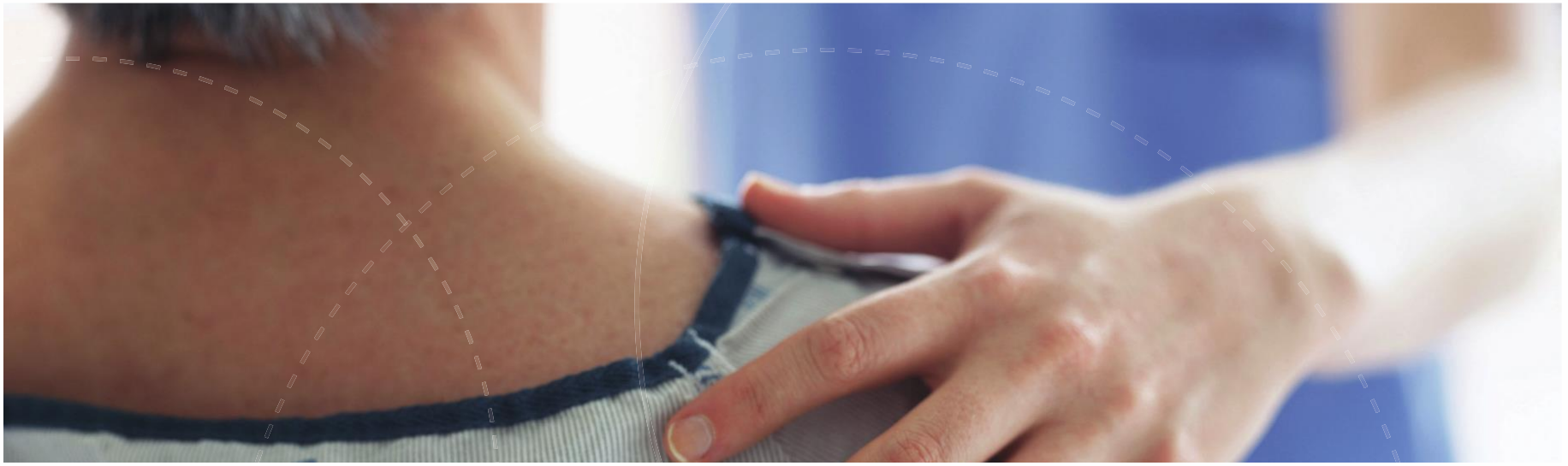

Changing how Physicians Communicate to Reduce Contextual Error in a Large Healthcare Organization

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Questions

- What is a contextual error (Discussed yesterday)?
- Can we change how physicians communicate so as to prevent them?
- Is Audit & Feedback effective?
- What does it take for physicians to be comfortable being covertly recorded by their patients (patient-collected audio)?
- If patient-collected audio for audit & feedback is effective is it scalable?

Contextual Error

A care plan that is inappropriate given a particular patient's context

Looks correct if you don't know the back story.

Contextualizing Care is a 4 Step Process

1. Recognize a *Contextual Red Flag*: A clue that something in a patient's life situation might be impacting their care
2. Pursue the clue with a *Contextual Probe*: An attempt to inquire about a contextual red flag to find out what in the patient's life situation might be impacting their care.
3. Identify, when present, a *Contextual Factor*: Anything in a patient's life situation that is impacting their care.
4. Establish a *Contextual Plan of Care*: A care plan that takes contextual factors into account so that the care will be effective.

4C coding:
Missed opportunity to probe and contextualize care

- **Red Flag:** A patient with diabetes commented that he was not checking his feet at home as had been recommended.
- **No Probe:** The provider did not ask him why.
- **Contextual Factor spontaneously revealed by patient:** The patient went on to say that he didn't care whether or not he developed problems with his feet because of his diabetes. He then said that that he was "the kind of person who just doesn't take care of themselves." (Domains: Attitude Towards Illness)
- **No Contextual Plan of Care made:** The provider did not explore with the patient why he felt this way about himself. Is he depressed? Has he always felt this way?

Contextual Factors sort into 12 Domains

Areas to consider when there are clues that a patient's circumstances or behaviors may need to be addressed when planning their care.

1	**Access to Care**	7	**Attitude Towards Illness**
2	**Competing Responsibility**	8	**Cultural Perspective/Spiritual Beliefs**
3	**Environment**	9	**Emotional State**
4	**Financial Situation**	10	**Health Behavior**
5	**Resources**	11	**Relationship with Health Care Provider and System**
6	**Social Support**	12	**Skills, Abilities and Knowledge**

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What we've learned

- Context matters: In about 40% of real ambulatory visits, effective care depends on identifying and addressing patient context.
- Often overlooked: In about 40% of encounters in which care depends on attention to context, physicians overlook context -- i.e. there is a contextual error.
- Harmful: Contextual errors *predict worse health care outcomes.*
- Expensive: Contextual errors *result in overuse and misuse of medical services with higher costs.*
- Wide variability: Physicians vary greatly in their attention to patient context.
- Surprising Finding: Physicians who did well didn't take longer.

