What is ACCORDS?

Adult and Child Center for Outcomes Research and Delivery Science

ACCORDS is a 'one-stop shop' for pragmatic research:

- A multi-disciplinary, collaborative research environment to catalyze innovative and impactful research
- Strong methodological cores and programs, led by national experts
- Consultations & team-building for grant proposals
- Mentorship, training & support for junior faculty
- Extensive educational offerings, both locally and nationally

ACCORDS Upcoming Events

February 13, 2023 *Virtual	**Methods and Challenges in Conducting Health Equity Research** **"Nothing About Us Without Us": Meaningful Engagement of Tribal Communities in Research** *Presented by:* Spero Manson, PhD
March 1, 2023 *Virtual	**Hot Topics in Mixed Methods and Qualitative Research** **Harm Reduction Story Sharing with People Who Use Drugs: Visual Narratives Designed to Promote Overdose Prevention and Destigmatize Drug Use** *Presented by:* Marty Otanez, PhD
March 20, 2023 *Virtual	**Methods and Challenges in Conducting Health Equity Research** **Using Mixed Methods to Understand Nuance in Disparities Work: Photovoice and Medicaid Studies** *Presented by:* Margarita Alegria, PhD (Mass. General Hospital/Harvard Medical School)
June 5-6, 2023 10:00 -3:00 PM MT	**COPRH Con 2023** **Reassessing the Evidence:** What is Needed for Real World Research and Practice

*all times 12-1pm MT unless otherwise noted

Hot Topics in Mixed Methods and Qualitative Research

2023 Seminar Mini-Series

Applying Conversation Analysis to Healthcare Interaction

Presented by:
Jeffrey Robinson, PhD

Mixing Conversation Analysis into Healthcare Research

Portland State University

Jeffrey D. Robinson

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   - **For at least 30 years, research on provider-patient communication has struggled with an inconvenient truth: Communication behaviors documented in audio- and videotape of actual care are rarely significantly correlated with either providers' or patients' self-reports of the occurrence of those behaviors**

- **Women 50-80 years old**
- **Routine Care**
- **General Internal Medicine**

TABLE 2

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TABLE 2

Comparison of SR of Office Visit Events with Medical Chart and Videotape[a]

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Recommended making another appointment	68	32	60	–.05	.26†
Recommended making appointment for mammogram	33	6	17	.27†	.41*
Said to reduce stress[c]	25	0	11	—	.10
Said to get more exercise[c]	20	0	7	—	.05
Said to alter diet[c]	33	0	24	—	.18
Said to stop smoking[c]	10	0	7	—	.16

Note. SR = self report.

[a]Based on 77 men and women for comparisons of SR with chart (63 women for mammogram recommendation) and on 35 men and women for comparisons of SR with video (30 women for mammogram recommendation). [b]Phi coefficient computed for 2 × 2 tables (from Fisher exact probability test when any expected frequency was 5 or less, otherwise from chi-square). [c]Number of chart entries was zero, making computation of measure of agreement between SR and chart impossible.

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TABLE 3
Correlations of Patients' SR of Affect, Communication, and Visit Experience With Audiotape (RIAS) and Videotape Ratings[a]

	Correlations With Audiotape Ratings		*Correlations With Videotape Ratings*	
Patient SR	*RIAS Variable*	*Correlation With SR*	*Video Variable*	*Correlation With SR*
Patient affect during time of visit				
Happy	Patient is responsive/engaged	.36*	Patient is active	.37*
Calm and peaceful	Patient is anxious	–.39*	Patient is relaxed	–.07
Depressed/downhearted	Patient is sad/depressed	.08	Patient is passive	.35*
SR variables above combined[c]	RIAS audio variables above combined[c]	.43*	Video variables above combined[c]	.43*
Physician interpersonal effectivenss				
Patient likes doctor	Patient shows approval	.25	Patient likes doctor	.38*
Patient dissatisfied with doctor	Patient shows disapproval	.17	Patient likes doctor	–.16
Doctor hurries too much	Provider is hurried	.37*	Doctor is cold	.41*
Doctor is friendly and courteous	Provider is friendly	.31†	Doctor is warm	.26
Doctor explains effectively	Provider gives information about medical condition	.15	Doctor is effective communicator	.02
SR variables above combined[c]	RIAS audio variables above combined[c]	.44*	Video variables above combined[c]	.33†
Patient participation				
Patient asked doctor about treatment	Patient asks questions about therapy	.11	Patient asks questions about treatment	.24
Patient discussed goals/had partnership with doctor	Provider facilitates partnership	.14	Doctor is submissive	.27
Patient felt confused during visit	Patient checked understanding	.31†	Doctor is effective communicator	–.16
Patient nervous	Patient is anxious	–.02	Patient is nervous	.26
SR variables above combined[c]	RIAS audio variables above combined[c]	.41*	Video variables above combined[c]	.43*

Note. SR = self-report.

[a]Based on 35 men and women. [b]Correlations are point-biserial in cases in which one variable is dichotomous while the other has at least three ordinal levels or interval scores. Correlations are Pearson in cases in which both variables are ordinal or interval (based on robustness of Pearson correlation to ordinal data: Baker, Hardyk, & Petrinovich, 1966). [c]Averaged.

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    - **E.g., How do providers solicit patients' chief complaints?**

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Provider: [Question Type] → Nominally Coded (e.g., 0, 1, 2) → IV

Patient: [Answer Type] → Nominally Coded (e.g., 0, 1, 2) → DV

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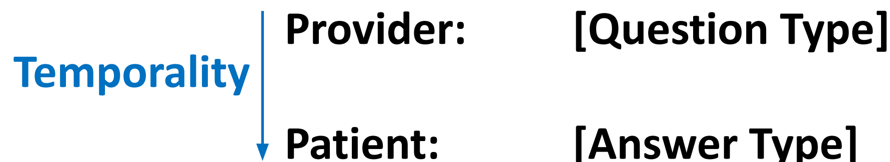

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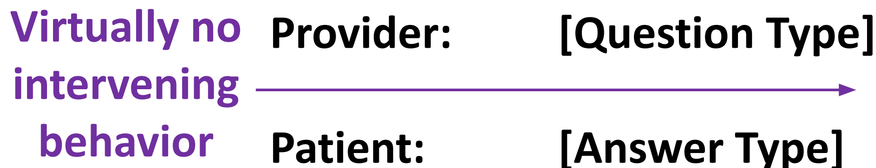

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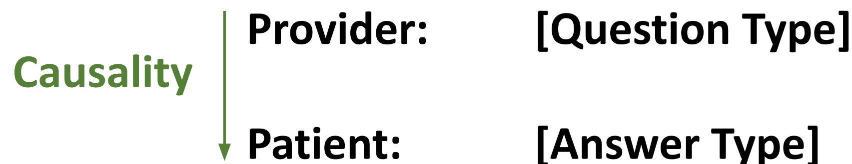

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   - **Sequential effects (e.g., QA sequence 1 vs. 2) can be statistically associated with more distal health outcomes (e.g., patient satis., treatment compliance)**

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- **The first step is qualitatively investigating all of the different WAYS that providers can solicit patients' chief complaints**
  - **There are about 5 systematic ways, each of which mean something slightly different to patients**

1. Open-Ended Solicitations of Patients' Concerns

Extract 1

```
01   DOC:   What can I do for you today.
02          (0.5)
03   PAT:   We:ll- (0.4) I fee:l like (.) there's something
04          wro:ng do:wn underneath here in my rib area.
```

Patient

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Other Examples

- How can I help?
- What's the problem?
- What's going on?

Extract 1

(a) Designed to communicate that the provider does not know; a lack of information to be 'filled in' by patient

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(b) As an action, it 'requires' patients to present their concerns as a first order of business

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Sequential effects of this strategy:

- **When providers use open-ended solicitations, patients present for an average of 27.10 seconds, and tend to present >1 symptom**

Extract 2

2. Request Confirmation of Concerns

01 DOC: Sounds like you're uncomfortable.
02 (.)
03 PAT: Yeah.
04 PAT: My e:ar,=an' my- s- one side=of my throat hurt(s).

Patient

Extract 2

```
01   DOC:   Sounds like you're uncomfortable.
02           (.)
03   PAT:   Yeah.
04   PAT:   My e:ar,=an' my- s- one side=of my throat hurt(s).
```

