

# When Twinkies are Healthy: Cancer Patient Nutrition Education from Healthcare Providers

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## Introduction

- In cancer patients, it has been estimated around 10-20% of deaths are due to malnutrition rather than the tumor itself<sup>1</sup>
- Poor nutritional status increases surgical morbidity, post-surgical complications, risk of infections, and significantly decreases survival for patients<sup>2,3</sup>
- There is a lack of clarity regarding medical health professionals' roles in providing dietary advice to cancer patients.<sup>4</sup> For example:
  - Only 18% of medical schools offer nutrition courses or electives<sup>5</sup>
  - 43% of oncology nurses perceive themselves to have insufficient nutritional knowledge<sup>6</sup>
  - Lack of awareness of guidelines and confidence when providing nutritional counseling<sup>7</sup>

## Objective

- Examine associations between:
  - Healthcare provider type vs. nutritional training received
  - Healthcare provider type vs. importance of nutritional knowledge
  - Healthcare provider type vs. nutritional counseling given
- Determine significant barriers and strategies for improvement among healthcare providers

## Methods

- Cross sectional study, with SPSS statistical analysis determined through Kruskal-Wallis Test
- Quantitative & qualitative data gathered through snowballing sampling via use of 15-item online Qualtrics survey, distributed via email/QR code to various healthcare contacts over a 5-week period (April - May 2024)
- Study population of healthcare professionals from various specialties, experience level, and education within California
- Survey categories included:
  - Demographics regarding age, gender, race/ethnicity, and healthcare professional title
  - Healthcare provider perceptions regarding nutritional education and knowledge, provider comfortability with nutrition counseling, and potential barriers to providing nutritional counseling
  - Possible strategies to address improved nutritional knowledge among healthcare providers and optional, additional comments

### Top Barriers\*:

- Insufficient nutritional knowledge
- Not enough time to provide nutritional counseling\*\*
- Not comfortable/confident in providing nutritional counseling

### Top Strategies\*:

- Increase nutritional education via trainings, pamphlets, seminars, medical school coursework, and websites that contain updated information\*\*
- Incentivize providers to increase nutritional knowledge
- Provide more proper referrals to RDs



