

# **Implementation of a Proactive Outreach Program to Patients with Gastrointestinal Malignancies Starting New Chemotherapy Regimens**

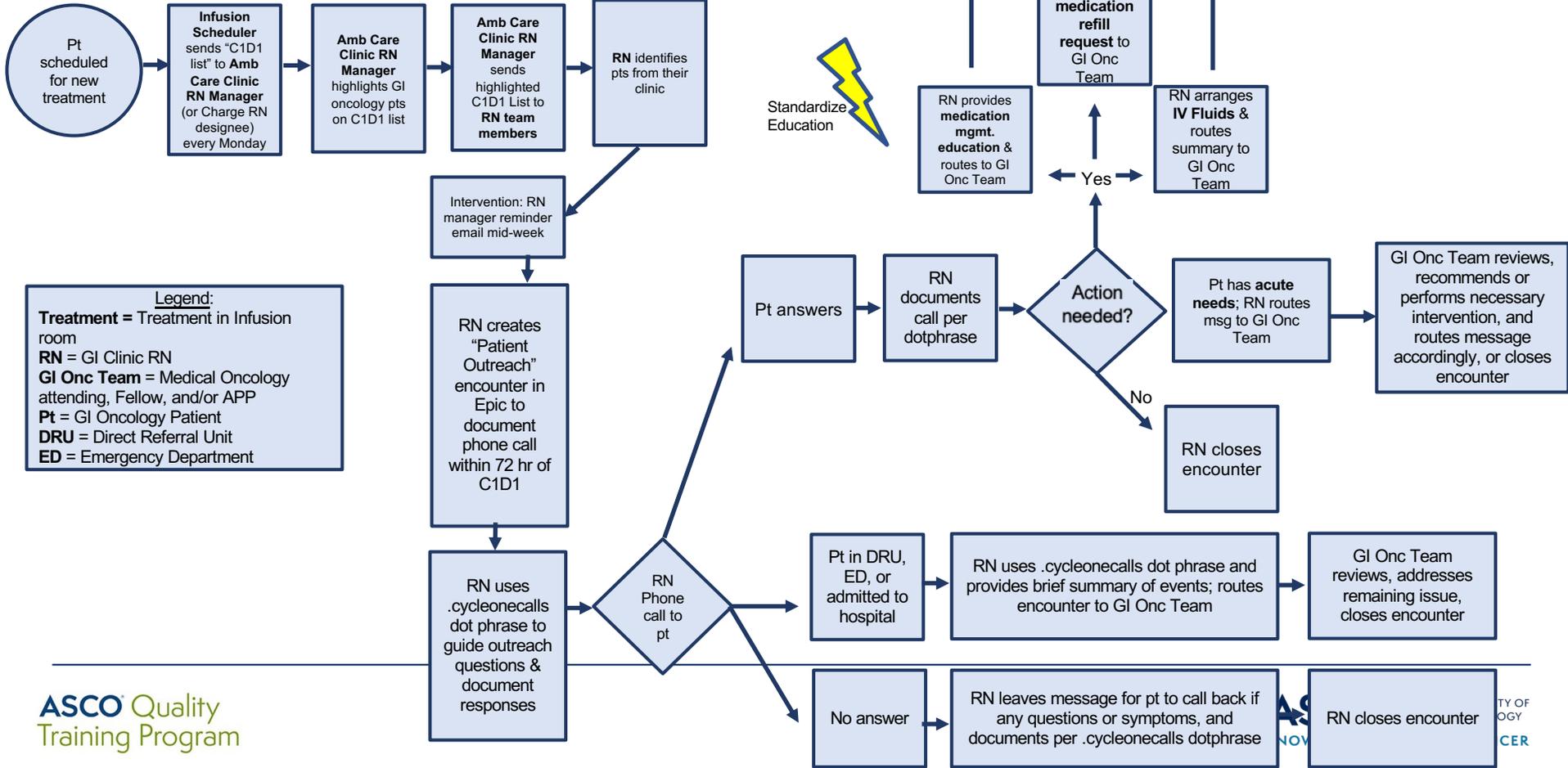
Dina Ioffe, MD  
Fox Chase Cancer Center

