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# Changes in US Dialysis Dietitian Responsibilities and Patient Needs During the COVID-19 Pandemic



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**Objective:** This study described the job responsibilities and modalities of care among dialysis dietitians in the United States and their observations regarding the nutrition needs of their patients, during the COVID-19 pandemic.

**Design and Methods:** Cross-sectional online survey captures dietitian characteristics and responsibilities, dialysis facility characteristics, and patient needs. We recruited US dialysis dietitians. We used chi-square tests to compare respondent stress and facility-level policies regarding eating/drinking and oral nutrition supplements based on facility ownership type.

**Results:** We received 191 complete or partial survey responses. Sixty-three percent of respondents stated that their center banned eating/drinking during dialysis due to COVID-19 masking policies. DaVita and non-profit facilities were significantly more likely to still allow eating/drinking during dialysis (31% and 29%, respectively) compared to Fresenius facilities (7%). A common theme in open-ended responses regarding nutrition care for COVID-19-positive patients was providing less care to these patients. A majority of respondents admitted to stress from working in healthcare during COVID-19. The majority of respondents indicated that patients were taking precautions such as having a family member or friend grocery shop for them (69%) or going to the store less often (60%). Just over a quarter of respondents indicated that affordability of food was a concern among patients. Seventy-two percent reported that patients were cooking at home more often, 60% had observed an increase in serum phosphorus, and 72% an increase in interdialytic weight gain.

**Conclusions:** Due to the increased risk of malnutrition and symptoms that can affect dietary intake in COVID-positive patients, and the economic conditions leading to increased rates of food insecurity, dietitians must be proactive in preventing and/or treating malnutrition through adequate protein and energy intake. Eating/drinking bans should not become permanent and dialysis centers should take precautions to allow intradialytic meals and oral nutrition supplement protocols to continue during the pandemic.

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## Introduction

THE COVID-19 PANDEMIC has been a period of rapid change in society and has particularly impacted healthcare<sup>1</sup> and health behaviors.<sup>2</sup> Even before COVID-19, dialysis patients had intensive nutrition needs, but these may be worsened during the pandemic. Due to the economic fallout from COVID-19, more individuals are facing personal economic crises including a need for food assistance, which the US Department of Agriculture estimates tripled from 12% to 38% in March and April 2020.<sup>3</sup> Early on in the pandemic (April 2020), survey respondents from a population participating in a fruit and vegetable dis-

tribution program for children reported that the pandemic had decreased their consumption of fruits and vegetables, their consumption of restaurant foods, and the frequency of their grocery shopping trips, suggesting rapid changes in health behaviors due to both financial and safety concerns.<sup>4</sup>

The COVID-19 pandemic may be impacting dialysis patient physical and mental health in other ways. A small mixed methods study in Portugal suggested that during the pandemic, patients were spending less time on dialysis, experiencing reduced dialysis adequacy, lower serum albumin, and higher serum phosphorus.<sup>5</sup> Patients reported difficulty adhering to nutrition guidance during lockdown and high levels of stress about their risk of contracting or experiencing morbidity or mortality from COVID-19.<sup>5</sup> Although patients in this study were generally compliant with recommendations for protecting themselves (masks, etc.), they were unhappy about some preventative strategies implemented in dialysis centers such as prohibitions on intradialytic food/drink and exercise.<sup>5,6</sup>

Patient stress about COVID-19 is valid, as dialysis patients are a high risk group for COVID-19,<sup>6</sup> due to their underlying health condition as well as to the social inequities associated with end-stage renal disease in the United

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States.<sup>3</sup> Estimates of seropositivity rates for US dialysis patients are 8.3% (95% confidence interval 8–8.6), with higher rates in expected higher risk groups based on age and race.<sup>7</sup> Beyond the<sup>1</sup> underlying physical and social risk factors for contracting COVID-19, dialysis also requires patients to come into relatively close contact with one another and health professionals on a frequent basis<sup>6</sup> and most dialysis facilities are under-equipped with isolation rooms or barriers between chairs.<sup>8</sup> Asymptomatic patients make the spread through dialysis facilities particularly risky—in one Spanish dialysis center 18.7% of the patients were COVID-19 positive in 1 month, with 39% of those cases being asymptomatic.<sup>9</sup>