\*based on survey responses to open-ended questions  
\*\*top votes by RDs

Additional Material

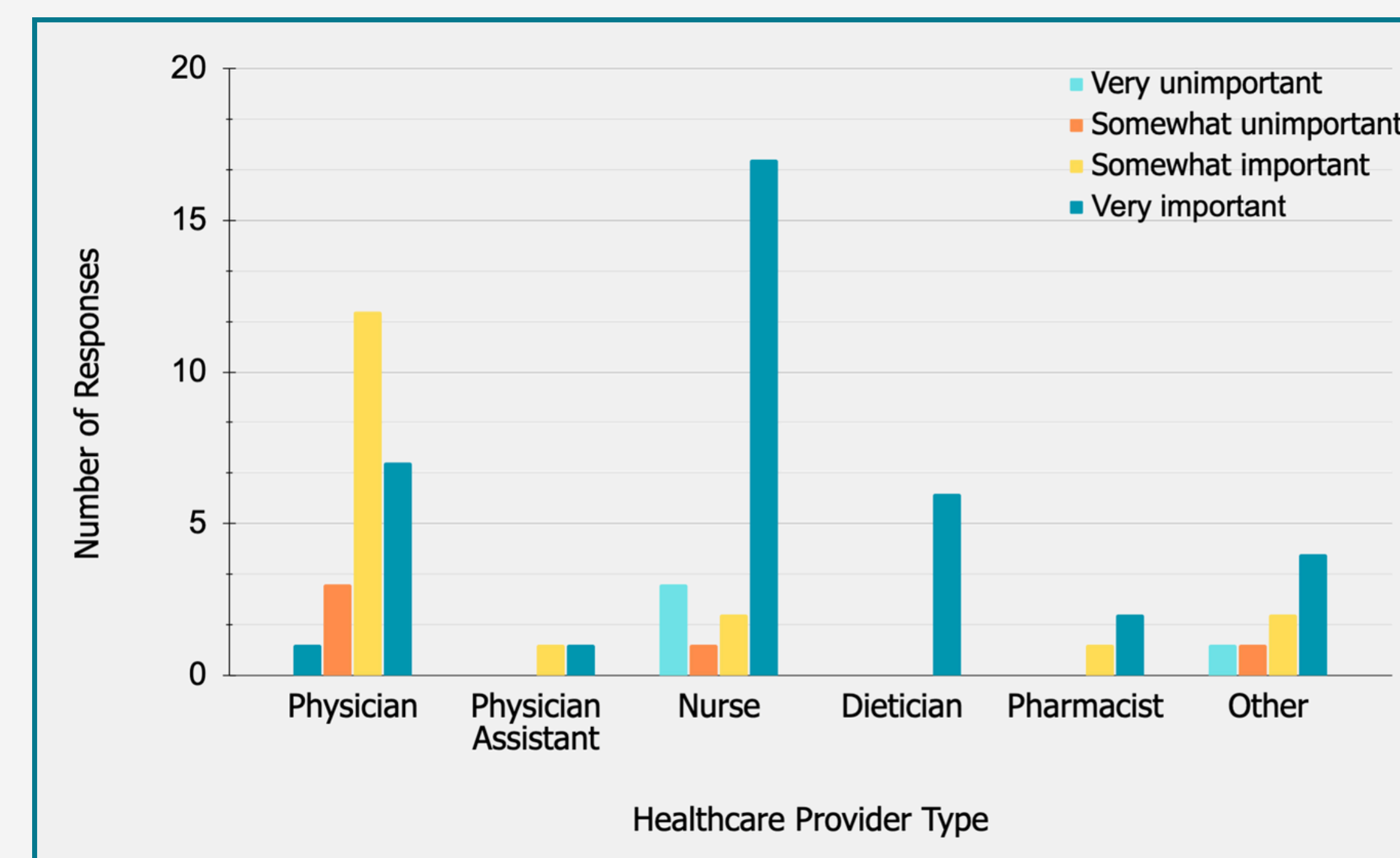


## Results

Table 1. Demographics (N=65)<sup>†</sup>

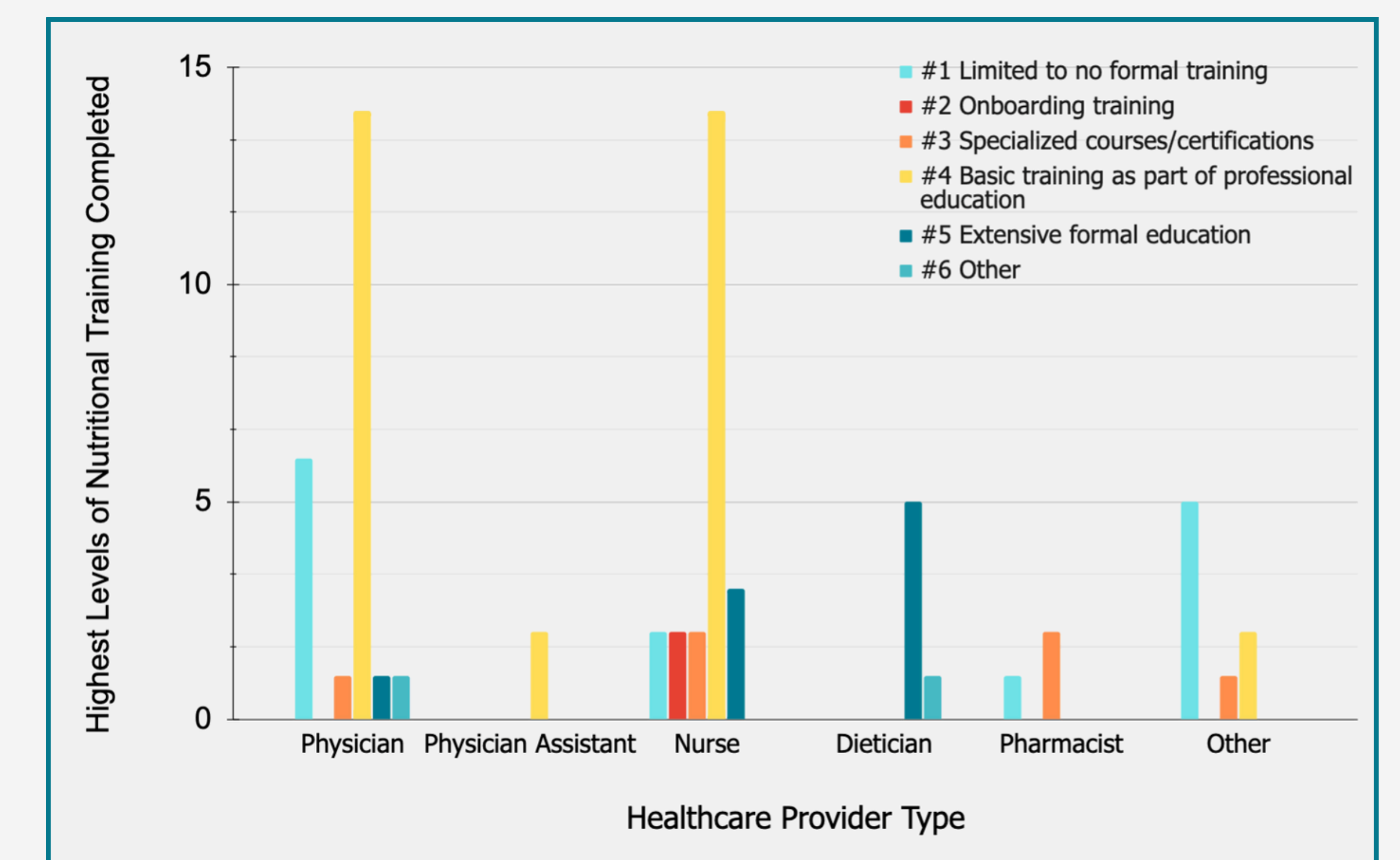
Professional Title	Count	Percentage
<b>Physician</b>	<b>23</b>	<b>35.4%</b>
Oncology	8	34.8%
Pediatrics	1	4.3%
Family Medicine	3	13.0%
Emergency Medicine	1	4.3%
Internal Medicine	1	4.3%
Surgery	5	21.7%
Other	4	17.4%
<b>Nurse</b>	<b>23</b>	<b>35.4%</b>
Registered Nurse (RN)	15	65.2%
Nurse Practitioner (NP)	5	21.7%
Licensed Vocational Nurse (LVN)	1	4.3%
Certified Nursing Assistant (CNA)	1	4.3%
Other	1	4.3%
<b>Dietician</b>	<b>6</b>	<b>9.2%</b>
Registered Dietician (RD)	5	83.3%
Dietetic Technician	1	16.7%
<b>Physician Assistant (PA)</b>	<b>2</b>	<b>3.1%</b>
<b>Pharmacist</b>	<b>3</b>	<b>4.6%</b>
<b>Other</b>	<b>8</b>	<b>13.9%</b>

Figure 2. Rank order of Importance of Nutritional Knowledge Based on Healthcare Provider Type<sup>†</sup>