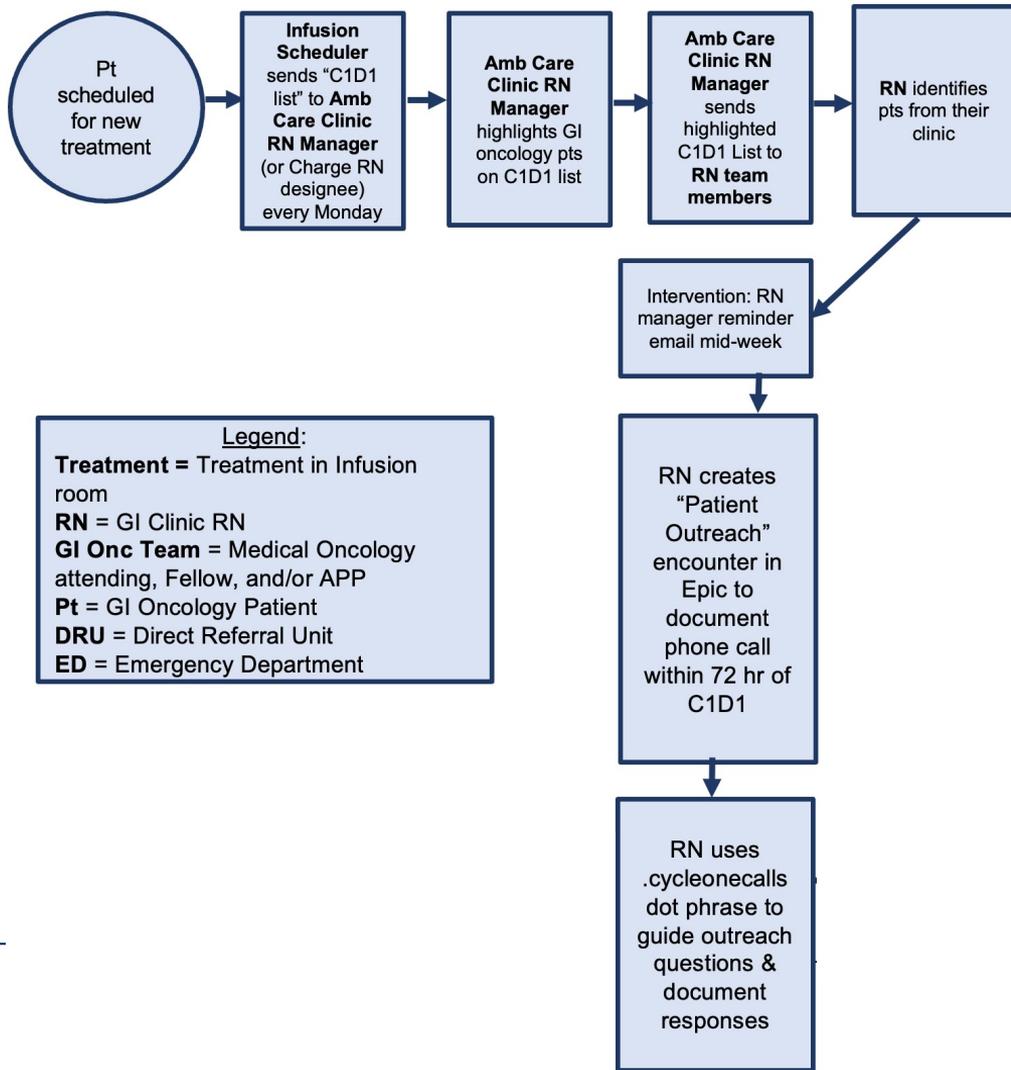
June 17, 2022

# Problem Statement

- From July – December 2021, zero (0) gastrointestinal (GI) medical oncology patients were proactively contacted through a standard process within 72 hours of their first cycle of a new intravenous (IV) chemotherapy treatment
- This led to urgent interventions to manage patient inquiries and symptoms by team members across Fox Chase Cancer Center yielding increased wrap-around care through phone triage calls, urgent care/emergency room visits, and hospitalizations, as well as increased patient/provider dissatisfaction