Can clinicians do better?

Studying two approaches to improve how doctors practices:

Experiential learning: A workshop series on contextualization of care. Fourth year medical students and residents.

Finding: They acquired the skill but it didn't improve performance in practice.*

Audit & feedback: Patients audio recorded their visits; information fed back to care team.

Finding: trend towards improved performance**

*Schwartz A. Weiner SJ, Harris I, Binns-Calvey A. An educational intervention for contextualizing patient care and medical students' abilities to probe for contextual issues in simulated patients. JAMA 2010;304(11):1191-1197.

Weiner SJ, Schwartz A, Sharma G, Binns-Calvey A, Ashley N, Kelly B, Dayal A, Patel S, Weaver FM, Harris I. Patient-Centered Decision Making and Health Care Outcomes: An Observational Study. Annals of Internal Medicine. 2013;158:573-579.

**Weiner SJ, Schwartz A, Sharma G, Binns-Calvey A, Ashley N, Kelly B, Weaver FM. Patient collected audio for performance assessment of the clinical encounter. Jt Comm J Qual Patient Saf. 2015;42(6):273-278.

QI Project to Prevent Contextual Error Data Collection

1. Veterans volunteer to carry encrypted audio recorders into their visits. They are encouraged but not required to conceal them so as not to disrupt the visit or influence the provider's behavior. The recorders are distributed and collected at a table in the waiting room by project staff and/or volunteers.

2. The audio recordings are uploaded to a secure server and analyzed by trained coders who review the chart and listen to the audio for contextual red flags, contextual probes, contextual factors and contextualized care plans, employing a method called "Content Coding for Contextualization of Care" or "4C".

QI Project to Prevent Contextual Error Data Analysis

1. The coders produce reports of each PACT team or multiple PACT teams that concisely present the findings of each audio recorded encounter, and a graphical summary of two performance indicators over time:

    a. Percentage of encounters in which the clinician probed contextual red flags.

    b. Percentage of encounters in which clinician contextualized care.

Example:
How encounters are reported back to PACT teams

Example of clinician probe, contextual factor revealed, no plan of care made:

- **Red Flag:** Pt.'s A1C is 8.5. Patient says he hasn't been checking his sugars.
- **Probe:** The provider states, "What's the hang up (with checking sugar levels at home)?"
- **Contextual Factor:** The patient reveals that he doesn't like poking his finger with a needle. It is also discovered that the patient is taking the wrong dose of insulin.
- **No Contextual Plan of Care:** The provider does not discuss preventing fingertip pain (e.g. warm hands first, Lance on side of finger, alternate fingers daily). The provider also doesn't probe further as to why the patient was taking the wrong dose.

How Data is Used

- Reports are discussed at PACT team meetings. All clinician and patient identifiers removed.
- Clinicians may request data on their own performance.
- Reflection exercises are offered to clinicians to complete at PACT team meetings and via email.
- Project is expanded to include nurses, pharmacists and front desk clerks
- Participating patients are followed for several months after visit to see if presenting problem improves

Summary: We employ multiple methods of feedback in an effort to heighten self-awareness about the importance of paying attention to patient context in care planning.

