



**QI case study:**  
**How we reduced expensive medication wastages at New York Presbyterian - Weill Cornell Medicine**

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**Disclosures**

- Pfizer (consulting)

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**Problem Statement**

- From January 2022-May 2023, there were 18 Keepsafe events related to medication wastage resulting in nearly \$110,000 losses in an oncology infusion area at NYP WCM. Many of these were newly approved and costly medications.

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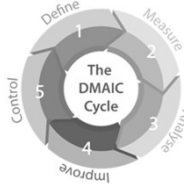
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### How this problem was identified

- Any medication wastage events are reported from pharmacy as Keepsafe events
- Keepsafe events are routinely reviewed and discussed during monthly Oncology Outpatient Quality & Patient Safety Meetings



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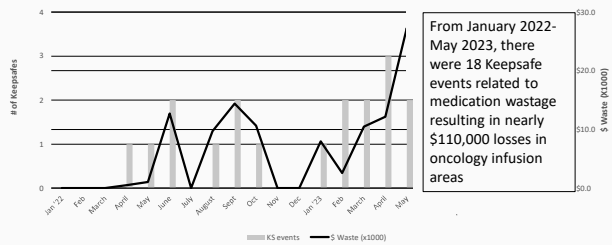
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### Baseline

Medication Waste in NYP-WCM Oncology Infusion Center



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### Team members (Oncology QPS Committee)

- Mohammad Islam, PharmD, PhD, MBA-HCA, BCOP; Pharmacy Manager, Oncology
- Hui Min Li, PharmD; Lead Pharmacist
- Catherine McHugh, MSN, RN, CEN; NYP Quality & Patient Safety Specialist
- Justine Enriquez, BSN, RN, OCN; Clinical Nurse Manager, Starr 3 Infusion Center
- Celsus Auguiste, MSN, RN; Patient Care Director, Oncology Treatment Center
- Michelle Patrice; Operations Manager, Oncology Treatment Center
- Claudia Gonzalez; Supervisor at Starr3 Hematology/Oncology & Infusion Center
- Elena Lungu; Practice Manager; Starr Outpatient
- Camalita Rahat, MSN, APRN; Patient Care Director, Breast Practice and Infusion Center -DHK 4
- Sebastian Mayer, MD; Starr Outpatient Director
- Christine A. Garcia, MD; MPH - Hem/Onc QI Chair

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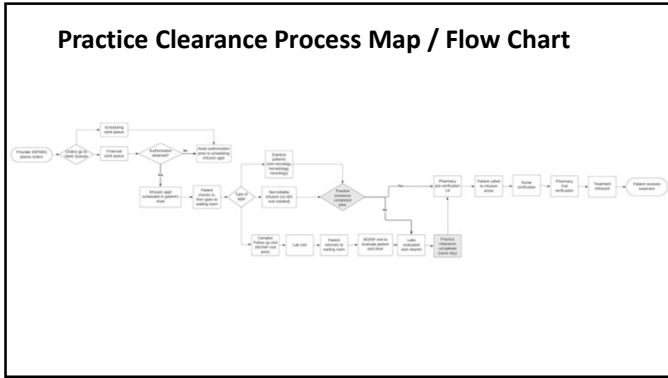
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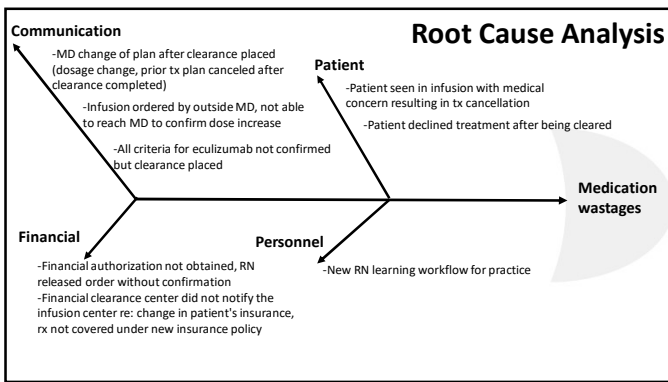
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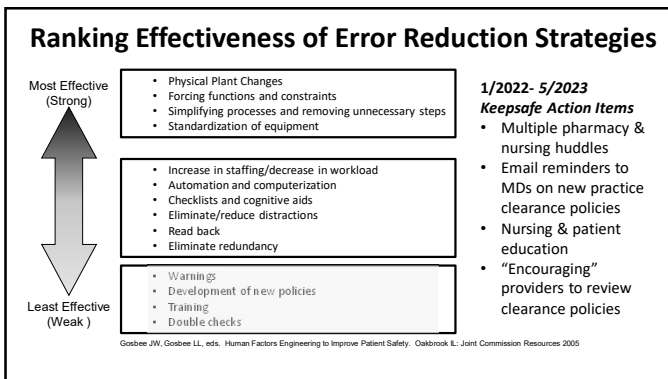
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**Project Aim** From June 2023-December 2023, the aim of this project is to reduce medication wastes in infusion center and Keepsafe events by implementing a new process for practice clearance for expensive, slow-moving items in the infusion center.

