

“...observation is about stalking culture in the wild...[it] is a strategic method... [which] puts you where the action is and lets you collect data . . .”

- *Bernard 2002*



The power and importance of qualitative observations in research and quality improvement work

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Poll Questions

What is your experience with direct observation?

- Never heard of it
- I have heard about it or have read about it in articles/classes/trainings
- I have tried it as a method
- I have real familiarity with direct observation

Poll Questions

I have conducted a research or quality improvement project that uses direct observation.

- No
- I am developing one
- I am currently working on one
- I have completed one (or more)

Learning Objectives

- Understand the benefits of using direct observation in health services research and quality improvement
- Get a sense of what observation is and what it can add to research and quality improvement projects
- Develop awareness of the multiple components of human behavior
- Learn the basics on how to select an appropriate environment, activity, process or people to observe
- Learn some basic techniques for collecting observational data

Overview

- Case Study
- Introduction to Direct Observation
 - When to use
 - How to plan
 - What to consider
- Concluding Thoughts

Use of observation in a VA study

- Funding: Centers for Disease Control and Prevention, Prime contract no. 2002011-42039, Task Order 0007; Centers for Disease Control and Prevention, 1 U54 CK000456-01; also supported by VA Health Services Research & Development Service (RCS 11-222)
- Study Team: Laura Petersen, Lynn Gregory, Me, Lauren Weston. PI, Sarah Krein (strategically taking the photo). Not pictured: Research Assistants.



Evidence of non-adherence and breaches in use of personal protective equipment (PPE) are well documented.

- Use of PPE (i.e., gowns, gloves, facemasks) prevents the transmission of infectious agents in healthcare settings.
- However, previous research has shown that compliance with PPE use varies among health care providers (HCP).
- The donning and doffing process has also been found to be inconsistent (PPE not put on or removed in the correct order).
- These previous studies used structured, direct observation to collect their data.
 - Data were documented using checklists and standardized forms.
- Although results were important and demonstrated that non-adherence and breaches were occurring; understanding *why* it was happening was lacking.

Research objective and aim

- **Objective-** Enhance effective use of PPE and precaution practices.
- **Aim-** Understand the contextual (i.e., cognitive, environmental, behavioral etc.) factors that affect PPE use and practices from the HCP perspective.
 - In order to achieve the aim, we knew we had to be in the environment where practice occurs.

Developing a study protocol

- Study team trained in PPE.
- Experienced observers performed initial observations.
- Developed a “semi-structured” data collection template.
- Hired research assistants (pre-med and nursing students) who were also trained in PPE use and observation (didactic and experiential training).
- Trained observers were instructed to document, in the open field note, what they observed which included a physical description of the environment, the HCP they were observing, tasks being performed prior to, during and upon room exit.
 - Goal was to understand and not judge.

Sampling of results

325 individual room observations across 2 sites

Contextual Factors: Very much intertwined

- **Cognitive-** HCPs applied a “risk assessment” that factored in their decision to don PPE.
Example- “Dash and Drop”. HCPs dash into patient rooms without donning PPE to drop off things (medications or snacks).
- **Environmental-** Environment not conducive to use of PPE.
Example- No signage in the room to act as a visual cue/reminder. Garbage cans placed outside patient rooms.
- **Behavioral-** Habitual movements often put HCPs at risk.
Example- Numerous instances of HCPs touching their faces, pushing up glasses, pulling back their hair with gloved hands.

Our work was not done

- Shadowing- 14 sessions with various HCPs
- Focus groups- 8 across the 2 sites

Introduction to Direct Observation

Observations in research and quality improvement work

Why Observe?

- Interviews/focus groups
 - Capture perceptions or experiences
 - Insufficient in capturing behaviors or context
- What people do and what they say they do are not always the same
 - People are often unaware of aspects of their behavior
 - Self reports may lack precision, detail or be unconsciously biased

What Can Observation Do?

- Understand
 - Processes, events, norms, values & social context
 - Human behavior that is largely unknown, hidden or complex
 - Conceptions & attitudes of study group & their points of view
- Complement other data
- Help formulate ideas in local “language”

Approaches to Observation

- Direct observation
- Automatic timestamps
- Behavioral evaluation & behavior sampling

Things to Consider...

