



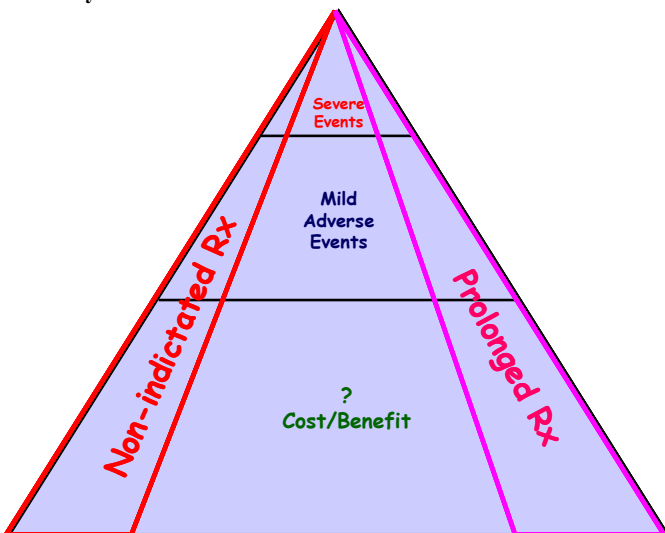
CHILDREN'S OUTCOMES

Pharmaceutical Use Improved by Multidisciplinary Effort in Oncology

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Several years ago a high-level PHIS utilization summary caught the attention of the executive team. TCH was noted to have higher pharmaceutical use than other children's hospitals in some clinical areas. As a result, the Outcomes and Pharmacy & Therapeutics Committees developed a data-driven, pharmaceutical use guideline to decrease unnecessary medication use (non-indicated Rx or prolonged Rx) and attendant medication errors, adverse events and costs (see model, Figure 1). Using PharmStat – a comparative medication use data system developed at TCH – an interdisciplinary task force, led by Edie Albano, Cindy McConnell, Nicole Kaiser, Nancy King and Deb Stiller then worked together to evaluate the effect of pharmaceutical use guidelines for medication use in inpatient oncology patients. The team used PharmStat data to stimulate questions regarding pharmaceutical use at TCH versus other hospitals that they selected. Each member of the team identified an area of practice that they would investigate and recommend evidence-based guidelines for implementation. As they worked together to make the practice changes, data from PharmStat was used to evaluate the effects.

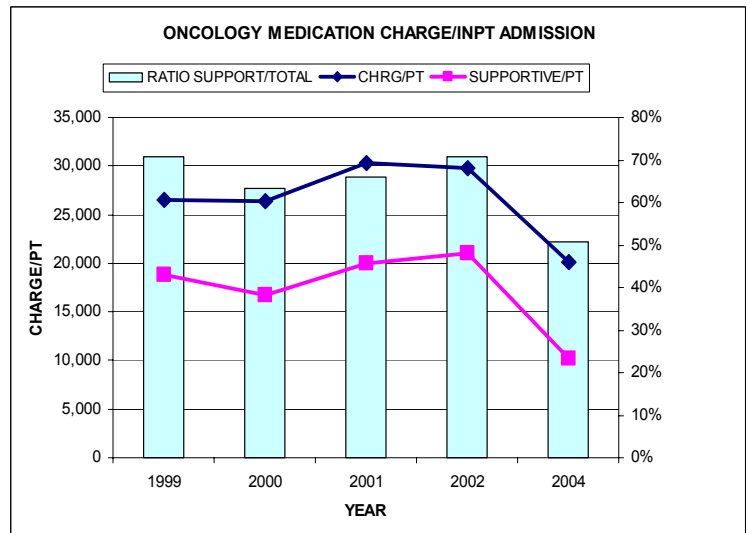
Figure 1: Reducing adverse events and cost by eliminating medications that are not clearly indicated or are given longer than necessary.



Results/Outcomes:

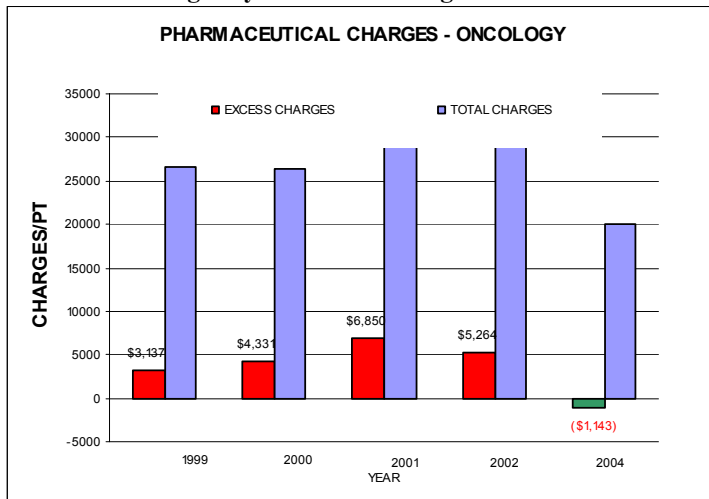
- Using PharmStat data, the oncology team selected a number of target drugs and processes, determined best practices based on data, and implemented departmental medication use guidelines.
- Supportive care medications (often discretionary in oncology patients) were reduced by 50% (see Figure 2).

Figure 2: Oncology medication charges per patient at TCH from 1999-2004 (2003 missing because of data corruption). Compared to prior years TCH oncology supportive medication use charges were reduced by 50%.



- TCH improved compared to PHIS hospitals, reducing the net excess per admission pharmaceutical cost from +\$5,000 to -\$1,000 saving \$1.5 million in hospital charges (see Figure 3, next page) in 2004.
- Targeted medications (e.g. albumin, dexamethasone, ondansetron, acyclovir and vancomycin) showed reduced utilization while untargeted utilization did not, further supporting the cause and effect of the oncology team's efforts.

Figure 3: Reduction in total medication charges and net excess charges by medication use guidelines.



The PharmStat data will be used to continue to monitor the practice changes as well as identify other opportunities for refined practice. Plans are being coordinated to develop practice improvement initiatives in all departments so that the pharmaceutical use guidelines are consistently utilized in guiding clinical decisions.