Despite the intensive nutrition needs of the dialysis population (with or without COVID-19 infection) and the fact that the Centers for Medicare and Medicaid Services requires a dietitian in every dialysis unit,<sup>10</sup> previous research demonstrates that a significant portion of the dialysis dietitian's time is spent in indirect care and that many patient encounters are short.<sup>11</sup> As much of healthcare has shifted to telehealth in response to the pandemic, and regulations have eased to allow telehealth under more circumstances during the pandemic,<sup>1,12</sup> it is unclear whether dialysis dietitians are also providing virtual care to in-center patients, or whether they are still seeing patients in person, given that patients still must attend dialysis.<sup>8</sup> Whatever the modality of the encounter, it is important to investigate whether dietitians are able to spend additional time with their patients given the increased nutrition burden they may be facing during the pandemic.

Finally, COVID-19 has been a great stressor for healthcare providers.<sup>6,13,14</sup> Prior to the pandemic, burnout was a concern in nephrology,<sup>15,16</sup> and the trends toward more indirect care responsibilities and less patient interaction were associated with increased job dissatisfaction.<sup>17</sup> Whether this problem has been exacerbated by the pandemic and related shifts in healthcare bears investigation.

Therefore, the aim of this cross-sectional survey study is to describe the job responsibilities and modalities of delivering care among dialysis dietitians in the United States, as well as their observations of the nutrition needs of their patients, approximately 10 months into the pandemic.

## Methods

### Survey

We drafted a series of open-ended questions related to dialysis dietitian characteristics and responsibilities, dialysis facility characteristics, and dialysis patient needs and experiences related to the COVID-19 pandemic and conducted 5 key informant interviews with currently practicing dialysis dietitians. We used their responses to develop a survey consisting of both closed-ended and opened-ended questions on work and facility characteristics since COVID-19, patient needs/experiences with COVID-19, other

observations, and dietitian characteristics. The survey asked individuals to think about what was happening currently compared to a pre-pandemic period, rather than trying to differentiate between how the pandemic had waxed and waned in different states at different times.

### Participants

Dialysis dietitians who are actively practicing in the United States and belong to the Renal Practice Group within the Academy of Nutrition and Dietetics were invited by email to participate. We asked that the survey link not be forwarded by respondents, in order to calculate an accurate response rate. The survey was open for 2 weeks from December 7 to December 18, 2020. Two email invitations were sent; each one on Monday during the recruiting period. Entry into a drawing for one of five \$50 [Amazon.com](https://www.amazon.com) gift cards was provided as an incentive to promote participation in this study. We received an exempt determination from the Case Western Reserve University Institutional Review Board.

### Statistical Analysis

Mean and standard deviation, or number and percent, were used to describe the demographic and facility characteristics of participants and to describe patient needs and experiences related to the COVID-19 pandemic. Responses to open-ended questions within the online survey were grouped into themes and then the frequency of each theme was counted. We used chi-squared tests to compare respondent stress and facility-level policies regarding eating/drinking and oral nutrition supplements (ONS) based on facility ownership type. Statistical analyses were conducted using SPSS version 26 (IBM, Armonk, NY).

## Results

Of 2,106 emails sent, 241 individuals clicked on the survey invitation link, and 27 of these were ineligible. Of the 204 eligible participants, 13 did not answer any questions after the screening question, while 32 completed some but not all questions. Therefore, the final sample size was 159 complete responses plus 32 partial responses (total  $n = 191$ ) and a response rate of 9%.

Participant characteristics are listed in [Table 1](#). Participants were evenly distributed among Fresenius, not-for-profit, DaVita, and other for-profit ownership ([Table 1](#)). Facilities were located across 39 US states (data not shown).

The majority of participants were working in the dialysis center (81%), primarily communicating with patients in person (87%) and had not experienced a change in paid hours (91%); a plurality had not experienced a change in patient census (39%) ([Table 2](#)). Respondents were using a variety of secondary methods to communicate with patients ([Table 2](#)), including postal mail and email (mentioned in the other write-in responses). Respondents were communicating with other team members both in person and remotely ([Table 2](#)).

**Table 1.** Characteristics of Renal Dietitians and Dialysis Facilities

Characteristic	N	n (%) or Mean $\pm$ SD
Years as registered dietitian	157	23.4 $\pm$ 13.9
Years in renal nutrition	157	13.8 $\pm$ 12.5
Years at current dialysis facility	155	9.2 $\pm$ 9.2
Highest level of education completed	158	
Bachelors		83 (53%)
Masters		73 (46%)
Doctoral		2 (1%)
Specialist certifications	191	
None		146 (76%)
Certified Specialist in Renal Nutrition		36 (19%)
Certified Diabetes Care and Education Specialist		6 (3%)
Certified Nutrition Support Clinician		3 (2%)
Dialysis facility community characteristics	156	
Urban		62 (40%)
Suburban		58 (37%)
Rural		36 (23%)
Dialysis facility characteristics	157	
Freestanding		123 (64%)
Hospital-based		28 (15%)
Connected to a nursing home		6 (3%)
Dialysis facility ownership	157	
Fresenius		47 (30%)
Not-for-profit		46 (29%)
DaVita Inc.		36 (23%)
Other for-profit		28 (18%)

SD, standard deviation.

The majority of respondents (57%) reported no change in the amount of time they were spending with patients compared to pre-COVID-19 (Table 2). Of the 39% who reported spending less time with patients the most common reasons were trying to limit one's own exposure by limiting time with patients (57%) (Table 2). Write-in responses for reasons for decreased patient time related to time consumed by donning personal protective equipment (PPE) and being asked to take on other responsibilities. Just over half of participants reported being asked to take on responsibilities not directly related to the dialysis dietitian role, for example, screening employees and patients for COVID-19 at the entrance (Table 2). DaVita and Fresenius dietitians were significantly more likely to report being asked to take on additional roles (72% and 79%, respectively) than non-profit and other for-profit dietitians (35% and 36%, respectively) ( $P < .001$ , data not shown).

Prior to COVID-19, 39% of respondents had been completing Nutrition Focused Physical Exam or Subjective Global Assessment on their patients; of those participants 60% were completing Nutrition Focused Physical Exam/Subjective Global Assessment in December 2020 (data not shown).

Use of all forms of PPE increased from pre-pandemic practices (Supplemental Table 1). Forty-two percent of respondents reported that their facility had experienced PPE shortages during the pandemic (data not shown).

About 99.4% of respondents reported that their facility had a mask wearing policy during dialysis. This policy was generally well accepted by patients (Table 3). A majority of facilities prohibited eating and drinking in the dialysis chair as a result of COVID-19 and masking policies (62%). DaVita and non-profit facilities were significantly more likely to still allow eating/drinking during dialysis (31% and 29%, respectively) compared to Fresenius facilities (7%). Respondents reported that patients were concerned about not being able to eat/drink on dialysis and were split between adhering and not adhering to the policy. Respondents reported in write-in comments that the no eating/drinking policy was particularly difficult for patients with dementia or diabetes. The plurality of respondents indicated that despite the eating/drinking prohibition that ONS was still provided during dialysis (48%; Table 3), some indicated in write-in responses that this varied based on the type of supplement—with concentrated protein liquids (e.g., LiquaCel®, Pro-Stat®) being given during dialysis while bars or larger volume drinks were sent home.

