

ORAL NUTRITION SUPPLEMENTS' IMPACT ON HOSPITAL OUTCOMES IN THE CONTEXT OF THE AFFORDABLE CARE ACT AND NEW MEDICARE REIMBURSEMENT POLICIES

Sunday, October 20, 2013

Poster Board # 30
Health Services, and Policy
Research (HSP)

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Purpose: To assess the effect of oral nutrition supplements (ONS) on 30-day readmission rates, length of stay (LOS), and episode costs in hospitalized Medicare patients, aged 65 and over, with diagnoses affected by new Medicare reimbursement rules under the Affordable Care Act (ACA): acute myocardial infarction (AMI), congestive heart failure (CHF), and pneumonia (PNA).

Methods: Analyses were conducted using the Premier Perspectives Database over an eleven-year period (2000-2010) on Medicare patients aged 65+ and carrying a diagnosis of AMI, CHF, or PNA. One-to-one matched samples of ONS and non-ONS episodes were created using propensity score matching, producing samples of 20,870, 38,418, and 47,477 AMI, CHF, and PNA episodes, respectively. To eliminate bias from confounding, instrumental variables (IV) regression analysis was performed to quantify the effect of ONS on the probability of 30-day readmission, as well as on LOS and episode cost. For comparison, analyses were also conducted on elderly Medicare patients with any primary diagnosis, with a 1:1 matched sample of 667,684 episodes.

Results: Use of ONS decreased the probability of 30-day readmission, LOS, and episode costs among hospitalized aged 65+ Medicare patients. Most notably, ONS use was associated with a statistically significant ($p < 0.01$) reduction in the probability of readmission within 30 days of 12% for AMI episodes and 10.1% for CHF episodes. The effect on LOS and episode cost was greatest for the comparison population (all primary diagnoses), with decreases of 16.0% and 15.8% ($p < 0.01$), respectively.

Percent change in outcome due to oral nutritional supplements			
Population	30-Day Readmission Probability	Length of Stay	Episode Cost
65+ Medicare patients with acute myocardial infarction	-12.0%**	-10.9%**	-5.1%*
65+ Medicare patients with congestive heart failure	-10.1%**	-14.2%**	-7.8%**
65+ Medicare patients with pneumonia	-5.2%	-8.5%**	-10.6%**
All 65+ Medicare patients	-8.4%**	-16.0%**	-15.8%**

Note: * indicates significance at the 5% level; ** indicates significance at the 1% level.

Conclusions: In the aged 65+ Medicare patient population with AMI and CHF, ONS improves 30-day readmission, LOS, and episode cost outcomes. This also holds true for all aged 65+ Medicare patients. Among patients with PNA, ONS improves LOS and episode cost outcomes. ONS use in hospitalized Medicare patients aged 65+ may present an inexpensive, evidence-based solution for hospitals seeking to meet the quality targets established by the ACA.