Welcome to Today’s Expert Webinar for the 2019 MQii Learning Collaborative:
“Extending the Reach of Hospital-Based Nutrition: Improving Patient Recovery Beyond the Acute Care Setting”

September 5, 2019
We will start promptly at 1:00 PM ET
(12:00 PM CT; 11:00 AM MT; 10:00 AM PT)

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# Today’s Agenda

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and Introduction to the Webinar</td>
<td>Christina Badaracco, MPH, RD, <em>Research Scientist at Avalere Health</em></td>
</tr>
<tr>
<td>Overview of the <em>MQii Learning Lab: Assessing Transitions of Care to the Community</em></td>
<td>Wendy Everett, ScD, <em>Senior Advisor at Avalere Health</em></td>
</tr>
<tr>
<td>Delivering Meals to Reduce the Impact of Malnutrition</td>
<td>Gerry Howick, MBA, RD, CD, <em>Clinical Nutrition Supervisor at Legacy Health</em></td>
</tr>
<tr>
<td>Malnutrition Across the Continuum of Care at James A. Haley Veterans’ Hospital</td>
<td>Jessica Settles, RDN, LDN, <em>Clinical Dietitian, Flowers Hospital</em></td>
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<tr>
<td></td>
<td>Questions – 15 min</td>
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</table>
Highlight the importance of malnutrition care across settings

Share the background and approach to the MQii Learning Lab: Assessing Transitions of Care to the Community

Review key takeaways and high-level findings
The Challenge of Missing Nutrition Status in Care Transitions

Figure 4. Framework for Existing System-Level Care Pathways
Determinants of Patient Experience and Outcomes Across Settings of Care

- Social Determinants of Health
- Disease and Chronic Conditions
- Incentives
- Population Health Management

Figure Source: Dialogue Proceedings / Advancing Patient-Centered Malnutrition Care Transitions
Advancing Patient-Centered Malnutrition Transitions of Care

In 2018, Avalere Health, the Academy of Nutrition and Dietetics, and the Defeat Malnutrition Today (DMT) Coalition convened a national meeting in Washington, DC, entitled “Advancing Patient-Centered Malnutrition Transitions of Care”

SPECIFIC OBJECTIVES OF THE DAY-LONG SESSION WERE TO:

● Evaluate the current state of care transitions for malnourished patients and patients at-risk for malnutrition

● Identify high priority care transition gaps and opportunities to address these gaps across the care continuum

● Outline key considerations for integrating malnutrition care into system-level care pathways to support patient goals and improve outcomes
Hospitals and primary care practices that indicated they had in place or were planning to implement transitions of care programs were identified.

Avalere contacted these sites’ nutrition directors or managers to request interviews about their transitions of care programs.

- 14 identified hospitals
- 15 identified primary care practices

Avalere conducted interviews with interested and responsive hospitals and practices.

- 10 interviews with hospital-based nutrition managers/directors
- 6 interviews with primary care practice-based care managers
Results of Learning Lab

Few Established Programs
- Fewer transition of care programs had been fully implemented than anticipated

Top Barriers in Hospital Settings
- Lack of nutrition care in discharge planning
- Lack of champions among administration for a nutrition-focused care transitions program
- Lack of staffing and prioritization for dietitians’ services

Top Barriers in Primary Care
- Lack of compatible electronic health records and communication avenues from hospitals
- Lack of awareness of proper malnutrition care among medical staff
- Lack of engagement with dietitians

Top Barriers in Community
- Lack of effective means of identifying and addressing nutritional risk
- Better integrating nutrition-focused documentation in EHRs, including nutrition care in discharge planning
- Providing nutrition-focused education and resources to physicians
- Developing a standardized transitions-of-care protocol that addresses nutrition needs

Interview process revealed several innovative programs as transition of care “gems” that we’ll highlight for you today
Gerry Howick, MBA, RD, CD
Food and Nutrition Manager
Salmon Creek Legacy Health

- Share background and approach to addressing malnutrition in the community
- Review key takeaways
Disclosures

none
Background

- Audit in 2017: Average 30% of patients malnourished
  - Discharged with higher rate of readmission
- Patients identified as malnourished stay longer
  - Not long enough to impact a change to their condition of malnutrition
- Identified need to support patients when they are home
  - Patients think more about nutrition after discharge (1)
  - Reported barriers to adequate nutrition:
    - Food insecurity
    - Fear of eating the wrong food
    - Too weak to shop/store/prepare/cook/eat meals
    - Limited mobility
    - No appetite so less motivation to eat
    - Limited resources available in community
Getting Started

- Grant funded by hospital foundation
- New process, so small pilot
  - > 10 patients in 1 year
- 4 weeks of food provided
  - > Limited evidence in literature but based on reduced readmissions within 30 days
- Support from leadership and nursing staff
- Eligibility screen with patients identified with malnutrition
  - > Approx. 1 per week
- Long term view to scale up to meet need
Starting the Process – Asking Questions

- How will we…
  - Identify patients for program
  - Get the food to the patient?
    - Safety of staff
    - Food safety
  - Cover liability?
  - Communicate the menu?
  - Storage/heating instructions?
  - Collect data and review outcomes?