The majority of respondents (52%) indicated that patients who test positive for COVID-19 are transferred to another designated facility, while 27% retained their usual patients even if positive (Table 4). A small number of respondents (8%) worked at facilities that received positive patients, and 6% were not aware of any patients testing positive from their facilities. Among those who reported patients from their facility had tested positive, 36.0% indicated that the nutrition care of positive patients varied from the care of other patients (Table 4). This care was described in write-in responses, with the most common themes being contact with positive patients via phone or video (47%). Another theme (36% of open-ended responses) was providing less care to positive patients—either because the dietitian only follows up after return to the usual unit, because the dietitian limits in-person contact, or because the dietitian relies on nursing to pass on nutrition information to COVID-19-positive patients. Eleven percent of write-in responses indicated that positive patients receive additional nutrition care.

Twenty percent of respondents considered leaving their position or employer during COVID-19, evenly split between concern about COVID-19-related work stressors or worries (11%) and due to balancing working and home responsibilities (9%) (data not shown). The plurality of respondents admitted to stress from working in health-care during COVID-19 and worry about becoming infected themselves (Table 5). However, they also mostly agreed that their employers had done as much as possible to keep them safe (74% agreed or strongly agreed)

**Table 2.** Work Characteristics of Renal Dietitians

Characteristic	N	n (%)
Work location	183	
Working from dialysis center		149 (81%)
Working a combination of in-center and remotely		30 (16%)
Working remotely from home		4 (2%)
Change in paid hours	183	
No change		166 (91%)
Paid/scheduled hours increased		9 (5%)
Paid/scheduled hours decreased		8 (4%)
Primary method of patient interaction (limited to one response)	183	
In person while patients in dialysis chair		160 (87%)
By phone while patients at home		9 (5%)
By video call while patients are home		2 (1%)
By phone while patients in dialysis chair		2 (1%)
Other methods used for patient interaction (multiple responses allowed)	191	
By phone while patients are home		113 (59%)
In person while patients are in dialysis chair		69 (36%)
By video call while patients are home		43 (23%)
By phone while patients are in dialysis chair		23 (12%)
Other		15 (8%)
Time with patients (limited to one response)	180	
I am spending about the same amount of time with patients		102 (57%)
I am spending less time with patients		70 (39%)
I am spending more time with patients		8 (4%)
Of those spending less time, why? (multiple responses allowed)	70	
No official policy but I am trying to limit time with patients		40 (57%)
Other		18 (26%)
I feel rushed		15 (21%)
A policy about spending less time with patients at my center		6 (9%)
Of those spending more time, why? (multiple responses allowed)	8	
Difficult to communicate through PPE		6 (75%)
Patients need more counseling/resources		6 (75%)
Other		2 (25%)
Interacting with team members in person	191	156 (82%)
Interacting with other team members remotely	191	92 (48%)
Have been asked to take on other responsibilities not related to dialysis dietitian role	183	103 (54%)
Census change	161	
No change		63 (39%)

(Continued)

**Table 2.** Work Characteristics of Renal Dietitians (Continued)

Characteristic	N	n (%)
Census has increased		52 (32%)
Census has decreased		46 (24%)

(Table 5). There were no differences in stress levels or consideration for leaving based on facility ownership type.

Although 16% of respondents stated that patients had not verbalized any changes to their ability to access healthy affordable food during the pandemic, the majority of participants indicated that their patients were taking precautions such as having a family/friend grocery shop for them (69%) and going to the store less often (60%) (Supplemental Table 2). Just over a quarter of respondents indicated that affordability of food was a concern—patients using foodbanks/pantries and/or Supplemental Nutrition Assistance Program more frequently (31%), patients discussing food price increases (28%) or sharing that they have less money for food (28%) (Supplemental Table 2).