Research study across six sites: Comparing two levels of feedback

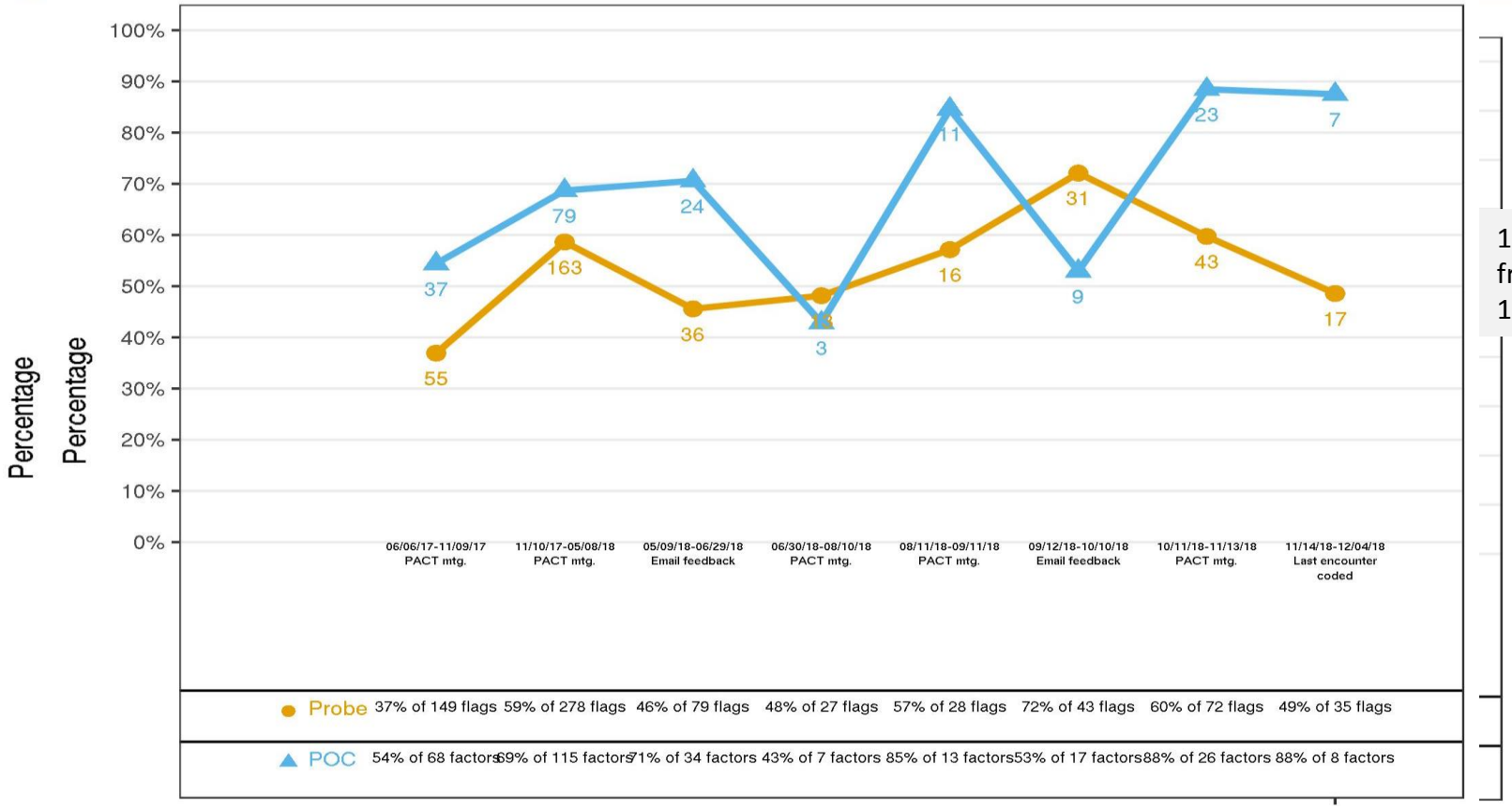
Elements of Intervention	Enhanced Feedback	Standard Feedback
Aggregate performance reports to doctors with external facilitation (A-4 for example)	X	X
Add data for residents	X	X
At least monthly feedback	X	X
Feedback Reports to doctors with peer facilitation	X	X
Reflective written exercises developed from recent cases for CME credit (see A-5 for example)	X	
Individualized performance reports	X	
Feedback Reports to nurses, clinical pharmacists, and clerks	X	
Feedback includes data on health care outcomes	X	
Weekly email blast with contextual examples from recent audios	X	
Maintenance of Certification (MOC) credit for attending physicians	X	

Rollout: Stepped Wedge Design

Milwaukee	Audit	Audit	Audit			
Madison	Plan	Audit	Audit			
Los Angeles	Plan	Audit				
Cleveland	Plan	Audit				
Hines						
Jesse Brown						
Timeline	11/16 - 4/17	5/17 - 10/17	11/17 - 4/18	5/18 - 10/18	11/18 - 4/19	5/19 - 10/19

