



# Changes in Practices and Opinions on In-Center Food Consumption in a Large Dialysis Organization in the US

Mary Burgess, MS, RD;<sup>1</sup> Maria Stasios, RDN, CSR, LDN;<sup>1</sup> Becky Brosch, RD, CSR, LD;<sup>1</sup> Rich Mutell, MBA, MA;<sup>2</sup> Debbie Benner, MA, RD, CSR<sup>1</sup>

<sup>1</sup>DaVita HealthCare Partners Inc, Denver, CO; <sup>2</sup>APEX Health Innovations, Simi Valley, CA

## Introduction

- Research has shown that more than 60% of end-stage renal disease patients receiving dialysis in the United States have serum albumin levels below the target of 4.0 g/dL.<sup>1</sup> Low serum albumin has been associated with increased risk of mortality and poor outcomes among dialysis patients.<sup>2</sup>
- Restricting food intake while on dialysis in the United States has been proposed as a potential cause for the low levels of albumin in patients in the United States.<sup>1</sup>
- There is some evidence that oral nutritional supplementation (ONS) during dialysis is associated with improved mortality.<sup>3</sup>
- While some facilities in the United States have begun offering ONS during dialysis, participation is restricted due to eligibility criteria, supplement intolerance, and taste fatigue.
- A complimentary program that encourages appropriate food consumption at treatment may increase food consumption on dialysis days, provide opportunities for counseling on food choices and demonstrate similar clinical improvement as ONS programs.

## Objectives

A survey was conducted to measure changes in practices, opinions, and perceived barriers to consuming food on dialysis in a large dialysis organization (LDO) in the United States. Facility-specific policies related to food consumption during treatment in this LDO are determined by the medical director and facility management team.

## Methods

- In May 2011 and June 2014, registered dietitians from more than 1000 facilities within this LDO in the United States were surveyed on facility practices and opinions regarding food consumption on dialysis.
  - The online survey also asked for reasons regarding any change in facility practices with regard to eating on dialysis.
- Registered dietitians provided input on facility practice and collected medical director responses.
- In 2013, guidelines and educational materials on Eating at Treatment (EAT) were developed and shared with the registered dietitians for optional use with patients and clinical staff in their facilities. Eating at treatment is defined as consuming food before, during, or after dialysis at the facility.
  - Guidelines addressed clinical and operational barriers to eating during treatment, as well as quantity and quality of food to consume on dialysis.
  - Educational materials focused on renal friendly foods with an emphasis on including protein.

## Results

- In 2011 and 2014, 1210 and 1407 LDO facilities, respectively, were surveyed regarding eating practices during treatment. Differences in the responses to questions about food consumption on dialysis between the 2011 and the 2014 surveys were significant ( $p < 0.001$ ) and indicate a practice pattern change toward increased consumption of food on dialysis.
- Facility practices regarding food consumption on dialysis are shown in Table 1.
  - The 2014 responses show a decrease in the number of facilities that do not allow eating on dialysis, whereas facilities that allowed and encouraged food consumption increased from 18.0% to 31.1%
- Registered dietitians collected responses from 837 facility medical directors in 2011 and 963 facility medical directors in 2014. Responses to the question regarding their opinion on allowing consumption of food on dialysis are shown in Table 2.
  - In 2011 nearly half of all medical directors either strongly discouraged (30.5%) or discouraged (19.2%) eating on dialysis.
  - By 2014, < 40% of medical directors either strongly discouraged (23.5%) or discouraged (15.8%) eating on dialysis.
  - Medical directors who encourage and strongly encourage food consumption on dialysis increased from 25.3% and 5.9% to 30.2% and 12.9%, respectively.
- Medical directors who held the opinion that consuming food on dialysis should not be allowed were asked to choose reasons that were deciding factors for their opinion. Top reasons provided were:
  - Hypotension
  - Increased chance of choking
  - Infection
  - Increased chance of gastrointestinal problems
  - Risk of food spills and pest control
- Facilities that perceived a change in practice (in either direction) were asked to choose among responses regarding what may have influenced the change in practice; multiple answers were allowed (Figure 1). Among those facilities, the number one reason for a change in practice was increased emphasis on improving nutritional status among patients.

**Table 1. Facility Level Response to Survey Question About Food Consumption on Dialysis**

Facility Practices	2011		2014	
	Count	% <sup>a</sup>	Count	% <sup>a</sup>
Not allowed, does not occur	60	5.0	59	4.2
Not allowed, does occur	288	23.8	254	18.1
No guidelines	64	5.3	91	6.5
Allowed, not encouraged	580	47.9	566	40.2
Allowed, encouraged	218	18.0	437	31.1
Total	1210	100.0	1407	100.0