# Process Map: New





# Institutional Overview

## Fox Chase Cancer Center (FCCC)

- Affiliated with Temple University Health System in Philadelphia, PA
- Founded in 1904 as one of the nation's first cancer hospitals
- NCI-designated Comprehensive Cancer Center
- Founding member of the National Comprehensive Cancer Network (NCCN)
  
- Ongoing clinical trials: 250
- Hospital beds: 100
- Total patients seen per year: >35,000
- New patients seen yearly: 8,418
- Number of outpatient visits per year: 88,497
- Training programs in hematology oncology, radiation oncology, surgical oncology

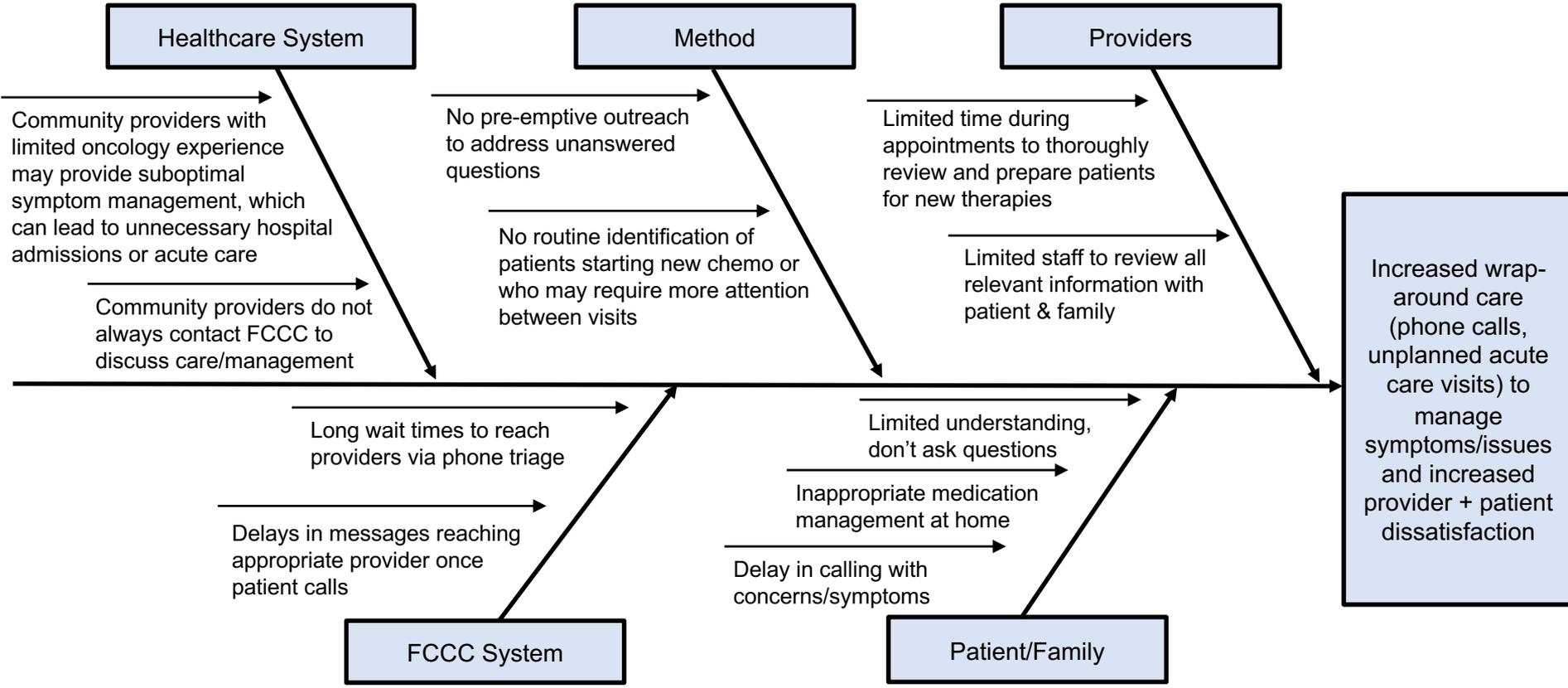
# Team Members

- Peter Whooley, DO, MBA
  - Hematology/Oncology Fellow, PGY-6
    - *Currently away*
- Dina Ioffe, MD
  - Hematology/Oncology Fellow, PGY-5
- Marie Riehl, BSN, RN, OCN
  - Clinical manager of ambulatory care & clinic
- Tara DelGrippo, MSN, RN, OCN, NE-BC
  - Clinical director of ambulatory care & infusion services

