Analysis of Adult Inpatient Malnutrition at the University of Virginia Health System

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Purpose: The purpose of this study is to determine the effectiveness of the recent intervention on documentation of malnutrition, and, secondarily, to describe some characteristics of the patients identified as malnourished.

Relevance: Correct documentation and coding of malnutrition relies heavily on communication between registered dietitian nutritionists (RDN) and licensed independent practitioners (LIP). Oftentimes, the malnutrition diagnosis is not documented using the correct terminology for coding, is not documented at all by the LIP, and/or does not include adequate supporting evidence of malnutrition or a nutrition treatment plan.

Background: In hospitalized patients, malnutrition is associated with poor outcomes such as readmissions, increased length of stay (LOS), nosocomial infections, and increased healthcare costs. It is important to identify and address inpatient malnutrition in order to provide the best possible outcomes.

Hospital reimbursement from the Centers for Medicare and Medicaid Services (CMS) for the treatment of malnourished patients is dependent upon correct documentation and coding, requiring adequate communication among members of the interdisciplinary team.

Methods: A malnutrition note type in the electronic medical records was introduced in November 2018 to facilitate communication between RDNs and LIPs.

Data were collected via Epic reports for adult inpatients admitted January-February of 2018 and 2019. Included in the reports were patients with malnutrition documented on the problem list or malnutrition on the discharge diagnosis.

Analysis of variance (ANOVA) and post hoc Tukey test were used to determine significant differences in age and BMI between degrees of malnutrition. Chi square with post hoc analysis was used to determine changes in outcome measures from 2018 to 2019.

Results / Outcomes: A total of 724 adult inpatient admissions were analyzed: n(2018)=339, n(2019)=385. Documentation of malnutrition on the problem list increased from 136 to 252 times. There was a significant increase in the number of malnourished patients who were characterized having had malnutrition on admission (p=0.00003). RDN documentation on the problem list increased significantly from 88 times in 2018 to 217 times in 2019 (p=0.001). Service lines with the highest percent of malnourished patients were medical subspecialties and oncology at both time points. Primary discharge diagnosis categories with the highest percent of malnourished patients were oncology, infectious disease, and general medicine at both time points.

Conclusions: Implementation of the malnutrition note type resulted in improved documentation of malnutrition at University of Virginia Health System (UVAHS). There were more patients with malnutrition documented on the problem list in 2019, specifically those with moderate and severe malnutrition. Of the patients identified as being malnourished, there was a significant increase in those identified as having malnutrition on admission.

Implications for Policy or Practice: Evaluation of the effectiveness of the malnutrition note type at UVAHS warrants continuing efforts for improved documentation of malnutrition. Identifying service lines with the greatest percentages of malnourished patients allows for increased awareness as well as justification for resource allocation (RDN staffing) in those areas.

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Evaluating Efficacy of a Recently Implemented Malnutrition Screening Tool

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Purpose: The purpose of this Quality Improvement initiative was to track outcomes following the implementation of a the Malnutrition Screening Tool (MST) in the acute care setting in an efficient way utilizing embedded features in the electronic medical record (EMR) and the expertise of data analysts in an effort to capture more referrals for the patients deemed to be at nutritional risk.

Relevance: At a tertiary care hospital, a one-day audit was completed by the registered dietitian nutritionists (RDNs) via chart review in February of 2018. Results showed that 12% of patients were identified to have a nutritional risk factor on admission screen but were not referred to the RDN.

Background: A validated nutrition screening tool was implemented in January 2019 to be completed on admission. The MST was selected based on the available evidence as it was shown to be both valid and reliable. A Best Practice Advisory (BPA), which is an alert built into the EMR, prompted nursing staff to enter a nutrition consult, if indicated.

Methods: The nutrition support team collaborated with data analysts to develop a report in the EMR system to monitor outcomes of implementing the screening tool. Outcomes included percentage of patients with MST completed on admission, percentage of patients identified at nutrition risk using a BPA, and of the patients identified at nutrition risk, how many received a nutrition consult. Furthermore, the report indicated if the RDN identified malnutrition as a result of the consult, if malnutrition was put on the problem list, and if malnutrition was a coded diagnosis after discharge. The data analyst created a report which could be run for any specified time frame.

Results / Outcomes: With 5,973 patients discharged between the date of implementation at the end of January and mid-April, the MST was completed on 5,142 (86%) of those patients. Of those with MST completed, 589 (11.5%) were found to be at nutrition risk. Nutrition services received a consult for 555 (94%) of those patients. Upon further review, 145 (26.2%) of the patients who had a nutrition consult resulting from the MST had a form of malnutrition documented by the RDN in the chart, 141 (25.4%) had malnutrition added to the problem list, and 139 (25%) went on to have malnutrition included in the final diagnosis. To date, since implementing the MST, the rate of patients who are identified as being at nutritional risk but not referred has decreased by 50%, from 12% to 6%.

Conclusions: Implementation of a validated screening tool as well as utilizing features embedded in the EMR can improve the number of referrals of patients identified at nutrition risk. Collaboration between RDN and data analysts can result in efficient ways to monitor outcomes of a quality improvement project such as implementation of a new screening tool.

Implications for Policy or Practice: Having an effective report such as this can help target future QI efforts to close the gap of missed referrals and help identify malnutrition.

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