S	M	A	R	T
<b>Specific</b>	<b>Measurable</b>	<b>Achievable</b>	<b>Relevant</b>	<b>Time-bound</b>
- State what you'll do - Use action words	- Provide a way to evaluate - Use metrics or data targets	- Within your scope - Possible to accomplish/attainable	- Makes sense within your job/functors - Improves the business in some way	- State when you'll get it done - Be specific on date or timeframe

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**List of "Go List" medications**

- Blinatumomab
- Cetuximab
- Crizanlizumab
- Daunorubicin-cytarabine (liposomal)
- Eculizumab
- Enfortumab Vedotin – EJFV
- Eptinezumab-JJMR
- Fam-Trastuzumab Deruxtecan – NXXI
- Gammagard S/D
- Gemtuzumab Ozogamicin
- Inotuzumab Ozogamicin
- Ipilimumab
- Luspatercept – AAMT
- Loncastuximab Tesirine – LPYL
- Mogamulizumab- KPKC
- Mosunetuzumab- AXGB
- Nivolumab
- Ocrelizumab
- Panitumumab
- Polatuzumab Vedotin – PIIQ
- Ravulizumab
- Sacituzumab Govitecan- HZIY
- Siltuximab
- Sutimlimab-JOME
- Teprotumumab – TRBW
- Tremelimumab-ACTL

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**New process**

- Pharmacy will reach out to the assigned nurses via Epic secured chat to get a "GO" if we can start to compound the item for the respected patient. RN should give a "GO" only if followings are met:

- 1. Patient has been seen by MD and cleared for treatment**
- 2. Patient physically present**
- 3. Patient vitals are stable**
- 4. Patient has all required line access**

- If any of the above is missing, **pharmacy will hold off mixing the item ("Hard stop")** and will be made after the issues are resolved
- All RNs kept a copy of the list at their work stations

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### Implementation

Most Effective (Strong)

Least Effective (Weak)

- Physical Plant Changes
- Forcing functions and constraints
- Simplifying processes and removing unnecessary steps
- Standardization of equipment

- Increase in staffing/decrease in workload
- Automation and computerization
- Checklists and cognitive aids
- Eliminate/reduce distractions
- Read back
- Eliminate redundancy

- Warnings
- Development of new policies
- Training
- Double checks

- Reminders at morning huddles, faculty, APP& fellows' meetings
- Training
- New "Hard Stop" Process with forcing functions & constraints
- Practice clearance icon moved in EPIC
- Posted list of meds for all RNs

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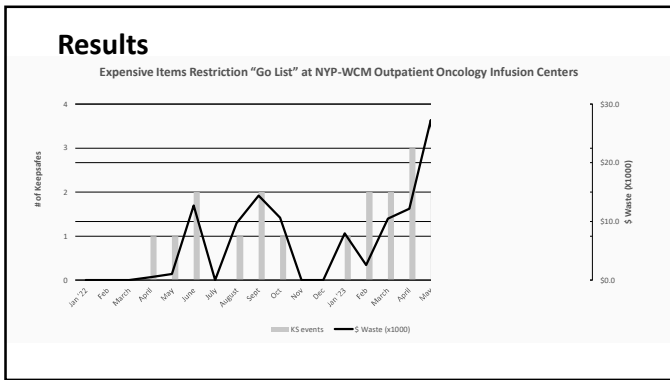
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### Lessons Learned

- Efforts were led by a multidisciplinary team including pharmacy, nursing, medical oncologists, and lab team members – Needed buy-in from all involved
- Understanding the process (flow chart) from end-to-end was important to see how where we could improve
- While education and training are important, forcing functions (Go-List hardstop) and simplifying practice clearance processes were more effective in achieving (nearly) zero waste

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### Planned Next Steps

- Continue Go List process
- Evaluate balancing measures (unintended infusion treatment delays awaiting all clearance parameters)
- Expansion to other infusion areas and across the institution where other costly medications are given

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### Key Takeaways

- Using QI tools including Root Cause Analysis, Flow Charting, and implementation of a simplified practice clearance process with hard stops has resulted in a significant reduction of medication waste (almost near zero waste)

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### Thank you

Acknowledgements:  
 NYP-WCM Oncology Quality & Patient Safety Outpatient Committee




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