Respondents reported relatively few changes in patient health behaviors and nutrition-related biomarkers (Table 6). Behaviors for which the majority of respondents observed a change were patients cooking at home (more often, 72%) and patients engaging in physical activity (less often, 64.8%) (Table 6). Biomarkers for which the majority of respondents observed an increase were serum phosphorus (60%) and interdialytic weight gain (51%) (Table 6). In general, respondents did not report changes in medication compliance among their patients (86%) (data not shown). Eighty-eight percent of respondents had noticed an increase in patient stress levels during COVID-19 (data not shown).

One hundred twenty-two participants responded to an open-ended question regarding what changes they expected would remain after COVID-19. The most common theme from these responses was that additional PPE would stay (53%). Fourteen percent of responses indicated that telehealth would continue to be used, and 9.8% believed that they would still be able to work from home. Four percent of write-in responses indicated that they expected to maintain an increased caseload and 4% anticipated a continuation of the no eating/drinking policy.

## Discussion

In this study, we describe the job responsibilities and modalities of care delivery among dialysis dietitians in the United States, as well as the nutrition needs of their patients, approximately 10 months into the COVID-19 pandemic. Although most respondents continue providing care in person, with additional PPE, reduction in nutrition care for COVID-19-positive patients was also reported. This is a major concern because infectious diseases such

**Table 3.** Masking and Eating Policies at Dialysis Facilities During COVID-19

Characteristic	N	n (%)
Acceptance of masking policy	160	
Generally accepting		156 (98%)
Generally resistant		4 (3%)
Eating and drinking policy	159	
No eating/drinking because of COVID-19		99 (63%)
Eating/drinking allowed		31 (20%)
Prohibited eating/drinking prior		29 (18%)
Patient response to new eating/drinking prohibition (multiple responses allowed)	99	
Patients are concerned about not eating/drinking		46 (47%)
Patients adhere to the no eating/drinking policy		42 (42%)
Patients do not adhere and eat/drink		41 (41%)
Patients do not mind not eating/drinking		15 (15%)
Other*		10 (10%)
How has new eating/drinking prohibition impacted ONS protocol? (limited to one response)	99	
ONS protocol goes on		47 (48%)
ONS is sent home		39 (39%)
Other		10 (10%)
No ONS pre-COVID-19		2 (2%)
Stopped ONS protocol		1 (1%)

ONS, oral nutrition supplements.

\*Other responses included that patients sometimes “sneak” food or drink during treatment despite the prohibition or that the prohibition was particularly difficult for patients with dementia to understand and led to low blood sugar among patients with diabetes.

as COVID-19 can increase the risk of malnutrition.<sup>18</sup> Multiple possible symptoms of COVID-19 such as shortness of breath, loss of sense of taste and/or smell, diarrhea, nausea and vomiting, fatigue/weakness also affect nutritional status and dietary intake.<sup>18</sup> Dialysis dietitians must be aware of the additional barriers of achieving adequate dietary intake and heightened risk of malnutrition in COVID-19-positive dialysis patients. Recommendations for the nutrition care of COVID-19-positive patients in general include proactive prevention and treatment of malnutrition via adequate protein and energy intake, including the use of ONS, when necessary, and routine assessment of weight and nutritional status.<sup>18</sup>

Prior to the pandemic, eating during dialysis was becoming a more accepted practice in the United States,<sup>19</sup> supported by the publication of the 2018 International Society of Renal Nutrition and Metabolism consensus statement supporting intradialytic meals and/or ONS to improve nutritional status<sup>20</sup> and data demonstrating reductions in mortality and hospitalizations with an intradialytic

**Table 4.** Nutrition Care of COVID-19 Patients

Characteristic	N	n (%)
Where COVID-19-positive patients receive dialysis	191	
COVID-19-positive patients remain at usual facility		52 (27%)
Receive positive patients from other facilities		15 (8%)
Usual patients who test positive are transferred to other facilities		99 (52%)
Not aware of any positive patients		11 (6%)
Confirmed positives treated at facility	151	
1-5		44 (29%)
6-10		53 (35%)
11-20		30 (20%)
>20		24 (16%)
Care of COVID-19-positive patients has varied from that of other patients	150	54 (36%)

