

Doing More With Less: The Adoption of Slot Management Practices to Drive Resource Allocation in the Clinical Trials Office

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1. Background

In 2019, the Vanderbilt-Ingram Cancer Center (VICC) identified the need for a more structured approach to portfolio management and resource allocation within the clinical trials office (CTO). New study submissions were increasing 12 to 15 percent each year while the number of CTO staff remained static. Further, CTO leadership noted 20 percent of studies submitted in 2018 were abandoned during start-up, resulting in wasted effort and lost revenue for the organization. All these factors combined, negatively impacted staff workloads, and contributed to an increase in staff turnover across the department. In response, CTO leadership implemented a new study allocation system with the goal of decreasing study start-up time, decreasing the number of studies abandoned during start-up, increasing accrual, and improving staff retention.

2. Goals

- Decrease start-up time to 120 days
- Increase accrual by 15 percent
- Decrease number of zero accrual studies by 15 percent
- Decrease abandoned studies by 15 percent
- Increase staff retention by 10 percent

3. Solutions and Methods

CTO leadership compared the number of new study submissions against the number of studies opened each year for the preceding five years (Fig. 1). Based on this data they set 120 new studies as the annual capacity cap for the CTO. They proposed allocating 100 studies across all disease teams (DTs) while retaining the additional 20 study slots to for performance-based incentives around key cancer center goals. These goals were measured every three months and additional slots were allocated based on:

- Highest NCTN accrual
- Highest overall accrual
- Highest average accrual per protocol
- Key project for new faculty recruitment
- Project relevance to cancer center mission (grants, SPOREs, etc.)

DTs received their initial allocation of study slots based on historical performance data around the average number of studies submitted, studies opened, studies abandoned, overall accrual, and accrual per protocol. DTs were ranked based on these performance indicators and then assigned slots based on their order. Every DT received two studies as a base allotment and then additional slots were handed out based on ranking.

4. Outcomes

At the end of 2020, study start-up timelines decreased by 20 percent and staff retention improved by 41 percent. The number of abandoned studies decreased by 75 percent from 2018 and 53 percent of the DTs saw an improvement in accrual per protocol. The cancer center did not see an improvement in overall accrual in 2020, however much of that can be credited to the impact of COVID-19.

5. Lessons Learned

To date, most DTs have accepted the slot allocation program as a positive improvement and agree that the allocation has promoted more thoughtful and robust discussions around their portfolios. CTO leadership agreed to continue the slot allocation program in 2021, however a higher emphasis has been placed on accrual per protocol as a measure of DT performance rather than overall accrual numbers. This decision was made after CTO leadership noted that rewarding straight accrual numbers benefited larger teams at the expense of smaller ones and unfairly skewed the performance data for the following year. As such, that metric was eliminated for performance incentives. Additionally, performance review was moved to every six months to allow DTs more time to demonstrate improvement.

Figure:

