

Patient-Reported Outcomes

Christopher Friese, PhD, RN

AGENDA

- Overview of PROs (and Cons) of PROs – Friese
- (Video) Discussion with Alex Chong,
Center for Medicare & Medicaid Innovation
- Panel Discussion
- Q & A, Discussion
- Polling questions via your phone

PROs (and Cons) of PRO Reporting

Christopher R. Friese, PhD, RN

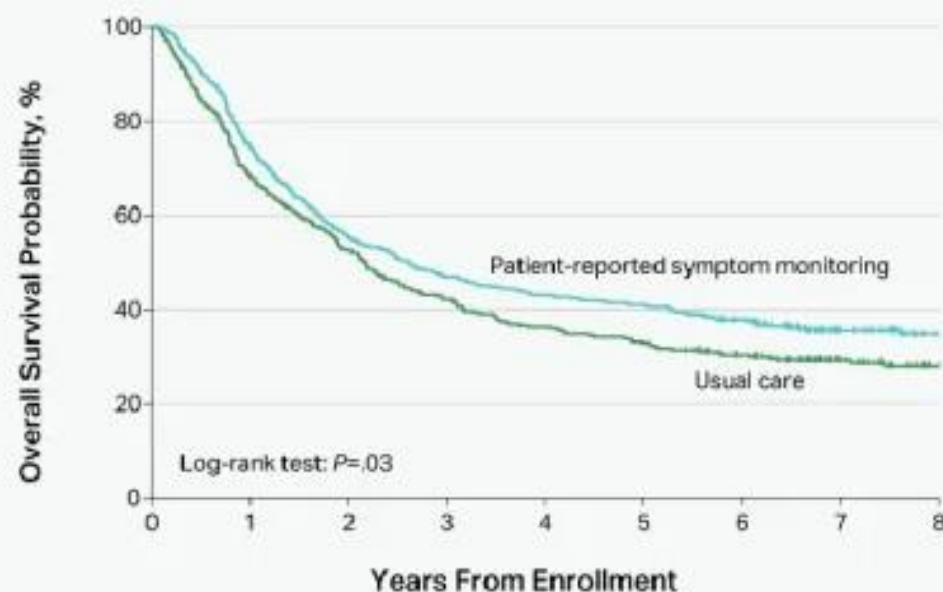
The Evidence Base for PROs

- Basch, et al. Patient vs. Clinician Reporting:
 - Patients report toxicities at higher severity
 - Clinicians miss some PROs
 - PROs reported sooner in the course of treatment
 - E-PRO monitoring associated with lower mortality

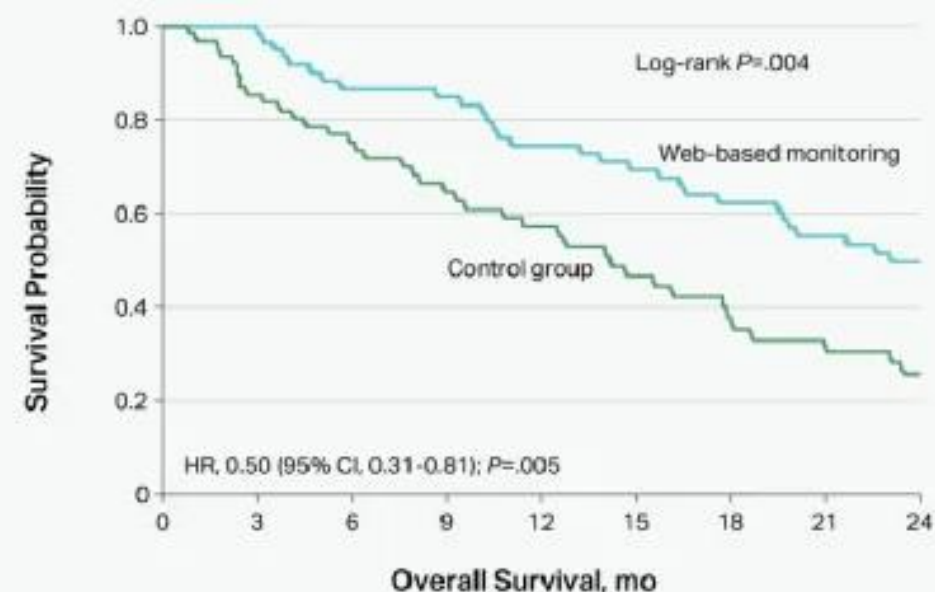


Figure 3. Evidence from two randomized controlled trials demonstrating overall survival benefits when integrating patient-reported outcomes into routine cancer care

Two-year survival comparing web-based symptom monitoring vs routine surveillance following treatment for lung cancer⁷



Overall survival among patients with metastatic cancer assigned to electronic patient-reported symptom monitoring during routine chemotherapy vs usual care⁸



Source: JAMA 2017;318:197 and JAMA 2019;321:306.

