Role of Nutrition in Hospital Discharge Planning: Current and Potential Contribution of the Registered Dietitian

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Hospital Background

• Hospital is a level 1 trauma center, with multi-organ transplants, obesity surgery, regional cancer center, heart failure program, and geriatric care center
• Hospital has 2014 goal to eliminate preventable deaths and 30-day readmissions
• Among top 10 by U.S. News and World Report
• 193 Penn physicians were Philadelphia Magazine’s top doctors
• Nurses have achieved Magnet status

• With thousands of MD and RD positions in hospital, Registered dietitians (RD) are the smallest group of professionals in the institution
  – 20 RDs to care for 784 patients, 42,500 admissions for FY 2011
Outline

• Registered Dietitian (RD) effectiveness
• Current contributions of hospital-based RD
• Potential future role of RD
Counseling by RD Changes Patient Behavior

• In weight loss clinic, RD instruction improves weight loss success
  – Raatz et al, JADA 2008
• In MD office, RD counseling improves patient weight management and lipid profile
  – Welty, Am J Cardiol 2007
  – Gaetke et al, JADA 2006
• In heart failure clinic, RD diet education improves patient adherence to low Na diet
  – Arcand et al, Am Heart J 2005
• In-hospital, RD counseling improves patient cardiac diet behaviors
  – Cook, Can J Diet Prac Res 2006
Nutritional Management by RD Improves Clinical Outcomes

• In long-term acute care facility, implementation of RD recommendations for enteral tube feeding in patients resulted in
  – Shorter length of stay (28.5 vs. 30.5 days, p<0.05)
  – Improved albumin levels (0.13 vs. -0.44 g/dL, p<0.05)
  – Desired weight pattern (0.51 vs. -0.42%, p<0.05)

• Braga, et al. JADA 2006
Nutritional Management by RD Improves Clinical Outcomes

In 259 patients with age \( \geq 65 \) years

**Control**
- In-hospital standard screen or 1 visit by RD

**Intervention**
- Individualized nutrition assessment
- Enhanced food intake
- Protein/energy and micronutrient supplements as needed
- 3 home visits by RD after discharge

**Results at 6 months**
- Mini-nutritional assessment score improved (\( p=0.004 \))
- Low albumin level less frequent (9.7% vs. 22.9%, \( p=0.03 \))
- Mortality lower (3.8% vs. 11.6%, \( p=0.046 \))
  - Feldblum, J Am Geriatr Soc 59; 10-17, 2011
  - Site of study was Israel, not U.S.
CURRENT HOSPITAL NUTRITION PRACTICE
Nutrition Screening

• The Joint Commission requires nutrition screening within 24 hours of hospital admission
  – Often done by nurses using individual institutional criteria
    • Unexpected weight loss
    • Gastrointestinal symptoms
    • Obvious emaciation
    • Pressure ulcers
    • Intravenous or tube feedings
  – High risk patients should be referred to RD for full nutrition assessment
Nutrition Assessment

• Evaluation includes:
  – Diet history
  – Weight history
  – Medical history
  – Medication profile
  – Laboratory values
  – Current conditions
  – Physical examination for nutrient deficiency/excess

• Nutrition care plan developed
• Nutrition risk level set, determines timing of follow-up

• Conducted by RD, requires 1 hour to complete
Role of RD in Hospital

• Nutrition assessment of referrals
  – From nutrition screen by nurses
  – From physicians
  – For tube or intravenous feedings

• Nutrition assessment of patients with high risk diagnosis
  – ICU care

• Monitoring of nutrition support therapy

• Provision of discharge information for tube or intravenous feedings

• Reports to outpatient RD on high risk patients
  – When there is RD in an outpatient care center

• RD participation in hospital discharge planning rounds
POTENTIAL FUTURE DIETITIAN ROLE
Potential Solutions - Communication

• Use electronic medical record (EMR) to send RD assessment information to discharge planners

• Use EMR to alert RD to high-risk patients

• Add questions about patient’s independent activities of daily living to discharge planner’s information
Potential Solutions

- Rescreen by RD or dietetic technician prior to discharge from hospital
- Include questions about ability to prepare meals, shop for food, obtain supplements if needed after discharge home
- Assess need for support that was not required prior to admission
- Assess change in nutrition status
Increase Cases with Nutrition Assessment

Benefits
- Potential to address more subtle nutritional problems
- Potential to improve post-hospital outcomes

Challenges
- Staffing
- Identification of those who will benefit most
  - All patients over age 65 years?
  - All Medicare, Medicaid patients?
  - All those with emergency dept admissions?
Ensure that Nutrition Assessment Goals are Included in Discharge Plan

**Benefits**
- Less risk of missed information by discharge planners
- Better integration of hospital vs. home nutrition planning
- Potentially fewer readmissions

**Challenges**
- New documentation requirement
  - Communication
  - Staffing
  - Cost
- Only possible for those with full nutrition assessment
High Risk Patients

• RD in Emergency Department
  – Screen and provide nutrition assessment to emergency admissions
  – Begin nutrition care right away
  – Set up outpatient nutrition services for those who are not admitted
Potential Solutions-Staffing

• RD position on discharge planning team
  – Screen hospital records for nutrition care plans that need home support
  – Screen records for change in status since RD assessment that increases care needs
  – Person to person report to outside facilities/services
True Integration of Hospital and Post-hospital Nutrition Care

Benefits
- Potential to reduce mortality
- Potential to reduce readmissions

Challenges
- Staffing
- RD position with PACE services
- RD position with heart failure programs
- RD position with all outpatient clinical programs
- RD position with community geriatric day programs
Potential Solutions - Cost

• Incentivize hospitals for cases where likely readmission is avoided
• Pay RD for home visits for nutrition assessment
• Fund dietetics staff to find the most cost-efficient solutions
• NIH call for clinical trials comparing 2-3 approaches to best outcomes of nutrition care
In Conclusion

• To move from the current level of RD availability into a future with enhanced nutrition care of elders is daunting

• Since the RD has the best training and skills to provide enhanced nutrition care, we should take the challenge