- Observation may not be the most effective way to answer the question
- Time & financial costs
- Hawthorne Effect
- Observation does not replace interviewing
- Behavior observations are seldom an end in themselves

Design & Sampling

Observations in research and quality improvement work

Research or Quality Improvement Aims

Main aims inform:

- Study design
- Data collection
- Data analysis

What Might You Observe?

Units of Observation

- Environment
- Verbal behavior & interactions
- Physical behavior & gestures
- Spatial arrangements
- Personal space
- Special gatherings
- Movement of people
- People who stand out

Sampling Strategies

- Continuous (motion picture)
 - Pros: detailed, with duration & sequence
 - Cons: time consuming, subject reactivity, small sample

- Instantaneous (snap-shot)
 - Pros: economical, large sample, less subject reactivity
 - Cons: unavailability of subjects & informant recall, observation window

Time-Motion Studies

- An observer captures data on the duration & movements required to accomplish specific tasks
- Generally coupled with analyses focused on improving efficiency of performing the tasks

[Lopetegui 2014, Finkler 1993]

Time-Motion Studies

- Common applications in healthcare examine clinical workflow, e.g.:
 - What proportion of a clinician's workday is spent on patient-facing versus administrative tasks?
 - What changes to staff's work schedules and/or staff composition decreases the time between a patient's scheduled and actual start times of his/her clinical appointment?

Behavior Sampling

- Used by animal behaviorists & psychologists
- Behavior recorded when it occurs or one identifies process steps or “thin slices of behavior”
 - Useful if you have only a short time/cannot do long or continuous observations

Nonverbal & Verbal Behavior

- Nonverbal behavior
 - Frequencies or counts of behavior
 - Smile, nod, gaze, gesture (patient-centered)
 - Self-touch (anxiety)
 - Interpersonal distance (liking)
 - Body orientation (closed vs. open)
- Verbal behavior
 - Established coding schemes
 - E.g., Roter Interaction Analysis System (RIAS)

How To Do Observations

Observations in research and quality improvement work

Getting Started

Why

- What are you hoping to learn through your research or quality improvement project?

What

- Behaviors (e.g., workflow, interactions) Validated coding scheme

Where

- Setting (e.g., how many locations or clinical encounters)

Who

- Individuals (e.g., all team members, patients)

When

- Frequency/How often?
- Number of observations/site visits
- Particular days/times? (e.g., clinics=Tuesdays)
- Duration (e.g., all day, a few hours)

