Granting Order-Writing Privileges to Registered Dietitian Nutritionists Can Decrease Costs in Acute Care Hospitals

MANY HEALTH CARE INstitutions are seeking to decrease the cost of providing safe, high-quality care because of changes in payment processes used by the Centers for Medicare and Medicaid Services (CMS) and other payers. Malnourished patients are at risk for poorer health outcomes, such as longer hospital length of stay, higher readmission rates, and increased mortality.[1,2] This increases the cost of care; however, no corresponding increase occurs in payment from insurers. Granting nutrition-related order-writing privileges (OWPs) to registered dietitian nutritionists (RDNs) can help acute-care hospitals enhance the quality of care provided to malnourished patients, improve outcomes, and decrease the costs associated with this care. Documenting potential cost savings while demonstrating improved patient outcomes can build a persuasive case to expand the scope of privileges provided to RDNs. These cost savings may be realized in direct ways, such as reduced labor and supply costs, as discussed in the first section of this article, or in indirect ways, as described in the second section of this article.

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RDN OWPs: POTENTIAL REDUCTION IN DIRECT COSTS

Following the methodology provided by CMS in the February 7, 2013 *Federal Register*[3] to estimate direct cost savings by OWP implementation may be one way to illustrate potential savings in one's own facility. When applying this methodology, one must understand the assumptions used by CMS in their own cost savings calculations. In 2012, 4,900 hospitals received reimbursement from CMS, with an average bed size of 165.[3] CMS then made the following assumptions:

- Five percent of hospitals either had already granted OWPs to RDNs and, therefore, would not realize further cost savings, or would not grant privileges going forward.
- Although CMS cannot be certain how many hospitals will grant OWPs to RDNs, they assumed that at least 15% will.
- Therefore, the expectation was that 15% to 95% of hospitals would realize cost savings from implementation of OWPs for nutrition professionals.

Direct cost savings were assumed to be accomplished in two ways: reducing the expense of goods and services by avoiding inappropriate nutrition orders, such as inappropriate parenteral nutrition (PN), and reducing labor expenses by allowing professionals who are paid less per hour to write necessary orders and manage nutrition care.

Reducing Inappropriate PN Orders

The Academy of Nutrition and Dietetics (the Academy) provided CMS with evidence of cost savings from RDN OWPs by citing a study by Peterson and colleagues,[4] in which a 613-bed hospital saved $169,000 by reducing the use of PN solutions, materials, and pharmacy labor because of RDNs having OWPs and ensuring PN was ordered appropriately. This study was published in 2010,[4] but it used cost data from 2003, so CMS adjusted that data to 2012 figures based on the Consumer Price Index. Because the average bed size of CMS-funded hospitals is 165,[3] this savings amount was adjusted to reflect an average savings per hospital of $45,641. Assuming that 15% to 95% of the 4,900 hospitals would allow OWPs, expected annual savings range from $33,546,135 to $212,258,855 nationally. Table 1 describes recommended steps for implementing a similar quality assurance/performance improvement program to track potential cost savings by following evidence-based guidelines to reduce inappropriate PN use.

In the example provided, the potential annual direct cost savings for reducing inappropriate PN by authorizing RDN OWPs is $78,100.

Reducing Labor Expenses

In addition to the reduction in supplies and labor cited in the Peterson and colleagues study, CMS recognizes that additional time and salary savings would be realized if and when RDNs are provided the autonomy to write nutrition orders independently.[3] Their methodology to determine this additional direct cost savings can be followed to estimate cost savings in other facilities. Table 2 lists data necessary to replicate these calculations in another facility, with a column including assumptions made by CMS in their methodology.[3] The information required for items 1 through 4 can be obtained from hospital administration, human resources, or the hospital finance department. The clinical nutrition department should track the information needed for rows 5 through 8 for a 3-month period and then calculate averages.

