

Supporting your patient beyond immunodeficiency: a dietitian-led nutrition pilot program

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Background

Common Variable Immunodeficiency (CVID) results in inadequate antibody production causing the immune system to ineffectively fight off viruses and bacteria leading to recurrent infections.¹ Malnutrition rates may be higher amongst patients with CVID due to more frequent infections and treatments that result in poor nutrition intake.² It was found that a complete nutrition assessment is warranted rather than nutrition screening alone for patients with CVID.² Home infusion companies dispensing Immunoglobulin (IG) medications to treat CVID can provide a comprehensive approach to the care of these complex patients by offering additional supportive care services, such as access to a dietitian.

Purpose

The aim of this IG Nutrition Pilot Program was to provide a nutrition assessment by a home infusion Registered Dietitian (RD) to patients with a diagnosis of CVID whom receive IG therapy to gauge the level of interest in nutrition services, explore malnutrition rates and determine common nutrition interventions for this population.

Methods

A KabaFusion report was developed identifying patients that initiated IG therapy, either intravenously or subcutaneously, from June 1, 2022, through May 31, 2023, have a primary diagnosis of CVID, and remained an active patient when assessments were conducted from June 20, 2023, through July 30, 2023. Exclusion criteria included patients less than 18 years old and patients that discharged off service before June 20, 2023. An equal number of subcutaneous and intravenous patients were randomly selected from the remaining patients to receive a telephonic nutrition assessment by a home infusion RD to determine if the patient met criteria for malnutrition based on a modified version of the Global Leadership Initiative on Malnutrition (GLIM) criteria (see table 1) and if the patient had any nutrition-related concerns for which interventions were appropriate. Each patient was called twice, if unreachable, the assessment was deferred. Appropriate nutrition interventions and education were tailored to patients' needs.

Table 1: Global Leadership Initiative on Malnutrition (GLIM) criteria

Modified GLIM criteria				
Phenotypic Criteria			Etiologic Criteria	
Weight Loss (%)	Low Body Mass Index (kg/m ²)	Reduced muscle mass	Reduced food intake or assimilation	Inflammation
>5% within past 6 months or > 10% beyond 6 months	<20 if <70 years or <22 if >70 years	Reduced muscle mass as subjectively reported by patient	<50% of energy requirements >1 week or any reduction for >2 weeks or any chronic GI condition that adversely impacts food assimilation or absorption	Acute disease/injury or chronic disease-related

*Diagnosis of malnutrition requires at least 1 phenotypic criterion and 1 etiologic criterion