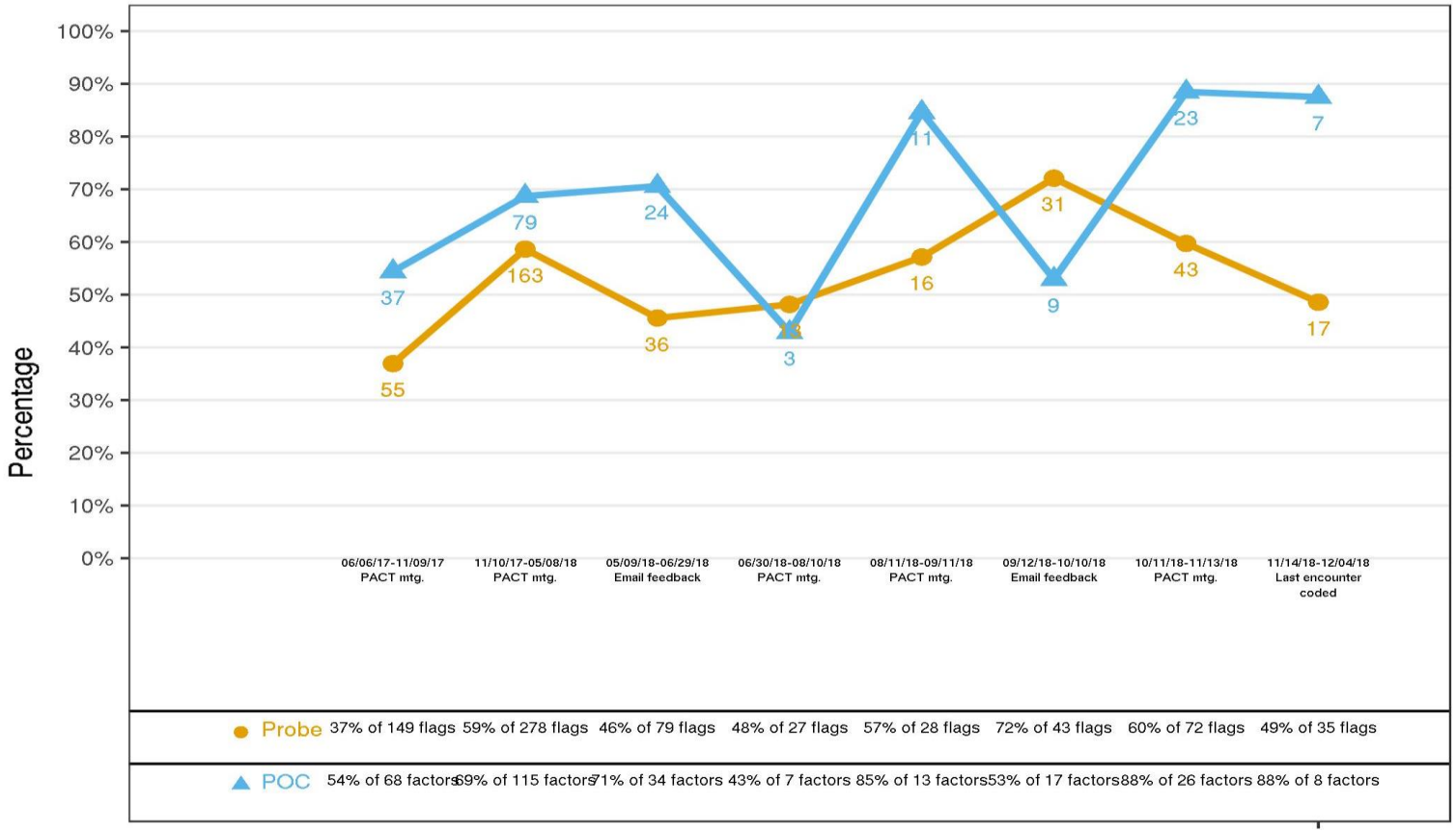
Baseline	Standard	Enhanced

Los Angeles, California