Table 1. Quality assurance/performance improvement (QAPI) steps to assess financial impact of inappropriate parenteral nutrition use

QAPI steps	Sample calculations
Step 1. Using evidence-based guidelines such as the ASPEN/SCCM[a] guidelines to determine appropriate use of PN, track the number of inappropriate PN days over a designated period (at least 3 months is recommended).	Step 1. Total inappropriate PN days based on RDN data collection—Month 1: 21 days, Month 2: 27 days, Month 3: 23 days; total for 3-month period=71 days
Step 2. Work with the pharmacy department to establish the cost per day of providing PN, including PN solution, pharmacist labor, bags, and tubing. Work with nursing administration to determine nursing labor costs and any other potential costs to administer PN.	Step 2. PN supplies—$120/day, Pharmacist labor (salary + benefits for order review and compounding)—$165, total cost $285. Additional nursing labor to administer PN instead of oral or enteral nutrition (EN): 10 minutes/day=$5 (salary and benefits). Total cost of all items=$290/PN day.
Step 3. Determine how much it would have cost per day to feed the patient without PN (average patient meal costs/day are approximately $15)	Step 3. Cost to provide EN or oral diets for each patient=$15/day
Step 4. Subtract amount in step 3 from amount in step 2.	Step 4. $290-$15=$275 net cost/day for inappropriate PN
Step 5. Multiply total inappropriate PN days by the costs per day in step 4 to determine a total cost for the 3-month period.	Step 5. 71 days×$275/day=$19,525 for 3-month period.
Step 6. Extrapolate this to an annual figure to determine estimated yearly savings.	Step 6. Extrapolate to 1 year: $19,525×4=$78,100

[a]American Society of Parenteral and Enteral Nutrition and the Society of Critical Care Medicine.[3]

In this methodology, time assumptions were made for writing orders for patients who were either nutritionally noncomplex or complex.[3] The RDNs would not write all nutrition orders for every admitted patient, because not all patients are seen by the RDN; physicians and other licensed independent practitioners would write orders for patients not managed by the RDNs. Noncomplex dietary orders were described as "ordering and monitoring of laboratory tests, subsequent modifications to orders, and dietary orders for discharge/transfer/outpatient follow-up as needed." More complex dietary orders were defined as those for Medical Nutrition Therapy "(for example, PN, tube feedings, patients with multiple comorbidities, transition of patient from parenteral to enteral feeding, and so forth), including ordering and monitoring of laboratory tests, subsequent modifications to orders, and dietary plans and orders for discharge/transfer/outpatient follow-up as needed."[3] Since 2011, when the Academy suggested these definitions to CMS, a new method for categorizing the complexity of patients has emerged from the Academy's Dietetic Practice-Based Research Network.[5] To be consistent with this more recent literature, clinicians should use the definitions provided by the Dietetic Practice-Based Research Network in a recent analysis of inpatient acute-care staffing needs.[6] High-complexity patients are considered those needing nutrition interventions that warrant frequent comprehensive reassessments, in which the RDN documents the impact of the interventions using evidence-based nutrition outcomes. Typically these patients have a chronic or complex disease state that impacts nutritional status, are receiving enteral nutrition or PN requiring frequent adjustments, or require comprehensive nutrition education and corresponding interventions.[6] All other patients are considered "nutritionally stable" or noncomplex for the purposes of this cost calculation.

To determine the percentage of patients who are nutritionally complex, the RDNs can track the following three metrics over a given period: the number of patients seen, the number considered nutritionally complex per the above definition, and the number for whom they would have written a nutrition order. This information can be recorded as part of a departmental productivity monitoring tool and evaluated at the end of the tracking period.

The calculations below explain how CMS arrived at an estimated savings of $49,803,600 to $315,422,800 per year, using the assumptions described in Table 2.

- Minimum calculations based on assumptions that 15% of hospitals will allow OWPs for RDNs: (735 hospitals×5,600 inpatient hospital stays×0.17 hours for basic nutrition orders×$44 per hourly wage difference)+(735 hospitals×1,400 inpatient hospital stays×0.42 hours for complex nutrition orders×$44 per hourly wage difference)=$49,803,600
- Maximum calculations based on assumptions that 95% of hospitals will allow OWPs for RDNs: (4,655 hospitals×5,600 inpatient hospital stays×0.17 hours for basic nutrition orders×$44 per hourly wage difference)+(4,655 hospitals×1,400 inpatient hospital stays×0.42 hours for complex