



P3OC: Patient-centered Pharmacy Pathway for Oral Chemo for Older Adults



Aim 1: To develop P3OC through stakeholder engagement

Delphi



Interview



Usability Testing
EHR



Aim 2: To assess the feasibility and pharmacist adoption of P3OC in a single-arm pilot study of 30 older adults prescribed OC for breast, thoracic, or hematology malignancies

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P3OC Patient Interview Demographics

Characteristic	Breast N=12	Thoracic N=12	Hematology N=12
Women	10 (83%)	6 (50%)	6 (50%)
Men	2 (17%)	6 (50%)	6 (50%)
Non-Hispanic White	4 (33%)	8 (75%)	6 (50%)
Non-Hispanic Black	4 (33%)	3 (25%)	5 (42%)
Non-Hispanic other race	4 (33%)	1 (8%)	1 (8%)
Age 65 and older	7 (58%)	8 (75%)	6 (50%)
Completed interview by zoom	5 (42%)	7 (58%)	2 (17%)
Completed interview by phone	7 (58%)	5 (42%)	10 (83%)

Symptoms: Delphi and Interviews

Delphi	Pharmacists	Breast	Thoracic	Hematology
Felt sick to stomach	X	X	X	X
Constipation, diarrhea	X	X	X	X
Fatigue	X	X	X	X
Pain related to treatment	X	X	X	X
Mouth or throat sores	X	X	X	X
Numbness or tingling	X	X	X	
Not wanting to eat	X	X	Increased	
Dyspnea	X		X	X
Rash	X	X	X	
Sad/unhappy feelings	X		"Mental health"	
Anxiety				X
Usual activities		X	X	X
Trouble sleeping	X			X

EHR Smart Form Build: 13 Symptoms

[Chart Review](#)
[Pharmacy Enrollments](#)
[Synopsis](#)
[Intake](#)
[Specialty Rx](#)
[Plan](#)
[Wrap-Up](#)
[MyChart Administration](#)

Specialty Rx
?

RX SPECIALTY **Oral Chemo**
[Review of Symptoms](#)
[Drug Interactions](#)
[Patient Counseling](#)
[Adverse Effects](#)
[Education Assessment](#)

Patient-Reported Symptoms Tracker for Cancer Patients on Oral Chemotherapy
↑ ↓

Interval history:

Symptom	Please record patient's responses exactly, without changing					CTCAE v5.0 / Your Clinical Impression
1. Have you felt sick to your stomach?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE nausea: <input type="text"/>
2. Had diarrhea?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE diarrhea: <input type="text"/>
3. Constipated?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE constipation: <input type="text"/>
4. Not wanting to eat?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE anorexia: <input type="text"/>
Comments: <input type="text"/>						
5. Feel very tired even after you rest?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE fatigue: <input type="text"/>
6. Sad or unhappy feelings, or depression?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE depression: <input type="text"/>
7. Anxiety or worry?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE anxiety: <input type="text"/>
8. Pain?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE pain: <input type="text"/>
Comments: <input type="text"/>						
9. Numbness or tingling in hands and/or feet?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE peripheral neuropathy: <input type="text"/>
10. Felt short of breath?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE dyspnea: <input type="text"/>
11. Mouth or throat sores?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE mucositis: <input type="text"/>
12. Rash?	Denies	Yes	Did not assess			
12a. Palmar-plantar erythrodysesthesia syndrome?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE palmar-plantar erythrodysesthesia syndrome: <input type="text" value="0"/>
12b. Rash acneiform?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE acneiform: <input type="text"/>
12c. Rash maculo-papular?	Denies	Mild	Moderate	Severe	Did not assess	CTCAE Maculo-papular: <input type="text"/>
13. Trouble doing usual activities?	Denies	Yes	Did not assess			
14. Other side effects or things you would like to discuss?	Comments	<input type="text"/>				Your clinical impression: <input type="text"/>

EHR Smart Form Build: 3 Adherence Questions

Adherence															
16. In the last 30 days, how often did you take your [drug name] as prescribed?	<table border="1"><tr><td>Never</td><td>Rarely</td><td>Sometimes</td><td>Usually</td><td>Almost Always</td></tr><tr><td>Always</td><td colspan="4"></td></tr></table>	Never	Rarely	Sometimes	Usually	Almost Always	Always								
Never	Rarely	Sometimes	Usually	Almost Always											
Always															
15. In the last 30 days, on how many days did you miss at least one dose of any of your [drug name]?	Write in number of days, 0-30 <input type="text"/> Specify chemotherapy cycle <input type="text"/>														
17. What reasons are you having trouble taking your medication [pharmacist: check all that apply]?	<table border="1"><tr><td>No problems identified</td><td rowspan="12"></td></tr><tr><td>Adverse effects</td></tr><tr><td>Financial</td></tr><tr><td>Instructed by provider to hold or take differently</td></tr><tr><td>Lack of perceived benefit</td></tr><tr><td>Language barrier</td></tr><tr><td>Low health literacy</td></tr><tr><td>Patient forgets</td></tr><tr><td>Knowledge deficit</td></tr><tr><td>Patient refuses</td></tr><tr><td>Psychosocial</td></tr><tr><td>No transportation</td></tr><tr><td>Other non-adherence reason (enter a comment)</td></tr></table> Comments <input type="text"/>	No problems identified		Adverse effects	Financial	Instructed by provider to hold or take differently	Lack of perceived benefit	Language barrier	Low health literacy	Patient forgets	Knowledge deficit	Patient refuses	Psychosocial	No transportation	Other non-adherence reason (enter a comment)
No problems identified															
Adverse effects															
Financial															
Instructed by provider to hold or take differently															
Lack of perceived benefit															
Language barrier															
Low health literacy															
Patient forgets															
Knowledge deficit															
Patient refuses															
Psychosocial															
No transportation															
Other non-adherence reason (enter a comment)															
Comments: <input type="text"/>															
Optional Symptom Tracking															

Overview: Pilot Test Starting this Month

- Design: single arm with 20 patients per clinic (N=60)
 - Half age 65+, 40% Black, 50% women (thoracic & hematology)
- Aim 1: Acceptability and feasibility
 - Patients: PROMs at 1 week/1 mo/3 mo, interview at 3 months
 - Pharmacists: brief questionnaire at end of study, feedback
- Aim 2: Adoption
 - EHR data extraction:
 - Smart form PRO-CTCAE
 - Patient demographic and clinical characteristics
 - Visit characteristics/ how EHR Smart Form is used

Thank You to Our Stakeholder Advisory Board

Pharmacists and Leaders	Patient Advocates	PhD and MD Champions	Staff Members & Students
Debbie Liang	Kang Sung	Lorinda Coombs	Dana Mueller
Sonali Acharya	Ron Taylor	Jennifer Elston Lafata	Janiece Morgan-Glover
Jill Brese	Anne Wilson	Jennifer Lund	Dan Giang
Kaitlyn Buhlinger		Emily Miller Ray	Shweta Pathak
Kevin Chen		Gita Mody	Liang Zhao
Evan Colmenares			Christiana Ikemeh
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Bianca Patel			
Michael Tilkens			