## Sponsors

- James Helstrom, MD, MBA
  - Chief Medical Officer
- Martin J. Edelman, MD
  - Chair, Department of Hematology/Oncology
- Efrat Dotan, MD
  - Chief, Division of GI Medical Oncology
- Jessica Bauman, MD
  - Hematology/Oncology Fellowship Program Director

# Cause and Effect Diagram



# Aim Statement

- At least 50% of GI oncology patients starting new IV chemotherapy will be contacted through a standardized nurse phone call within 72 hours of their first infusion by June 2022

# Outcome Measures

Item	Description
Measure:	Percent of GI oncology patients proactively contacted through a standard process within 72 hours of initiation of new IV chemotherapy
Patient population: <i>(Exclusions, if any)</i>	GI medical oncology patients at FCCC
Calculation methodology: <i>(i.e. numerator &amp; denominator)</i>	<b>Numerator:</b> Number of patients with GI malignancies contacted within 72 hours of first cycle of new IV chemotherapy <b>Denominator:</b> Number of patients with GI malignancies identified as starting new IV chemotherapy
Data source:	List of all FCCC patients receiving new IV chemotherapy generated by infusion room schedulers, reviewed & verified by clinical nurse manager
Data collection frequency:	Weekly
Data limitations: <i>(if applicable)</i>	Appropriate documentation, patient list accuracy, patient availability to be contacted, communication between staff involved

# Process Measures

Item	Description
Measure:	Frequency of infusion scheduler distributing weekly list of medical oncology patients starting new IV chemotherapy (C1D1 list) to clinical nurse manager
Patient population: <i>(Exclusions, if any)</i>	GI medical oncology patients starting new IV chemotherapy
Calculation methodology: <i>(i.e. numerator &amp; denominator)</i>	<b>Numerator:</b> Number of times infusion scheduler distributes C1D1 list to clinical nurse manager <b>Denominator:</b> Number of weeks since initiative began
Data source:	C1D1 email list generated by infusion room scheduler; clinical nurse manager email
Data collection frequency:	Weekly
Data limitations: <i>(if applicable)</i>	Consistency and frequency of list generation and distribution; list accuracy

# Process Measures

Item	Description
Measure:	Accuracy of clinical nurse manager identifying GI oncology patients on C1D1 list
Patient population: <i>(Exclusions, if any)</i>	GI medical oncology patients starting new IV chemotherapy
Calculation methodology: <i>(i.e. numerator &amp; denominator)</i>	<b>Numerator:</b> Number of GI oncology patients from C1D1 list identified <b>Denominator:</b> Number of GI oncology patients on C1D1 list
Data source:	Clinical nurse manager distribution email, C1D1 email list generated by infusion room scheduler
Data collection frequency:	Weekly
Data limitations: <i>(if applicable)</i>	Consistency & accuracy in identifying all GI oncology patients

# Process Measures

Item	Description
Measure:	Frequency of clinical nurse manager distributing C1D1 list to clinical GI oncology nurses
Patient population: <i>(Exclusions, if any)</i>	GI medical oncology patients starting new IV chemotherapy
Calculation methodology: <i>(i.e. numerator &amp; denominator)</i>	<b>Numerator:</b> Number of times clinical nurse manager distributes C1D1 list to clinical GI oncology nurses <b>Denominator:</b> Number of weeks since initiative began
Data source:	Clinical nurse manager email, C1D1 email list generated by infusion room scheduler
Data collection frequency:	Weekly
Data limitations: <i>(if applicable)</i>	Consistency & frequency in list distribution, appropriate recipients

