Executive Summary:

Implementation of Evidence-Based Treatment Plans in Medical Oncology

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Important Findings

- The implementation of evidence-based treatment plans in medical oncology significantly improved the availability of treatment plans for the outpatient oncology practice.
- Prior to implementation, about 40% of patients lacked an available evidence-based treatment plan, whereas post-implementation, more than 70% had available plans.
- 18 evidence-based treatment plans were designed and approved by the interdisciplinary care team during the implementation phase of this project.

Background and Purpose

Treatment plans are essential components of safe oncology care in the outpatient cancer center setting. These plans, or clinical pathways, outline chemotherapy regimens, supportive medications, monitoring parameters, and patient education components; essentially providing a chemotherapy protocol for the patient and provider. National organizations, such as the American Society of Clinical Oncology (ASCO) and the National Comprehensive Cancer Network (NCCN) recommend that treatment plans be standardized, evidence-based, and consistently documented in an electronic health record (Zon et al., 2016). Studies have shown that treatment plans, or clinical pathways, increase efficacy, reduce toxicity, decrease costs, and may improve provider work-life balance (Ichiuji, 2024).

Despite these recommendations, many oncology practices struggle to maintain up-to-date treatment plans due to rapid advancements in cancer therapies, time constraints, and inconsistent processes for protocol updates. At the project site, evidence-based guidelines from both NCCN and ASCO are used to develop treatment plans. However, there is no specific policy for the

development and review of these pathways (B. Lewis, personal communication, March 18, 2025).

The purpose of the Doctor of Nursing Practice project, *Implementation of Evidence-Based Treatment Plans in Medical Oncology,* was to develop evidence-based medical oncology treatment plans in an outpatient healthcare setting. The goal was to make updated, standardized, and evidence-based treatment plans available at the site to help improve patient outcomes, decrease medication errors, and improve care.

Methodology

This project used a quality-improvement design implemented in an outpatient oncology practice and began with a baseline analysis of patients initiating a new chemotherapy regimen. The Plan-Do-Study-Act (PDSA) was the operational framework of choice for this project which guided intervention development by allowing continuous improvement, involving key team members and delivering evidence-based outcomes.

A preliminary report from April through June of 2025 identified 373 patients who initiated new chemotherapy treatments. Of those patients, 152 (about 40%) did not have an associated treatment plan available in the Electronic Health Record (EHR) at the time of treatment initiation. This gap highlighted a significant opportunity to improve access to standardized treatment plans to support safe and efficient patient care.

Following the data analysis, high-frequency regimens lacking a treatment plan were identified, and drafts were created to prevent delays in care and ensure continuation of evidence-based standards. After development, the interdisciplinary team reviewed drafts, including the site champion, medical director, clinical pharmacists, nurse managers, and an Information Systems Technology (IST) team member. Revisions were then made based on the interdisciplinary team's

recommendations and submitted to the IST department for preparation of EHR integration. Final approval from the medical director was the last step before treatment plans were live in the EHR.

During the implementation phase, additional urgent treatment plans were needed as new therapies were identified and patient needs evolved. Additionally, high-priority treatment plans were developed to support emerging clinical needs, ensuring providers had access to updated regimens when initiating therapy.

Results

Of the 373 patients sampled in the baseline analysis, an additional 54 had evidence-based treatment plans available for their prescribed chemotherapy regimen. The percentage of patients with an evidence-based treatment plan increased from 59.2% to 73.7% of the total sampled population. Additionally, the proportion of patients without an appropriate treatment plan decreased from 40.8% to 24.3%. In total, 18 evidence-based treatment plans were created, 11 prioritized from the initial report based on patient volume and clinical impact, and 7 high-priority plans based on time-sensitive needs from the project site.

Figure 1. As a result of this quality improvement project, 14.5% more patients had treatment plans available compared to the baseline data.

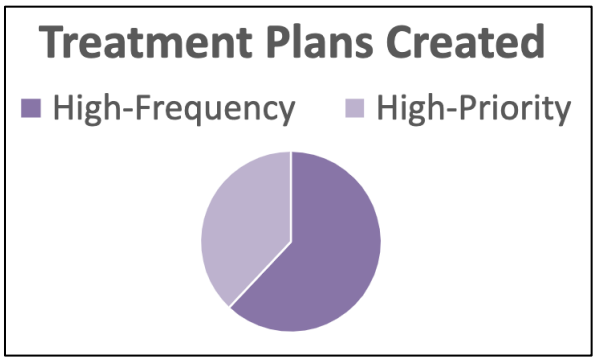

Figure 2. Most plans developed were high-frequency plans (62%) identified in the baseline report provided by the site champion, compared to high-priority plans (38%) requested by the interdisciplinary team during the implementation period.

Strengths and Limitations

The project highlighted the leadership role of the DNP-prepared nurse in system-level practice change and quality improvement. With strong interdisciplinary collaboration, the intervention addressed and closed an identified gap. The advanced practice nurses' contribution to protocol development has a major impact on patient safety and culture, leading the way to additional leadership opportunities in treatment planning. Limitations included a small sample size and a short 12-week implementation period, limiting the number of treatment plans that could be created. The interdisciplinary team's full-time roles competed with the treatment plan review required for this project.

Implications

A formalized policy would allow for a standardized treatment plan process and establish clear expectations for treatment plans moving forward. Additionally, quality improvement projects with a stronger focus on the patient can stem from this project, such as measuring patients' understanding of their treatment plan or exploring patient satisfaction with treatment plan education. The strongest recommendation stemming from this project is for the site to

integrate a publicly and commercially available pathway program. These pathways are integrated into the EHR and are continually reviewed and updated to ensure that all treatment plans are based on the most recent evidence.

Conclusion

Before this project's implementation, the site lacked evidence-based treatment plans available to patients in its outpatient settings. This quality improvement project addressed variability in medical oncology treatment planning by developing and implementing evidence-based chemotherapy treatment protocols. The integration of 18 chemotherapy treatment plans demonstrated significant improvements in guideline adherence and overall care consistency, without negatively impacting workflow. This project highlights the critical leadership role of the DNP-prepared nurse in driving systems-level change and quality improvement within evidence-based oncology practice.

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