Pilot

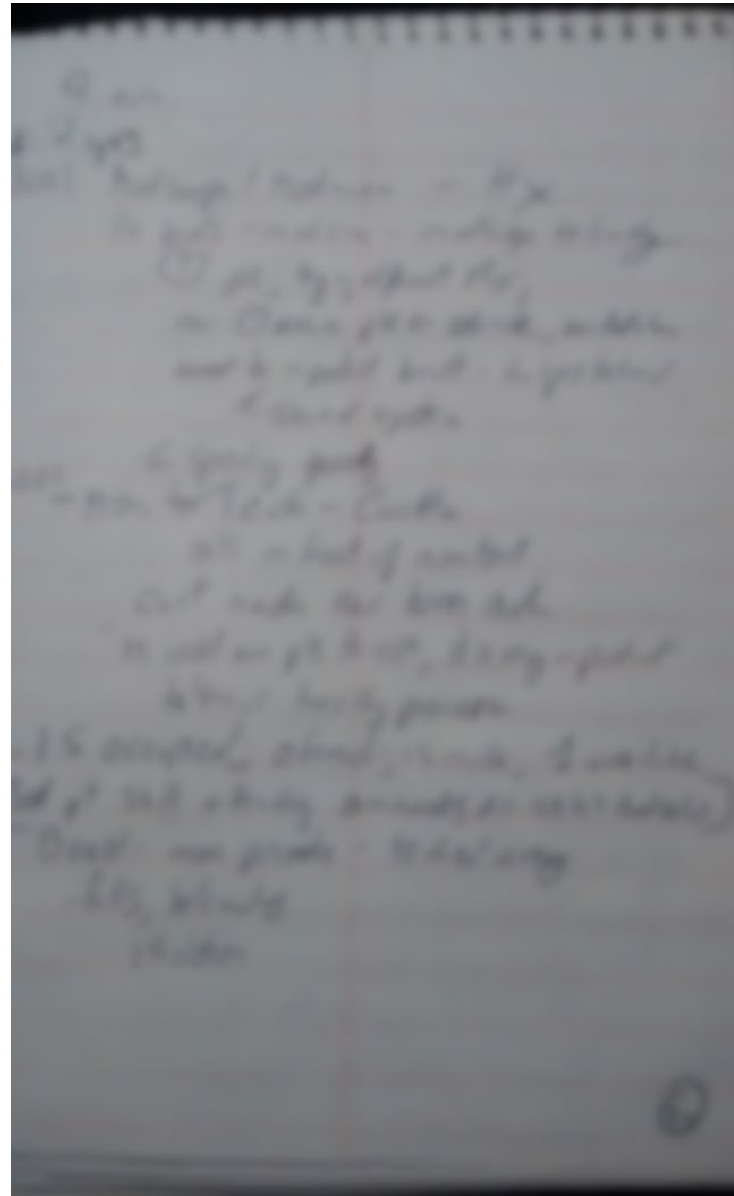
- Develop draft observation tool & practice!

Data Collection Tools

- Fieldnotes
- Templates
- Recording sheets & check lists

Fieldnotes

- Least standardized
- Open-ended, narrative
- Does not include preset questions or responses
- A note about “memoing”



Fieldnote, written by GM Fix 2014

Templates

- A priori fields to capture interactions, processes or behaviors
- Space for narrative descriptions
- Allows for emergent data

Center for Evaluating Patient-Centered Care in VA

Site Visit: *PHP Interactions Observation Tool*

Team Member: GF/ RB PHP Status: _____ ID # _____
Provider: _____ Role: RN HC MD LVN/LPN Other _____

Elements of PCC Observed:

| | | |
|--|--|---|
| <input type="checkbox"/> PCC Greeting | <input type="checkbox"/> Collaborative Decision-Making | <input type="checkbox"/> Display Empathy |
| <input type="checkbox"/> Communicate Purpose | <input type="checkbox"/> Inclusion of Life Realm | <input type="checkbox"/> Attend to Emotions |
| <input type="checkbox"/> Seek Permission | <input type="checkbox"/> Clear Communication | <input type="checkbox"/> Show Respect |
| <input type="checkbox"/> Elicit Pt Perspective/Preferences | <input type="checkbox"/> Listen to Patient | <input type="checkbox"/> Attend to Family |

PHP Elements Observed

| | | |
|---|---|---|
| <input type="checkbox"/> Introduction / Framing | <input type="checkbox"/> Develop a Plan to meet goals | <input type="checkbox"/> Set Visit Agenda |
| <input type="checkbox"/> PHI/PHP Assessment Questions | <input type="checkbox"/> Initiate Referrals | <input type="checkbox"/> Whole Health Orientation |
| <input type="checkbox"/> Elicit Pt Priorities | <input type="checkbox"/> Discuss a plan for follow-up | <input type="checkbox"/> Pt Driven <input type="checkbox"/> Provider Driven |
| <input type="checkbox"/> Selecting PHP Goals | <input type="checkbox"/> Follow-up on Existing Plan | <input type="checkbox"/> Goals Congruent / Aligned |
| <input type="checkbox"/> PHP Addresses Life Context | <input type="checkbox"/> Establish New Goals | <input type="checkbox"/> Documentation _____ |

Other Relevant Elements

Visit Agenda: _____
Pt Info: Ethnicity: _____ Age: _____ Male Female Provider Info: Male Female Age: _____

Observation template developed by GM Fix & RE Bolton (VA PEC 13-001; Bokhour) See Bolton et al JGIM 2020