# Process Measures

Item	Description
Measure:	Frequency of clinical nurse manager sending reminder email mid-week to clinical GI oncology nurses to make outreach calls
Patient population: <i>(Exclusions, if any)</i>	GI medical oncology patients starting new IV chemotherapy
Calculation methodology: <i>(i.e. numerator &amp; denominator)</i>	<b>Numerator:</b> Number of times clinical nurse manager sends reminder to clinical GI oncology nurses <b>Denominator:</b> Number of weeks since initiative began
Data source:	Clinical nurse manager email, C1D1 email list generated by infusion room scheduler
Data collection frequency:	Weekly
Data limitations: <i>(if applicable)</i>	Consistency & frequency sending reminder, appropriate recipients

# Baseline Data

- Gastrointestinal (GI) medical oncology patients disproportionately contribute to acute unplanned care services at FCCC
  - Between January 2014 – June 2018, patients with GI malignancies comprised 24% of visits to Jeanes Hospital Emergency Department & 29% of visits at FCCC Direct Referral Unit (urgent care center)
  - On average, during Q1 2020 – Q2 2021, 36% of patients admitted to FCCC hospital had a GI malignancy diagnosis
  - Most patients (X%) experience chemotherapy-related side effects within 72 hours of starting new chemotherapy, which triggers patient-initiated phone calls, acute care needs

# Prioritized List of Actions (Priority/Pay-Off Matrix)

<b>Impact</b>	<b>High</b>	<ul style="list-style-type: none"><li>- EMR smart phrase for outreach call documentation</li><li>- Weekly email reminder to GI oncology nurses</li></ul>	<ul style="list-style-type: none"><li>- Formal assignment of patients to specific nurses</li><li>- Automated EMR patient assignment and/or reminder</li><li>- Manual chart review to verify if calls were made</li><li>- Automated EMR reports of outreach calls</li><li>- Standardizing workflow for call distribution</li><li>- Clinical nursing staff consistency</li></ul>
	<b>Low</b>	<ul style="list-style-type: none"><li>- Generating C1D1 list</li><li>- Distributing C1D1 list</li></ul> <p><b>Easy</b></p>	<ul style="list-style-type: none"><li>- Multiple phone calls if patients do not answer</li></ul> <p><b>Difficult</b></p>

**Ease of Implementation**

# PDSA Plan (Test of Change)

	Date of PDSA Cycle	Description of Intervention	Results	Action Steps
1	3/14/2022	Initiate outreach calls	Inconsistent call rate but most patient calls are made within 72h	Discuss optimal intervention with nurses to assign calls
2	4/15/2022	Met with clinical nurses for feedback on outreach calls	Increased engagement and buy-in from nursing	Add mid-week reminder to make outreach calls
3	5/23/2022	Added mid-week reminder for nurses to make outreach calls	Increased consistency in percent of patients called within 72h	Formalize and standardize workflow for assigning patients to RN (e.g., EMR automation)

# Materials Developed

## User SmartPhrase – CYCLEONECALLS [291086]

 This SmartPhrase is currently read-only.  
You don't have the security to edit this SmartPhrase.

⌵ . . . . . 1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 . . . . . 7 . . . . . 8

Patient answered: {Yes/No:27009}

If No, was message left: {Yes/No:27010}

Did you have any problems with your infusion? {Yes/No:27011}

Do you have any symptoms right now that you feel are related to your therapy? {Yes/No:27012}

What medications have you used to manage your symptoms? {Onc Medications Used:27013}

    Do you have any questions about how to take these medications? {Yes/No/NA:27014}

    Do you need any refills for these medications? {Yes/No/NA:27015}

Do you have questions about your upcoming appointment with your Oncologist? {Yes/No:27016}

Do you know how to get in touch with your care team during daytime, nigh-time and weekend hours? {Yes/No:27017}

Margaret O'Brien, RN      Telephone Encounter    
Registered Nurse              Signed                              Encounter Date: 5/13/2022

Signed

Patient answered: Yes

If No, was message left: N/A

Did you have any problems with your infusion? Yes

Do you have any symptoms right now that you feel are related to your therapy? Yes. Patient has had multiple episodes of diarrhea and vomiting since this morning. He expressed difficulty with travel back to FCCC for disconnect due to nausea/vomiting/diarrhea.

What medications have you used to manage your symptoms? Patient said he took a pill when he was at FCCC getting disconnected today. He was unsure of name.