- What food will we serve?
# Eligibility Criteria

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<th>No</th>
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<td><strong>Information from EHR</strong></td>
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<td></td>
</tr>
<tr>
<td>Inpatient at Salmon Creek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identified as malnourished? Or at high risk of becoming malnourished</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharging home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharging to home county</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No food allergies in chart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No listed food dislikes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No diagnosis of eating disorder</td>
<td></td>
<td></td>
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<tr>
<td>On “general,” “high protein/calorie,” “heart healthy,” “60 gm CHO,” or “no added salt” diet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No hx of VIW</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Information from Patient and/or Family</strong></td>
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<td></td>
</tr>
<tr>
<td>Home has working fridge, freezer and space to accommodate 1 weeks’-worth of food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home has working microwave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient agrees to participate (and has signed agreement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No known food allergies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food dislikes are not in more than one food group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pt or SO available to receive food</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Answering the Questions

- All patients are screened for meal delivery program if diagnosed with malnutrition

- Delivering meals
  - Weekly – to each patient – by volunteers
  - 2 delivery options per week
  - Transported in 2 coolers
    - Frozen
    - Refrigerated

- Meals and labels

---


day: 1 2 3 4 5 6 7
breakfast / lunch / dinner
best by date:

keep frozen until ready to eat
remove lid, and place loosely back on top
heat from frozen in microwave for 2-4 minutes.
(times may vary for your microwave)
stir contents half way through cooking
allow to cool for 3-5 minutes before eating.
Answering the Questions – Food Provided

- Food served to patients
  - Balanced
  - 30g protein per meal, 2000 kcal per day
  - Variety
  - Reduced volume (where possible)
  - All meals taste-tested

- 7-day cycle

- Worked with executive chef to create menus
  - Food made during tray-line where possible
  - Salad items made one day ahead of delivery
  - Food gathered by chef/cooks
  - Food pulled for delivery by RDs
<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
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<tr>
<td><strong>Breakfast</strong></td>
<td>Souffle</td>
<td>Frittata</td>
<td>French Toast</td>
<td>Oatmeal</td>
<td>Ham scramble</td>
<td>Cheese Omelet</td>
<td>Breakfast Bake</td>
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<tr>
<td></td>
<td>Turkey</td>
<td>2 Turkey sausage</td>
<td>2 turkey sausage</td>
<td>Raisins</td>
<td>Peaches</td>
<td>sausage</td>
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<tr>
<td></td>
<td>Sausage</td>
<td>Whole fruit</td>
<td>Butter &amp; Syrup</td>
<td>Walnuts</td>
<td>Milk</td>
<td>Apple sauce</td>
<td>Apple Sauce</td>
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<td></td>
<td>Whole milk</td>
<td>Orange Juice</td>
<td>Applesauce</td>
<td>Brown sugar</td>
<td>Orange Juice</td>
<td>Orange Juice</td>
<td>Cranberry Juice</td>
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<td></td>
<td>Apple Sauce</td>
<td>Whole milk</td>
<td>Whole milk</td>
<td></td>
<td>Whole milk</td>
<td>Whole milk</td>
<td>Whole Milk</td>
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<tr>
<td></td>
<td></td>
<td>Orange Juice</td>
<td>Orange Juice</td>
<td></td>
<td></td>
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<td><strong>Lunch</strong></td>
<td>Chicken Salad</td>
<td>Pork Loin</td>
<td>Chef Salad</td>
<td>Baked fish</td>
<td>Turkey Meatloaf</td>
<td>BBQ chicken</td>
<td>Chicken Casserole</td>
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<tr>
<td></td>
<td>Orange Roll</td>
<td>Mashed Potatoes</td>
<td>Ranch Dressing Roll</td>
<td>Rice</td>
<td>Mashed potatoes</td>
<td>Corn</td>
<td>Carrots</td>
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<tr>
<td></td>
<td>Chocolate Pudding</td>
<td>Gravy Broccoli</td>
<td>Orange</td>
<td>Asparagus</td>
<td>Broccoli</td>
<td>Dinner roll</td>
<td>Ranch</td>
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<tr>
<td></td>
<td></td>
<td>Cheesecake</td>
<td>Vanilla pudding</td>
<td>Lemon slice</td>
<td>Pears</td>
<td>Peaches</td>
<td>Mixed fruit</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>chocolate pudding</td>
<td></td>
<td>Choc Chip Cookie</td>
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<tr>
<td><strong>Dinner</strong></td>
<td>Hamburger</td>
<td>Northwest Salad</td>
<td>Chicken Orzo</td>
<td>Pork Carnitas</td>
<td>Almond Chicken</td>
<td>Sloppy Joe</td>
<td>Roast Turkey</td>
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<tr>
<td></td>
<td>Condiments</td>
<td>with Chicken</td>
<td>Green beans</td>
<td>Black beans</td>
<td>pasta</td>
<td>pub bun</td>
<td>Mash potatoes</td>
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<tr>
<td></td>
<td>Relish plate</td>
<td>Berry Dressing</td>
<td>corn</td>
<td>pasta</td>
<td>Pasta sauce</td>
<td>Green Beans</td>
<td>Broccoli</td>
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<tr>
<td></td>
<td>Chips</td>
<td>Bread Roll</td>
<td>Brownie</td>
<td>Green beans</td>
<td>Green sauce</td>
<td>Peanut Butter</td>
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<td></td>
<td>Apple</td>
<td>Jammer</td>
<td>Peanut butter</td>
<td>cookie</td>
<td>Snickerdoodle</td>
<td>Cookie</td>
<td>Cookie</td>
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<tr>
<td></td>
<td>Lemon Bar</td>
<td></td>
<td>cookie</td>
<td></td>
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</table>
Data Collection