Cleveland Site Visit: PMP Interaction Observation Tool

Team Member: GW/RS PMP Status: None ID #: 10-10
 Walk Park Provider: 1007 & 1003 Role: RN HC MD LPA/LPN Other _____

Elements of PCC Observed

| | | |
|--|--|---|
| <input checked="" type="checkbox"/> PCC Greeting NEW | <input type="checkbox"/> Collaborative Decision-Making | <input type="checkbox"/> Display Empathy |
| <input checked="" type="checkbox"/> Communicate Purpose NEW | <input type="checkbox"/> Inclusion of Life Realm | <input type="checkbox"/> Attend to Emotions |
| <input type="checkbox"/> Seek Permission | <input type="checkbox"/> Clear Communication | <input type="checkbox"/> Show Respect |
| <input type="checkbox"/> Elicit Pt Perspective/Preferences | <input type="checkbox"/> Listen to Patient | <input type="checkbox"/> Attend to Family |

PMP Elements Observed

| | | |
|---|--|---|
| <input type="checkbox"/> Introduction / Framing | <input type="checkbox"/> Develop a Plan to meet goals | <input type="checkbox"/> Set visit Agenda |
| <input type="checkbox"/> Pcc/PMP Assessment Questions | <input type="checkbox"/> Initiate Referrals | <input type="checkbox"/> Whole Health Orientation |
| <input type="checkbox"/> Elicit Pt Priorities | <input type="checkbox"/> Discuss a plan for follow-up | <input type="checkbox"/> Pt Driven <input type="checkbox"/> Provider Driven |
| <input type="checkbox"/> Selecting PMP Goals | <input type="checkbox"/> Follow-up on Existing Plan NEW | <input type="checkbox"/> Goals Congruent / Aligned |
| <input type="checkbox"/> PMP Addresses Life Context | <input type="checkbox"/> Establish New Goals | <input type="checkbox"/> Documentation <u>_____</u> |

Other Relevant Elements

Visit Agenda: Smoking Cessation

Pt info: Ethnicity: Male Female Provider info: Male Female Age: _____

Patient had been in week before, and had expressed interest in smoking cessation. He was scheduled to come in and speak with SO-03, the peer support, health coach. The day before this appointment, yesterday, the patient came in with out of control diabetes (SO). The patient saw the RN SO-07, who was also in the room with us. Patient SO-10 and RN SO-07 met for 3 hours yesterday, to work on the immediate diabetes crisis. [Interestingly, in the interview—see transcript SO-10—GW does not describe this event as a crisis. Only that his monitor wasn't working, and that is why he came yesterday.] Patient learned about SO-03 and the health coaching/PMP program from another RA2T provider.

I did not observe the very beginning of the encounter and do not know what the "greeting" was. There were no hand-on-activities to "seek permission" for. (see above)

The office is a small, private cubicle, near the entrance to Primary Care. There were three chairs in the room. The RN logged in and sat at the computer. She made a point to say why she was looking at the screen, and spent almost the entire visit, facing the patient and not the screen. The patient, RN SO-07, and HC SO-03 took turns speaking. They began by establishing that they were there to discuss smoking cessation. The RN made a point to distinguish yesterday's diabetes event as a separate event. (At one point early in the observation, the patient says of the RN, "I've got a relationship with her."—likely in part because he had been in for 3 hours the day before.)

The patient currently lives at the Salvation Army. He left his house to assist in his quitting heroin. He lives and works at the Salvation Army, where they have housing and work program. The HC SO-03 began by asking about the patient's smoking routine at the Salvation Army. The patient replied that he only smokes on breaks.

When asked why he wanted to quit smoking, the patient explains that he "smoked deep" for 47 years. "I want to stop for me, since I'm not smoking dope, I could put my whole self back together." Patient consistently refers to himself as a recovering addict, and also mentions his history of crime—such as robberies to get money to support his habit. In response to one of these stories to RN says "you've [the patient] have already proven yourself"—as a way to express that since the patient had quit using drugs, he could quit smoking.

The RN only brings up the diabetes crisis a few times during the encounter, in instances such as when she explains how smoking affects the patient's diabetes. "Since you have diabetes, smoking makes it more dangerous."

