

Short Communication

Healthcare Providers Experience and Satisfaction with Outpatient Nutrition-Focused Quality Improvement Initiatives

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ABSTRACT

Aims: Providing effective nutrition care in the outpatient setting is essential as up to 25% of community-dwelling adults experience poor nutritional health. We analyze the effectiveness of QI efforts aiming to improve nutrition care in outpatient clinics by assessing the experience and satisfaction of healthcare providers with an outpatient nutrition quality improvement (QI) initiative.

Methods: An online survey was distributed to healthcare providers participating in an outpatient clinic nutrition QI initiative. Key survey topics included healthcare provider satisfaction with the conduct of the QI initiative and perceptions of the initiative's impact on patient care and provider performance.

Results: In total, 63 healthcare providers from 18 U.S. outpatient clinics responded to the survey. Registered nurse was the most commonly reported role. Over 88% of respondents expressed agreement with the statements regarding overall satisfaction with the QI initiative and recommending the initiative to other clinics. After the QI initiative was implemented, 27% more respondents agreed that nutrition care in their practice

helped them identify patients with poor nutrition, and 30.2% more respondents felt better able to answer nutrition questions (p -values <0.05). Higher average rates of oral nutritional supplementation recommendation for patients with poor nutrition were confirmed (7.03 vs. 14.6, $p<0.05$). Survey responses indicated that the patient experience improved; 20.6% (61.9% before vs. 82.5% after) more respondents agreed that patients experienced greater satisfaction with their care, and 25.4% (65.1% before vs. 90.5% after) more respondents agreed that patients had improved health and functionality after the QI initiative was implemented (p -values <0.05).

Conclusions: Our results support the potential of outpatient nutrition-focused QI initiatives to be successfully implemented and optimize patient care in outpatient clinics, improve patient health and reduce healthcare costs. Future studies utilizing larger groups of healthcare providers and clinics are warranted to support our findings and look for improvement in patient outcomes.

Key words: Healthcare providers, Outpatient clinics, Nutrition care, Patient outcomes, Satisfaction

Introduction

Up to 26% of community-dwelling adults experience poor nutrition health. This issue is particularly salient among patients 55 and older receiving care for chronic conditions [1-3]. Disease-associated malnutrition among community-dwellers costs the United States (U.S.) healthcare system over \$15.5 billion in direct costs alone [4].

Addressing the nutritional needs of these patients in outpatient clinics may reduce healthcare resource utilization and the overall economic burden of unrecognized and unaddressed poor nutrition. A systematic review of 20 studies targeting community-dwelling adults showed that nutrition interventions can result in improved body weight, nutritional status, functional

status, protein and energy intake, and muscle strength [5]. Additionally, oral nutritional supplements (ONS) are a cost-effective intervention for optimizing the health outcomes and reducing healthcare costs of community-dwellers at nutrition risk [6,7].

While research has shown nutrition-focused quality improvement (QI) initiatives to be effective in acute and post-acute settings [8-10], little is known about the implementation effectiveness of QI efforts in outpatient clinics or healthcare providers' experiences and satisfaction with such initiatives. We assessed the experience and satisfaction of healthcare providers with an outpatient nutrition QI initiative that screened patients for poor nutrition status, educated them on good nutrition, and recommended an ONS regimen when appropriate.

Methods

This is a cross-sectional survey study utilizing an online survey distributed via Qualtrics™ to healthcare providers at outpatient clinics (Table 1) that had implemented a nutrition QI initiative within the last 2 years. Although QI programs varied across clinics in terms of implementation methods and resource utilization, each included the use of a nutrition care pathway with questions reported in a graphical flowchart format to help identify patients with poor nutrition and provide targeted diet and ONS recommendations. Participating clinics were also provided with nutrition education resources for both providers and patients. Additionally, ONS samples and coupons were made available to patients as needed. The key components of the outpatient nutrition QI programs – identify, educate, and intervene – are the same as those previously implemented by successful inpatient and post-acute nutrition QI programs [8-10].

The survey structure was informed by the Client Satisfaction Questionnaire (CSQ-8) [11,12] and augmented to account for the unique aspects of the nutrition QI initiative. Eligible healthcare providers included anyone that played a key role and was actively involved in the implementation, monitoring and performance of the nutrition QI initiative at their clinic.

Key survey topics were healthcare provider satisfaction with the conduct of the QI initiative and perceptions of the initiative's impact on patient care and provider performance. Questions were pilot tested by two healthcare providers whose responses informed survey adjustments, but their data was not included in the final analysis. Main survey questions are listed in Tables 2 and 3, and a 5-point Likert-scale was used.

Analysis

Descriptive statistics were calculated for all respondent characteristics and survey responses. Analyses were performed by comparing pre- and post-QI responses using the Wilcoxon test for categorical variables and Student t-test for continuous variables. Analyses were performed with SAS V9.4; a two-tailed p-value ≤ 0.05 was considered statistically significant.

Results

In total, 63 healthcare providers from 18 U.S. practices responded to the survey. Registered nurse was the most commonly reported role with 41% of respondents identifying this as one of their roles, while fourteen of the 63 respondents (22%) indicated they had multiple roles. Almost half of respondents were from clinics with 50 to 100 providers (Table 1). Respondents reported seeing 6 to 200 patients per week (average=46 patients) and most of them were with the practice less than 10 years.