Practice-based sampling

- Local community-based oncology practices (5 offices)
- Patient-reported outcomes for the 3 weeks after first cycle chemo
 - Frequency/severity of toxicities (did not occur to very severe)
 - Unplanned service use (clinic visit, ED, admission)
- Distress thermometer (0-10)
- Patient demographics and clinical data
- Recruited 106 for planned 100 patients
 - 43% breast cancer, 26% Stage III, 31% Stage IV

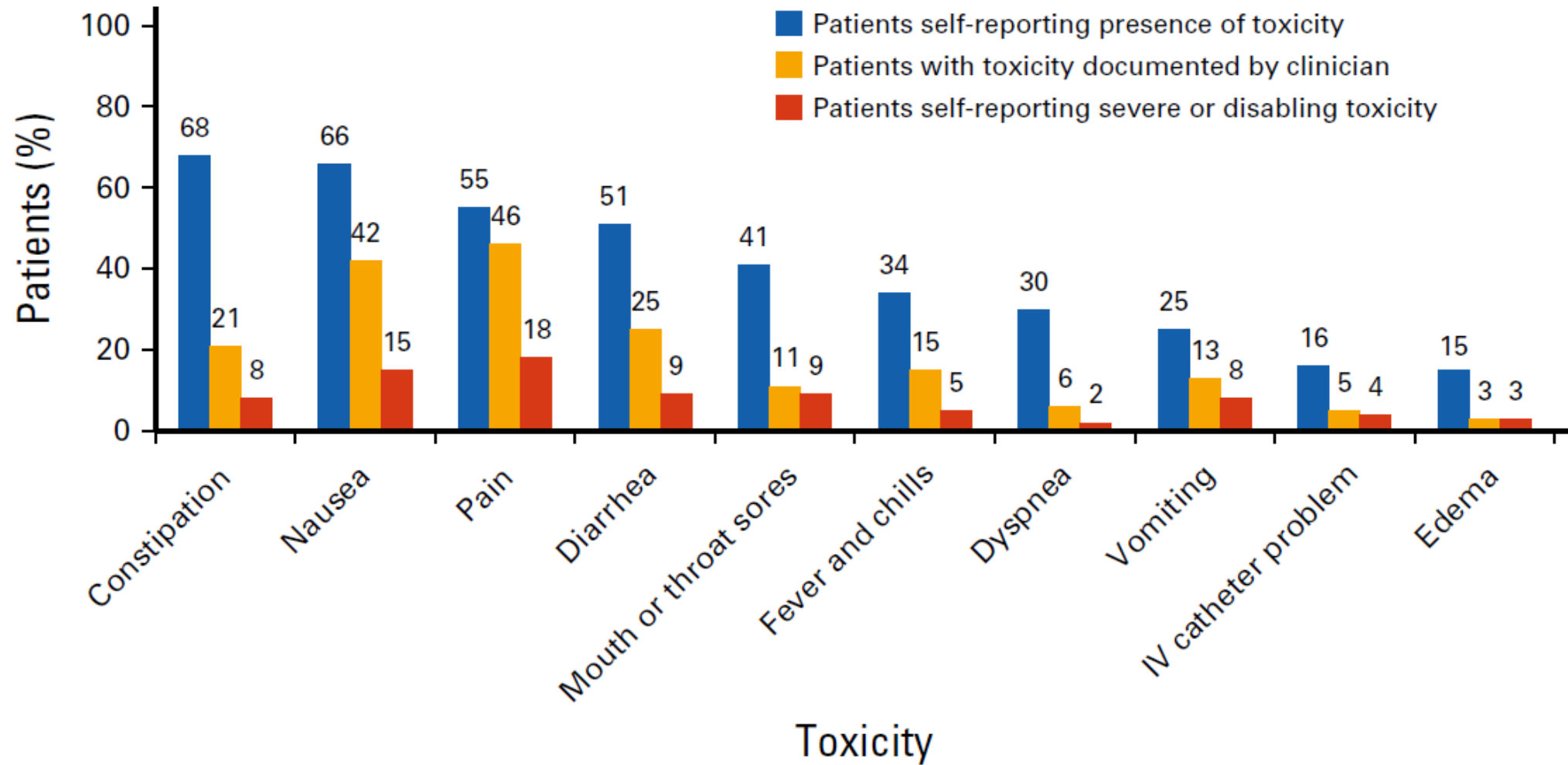


FIG 1. Frequency of patient-reported chemotherapy toxicities. IV, Intravenous.

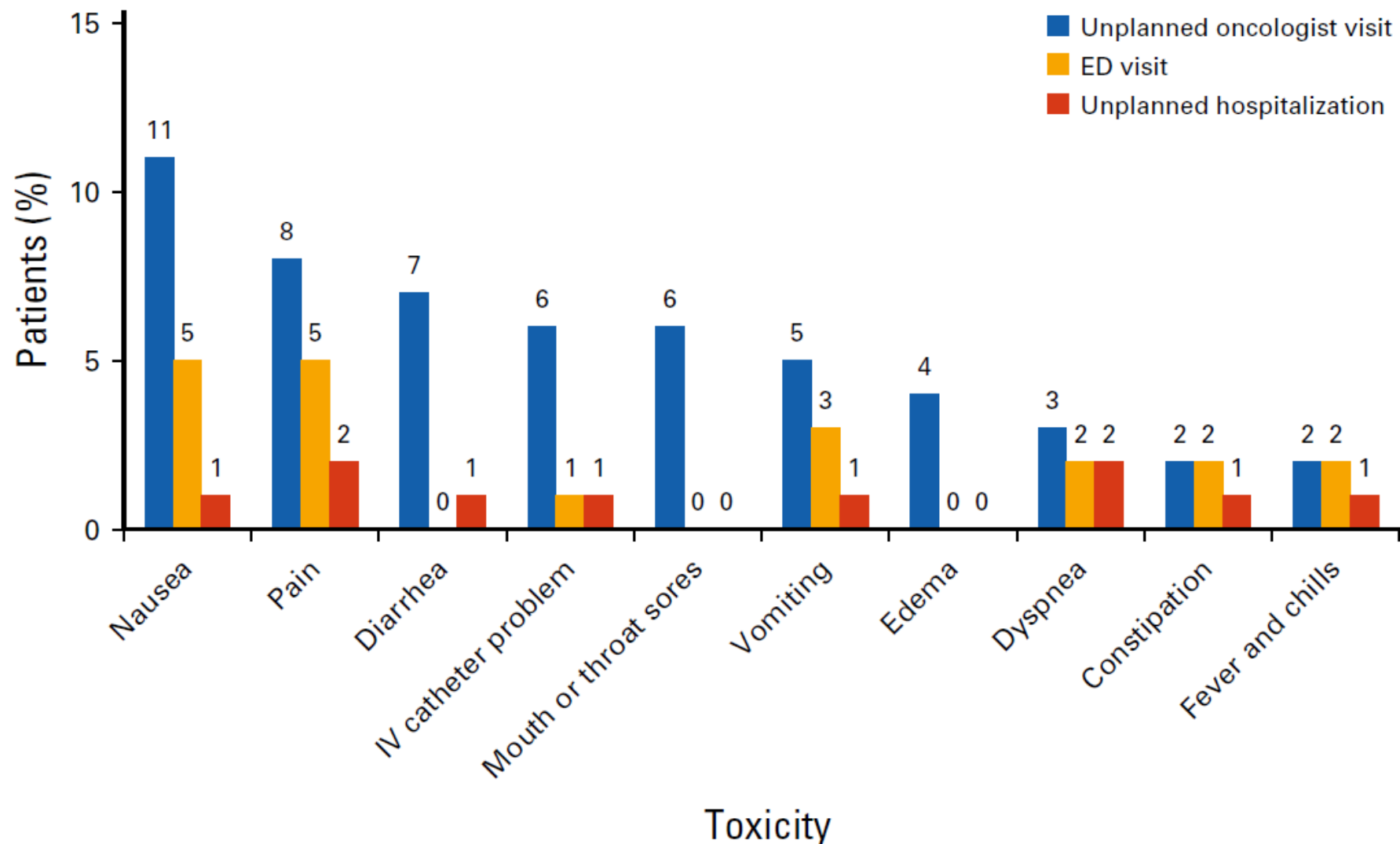


FIG 2. Frequency of patient-reported unplanned service use for chemotherapy toxicities. ED, emergency department; IV, Intravenous.