- Patient survey
  - Before and after program participation
- Hand grip strength
  - Before and after program participation
- Food intake survey
  - Every meal, all days
- Frailty score
  - Before and after program participation
- Readmission rates
  - Within 30 days of discharge
Patient Experience - Qualitative Measures

- **Experience = Education**
  - Improved understanding for the importance of:
    - Eating regularly
    - Eating variety
    - Protein
  - Reduced confusion about what they should eat based on their clinical condition
    - Confidence in eating meals
  - Relief for relatives knowing their loved ones are getting nutritious meals to eat 3 times per day
  - Relief for patients experiencing food insecurity
  - Independence in their home
  - Barriers to be able to eat meals removed
  - Stronger/improved mobility
  - Ensures balanced nutrition during overwhelming and exhausting post-discharge period
Quantitative Measures

- Reduced readmission rate
- Improved hand grip strength
- Improved frailty scores
Tips for a New Program

- Regular PDSA (Plan/Do/Study/Act) meetings after initiation
- Flexibility for unexpected changes
- Be very clear on expectations with patients (e.g., delivery date, time, and menu)
- Screen thoroughly
- 4 weeks works…if planning for longer, add more meal options
- Close communication with the RD coordinator, kitchen staff, and driver
- Information on program in new *JAND* Supplement article
Next Steps

- Continue to improve on current menu
- Offer an opportunity to purchase and pick up at the hospital
- Focus more on patients at risk of malnutrition
- Continue to follow data to show the need
- Present findings to administrators/leadership
The Team

From left to right:
Laura Walsh, (Volunteer Manager),
Gerry Howick (Food and Nutrition Manager),
Brian Seto (Executive Chef),
Alison Lambert (RD),
Ashley Harmon (RD)
References

• Describe the retrospective research study measuring the impact of malnutrition identification in a veteran ambulatory setting

• Present study findings

• Highlight best practices and evaluate future directions
Research Project Background

**Background:** In 2015, the VA Nutrition and Food Service Strategic Planning Goals addressed the identification and treatment of malnutrition.

**Researchers:** Jessica Settles, RDN, LD/N; Sherri Lewis, MS, RD, LD/N; Claire Bell, MSPH, RD, LD/N, CSG; Dustin Lawhorne, RD, LD/N

**Goal:** Determine the impact of RD identification of malnutrition in VA outpatient and home-based primary care (HBPC) settings on patient’s clinical improvement.

**Hypothesis:** Identification of malnutrition in the primary care setting will lead to clinical improvements.
Background on Malnutrition Clinical Characteristic Implementation at JAHVH

• Extensive and comprehensive hands-on in-service training of James A. Haley employees using the AND/ASPEN criteria
  • Simulations
  • Continual opportunities to retrain each year
• HBPC RDs becoming board certified specialist in Gerontological Nutrition (CSG)
• Pocket cards
• Malnutrition rounds
• Internship

Challenges

• Continual need for staff training given frequent turnover
• Need to train not only RDs but also providers in the process
  • Adherence to ONS criteria
Methods and Design

**Design:** Retrospective study on quality improvement

**Data Collection:** Chart reviews

**Sample:** 98 patients identified as malnourished between March 2016 and March 2018

**Exclusion criteria:** Active oncology treatment, hospice admission, death within study timeframe

**Outcomes studied:**
- Malnutrition clinical characteristics
- Length of stay
- Morse fall risk
- Number of falls
- Zaritt caregiver burden
- Number of dehydration-related ER visits
- Osmolality
- Number of hospital admissions
Results Highlights