ONS protocol.<sup>21</sup> However, our data suggest that the pandemic may be causing a reversal in the progress made toward intradialytic nutrition: 62% of respondents stated that their center adopted a no eating/drinking policy during dialysis due to COVID-19 and masking policies, with wide variation in how ONS protocols were handled. Clinicians must be vigilant in not allowing an eating/drinking prohibition during treatment to become permanent, especially as respondents cited concerns for the impact of this ban on patients who have diabetes and/or dementia. The benefits of providing meals and/or ONS during treatment may outweigh the risk of COVID-19 transmission when precautions are taken. Recent suggestions for eating during dialysis while centers have a universal masking policy include providing patients with a limited amount of time to eat their meal instead of allowing them to graze, drawing curtains between dialysis stations, providing patient with hand sanitizer to remove mask and clean hands prior to eating, providing additional PPE (e.g., protective eyewear) to staff to wear when in contact with an unmasked patient, having patient be seated in an upright position to reduce risk of choking, and disposing of food wrappers in a no-touch receptacle.<sup>22</sup>

Given the increases in food insecurity in the general population as a result of COVID-19, we were surprised that these themes were not more common in the responses to our survey. It is possible that if dialysis patients are already receiving disability benefits as their primary source of income that the pandemic was less disruptive to their household budgets. However, other patients who newly experience food insecurity may feel shame and not admit this unless asked. Dialysis dietitians and other health professionals must be willing to raise these concerns in a compassionate manner to ensure that patients have access to benefits.

**Table 5.** COVID-19-Related Stressors Among Dialysis Dietitians

COVID-19 Related Stressor	n	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I am currently very stressed as a healthcare professional working during COVID-19	163	11 (67%)	28 (17%)	34 (21%)	66 (41%)	24 (15%)
I am currently very worried about becoming at work and/or bringing infection home to my family	161	13 (8%)	28 (17%)	27 (17%)	68 (42%)	25 (16%)
My employer has done as much as possible to keep me safe during COVID-19	162	4 (3%)	17 (11%)	21 (13%)	73 (45%)	47 (29%)

Previous researchers who investigated the mental health effects of other epidemics (Ebola, SARS, MERS) have found that healthcare professionals face symptoms of anxiety, post-traumatic stress disorder, exhaustion, burnout, and depression in all stages of an outbreak.<sup>23</sup> Researchers have suggested that healthcare professionals will face work-related problems, depression, and anxiety during the COVID-19 pandemic.<sup>23</sup> In our study, the majority of respondents admitted to stress from working in healthcare during the COVID-19 pandemic, demonstrating that dialysis dietitians are not immune to these concerns. Even with the rollout of COVID-19 vaccines, the end of the pandemic in the United States is not yet in sight. The effects that working in healthcare during the pandemic can have on mental health should be addressed by healthcare professionals and/or their employers particularly given longer term concerns about burnout. Realistic workplace solutions for stress management in health providers include providing opportunities to speak with team members about

how stress during the pandemic is affecting work, setting clear expectations with input from team members, and making mental health resources more accessible.<sup>24</sup>

**Limitations**

One limitation of our study is that participants may not be honest when responding to sensitive topics such as job satisfaction. The survey was anonymously completed to protect participants’ privacy and to encourage honest responses. Another limitation is that we asked dietitians to report on their observations of group trends regarding patient needs and behavior changes limiting comparability to other studies that have used individual data collected directly from patients.<sup>4,5</sup>

Another limitation of our research study is that the language describing different types of PPE may have been unclear and misinterpreted by respondents. An unusually small percentage of respondents answered that they wore goggles prior to the pandemic. It seems possible that

**Table 6.** Changes in Patient Health Behaviors and Biomarkers According to 191 Respondents to a Survey About US Renal Dietitian Job Responsibilities and Patient Needs During COVID-19 Pandemic