The HC SO-03 tells a story about himself when he was on a mission (MC/DEF/DF veteran), as a way to explain how stressful situations can make you want to smoke.

RN: "what really matters?"
 Pt: God, religion, spiritual growth.
 RN: "how do you relate that to smoking?"
 Pt: I need God's help, I trust He'll help navigate. God will fill the void [left by not smoking]. Patient shares quitting smoking to his experiences in a 12 Step Program.
 RN: Did you use that when recovering from heroin?
 HC: Do you have the Blue Book?
 Pt: Yes, has a sponsor, AA 12 Step Program.
 RN or HC (not sure): Have talked to your sponsor about quitting smoking? (Encourages GW to speak with sponsor.)
 Pt: explains sponsor smokes and expresses doubt about sponsor being appropriate for quitting smoking. Has worked with sponsor 3-4 years.
 Pt: If you take cigarettes away, you need to fill the void with something. Fill it with God. Patient uses scriptures when he gets the urge to smoke. "I'm a thief, I steal stuff." relies on God to stop stealing and not go back to those activities. He left house, clothes, bed to walk away from heroin and cocaine. God supplied the Salvation Army. God made this meeting happen today. [This interaction recorded in the fieldnotes.]
 [During this interaction, HC is writing note/selection items on an erasable white board, "talk to sponsor", "activities". HC is also working on a "quit smoking" list that includes how much and a quit date.]

HC: Points to wheel of health mounted on the wall, right next to the patient. Points specifically to the spiritual circle. "If a rock is thrown, it would ripple through all the circles." The Circles are connected and so the patient's spiritual well-being is affected by the other realms of his life. HC gives example of how "family" is a really important circle to him. RN brings up event yesterday with diabetes and discusses how it is connect. Patient then mentions how he urinated on himself during the appointment yesterday. Patient says this was God's work, so that the RN would know this has been an ongoing issue. Patient was sent to urinalogy to check this out—possibly during those 3 hours yesterday (not clear). RN acknowledges this event and apologizes.

RN: [continues with next PMP question—this is only the 2nd] "where do you want to be/where will you be in 10 years?"
 Pt: "I need to clean up some things." "I don't know how to answer." Patient is worried about toes and eyes [likely because of diabetes]. His 87 year old mother, whom he has a good relationship with, had her foot amputated. "Things might start to fall off."
 RN: Ties this back to diabetes. RN asks about his mother.
 Pt: Brother also has a diabetes-related amputation.

RN: Asks GW about specific goals related to not smoking. Does he want to quit "cold 50/50." They also offer a program. Pt describes quitting vs. "staying stopped." Patient shares this to stopping drug use. "you don't really ever stop, instead you just have to stay stopped, like sobriety.

RN: What timeframe is the patient interested in trying to quit. It's up to you.
 Pt: As soon as possible.

All (RN, HC, GW): Discuss next steps. What do you when you slip GW, how to manage "curve balls."
 HC: "Give me a phone call" [if you need help or support or anything]

Pt: wonders about connections between diabetes and smoking?
 [HC looks for pamphlet describing the relationship]

RN: Should patient talk to sponsor?
 Pt: Sponsor smokes. "Maybe I'll get another sponsor." A peer is better than a Dr. One person helping another, came with

Recording Sheets and Check Lists

- Standardized
- A priori questions & responses
- Allows for counting phenomena

Patient Centered Observation Form- Clinician version

Trainee name _____ Observer _____ Obsrvng# _____ Date _____

Directions: Track behaviors in left column. Then, mark one box per row: a, b or c. Competent skill use is in one of the right two right side columns. Record important provider / patient comments and verbal / non-verbal cues in the notes. Use form to enhance your learning, vocabulary, and self-awareness. Ratings can be for individual interviews or to summarize several interactions. If requested, use this form to guide verbal feedback to someone you observe.