Project summary

- Clinically significant toxicities in the first cycle of chemotherapy
- Toxicities associated with unplanned health care service use
- Toxicities associated with higher patient distress
- Data were used to develop management algorithms
- New payment models informed by these data

ONCOLOGY COMMUNICATION, TECHNOLOGY, AND ADVERSE EVENTS STUDY (OCTET)



Investigators

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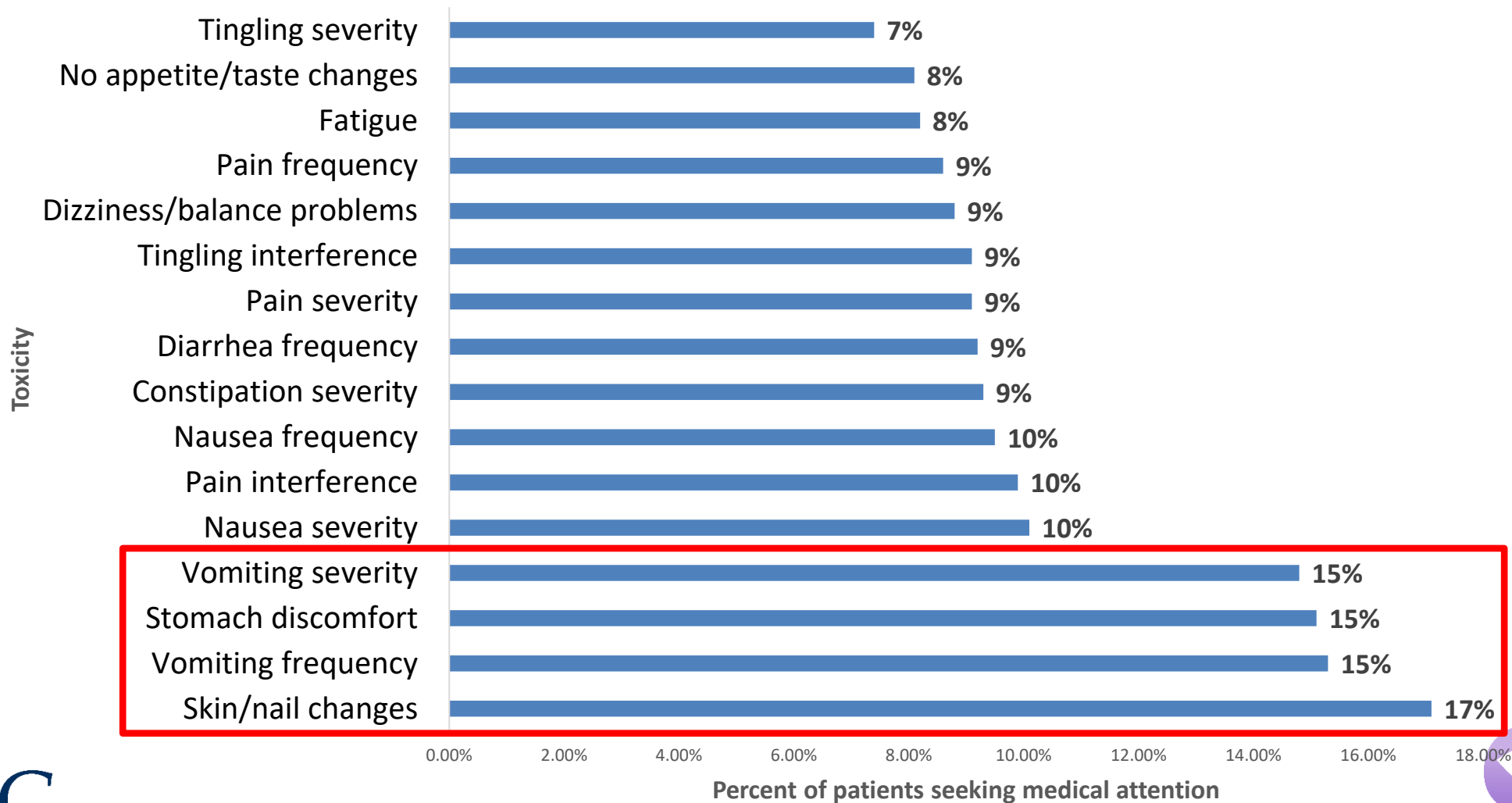
Patient-Reported Outcomes (PROs) Data