Patient Health Behavior	n	Less Often	No Change	More Often
Choosing convenience foods (canned, frozen, boxed)	161	5 (3%)	<b>90 (56%)</b>	66 (41%)
Cooking at home	161	2 (1%)	43 (27%)	<b>116 (72%)</b>
Eating take out/fast food	159	58 (36%)	<b>64 (40%)</b>	39 (24%)
Engaging in physical activity	159	<b>103 (65%)</b>	56 (35%)	0
Skipping dialysis treatment	160	5 (3%)	<b>124 (78%)</b>	31 (19%)
Staying for the entire dialysis treatment	159	9 (6%)	<b>148 (93%)</b>	2 (1%)
Patient Nutrition-Related Biomarkers	n	Decreased	No Change	Increased
Serum potassium	161	3 (2%)	<b>123 (76%)</b>	35 (22%)
Serum phosphorus	160	8 (5%)	56 (35%)	<b>96 (60%)</b>
Serum sodium	158	8 (5%)	<b>139 (88%)</b>	11 (7%)
Dry weight	156	10 (6%)	<b>94 (61%)</b>	52 (33%)
Interdialytic weight gain	160	4 (3%)	75 (47%)	<b>81 (51%)</b>
Serum albumin	157	48 (3%)	<b>95 (61%)</b>	14 (9%)
Protein catabolic rate	151	17 (11%)	<b>124 (82%)</b>	11 (7%)

The most common response category for each behavior or biomarker is in bold.

respondents understood this specifically as “goggles” rather than our more general meaning of “eye protection.”

We exceeded our goal response rate of 8%, achieving a rate similar to that seen in most electronic surveys of dietitians,<sup>25,26</sup> and reflecting the relatively low response rates among health professionals in general.<sup>27</sup> Evidence-based strategies for increasing response rate among health professionals were used: the recruitment message was sent from an organization with which the respondents have an affiliation, reminder messages/deadlines for participation, and incentives for participation<sup>27,28</sup> (described above). When these strategies are used, response rate has not been demonstrated to be a good indicator of non-response bias<sup>28</sup>; therefore we believe we are able to draw conclusions despite a low response rate.

### Next Steps

Future research should monitor whether trends observed in this survey become permanent. Beyond the concerns about permanent eating/drinking prohibitions discussed above, other trends to monitor include increased patient loads for dietitians, increased responsibilities such as screening, and other external factors (PPE, fear of infection) influencing the already limited time for direct patient care. The nutrition status of COVID-19-positive dialysis patients, and potential COVID-19 “long haulers” should also be monitored.

### Practical Application

Dialysis dietitians should be aware that dialysis patients who are COVID-19-positive may be experiencing additional barriers to achieving adequate dietary intake and are at an increased risk for developing malnutrition. Dietitians must be proactive in the prevention and treatment of malnutrition through adequate protein and energy intake and the use of ONS, when necessary.

Dietitians and dialysis centers should be vigilant in not allowing an eating/drinking ban to become permanent. Special precautions can be taken to allow intradialytic meals and ONS protocols while protecting patients and staff members from the spread of COVID-19-19.

Dialysis dietitians are not immune from the mental health effects of working as a healthcare professional during the COVID-19-19 pandemic. Workplace solutions for stress management in health providers may include providing opportunities to speak with team members about how stress during the pandemic is affecting work, setting clear expectations, and making mental health resources more accessible.

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### Credit Authorship Contribution Statement

**Rachael May:** Conceptualization, Data curation, Methodology, Writing – original draft, Writing – review & editing. **Ashwini R. Sehgal:** Conceptualization, Methodology, Supervision, Writing – review & editing. **Rosa K. Hand:** Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing.

### Supplementary Data

Supplementary data associated with this article can be found in the online version at <https://doi.org/10.1053/j.jrn.2021.07.006>.

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