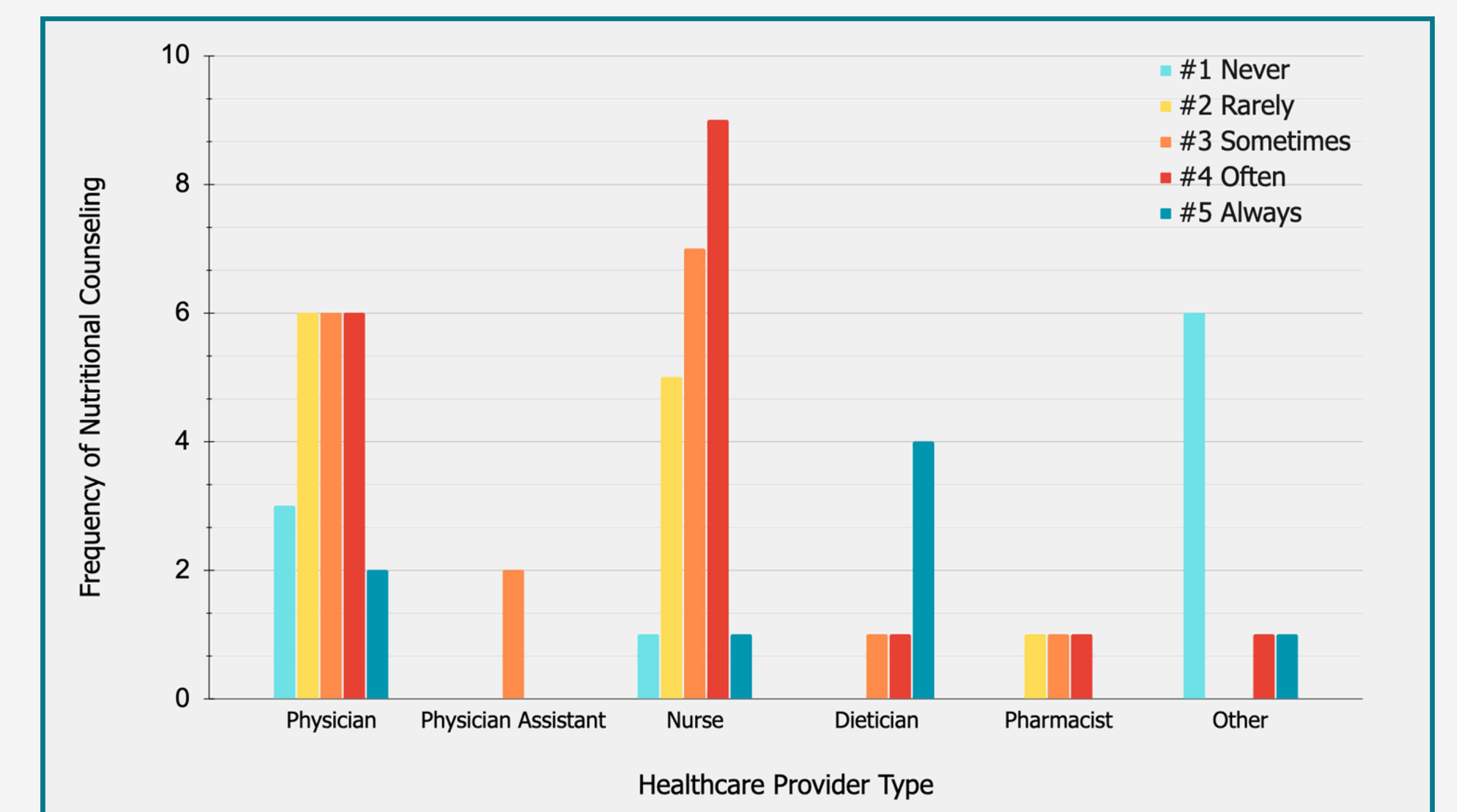
There is a statistically significant difference ( $p = 0.048$ ) between ranking regarding importance of nutritional knowledge and healthcare provider type.

Figure 1. Highest Levels of Nutritional Training Completed by Healthcare Provider Type<sup>†</sup>



There is a statistically significant difference ( $p < 0.001$ ) between highest level of nutritional training completed and healthcare provider type.

Figure 3. Frequency of Nutritional Counseling Based on Healthcare Provider Type<sup>†</sup>



There is a statistically significant difference ( $p = 0.016$ ) between frequency of nutritional counseling given and healthcare provider type.

## Conclusion

- These findings highlight the variability regarding 1) nutrition education completed, 2) the importance of acquiring nutrition knowledge, and 3) the frequency of nutritional counseling given to patients - especially among physicians, RDs, nurses, and pharmacists in particular
- Identified perceived barriers can help inform future strategies, such as increasing nutritional education, incentivizing providers, and providing more referrals to RDs
- Our study shows similar conclusions to various literature reviews cited, especially in regard to the lack of clarity and confidence of healthcare professionals' roles when it comes to nutritional guidance<sup>4,7</sup>
- Limitations may include response bias and small sample size
- Further research should be conducted regarding requirements around responsibilities of nutritional education and counseling among providers

## Policy Implications

- Implement updated nutrition curriculum and trainings for healthcare providers
- Design new policies to mandate nutritional guidance

## Acknowledgements

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<sup>†</sup>more information can be found in QR code