- 29 practices participated, 2,232 patients
- Six-week data collection schedule
- Eligible patients: receiving intravenous chemotherapy
- Complete survey assessing toxicities in past seven days using valid & reliable PRO-CTCAE (converts CTCAE to patient-reported version)
- Nausea, Vomiting, Constipation, Diarrhea, Neuropathic Pain, General Pain, + two write-in options; 5-point scale (severity ± frequency)
- Self-reported unscheduled clinic visits, ED visits, inpatient admission

PROs Data: Key Findings

- 453 (20%) of patients reported one toxicity as severe/very severe
- 156 (7%) of patients sought medical attention for a toxicity
 - Mean severity of worst toxicity was 2, which is < than CTCAE grade 3.
- Frequent write-ins: Fatigue, Vague GI Sx, Skin/Nail Changes
- Next slide: toxicities aligned with excess service use: some surprises?

Chemotherapy Toxicities and Service Use



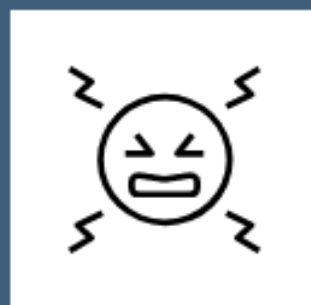
Patient-reported outcomes collected in ambulatory oncology practices: Feasibility, patterns, and correlates

Highly Feasible



**63%
completion rate**

**Pain and GI toxicities
are most distressing**



**21% 10%
severe or very severe**

**Allow patients to
write in toxicities**



**773 open-text
comments**

Paper survey of 2,245 adult patients w/ cancer in 29 practices

Friese, et al., Health Serv Res, 2020

doi.org/10.1111/1475-6773.13574

We acknowledge www.MOQC.org as project partners and AHRQ for Research Funding



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QUESTION In patients undergoing treatment for metastatic cancer, does electronic symptom monitoring improve patient-reported outcomes?

CONCLUSION Use of weekly electronic patient-reported outcome (PRO) surveys to monitor symptoms resulted in statistically significant improvements in physical function, symptom control, and health-related quality of life (HRQOL) at 3 months vs usual care among patients with metastatic cancer.

POPULATION

694 Women
496 Men



Adults receiving treatment
for metastatic cancer

Mean age: 62 years

LOCATIONS

52
Community
oncology practices
in the US



INTERVENTION



1197 Patients randomized
1191 Patients analyzed

593

PRO intervention

Weekly electronic patient survey
asking about symptoms,
performance status, and falls

598

Control

Usual care

OUTCOMES

Secondary outcomes were change from baseline in physical function, symptom control, and HRQOL at 3 months, measured by the EORTC QLQ-C30 instrument. Results on the primary outcome, overall survival, are not yet available.

FINDINGS

Change in physical function, symptom control, and HRQOL (score range, 0-100 points) from baseline to 3 months

	PRO intervention		Control	
	Baseline	3 mo	Baseline	3 mo
Physical function	74.27	75.81	73.54	72.61
Symptom control	77.67	80.03	76.75	76.55
HRQOL	78.11	80.03	77.00	76.50

Mean differences were significant:

Physical function, 2.47 points (95% CI, 0.41 to 4.53); $P = .02$

Symptom control, 2.56 points (95% CI, 0.95 to 4.17); $P = .002$

HRQOL, 2.43 points (95% CI, 0.90 to 3.96); $P = .002$

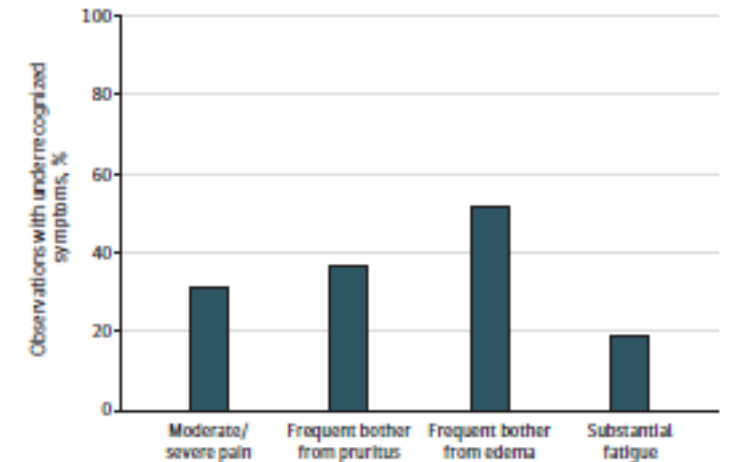
Now, for the CONS

- Workflow challenges
- Training + supporting overworked clinical teams
- Integration with electronic health records
- What can/will clinicians do with the data?
- MOQC challenge: feasibility and acceptability across diverse practices
- MOQC challenge: diverse patient populations

Local Examples

- MROQC (Radiation Oncology): Paper-based mostly, 2 projects with Qualtrics, not linked to EHR
- MUSIC (Urology): Web-based survey, portal for surgeons, register in practice → email surveys
<https://musicurology.com/programs/prostate/pro/>

Figure 1. Percentage of Observations With Underrecognized Symptoms





June 17, 2022

Patient-Reported Outcomes in Cancer Care (PROMOnc)

MOQC Biannual Meeting

Rachel Brodie

Senior Director, Measurement & Accountability



Purchaser Business
Group on Health

The Need

- PROMs in patients treated with curative intent
- Measures to improve delivery of cancer care
- May support accountability & value-based payment