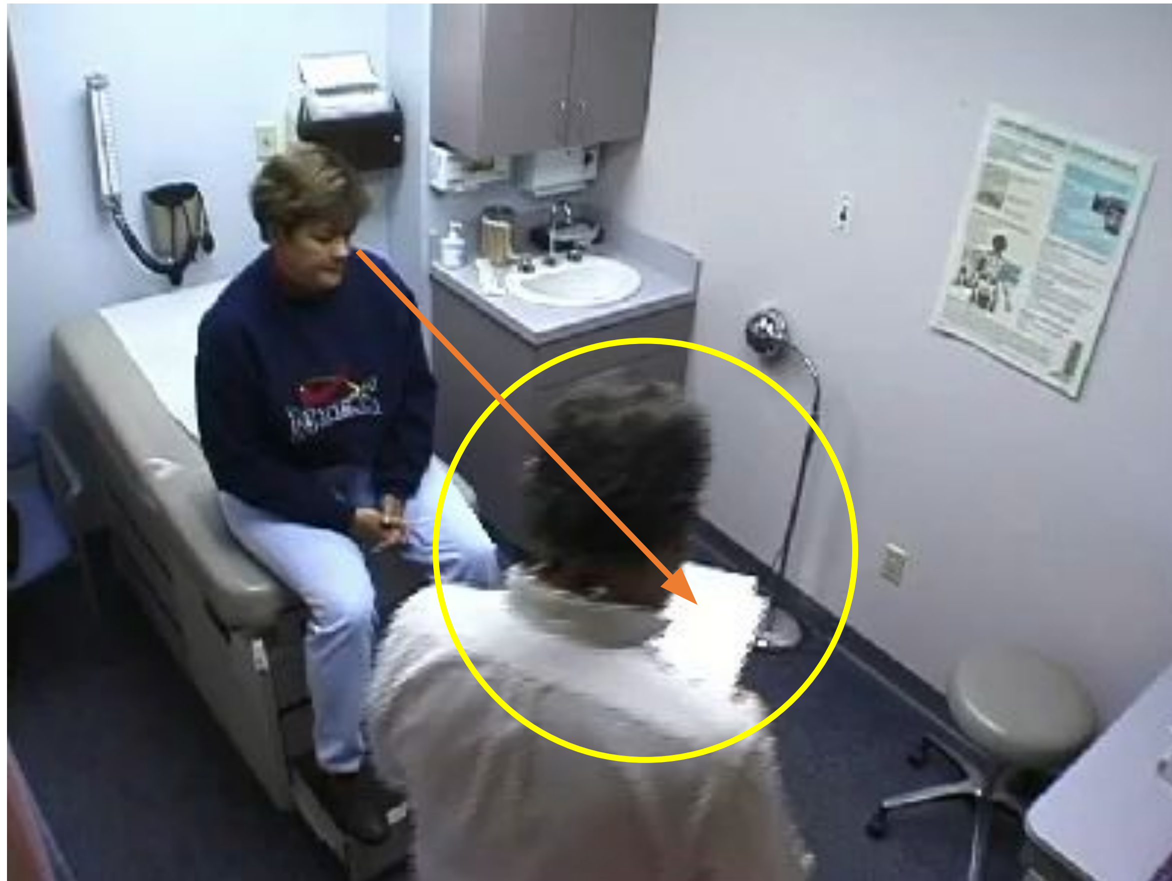
Other Examples

- So you're sick today?
- I understand you're having sinus problems?
- You're having knee problems since June?

Extract 2

(a) Designed to communicate that the provider does know; patient does not have to 'fill in' information

```
01   DOC:   Sounds like you're uncomfortable.
02            (.)
03   PAT:   Yeah.
04   PAT:   My e:ar,=an' my- s- one side=of my throat hurt(s).
```



(b) As an action, it ‘requires’ patients to first (dis)confirm, and only then present concerns