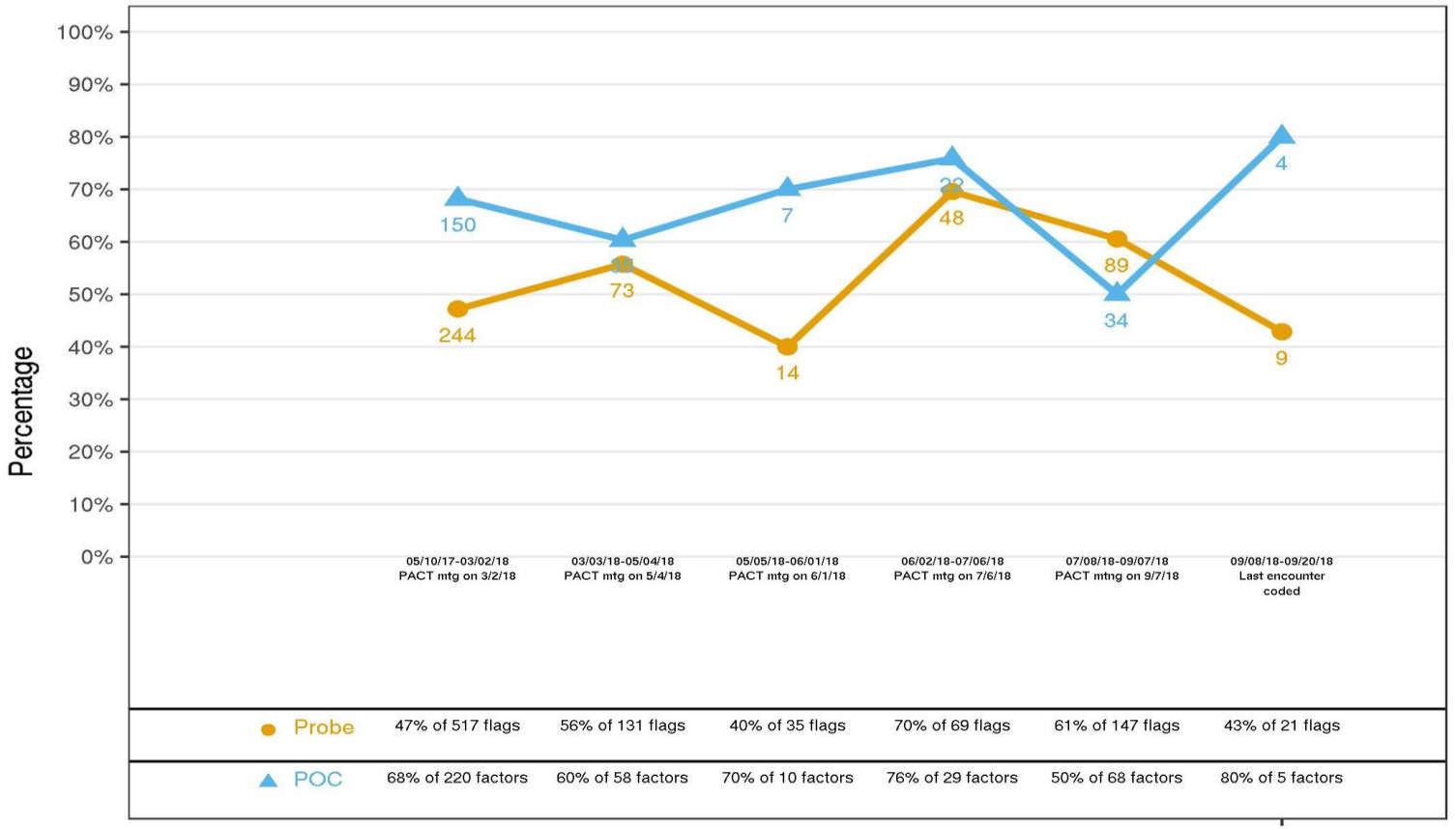
195 participants from 10/7/16 – 11/21/18