PROMOnc Measures

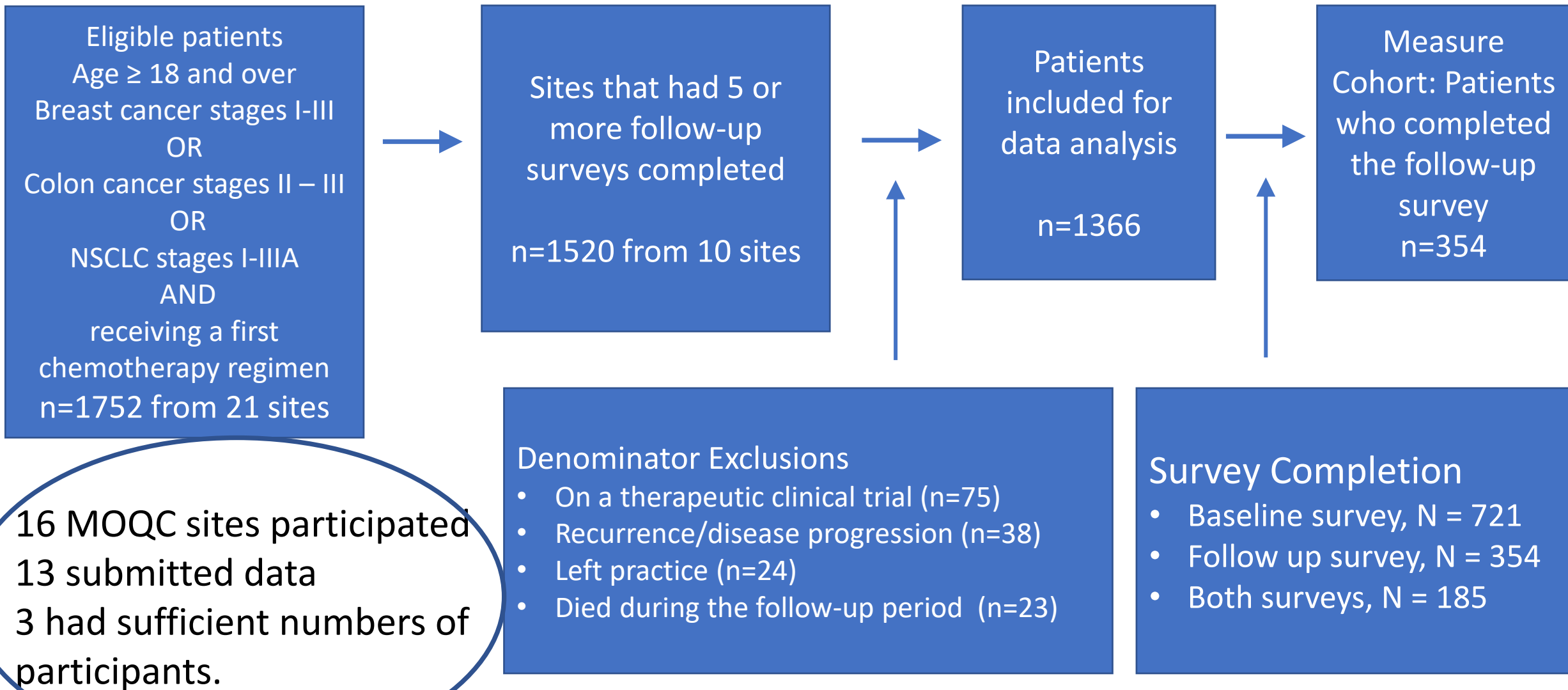
Selected with POQC input

PROMIS measures important to patients in survivorship

- HRQoL (mental & physical health)
- Pain interference
- Fatigue

Deployed in MOQC sites (N = 16) and Alliance of Dedicated Cancer Centers (ADCC)

Key Findings: Measure Denominator



Test Site Enrollment and Survey Completion

Site	Number of Eligible Patients	Number of Patients in Denominator Cohort	Number of Patients Completing Survey		
			Baseline	Follow-Up	Both Surveys
ADCC 1	70	65	10	7	3
ADCC 2	218	187	141	41	40
ADCC 3	355	328	178	9	7
ADCC 4	413	369	183	70	41
ADCC 5	202	176	63	49	26
ADCC 6	169	155	74	59	34
ADCC 7	30	28	24	8	7
MOQC 1	24	20	14	12	8
MOQC 2	22	21	19	13	12
MOQC 3	17	17	15	7	7
Total	1520	1366	721	275	185

Group Level Performance Measure Scores

	Mean Group Performance Score	SD	Min	Max	Inter-Unit Reliability	Number of Patients/Group Needed to Achieve .7 Reliability
Pain Interference	50	2.8	44	54	.77	22
Fatigue	49	3.1	42	53	.77	23
Physical Health	45	2.6	40	50	.53	66

- Mean among group scores that were significantly above or below the average; the mean absolute difference between the group's scores and the overall average is greater than what PROMIS literature cites as a meaningful difference.
- Results indicate that the PRO-PM measures can discriminate between groups' performance.

Key Points from MOQC PRO Task Force

- PROs important to measure
- Interest in straightforward instruments + also assess for social/structural needs
- A hybrid approach to begin (paper + Epro)
- Invite family/caregivers to contribute

A Phased Approach

Early State

- Meet practices where they are
- 3-4 core measures, at conclusion of treatment
- Paper + electronic platforms
- Reports generated by MOQC
- Shared at regular intervals
- Data inform future QI

Future State

- 100% digital reporting
- Fully-integrated into EHR
- Scored & shared in real-time
- Can adjust timing, questions
- Longitudinal monitoring
- Subgroup analyses
- Caregiver-specific instrument

Key Takeaways

Systematic PRO collection, reporting and analysis:



Helps focus clinical interventions



Prioritizes improvement efforts



Centers care on patient + family needs



Must be done with care to avoid burdens



Conversation with Dr. Alex Chong



VIDEO

<https://youtu.be/-YO6ommLJL8>

Panel Discussion



Table Discussions

Group A

1. What does collecting PROs make possible?
2. PROs can be collected to inform clinical care delivery or to strengthen quality improvement efforts. Which rationale makes the most sense for us to pursue at MOQC? What are the pros and cons of each approach?
3. What are your thoughts on the ***format(s)*** to collect PROs data? Is there any approach you have used that was particularly effective?
4. How would you want the PRO data to be shared with the practice?

Group B

1. What does collecting PROs make possible?
2. PROs can be collected to inform clinical care delivery or to strengthen quality improvement efforts. Which rationale makes the most sense for us to pursue at MOQC? What are the pros and cons of each approach?
3. What challenges do you foresee in implementing the collection of PROs?
4. Of all the PROs you have heard about, which ones would help cancer care teams help patients the most?

Group Q & A, Discussion