Do you have any questions about how to take these medications? Yes. Patient unable to verbalize how to use medications to manage symptoms. I reviewed use of Zofran and Compazine and suggested patient alternate each medication every 4 hours over the weekend. I also reviewed use of Imodium and discussed how to dose on a daily basis. I stressed importance of patient managing symptoms in order to avoid dehydration. Patient encouraged to contact us if symptoms are not controlled with above regimen. Patient verbalized understanding.

Do you need any refills for these medications? No

Do you have questions about your upcoming appointment with your Oncologist? No

Do you know how to get in touch with your care team during daytime, nigh-time and weekend hours? Yes; patient had number for nurse triage line. After hours number provided.

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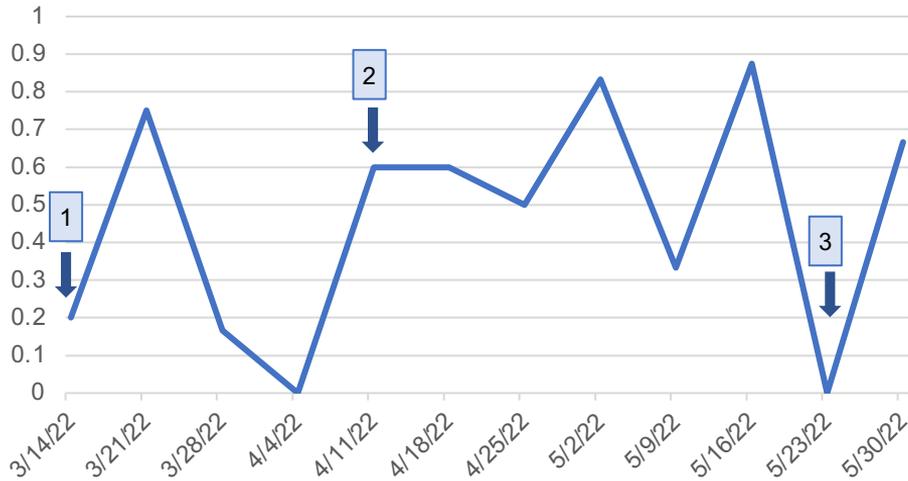
Electronically signed by Margaret O'Brien, RN at 5/13/2022 4:44 PM

# Change Data

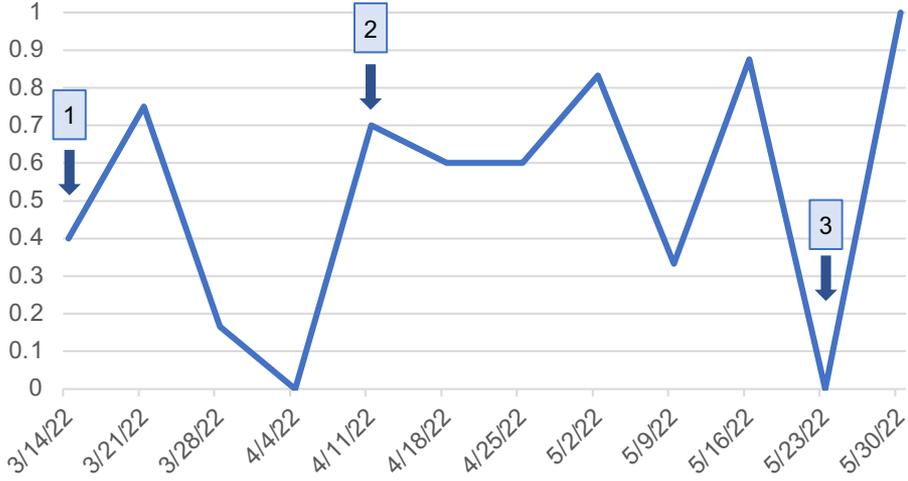
Week	Patients Treated	Patients Called	Patients called within 72h	% Called with 72h
3/14/22	5	2	1	20%
3/21/22	8	6	6	75%
3/28/22	6	1	1	17%
4/4/22	2	0	0	0%
4/11/22	10	7	6	60%
4/18/22	5	3	3	60%
4/25/22	8	4	4	50%
5/2/22	6	5	5	83%
5/9/22	6	2	2	33%
5/16/22	8	7	7	88%
5/23/22	4	0	0	0%
5/30/22	3	3	2	67%