Hines, Illinois



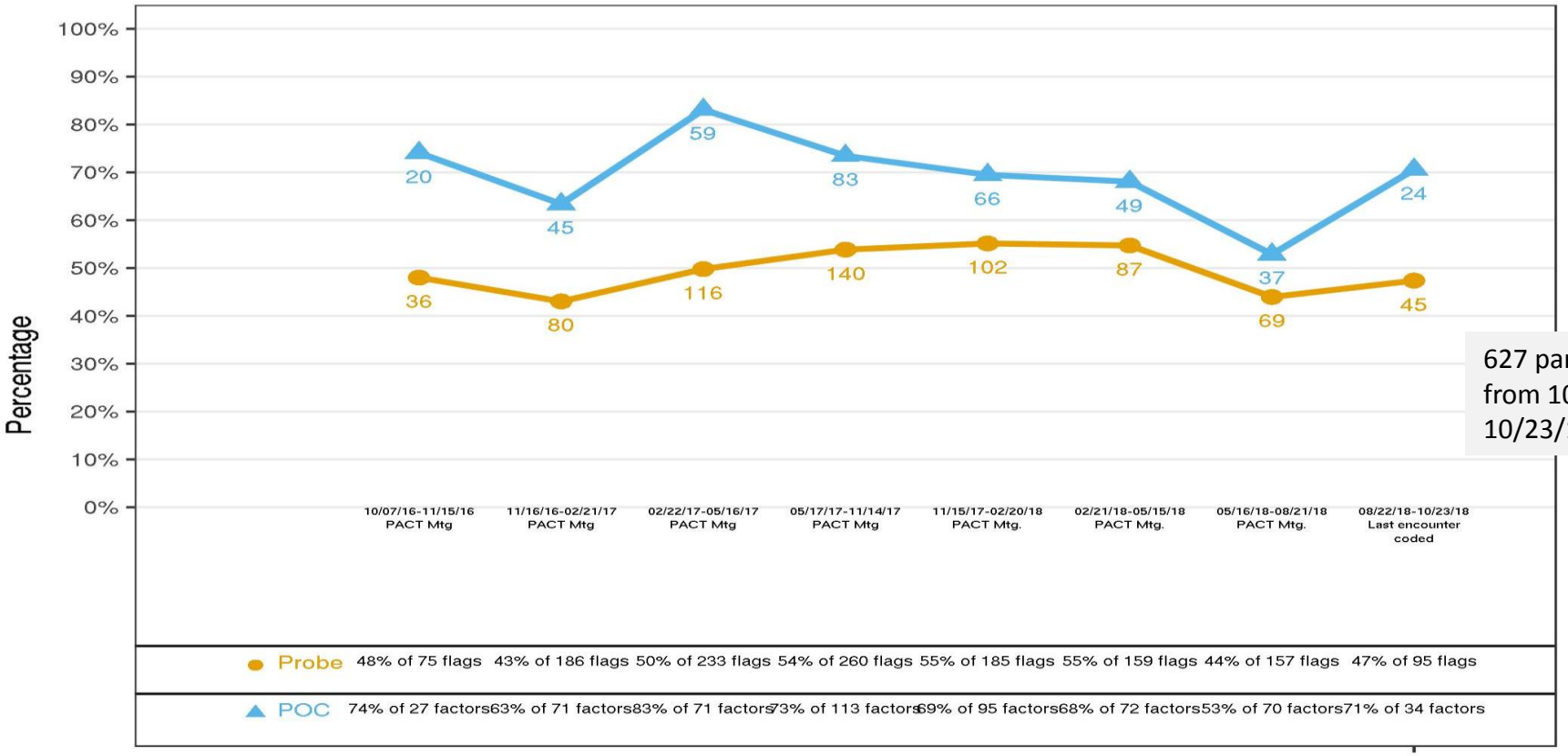
633 participants from 6/6/17 – 12/4/18

Cleveland, Ohio



497 participants from 5/10/17 – 9/20/18

Chicago, Illinois



627 participants from 10/7/16 – 10/23/18

Three principles for implementation

Clinicians/staff and their patients much be convinced of the following:

1. Project is *safe*: Audio data must be secure and never used punitively
2. Project is *not burdensome*: Data collected during routine care and shared during routine meetings or via confidential email
3. Project has *value*: show them their errors and improvements; provide continuing education credit

The Research Project: Efficacy

Efficacy: *Is the project achieving its goals?*

- *Is audio recording visits and feeding the data back to PACT teams resulting in fewer contextual errors over time?*

  4C coding of medical record and audio, based on an average of 17 audio recordings with contextual factors/month/site.

- *If it's resulting in fewer contextual errors, is it also resulting in improved health care outcomes?*

  Chart review 4-6 months following the coded visit.

- *If it's resulting in fewer contextual errors, is it also resulting in fewer unnecessary tests and treatments, i.e. reduced misuse and overuse of medical services?*

  Using de-identified large VA datasets, compare costs of care before and after implementation at each site. Also assess if cost savings greater than costs of project (i.e. cost effective).

The Research Project: Implementation

Implementation: *Has the project been implemented optimally and sustainably?*

- *Are patients who volunteer comfortable audio recording their visits and do they understand the purpose of the project?*

  Patients complete a survey when they return their audio recorder.

- *Are clinicians/staff comfortable participating, and do they find the data useful and not burdensome?*

  Survey and focus groups with participants.

- *Can facility leadership provide any input on how to improve integration of the project into facility operations?*

