TPN Collaborative: Improving Network Wide Parenteral Nutrition Care

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Background:
Sodexo Dietitians at Lehigh Valley Health Network (LVHN) identified suboptimal total parenteral nutrition (TPN) management. Interdisciplinary meetings revealed multiple TPN related concerns. RDs reported delays in macronutrient advancement and lack of standardized lab monitoring. Pharmacy reported significant time spent locating providers regarding TPN changes, labs, and renewal orders. Medicine and surgery providers had no clear referral service for home parenteral nutrition (HPN) management, and they reported a knowledge deficit in self-managing TPN and HPN orders.

Objective:
- Improve macronutrient appropriateness
- Implement lab monitoring consistent with ASPEN and LVHN/Sodexo standards
- Improve efficiency with TPN patient related care
- Provide clinical expertise for ordering & management of outpatient (HPN)
- Reduce financial leakage by keeping the infusion product within our network

Methods:
Nutrition support service (NSS) was created including RD, CNSC; physicians (both from medicine and surgery); physician assistants; and pharmacists. Also included assistance from other departments i.e. information services. TPN management consult was created with step-by-step order-sets. NSS providers receive consults via secure email and the on-line medical record. Consult includes if any indication for HPN. Case management also received notification if HPN was triggered. Collaborative TPN rounds held daily. Nutrition grand rounds lecture on HPN was provided and computer based TPN training module was created and made available to all providers.

Results/Conclusions:
NSS applied for Dorothy Rider Pool Trust Grant and was awarded grant to help fund new TPN program. NSS TPN management mirrors ASPEN guidelines including appropriate macronutrient advancement and lab monitoring. In network number of HPN has increased 250%. Efficient team model enabled inpatient pharmacy to adjust their job flow restructuring an 8 hour TPN pharmacist shift to a 4 hour shift. Peripherally Inserted Central Catheter (PICC) team collaborates with NSS regarding PICC consults that state reason “TPN” and appropriateness of line is reviewed prior to line placement; more than 75% of the time inpatient providers consult the NSS team for inpatient and home PN management.

Baseline Financial Impact Period
Sept. '11 - Apr '12

Average Annualized Financial Impact Study Period
May '12 - Feb '14

\[ \text{Monthly Average Annual Gross Margin} \]

\[ \text{Behind Budget} \]

\[ \text{Monthly Average Annual Gross Margin} \]

\[ \text{NSS $18,845} \]

\[ \text{NSS $218,299} \]

\[ \text{NSS $587,796} \]

\[ \text{NSS $48,983} \]

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