# Change Data

### % GI Oncology Patients Called within 72h



### % GI Oncology Patients Called



- 1 - Initiate outreach calls
- 2 - Met with clinical nurses for feedback on outreach calls
- 3 - Added mid-week reminder for nurses to make outreach calls

# Conclusions

- In the first 12 weeks of this initiative, 40 (56%) of 71 treated patients were called and 37 patients were called within 72 hours (52%)
  - Of the patients who were called, 92.5% were called within the intended time frame
- We met our goal of calling at least 50% of these patients in 7 out of the first 12 weeks of this new initiative
  - This QI initiative successfully implemented a nurse outreach call to GI oncology patients starting new therapies

# Next Steps/Plan for Sustainability

- We aim standardize outreach to patients with organized symptom management and patient education resources while striving to automate performance monitoring using iterative PDSA cycles
- Further evaluation of this intervention, which will eventually better identify patients at highest risk for acute unplanned care needs, will assess the impact on patient-reported outcomes and health care utilization
- We plan to collect more baseline data (e.g., how many patients call within 72h at baseline) to better assess the impact of this initiative
- We aim to improve the quality and impact of proactive outreach to patients at high risk for acute unplanned care

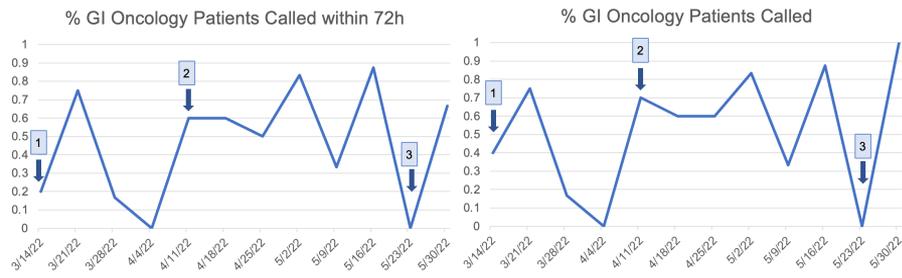
## Implementation of a Proactive Outreach Program to Patients with Gastrointestinal Malignancies Starting New Chemotherapy Regimens

**AIM:** At least 50% of GI oncology patients starting new IV chemotherapy will be contacted through a standardized nurse phone call within 72 hours of their first infusion by June 2022

### INTERVENTION:

- Initiated nursing-led outreach phone calls to GI oncology patients starting new IV chemotherapy
- Created smart phrase for efficient yet comprehensive documentation of outreach calls in EMR
- Met with clinical nurses for feedback on outreach calls
- Added mid-week reminder for nurses to make outreach calls

**RESULTS:** 40 (56%) of 71 patients receiving a new IVC were called and 37 (52%) of the patients were called within 72 hours. Of the patients who were called, 93% were called within the intended time frame.



1 - Initiate outreach calls  
2 - Met with clinical nurses for feedback on outreach calls  
3 - Added mid-week reminder for nurses to make outreach calls

### TEAM:

- Peter Whooley, DO, MBA, Hematology/Oncology Fellow PGY-6
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- Marie Riehl, BSN, RN, OCN, Clinical manager of ambulatory care & clinic
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- Jessica Bauman, MD, Hematology/Oncology Fellowship Program Director

### CONCLUSIONS:

- In the first 12 weeks of this initiative, 40 (56%) of 71 treated patients were called and 37(52%) patients were called within 72 hours. Of the patients who were called, 92.5% were called within the intended time frame.

### NEXT STEPS:

- Standardize outreach to patients with organized symptom management and patient education resources while striving to automate performance monitoring using iterative PDSA cycles
- Further evaluate this intervention in order to better identify patients at highest risk for acute unplanned care needs and assess the impact on patient-reported outcomes and health care utilization
- Collect more baseline data (e.g., how many patients call within 72h at baseline)
- Improve the quality and impact of proactive outreach to patients at high risk for acute unplanned care