Nutrition Support Team - A multidisciplinary enhancement
Mertius Medical Center (formally Washington County Hospital)

Program/Project Description.
The institution struggled with the appropriate use of and the safety risks associated with Total Parenteral Nutrition (TPN). Based upon national guidelines from the American Society for Parenteral and Enteral Nutrition (ASPEN), greater than 60% of our patients did not meet the indication for a TPN due to a functioning GI tract or length of therapy less than 5 days. Additionally, there were numerous patient errors from orders not being pulled from charts, additional workload placed upon the nursing staff trying to obtain TPN orders, and episodes of infection/complications from TPN therapy. The staff knew we could perform smarter and safer patient care and began to explore solutions to our TPN problems.

Process.
Review of the literature showed that a Nutrition Support Service, staffed by both qualified Pharmacists and Dietitians, could provide a more streamlined workflow and ensure appropriate selection of patients to receive TPN. This multi-disciplinary team could also bring additional expertise and increase the overall level of patient care with the application of national guidelines. A further enhancement would be a more aggressive and consistent IV to oral transition program performed by the pharmacists for certain medications.

Solution.
A core group of Pharmacists and Dietitians with previous experience with Nutrition Support Services was assembled. A review of the ASPEN guidelines and participation in live teleconferences was performed. Pharmacists and Dietitians also participated in formalized curriculum provided by the University of Virginia Nutrition Support Traineeship program. Dietitians also pursued and received national certification in nutrition therapy from ASPEN. A protocol with defined indications for TPN therapy and electrolyte management was constructed from a variety of internal and external sources. All healthcare staff were informed via e-mail and newsletters about this consult-based service. Individual communication with Physicians who prescribed TPN was conducted to inform them about the benefits of the service and a request to utilize the team.

Measurable Outcomes.
Since the program was started in mid October 2010, the Nutrition Support Service has been consulted for a range of 50-100% of all patients receiving TPN. No patient errors from missed or omitted orders have been made for patients on the consult service. In the first two weeks, a total of 3 patient consults were identified to be inappropriate for TPN therapy. Alternatives were utilized instead of placing central lines and infusing parenteral therapy for these patients. More oral medication therapy has been used for Protonix (IV to PO ratio - 1:3 to 1:3.6) and Zyvox (IV to PO ratio - 1:1.3 to 1:2.8) since the IV to oral protocols have been performed daily.

Sustainability.
Additional staffing was required to sustain this service 7 days a week, 365 days a year. More individual Pharmacists and Dietitians will be trained to rotate through this service to increase the available staff to cover this new shift. Overall, the entire healthcare staff have been enlivened by the positive results from this service and we expect the hospital culture has been positively changed.

Role of Collaboration and Leadership.
Teamwork for all healthcare staff and administration was absolutely critical for the successful implementation of this new program. Two separate departments, Pharmacy and Clinical Nutrition, had to identify the problem, develop solutions/protocols, train staff, perform daily rounds together and provide weekend/holiday coverage. The team also actively seeks input from physicians and nurses about the individual patients on the service. The organization did provide tremendous support by approving additional staffing despite an economic downturn which placed significant financial burden upon the hospital. The leadership did identify the significant risk for patient safety, need for improved patient care and need to provide more resources to the healthcare staff.

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