Identifying and Navigating Oncology Patients Admitted Within 15 Days of Chemotherapy for Treatment-Related Toxicities

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Background

The Oncology Nurse Navigators (ONN) at Lehigh Valley Cancer Institute, comprised of 8 Oncology Certified Registered Nurses, were presented with an initiative from Administration to assist with preventing patient readmissions due to severe toxicities that could otherwise be managed in the outpatient setting. Over a period of two years, the ONNs alternated weekly to review the daily Medical Oncology on-call provider sign-out e-mails in addition to internal site postings of patients who reported post-treatment side effects or were admitted from the Emergency Department.

Objective

Criteria was developed to identify patients that were admitted for the following diagnoses post-chemotherapy treatment: nausea, vomiting, diarrhea, constipation, acute kidney injury (AKI), dehydration, generalized weakness, and neutropenic fever.

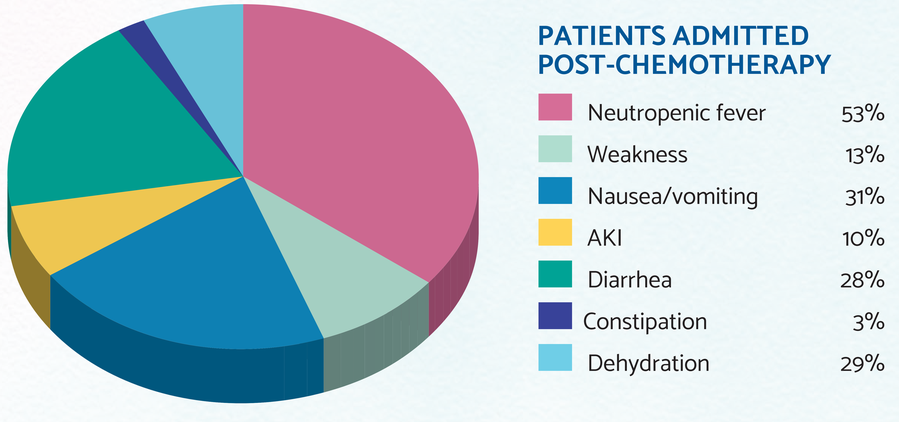
Methods

From July 1, 2017 through June 30, 2019, the ONNs evaluated the above criteria to determine eligibility of the patient for the initiative. Once eligibility was established, the reviewing ONN assigned the patient to the appropriate disease-specific ONN for initial contact. The designated ONN would complete a Barrier Assessment at the initial contact within 48 hours, review discharge instructions from their hospitalization, upcoming appointments, and the Chemotherapy Symptom Worksheet. Patients were provided with the ONN's contact information and description of their role. The practice provider and nursing staff were notified by the ONN that they were now part of the patient's multidisciplinary care team for additional support. The ONNs contacted the patient weekly or as appropriate, to assess their symptoms, answer any questions and mitigate any barriers to their treatment plan. In a literature search focused on the Potentially Preventable Readmission methodology, of 6 interventions, a navigator was implemented to provide home support, discharge planning, medication reconciliation, post discharge phone calls, and follow-up appointments, noting a reduction in readmission rate, leading to a noteworthy financial benefit, reduction in penalties from CMS and improved reimbursement by 25% from private insurers (McKale, 2014).

Results

Data was collected and analyzed by the ONNs at team meetings. Of 160 patients reviewed, 109 were navigated (70 of these already had an established ONN), with 39 newly navigated as part of this initiative over the 2-year period; 55 of these (34%) did not accept navigation services, expressing satisfaction with their current care team or the services of an ONN was not beneficial. Of patients admitted post-chemotherapy: 53% were due to neutropenic fever; 31% nausea/vomiting; 28% diarrhea; 3% constipation; 13% weakness; 29% dehydration; 10% AKI. According to 2016 Medicare data, "nausea and vomiting account for 10% of avoidable toxicity-related post-chemotherapy hospitalizations" (Roeland et al, 2018).

Each ONN spent approximately 2-4 work hours per week, equating to several hundred hours over the 2-year period. In addition to the criteria, common chemotherapy regimens were identified as the cause for an increased risk of hospital readmissions. These regimens were discussed with the Director of the Oncology Quality Team for further exploration and interventions, such as addition of G-CSF for specific regimens known to cause neutropenic fever or IV hydration for those causing dehydration. In 2012, the "total cost of cancer-related neutropenia hospitalizations was $2.3 billion for adults" with a mean length of stay of 9.6 days (Tai et al, 2017).



Conclusion

It was concurred that neutropenic fever was not preventable, and constipation alone did not contribute to readmission. The ONNs determined that the time spent during the extensive review caused duplication of work and did not equate to preventing readmissions as defined by the goals of the initiative. The ONN team continues to foster relationships with the multidisciplinary oncology team in the assessment, evaluation and management of patient treatment toxicities, while implementing a navigation plan to prevent readmissions.

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