Usage of the MCCs to Identify Malnutrition

- Inadequate Energy Intake: 82%
- Significant Weight Loss: 67%
- Fluid Accumulation Masking Weight Loss: 6%
- Loss of Muscle Mass: 96%
- Loss of Subcutaneous Fat: 87%
- Diminished Functional Status: 44%

Intervention Utilization

- ONS: 93% (HBPC), 98% (Ambulatory)
- Coordination of Care: 71% (HBPC), 51% (Ambulatory)
- Education: 86% (HBPC), 100% (Ambulatory)
- Counseling: 5% (HBPC), 77% (Ambulatory)
Results, continued

**Improvement in Malnutrition Clinical Characteristics**

- **Functional Status**: 50% (HBPC), 57% (Ambulatory)
- **Intake**: 59% (HBPC), 76% (Ambulatory)
- **Weight**: 57% (HBPC), 71% (Ambulatory)
- **Muscle**: 30% (HBPC), 39% (Ambulatory)
- **Fat**: 39% (HBPC), 47% (Ambulatory)
Results, continued

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Setting</th>
<th>N</th>
<th>Pre intervention (mean +/- std. dev.)</th>
<th>Post-intervention (mean +/- std. dev.)</th>
<th>Avg. Change</th>
<th>P-value</th>
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<tbody>
<tr>
<td>Dehydration-related ER visits</td>
<td>Total</td>
<td>89</td>
<td>0.06 +/- 0.28</td>
<td>0.05 +/- 0.28</td>
<td>-0.011</td>
<td>0.708</td>
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<tr>
<td></td>
<td>Outpatient</td>
<td>45</td>
<td>0.02 +/- 0.15</td>
<td>0.04 +/- 0.21</td>
<td>0.02</td>
<td>0.57</td>
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<tr>
<td></td>
<td>HBPC</td>
<td>44</td>
<td>0.09 +/- 0.29</td>
<td>0.05 +/- 0.30</td>
<td>-0.45</td>
<td>0.323</td>
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<tr>
<td>Osmolarity</td>
<td>Total</td>
<td>57</td>
<td>290.39 +/- 9.57</td>
<td>290.53 +/- 9.57</td>
<td>0.14</td>
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<tr>
<td>Weight (lbs)</td>
<td>Total</td>
<td>77</td>
<td>135.76 +/- 12.75</td>
<td>139.30 +/- 12.75</td>
<td>3.54</td>
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<td>132.03 +/- 24.05</td>
<td>131.64 +/- 26.39</td>
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<td>0.141</td>
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<td>141.83 +/- 28.53</td>
<td>148.03 +/- 33.68</td>
<td>5.98</td>
<td>0.023*</td>
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<td>Hospital Admissions</td>
<td>Total</td>
<td>89</td>
<td>0.48 +/- 0.82</td>
<td>0.26 +/- 0.82</td>
<td>-0.22</td>
<td>0.015**</td>
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<td>0.44 +/- 0.94</td>
<td>0.24 +/- 0.71</td>
<td>-0.76</td>
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<td>HBPC</td>
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<td>0.52 +/- 0.82</td>
<td>0.27 +/- 0.69</td>
<td>-1.82</td>
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<td>Length of Stay (days)</td>
<td>Total</td>
<td>89</td>
<td>3.19 +/- 6.23</td>
<td>1.91 +/- 6.23</td>
<td>-1.28</td>
<td>0.009**</td>
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<tr>
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<td>Outpatient</td>
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<td>2.44 +/- 5.37</td>
<td>1.69 +/- 5.46</td>
<td>-0.20</td>
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<td>1.91 +/- 5.85</td>
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<td>Falls</td>
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<td>0.17 +/- 0.86</td>
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<td>Fall Risk Score</td>
<td>Total</td>
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<td>2.63 +/- 0.23</td>
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<td>Caregiver Burden</td>
<td>Total</td>
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<td>2.00 +/- 2.89</td>
<td>2.28 +/- 2.89</td>
<td>0.28</td>
<td>0.688</td>
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*Statistically significant, *P-value determined by Wilcoxon-signed rank test for these variables. All others were normally distributed and significance was generated using two-tailed t-test.
Conclusions and Further Directions

- Identification by an RD significantly improved hospital LOS, number of admissions, and patient’s condition when evaluated based on the malnutrition clinical characteristics.

- Due to decreases in hospital LOS and admissions, RD identification may result in improved hospital ratings as well as better patient outcomes and reduced hospital burden.

- VA’s excellent continuity of care establishes a best practice for private sector hospitals.

- Future studies are needed to determine whether RD intervention intensity and duration between visits has an impact on patient malnutrition outcomes.

- A larger sample size is needed in future studies to determine whether specific interventions lead to better outcomes.
Questions?

15 mins