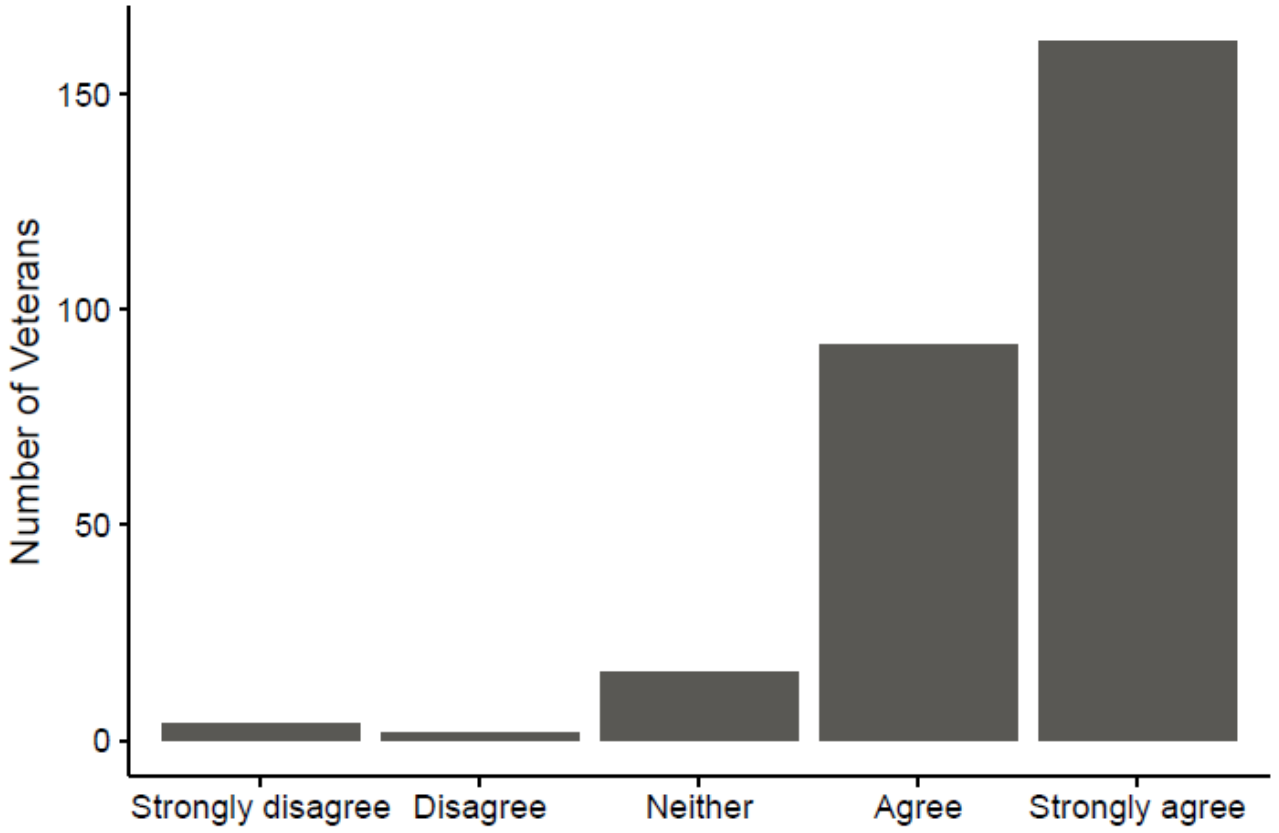
  Semi-structured interviews with facility leaders.

Project Status

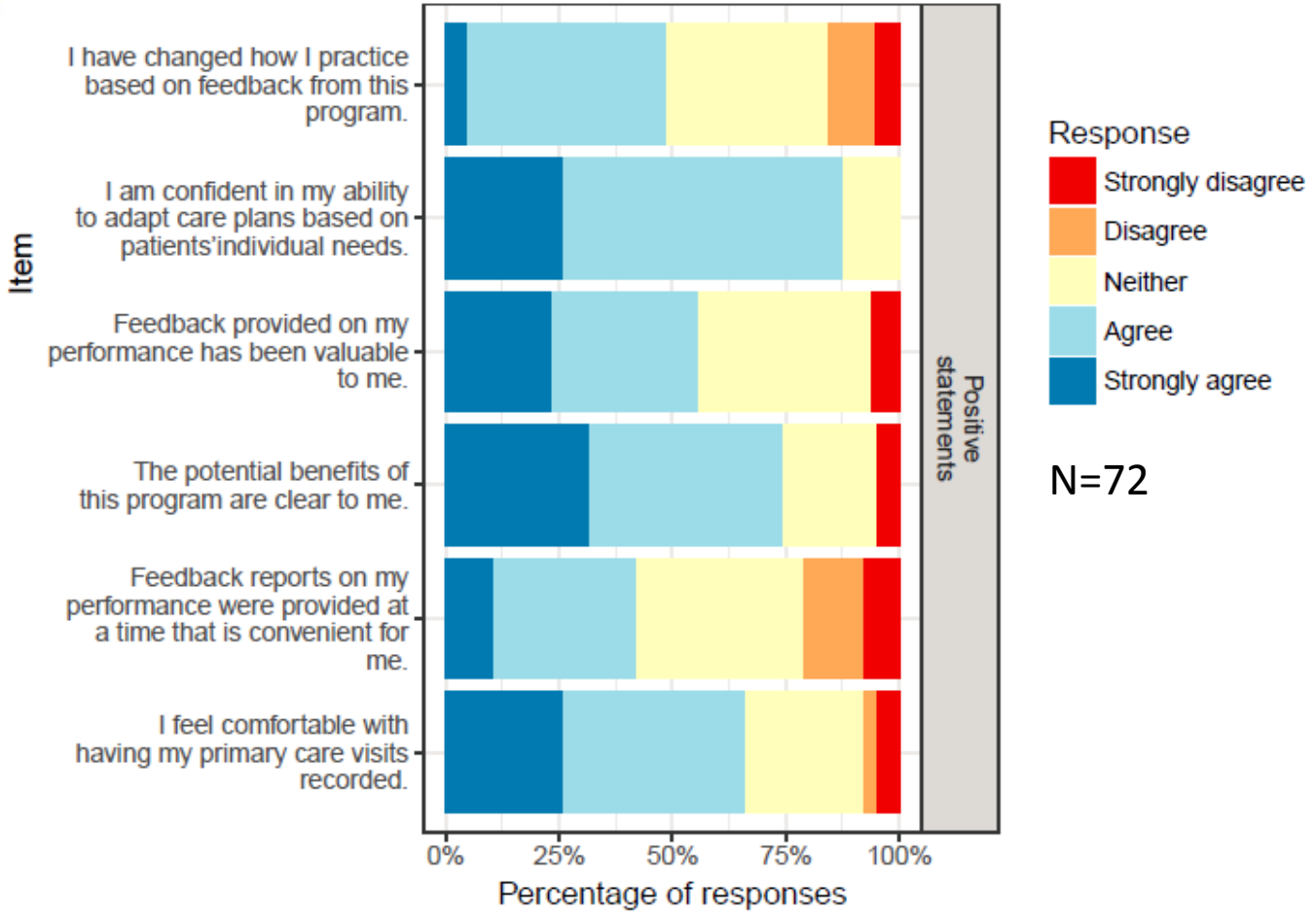
- Over 2896 patients participating across 6 sites.
- 51% of contextual red flags were probed
- 42% of contextual red flags revealed contextual factors
- 67% of contextual factors were addressed in the plan of care