| Skill Set and elements <small>Check only what you see or hear. Avoid giving the benefit of the doubt.</small> | Provider Centered Biomedical Focus | Patient Centered Biopsychosocial Focus |
|---|--|--|
| Establishes Rapport <input type="checkbox"/> Introduces self <input type="checkbox"/> Warm greeting <input type="checkbox"/> Acknowledges all in the room by name <input type="checkbox"/> Uses eye contact <input type="checkbox"/> Humor or non medical interaction | 1a. <input type="checkbox"/> Uses 0-2 elements | 1b. <input type="checkbox"/> Uses 3 elements. 1c. <input type="checkbox"/> Uses ≥ 4 elements |
| Maintains Relationship Throughout the Visit <input type="checkbox"/> Uses verbal or non-verbal empathy during discussions or during the exam <input type="checkbox"/> Uses continuer phrases ("um hmm") <input type="checkbox"/> Repeats important verbal content <input type="checkbox"/> Demonstrates mindfulness through presence, curiosity, intent focus, not seeming "rushed" or acknowledging distractions | 2a. <input type="checkbox"/> Uses 0-1 elements | 2b. <input type="checkbox"/> Uses 2 elements 2c. <input type="checkbox"/> Uses 3 or more elements |
| Collaborative upfront agenda setting <input type="checkbox"/> Additional elicitation- "something else?" * X _____ <small>* each elicitation counts as a new element</small> <input type="checkbox"/> Acknowledges agenda items from other team member (eg MA) or from EMR. <input type="checkbox"/> Asks or confirms what is most important to patient. | 3a. <input type="checkbox"/> Uses 0-1 elements | 3b. <input type="checkbox"/> Uses 2 elements 3c. <input type="checkbox"/> Uses ≥ 3 elements |
| Maintains Efficiency using transparent (out loud) thinking and respectful interruption: <input type="checkbox"/> Talks about visit time use / visit organization <input type="checkbox"/> Talks about problem priorities <input type="checkbox"/> Talks about problem solving strategies <input type="checkbox"/> Respectful interruption/redirection using EEE: Excuse your self, Empathize/validate issue being interrupted, Explain the reason for interruption (eg, for Topic tracking) | 4a. <input type="checkbox"/> Uses 0 elements | 4b. <input type="checkbox"/> Uses 1 element 4c. <input type="checkbox"/> Uses 2 or more elements |
| Gathering Information <input type="checkbox"/> Uses open-ended question X _____ <input type="checkbox"/> Uses reflecting statement X _____ <input type="checkbox"/> Uses summary/clarifying statement X _____ <small>Count each time the skill is used as one element.</small> | 5a. <input type="checkbox"/> Uses 0-1 elements | 5b. <input type="checkbox"/> Uses 2 elements 5c. <input type="checkbox"/> Uses 3 or more elements |
| <small>Notes:</small> | | |

Keen, M. et al. (2015). "Using the patient centered observation form: Evaluation of an online training program." *Patient Education & Counseling*.

COVID Caveats

- Observations may be limited or not feasible
- Switch to virtual
- Other complementary data
- Cyber Seminar in development
 - April 14th; addresses the virtual pivot in qualitative research.
 - Presenters include Karen Albright, Jessica Young, Lynette Kelley, Cristina Ortiz, Jennifer Van Tiem, Ana-Monica Racilia & Jane Moeckli.

Concluding Thoughts



Observation can be a useful method that offers new insights & can complement other methods



Approach to collecting & analyzing observation data is driven by the project's research question and/or quality improvement goal



Covid raises new considerations



Questions?

Learn More

Weston LE, Krein SL, Harrod M. (2022) Using observation to better understand the healthcare context. *Qualitative Research in Medicine & Healthcare*, Vol. 5(1).

Fix GM, Kim B, Ruben M, McCullough MB (revise/resubmit) *Direct Observation Methods: a Practical Guide for Health Researchers*. PEC-Innovations.

The Qualitative Methods Learning Collaborative is open to everyone. If you are interested in joining, please email IRG@VA.gov

The QMLC mission is to:

- Advance qualitative methods
- Build a community of (VA & non-VA) researchers
- Learn and teach qualitative methods
- Develop strategies for others interested in building their qualitative communities and expertise
- Share best practices

Thank you!

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