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Evaluating the Validity of Telehealth Nutrition Focused Physical Assessment for Malnutrition Diagnosis: A Comparative Study

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Background

- Telehealth is a form of communication that enables providers and patients to exchange medical information electronically.
- A nutrition focused physical assessment (NFPA) is completed by the registered dietitian who assesses designated criteria to identify malnutrition.
- The gold standard for performing NFPA is in-person.
- Despite the increase of telehealth, there are limited studies conducted regarding validity of a physical assessment performed remotely.
- 10 studies reported telehealth to be cost effective in 60% of the included studies.

Objectives

- Determine whether there is agreement in the primary outcomes of identification of malnutrition and severity level of malnutrition between telehealth and in-person consults.
- Determine whether there is agreement in the specific constructs. (e.g., muscle loss and severity)

Methods

Hypothesis: There will be a 67% or greater agreement as compared to the gold standard NFPA performed in-person.

Phase I: The Inter-rater Variability

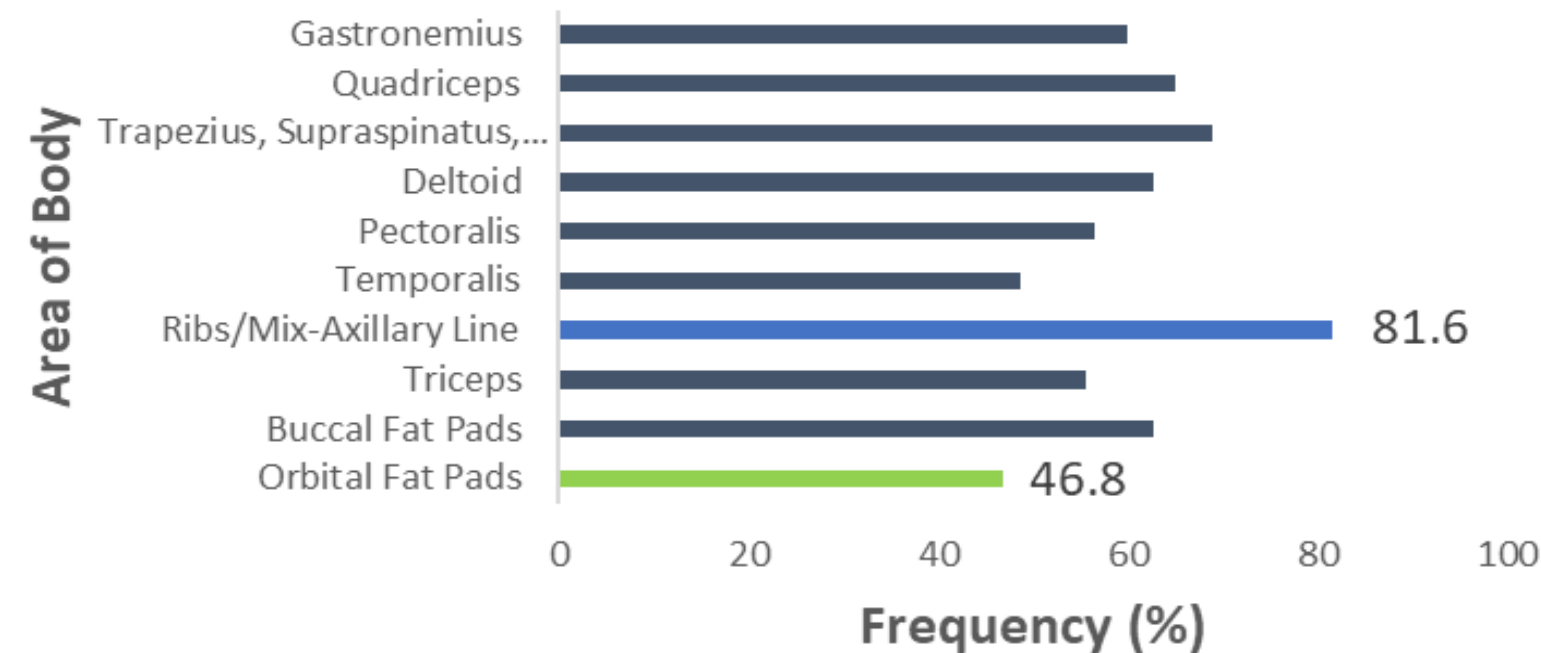
Subject matter experts will validate clinical skills ensuring dietitian A (performing remote) and dietitian B (performing in-person) have similar skill levels for assessment.

Phase II: Network Rollout

- Dietitian A will conduct the assessment on the same day as Dietitian B.
- Study was conducted at 7 locations.
- Study utilized generated block design randomization scheme.
- One hundred and twenty-eight patients were included in the study for final determination.

Results

Percent Match Between Telehealth and In-Person for Specific Areas of the Body



- The ribs/mix-axillary line resulted in the greatest agreement between telehealth and in-person NFPA with an 81.6% agreement.
- The orbital fat pads region resulted in the most discrepancy with 46.8% agreement.
- 94.7% of patients needed assistance for completion of telehealth NFPA while only 1.5% of patients needed assistance for in-person NFPA.

Conclusion and Future Directions

- Between telehealth and the gold standard in-person NFPA, a value of a 64% agreement was achieved (preliminary findings).
- Results offer an opportunity to develop strategies for improving agreement in the specific areas of the body impacting the overall agreement in malnutrition classification.
- Future studies are needed to evaluate the validity of telehealth for identification of malnutrition where a registered dietitian may not be available to see patients in-person.

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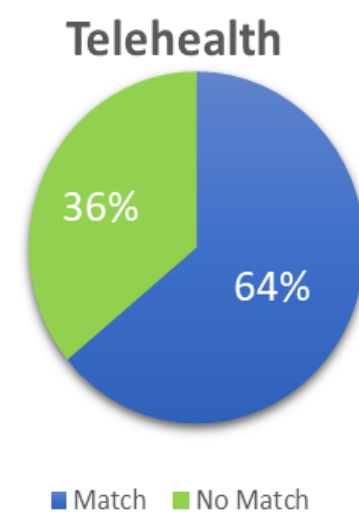
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Percent Agreement of Malnutrition Classification for In-Person vs. Telehealth



Percent for classification of overall malnutrition between in-person and remote showed a 64% agreement.

Patient Demographics

Average age:
63.92 (~64)

Gender:
Female: 54.7%
Male: 45.3%

Race:
White: 88.4%
Black/African American: 6.1%
Asian: 0.7%
Multi-racial: 3.4%
Other: 1.4%

Ethnicity:
Hispanic or Latino: 8.1%
Non-Hispanic/Latino: 90.5%