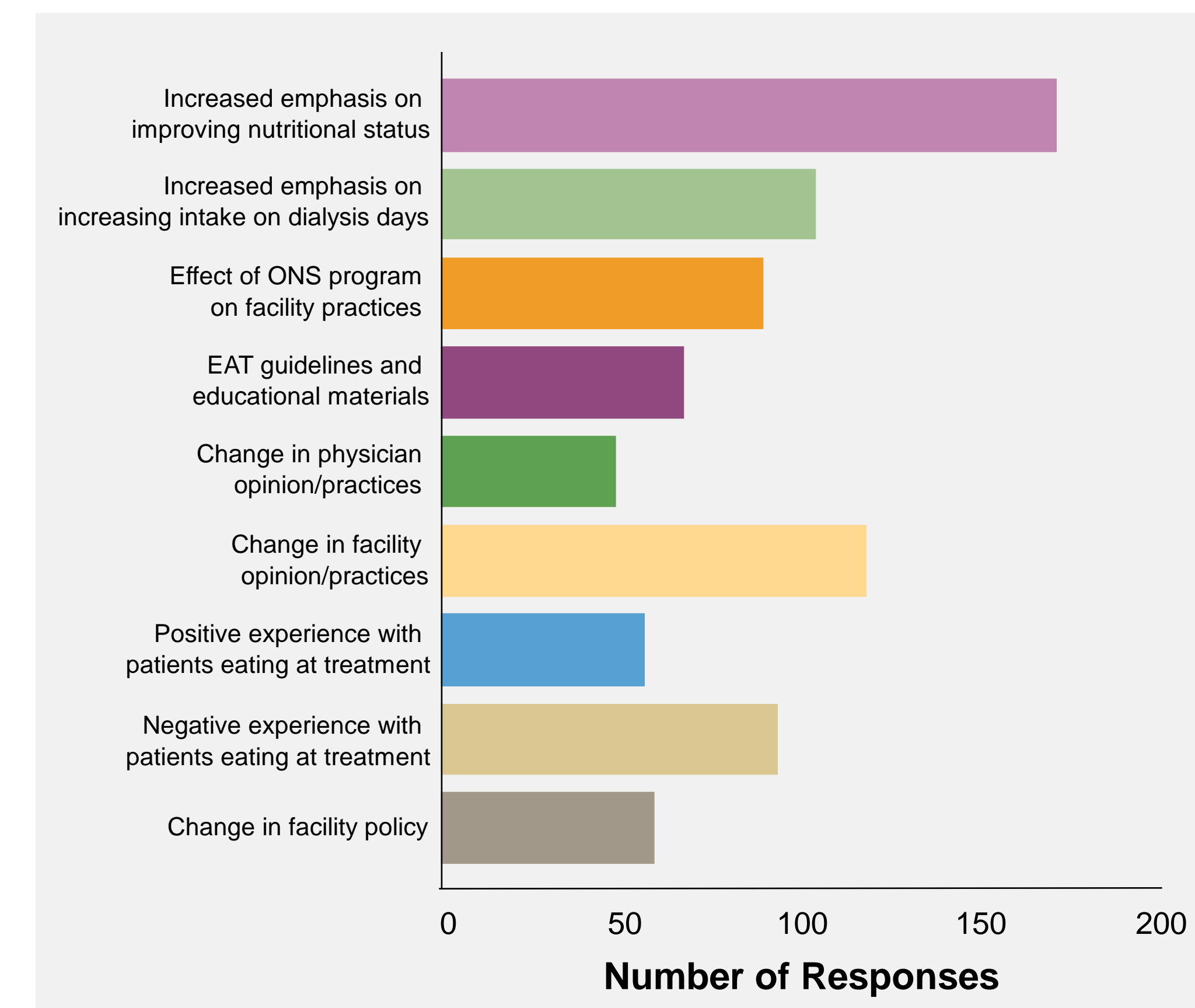
<sup>a</sup> Percent within year.

**Table 2. Medical Director Response to Question About Food Consumption on Dialysis**

Medical Director Opinion	2011		2014	
	Count	% <sup>a</sup>	Count	% <sup>a</sup>
Strongly discourage	255	30.5	226	23.5
Discourage	161	19.2	152	15.8
No opinion	160	19.1	170	17.7
Encourage	212	25.3	291	30.2
Strongly encourage	49	5.9	124	12.9
Total	837	100.0	963	100.0

<sup>a</sup> Percent within year.

**Figure 1. Reasons Given for Change from 2011 to 2014 in Facility Policy Regarding Consuming Food on Dialysis**



## Conclusions

- Food consumption patterns are evolving toward increased allowance of food consumption on dialysis.
- Experience with consuming food on dialysis (ie, providing ONS and the EAT guidelines) is stated as influencing change in facility practice.
- Further studies are warranted to:
  - Understand and mitigate risks associated with consuming food during treatment
  - Determine whether eating during treatment demonstrates similar benefits on clinical outcomes as current ONS programs.

## References

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## Acknowledgements

We extend our sincere appreciation to the teammates in more than 2,000 DaVita clinics who work every day to take care of patients and also to ensure the extensive data collection on which our work is based. We thank DaVita Clinical Research® (DCR®), and specifically acknowledge Michele G. Scheid of DCR for editorial contributions in preparing this poster. DCR is committed to advancing the knowledge and practice of kidney care.

This study was funded by DaVita HealthCare Partners Inc.

\*Correspondence: Mary.Burgess@davita.com

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American Society of Nephrology Kidney Week, 11-16 November 2014, Philadelphia, PA.