Respondents reported high levels of satisfaction with the nutrition care program. Over 88% agreed with the statements regarding overall satisfaction with the quality improvement initiative and recommending the initiative to other clinics. Additionally, over 90% of respondents agreed that the initiative

was meeting the needs of their patients and that they would continue to utilize it for future patients (Table 2).

Respondents also indicated the initiative had important impacts on their practice. After QI implementation, 27% more of respondents agreed that nutrition care in their practice helped them identify patients with poor nutrition and 30.2% more of respondents felt they were better able to answer nutrition questions. Survey responses indicated that the patient experience improved; 20.6% more of respondents agreed that patients experienced greater satisfaction with their care and 25.4% more of respondents agreed that patients had improved health and functionality after QI initiative implementation (p-values<0.05) (Table 3).

Providers were more likely to recommend ONS to patients after the QI initiative. Prior to the QI initiative respondents reported recommending ONS to an average of 7.0 patients per week compared to an average of 14.6 patients per week after the QI initiative (p-value=0.0074).

Table 1: Respondents by Role and Clinic Size.

Provider Role*	Number of Respondents
Registered Nurse	26
Care Coordinator	20
Health Coach/Navigator	18
Medical Assistant	5
Primary Care Physician	4
Nurse Practitioner	4
Registered Dietitian	3
Clinical Manager	1
Physician Assistant	1
Certified Diabetes Educator	1
Quality and Value-based Care Manager	1
Social Worker	1
Number of Providers	Number of Respondents
Less than 50	6
50 to 100	31
More than 100	19
Not Available	7

*Respondents could select multiple roles

Table 2: Responses Regarding Nutrition Quality Improvement Initiative Satisfaction with Reported Agreement Level.

Question	Percent "Agree" or "Strongly Agree"
Overall, I am very satisfied with the nutrition care collaboration	88.9
I would recommend the nutrition care collaboration to other clinics	95.2
The nutrition care collaboration is meeting the needs of my patients with poor nutrition status	90.5
The nutrition care collaboration materials provided by Abbott are of high quality	95.2
I would choose to utilize the nutrition care collaboration for my future patients	93.7

Table 3: Responses Regarding Nutrition Quality Improvement Initiative Impact.

Question	% of responses that “Agree” or “Strongly Agree”		
	Before	After	P-value
Improving nutrition care at my clinic helps...			
Me identify patients with poor nutrition status	65.1	92.1	0.0002
Me answer nutrition related questions for patients with poor nutrition status	63.5	93.7	<0.0001
Patients experience higher satisfaction with their care	61.9	82.5	0.0101
Patients experience improved overall health and functionality	65.1	90.5	0.0006
Helps me improve performance across quality measures	58.7	84.1	0.0017
Helps patients experience fewer hospitalizations (e.g. admissions, readmissions)	42.9	69.8	0.0024

Discussion

Optimizing the prevention and treatment of poor nutrition among community-dwelling adults presenting in outpatient clinics for routine care or chronic disease management is an important public health concern. The survey results suggest that implementation of nutrition QI initiatives is feasible given the high satisfaction level reported by the participating healthcare providers. This finding is supported by a recent paper profiling McLaren Health Care’s approach to implementing nutrition care in its outpatient clinics [13].

We argue that the nutrition QI initiatives implemented at these clinics were effective given more healthcare providers felt increased confidence in identifying patients with poor nutrition status and answering nutrition related questions. This is of immense importance, given that only 25% of the U.S. medical schools provide a dedicated nutrition course [14], fewer than 25% of physicians believe they have sufficient training to talk to patients about diet or physical activity, and fewer than one-eighth of physician visits include any nutrition counseling [15]. Hence, nutrition QI initiatives can provide healthcare providers with information and resources to ensure proper identification, education, and treatment of outpatients with poor nutritional health.

Healthcare providers reported that nutrition QI initiatives helped patients experience better health and satisfaction with their care. Extensive literature supports the utility of nutrition interventions in helping patients across different settings of care achieve nutritional goals and experience better health [5,7-10]. However, since poor nutrition has traditionally been studied in the institutional setting, more research is needed in outpatient clinics to confirm successful implementation and scalability methods as well as the effectiveness of nutrition QI initiatives at improving the health outcomes of community-dwelling adults and reducing healthcare costs.

This study inherits the limitations of any other study using a survey methodology. First, no causal inferences can be confirmed. Second, the participating healthcare providers and clinics may be inherently different from others, thus limiting the generalizability of our findings. However, to our knowledge, this is the first study of its kind, which provides initial insights into the feasibility of implementing and effectiveness of outpatient clinic nutrition QI initiatives from the healthcare provider perspective. Therefore, future studies utilizing larger groups of

healthcare providers and clinics are warranted to provide further support for our findings and assess improvements in patient outcomes by accessing patient level data.

Conclusions

The results of this analysis highlight the importance of outpatient nutrition-focused QI initiatives to optimize patient care and improve patient health, which in turn could lead to reduced healthcare costs. Improved identification of patients with poor nutrition, as reported by healthcare providers, can lead to early intervention on nutrition issues which is essential to prevent poor nutrition and chronic illness.

Financial disclosure

None.

Conflicts of interest

Drs. Kerr and Sulo are employees and stockholders of Abbott.

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