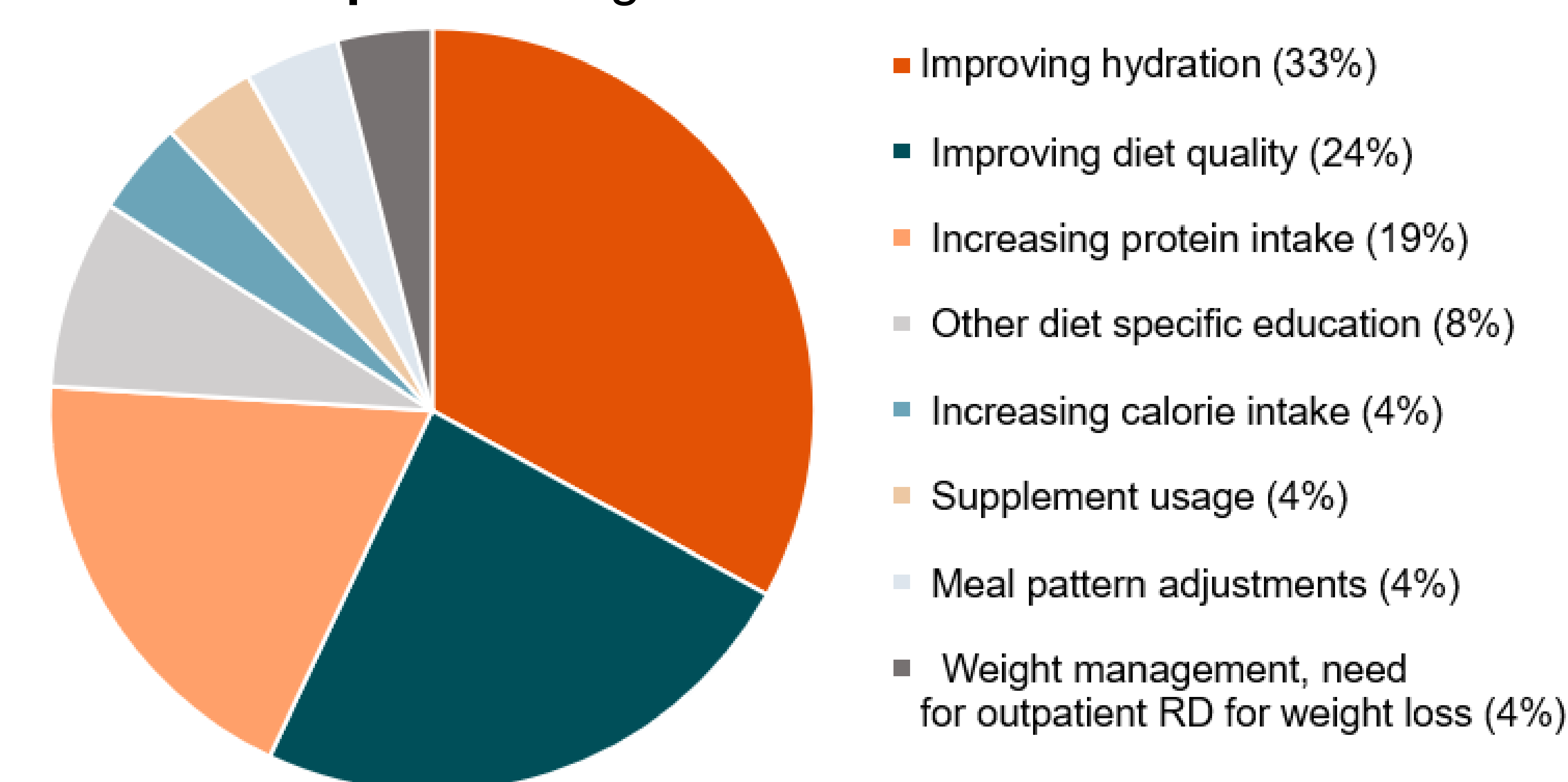
Disclosures

No financial support was provided by industry for this pilot program.

Results

- 222 patients called, equally divided between IVIG and SCIG
- 131 patients (59%) reached; 90 patients (41%) unreachable
- 78 patients (60%) participated in a nutrition assessment
- 42 patients (54%) were interested in a follow-up assessment in 3-6 months
- 75 interventions were provided by RDs; see graph 1
- 11 patients (14%) identified as having malnutrition based on modified version of GLIM criteria

Graph 1: Categorization of Interventions



Discussion

Most patients that participated had not previously seen a dietitian, were interested in engaging with a dietitian, wanted a follow-up in 3-6 months, and were open to nutrition interventions, suggesting a high level of interest in nutrition services from the home infusion provider. If the pilot program were converted to a permanent program, RDs noted that formal handouts on common nutrition interventions, especially for improving hydration, as this was the most common intervention, would be beneficial to reinforce education. Determining a screening process for which patients would be offered the service would be useful. Longer sessions and more frequent follow-up could be considered for specific nutrition interventions to achieve goals and provide adequate support to patients.

Due to the limitation of assessing patients via telephone, utilization of a validated body composition measuring technique was not possible. Instead, the RD asked if the patient subjectively felt they had lost muscle mass in the past year. Due to modifying the GLIM criteria, accuracy of malnutrition diagnosis is unclear. The prevalence of malnutrition in this study was 14% compared to 54% in another similar study, however our patient population started therapy within the past year and the previous study had a longer duration of therapy usage which may explain the discrepancy.² Assessing malnutrition remotely is challenging and relies heavily on reported information from the patient.

Conclusions

Home infusion companies providing IG therapy can offer access to a dietitian to bridge the gap between nutrition-related needs and IG therapy as most patients were not actively working with one and showed interest in the service. Improving hydration therapy was the most utilized nutrition intervention for CVID patients receiving IG therapy. Future studies exploring ways to remotely assess patients for malnutrition may be beneficial.

References

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2. Yildiz, Eray, et al. "Evaluation of malnutrition risk and nutrition status in adult patients with common variable immunodeficiency." *Nutrition in Clinical Practice*, vol. 37, no. 5, 2022, pp. 1206–1214, <https://doi.org/10.1002/ncp.10806>.

