Impact of malnutrition risk on patient outcomes and hospital costs

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#EHMA2024
225 years of excellence in healthcare...
The International Declaration of Human Right to Nutritional Care
Vienna, 2022

“It is universally recognized that,
(…)
Disease-related malnutrition is a frequent condition caused by virtually any disease, with negative impact on a person’s quality of life, increasing co-morbidities and mortality, and prolonging hospital stays, thereby resulting in unnecessary healthcare costs; therefore nutritional therapy must be administered by trained and competent health care personnel (Dietitians/nutritionists, nurses, doctors, pharmacists, etc.).”

There’s room for improvement…
How healthcare payers can expand nutrition support for the food insecure*
by Tamara Baer, Matthew Isaacs, Alex Mandel, and Pradeep Prabhala

Poor nutrition is a meaningful health risk factor that affects six in ten adults with a chronic disease.

Across the United States, regions in which a larger percentage of the population does not get enough to eat on a regular basis tend to have higher rates of chronic illness such as diabetes, obesity, and hypertension.

The recent growth of nutritional support programs among US healthcare payers represents a significant step in the right direction for improving members’ health and well-being.

*McKinsey Company, November 2021
How healthcare payers can expand nutrition support for the food insecure*
by Tamara Baer, Matthew Isaacs, Alex Mandel, and Pradeep Prabhala

While more research is needed to establish the relationship between nutrition and health (…) payers have a significant opportunity to build on the success of these programs, scale to wider populations, and address the rising societal challenge of food insecurity.

Beyond improving health outcomes for a vulnerable population, expanding nutrition benefits is also great business—with the potential not only to increase members’ health and happiness but also to lower overall care costs and provide a point of differentiation in a highly competitive market.

*McKinsey Company, November 2021
Assumptions

Hospital discharges in 2021 and 2022
Age ≥ 18 years

Complete NRS2002 Nutritional Risk Screening

4.345 inpatients
Of the 4,345 inpatients screened:
- 728 with no Nutritional Risk
- 3,617 present Nutritional Risk

48% screened at Internal Medicine wards
76% admitted via ER
% readmission in 30 days: 21.1%
% readmission in 90 days: 33.8%

Average Age: 72 years
% Male: 51%
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>LOS</th>
<th>Mortality</th>
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</thead>
<tbody>
<tr>
<td>Inpatient</td>
<td>5,477,32 €</td>
<td>8,7 days</td>
<td>5,2%</td>
</tr>
<tr>
<td>Inpatient</td>
<td>14,364,51 €</td>
<td>20,2 days</td>
<td>15,6%</td>
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</tbody>
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*Pearl and Philip Madvig*

From the Magazine (January–February 2020) Robert
# Managing the Most Expensive Patients*

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
<th>LOS Days</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient</td>
<td>5,477,32€</td>
<td>8,7</td>
<td>5,2%</td>
</tr>
<tr>
<td>No Risk</td>
<td>7,195,73 €</td>
<td>8,3</td>
<td>0,4%</td>
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<tr>
<td>Malnutrition Risk</td>
<td>15,807,38 €</td>
<td>22,6</td>
<td>18,7%</td>
</tr>
</tbody>
</table>

*Pearl and Philip Madvig
From the Magazine (January–February 2020) Robert
Cost Decomposition and Dispersion

NRS Score

Average Cost

Cases
Nutritional risk is associated to poorer outcomes and higher hospitalization LOS.

Mortality rate higher in patients with severe nutritional risk.

Higher Incidence of complications.
Nutritional risk is associated with higher readmissions

The higher the nutritional risk the higher the cost – medicine, exams/labs and ward
Where do we go from here?

Portuguese Health System 2024 reform, where primary and hospital care are integrated, with changes in financing to a capitation population-based system;

Opportunity to address DRM before hospitalization occurs and avoid the large prevalence of malnutrition risk on hospitalized population;
Where do we go from here?

Healthcare professional’s lack of awareness of importance of nutritional care is a fact. Integrating Nutritional Care across care continuum and assuring its benefits for population disease burden is like the Columbus egg, that no one ever put on practice. It is innovative that in three years it may be possible to show practical results.

Think outside the box
Thank you

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