Patient Experience

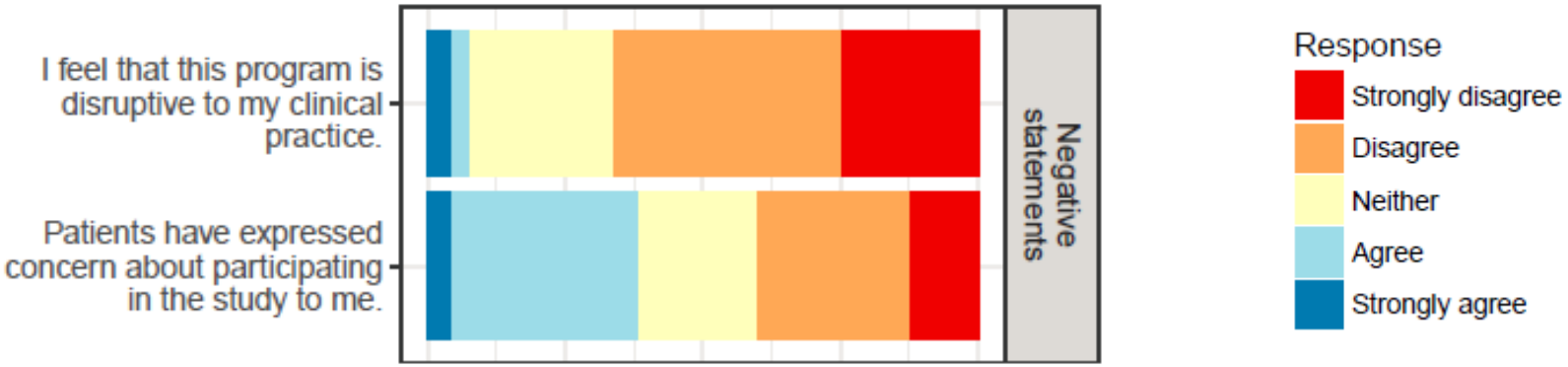
Q1 = I felt comfortable recording my visit with my doctor.



Physician Experience



Physician Experience



Patient Range of Perspectives

- *Anything that would improve my care I'm all in*
- *Frankly, I was not thinking about it. I hit play & didn't cross my mind.*
- *Hope to aid in improvement of an already excellent & competitive medical system*
- *It required no extra work nor did it disturb the appointment.*
- *Felt that it could possibly interfere with Dr./patient communication*
- *I informed Dr. of recording and it seemed to alter his behavior from past visits. He was never negative, but I prefer other demeanor*
- *Lack of privacy*
- *I think maybe this should be a requirement for patients as this shows the VA cares about my health, and the doctors or medical staff desire to help.*

Physician Range of Perspectives

- *"I've been taped before so that wasn't a big thing."*
- *"I think the bigger issue is the fact that we're moving in and living in a surveillance society. ….I think the relationship between a patient and their doctor will adapt to the idea of living in a surveillance society."*
- *"You're having to think can this be used against me."*
- *"I think this is one of the areas that we don't get a lot ….there's no other way to get feedback like this. I mean you can look at notes and at outcomes and all those other things but there's nothing like this interaction piece and it's just something that happens behind closed doors all the time. So how else are you going to know?"*

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The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.