Getting a Grip on Nutrition Related Muscle Function Losses
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Background

Malnutrition: 30-50% of patients admitted to inpatient rehab program.
Characterized by: inadequate protein-energy intakes, muscle losses and functional changes.
Impact: increases risk for pressure sores, length of stay and risk of being discharged to higher level of care.

Registered Dietitians (RDs) provide care that:
- diagnoses
- treats
- monitors

Currently lack: objective measures of nutrition related muscle function changes.

Handgrip Strength (HGS) is an accepted criterion for assessing malnutrition related muscle function losses.

Context

Three specialized inpatient rehabilitation units: stroke, neuro-musculoskeletal (MSK), brain injury.

1.1 Registered Dietitian full time equivalents

Methods

Preparation
- Purchase device
- Create evaluation plan

Train
- Online
- In-Person
- RD Use HGS

Implement

Evaluate
- collected measures of HGS training effectiveness, clinical uptake and clinical utility before and at 2, 4, 6 months after implementation.

Outcomes

Training Effectiveness
- total of seven RDs trained over four sessions
- I felt confident in safely conducting handgrip strength assessments after I was approved to complete the assessments independently.

Clinical Uptake
- no clinically significant impact on RD efficiency
- Patients seen by registered dietitians

Clinical Utility
- useful as a...
  A) diagnostic tool
  B) monitoring tool
  C) motivational tool

Case Study

60 year old male assessed on admission to neuro-MSK rehab
- Body Mass Index = 18.9 (normal=18.5-25)
- eating poorly at home
- eating better in hospital before rehab
- gained some weight but HGS measurably reduced

...2 weeks later...
- eating nutrient dense items
- wounds healing
- HGS within normal limits

Lessons Learned

- Handgrip strength adds value to dietetic practice without impacting efficiency.
- Regular discussion of difficult and interesting cases maintains use and builds confidence.

Next Steps

- Share findings.
- Plan to roll out with RDs working in:
  - pediatric obesity
  - outpatient RDs, &
  - sub-acute inpatient wards.

References