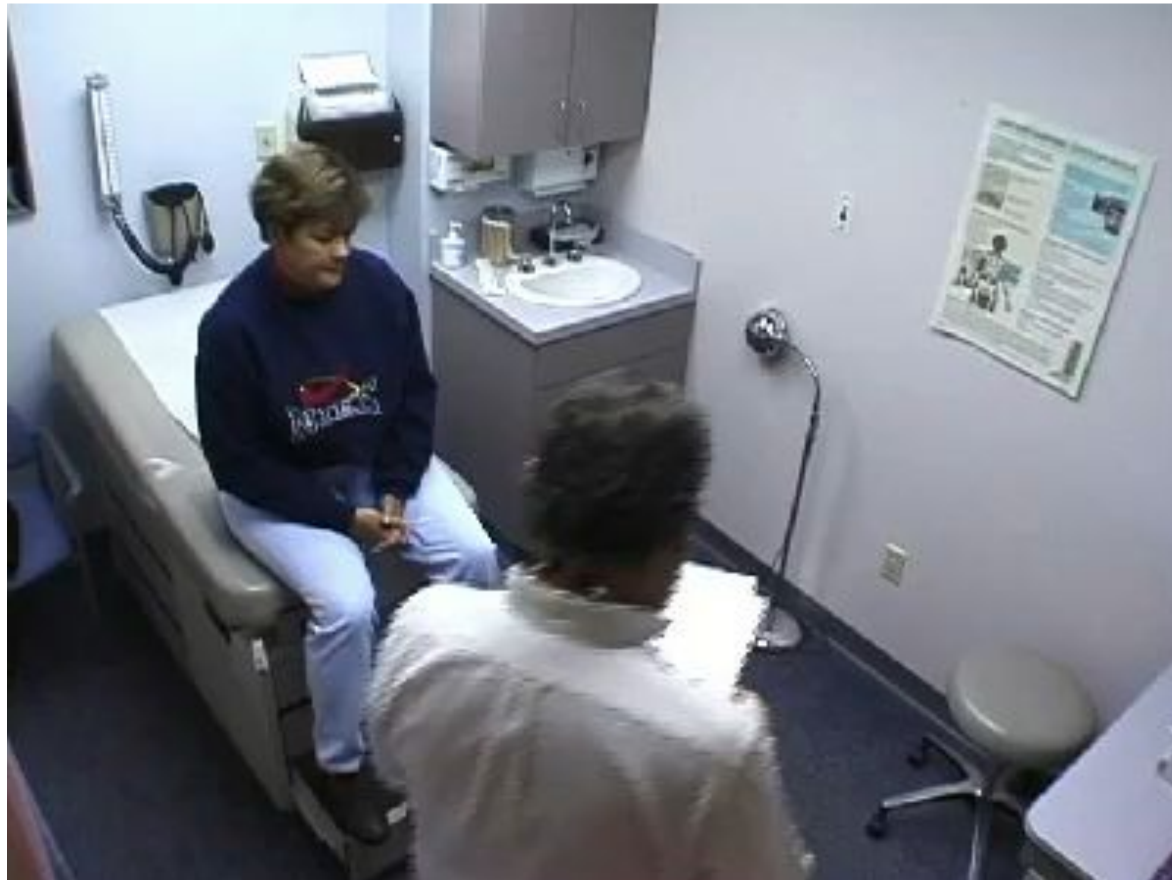
Extract 2

```
01   DOC:   Sounds like you’re uncomfortable.
02            (.)
03   PAT:   Yeah.
04   PAT:   My e:ar,=an’ my- s- one side=of my throat hurt(s).
```

(b) As an action, it 'requires' patients to <u>first</u> (dis)confirm, and then present problems

Extract 2

```
01   DOC:  Sounds like you're uncomfortable.
02          (.)
03   PAT:① Yeah.
04   PAT:② My e:ar,=an' my- s- one side=of my throat hurt(s).
```



Extract 3

After patients confirm, providers sometimes launch into history taking, 'interrupting' patients' presentations

```
01   DOC:   You're having knee problems since Ju::ne.
02   PAT:(1)Yes.
03   DOC:   Okay what have you done for that. Since then.
```

Provider initiates history taking

Case Study 1:
How do Providers Solicit Patients' Chief Complaints?

- The first step is investigating all of the different WAYS that providers can solicit patients' concerns
  - There are about 5 systematic ways, each of which mean something slightly different to patients

Strategy 1 – Open-Ended Solicitation: 27.10 second presentations, >1 symptom

Strategy 2 – Requests for confirmation: 12.02 second presentations , ≤1 symptom

Heritage, J., & Robinson, J. D. (2006). The structure of patients' presenting concerns: Physicians' opening questions. *Health Communication*, *19*, 89-102.

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Strategy 2 – Requests for confirmation: 12.02 second presentations , ≤1 symptom

  - **Adjusting for patients' age, sex, race and education, practice setting, and problem type, requests for confirmation result in significantly shorter problem presentations, that also have significantly fewer symptoms!**

Heritage, J., & Robinson, J. D. (2006). The structure of patients' presenting concerns: Physicians' opening questions. *Health Communication*, *19*, 89-102.

Dimension 1: Listening Behavior	Loading	Eigen.	% Var.
		2.171	24.1
1. The doctor gave me a chance to say what was really on my mind	.832		
2. I really felt understood by the doctor	.867		

Dimension 2: Positive Affective/Relational Communication	Loading	Eigen.	% Var.
		2.672	29.70
1. After talking to the doctor, I felt much better about my problem(s)	.721		
2. I felt that the doctor really knew how upset I was about my pain	.659		
3. I felt free to talk to the doctor about private thoughts	.623		
4. I felt that the doctor accepted me as a person	.746		

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- **Compared to providers who used requests for confirmation, those who used open-ended solicitations were rated by patients as being significantly better listeners, and as having a significantly warmer relational style**

Robinson, J. D., & Heritage, J. (2006). Physicians' opening questions and patients' satisfaction. *Patient Education and Counseling*, 60, 279-285.

Case Study 2:
How do Providers get Parents to Vaccinate their Children?

Opel, D., Heritage, J., Taylor, J., Mangione-Smith, R., Salas, H., Nguyen, V., Zhou, C., & Robinson, J. D. (2013). The architecture of provider-parent vaccine discussions at health supervision visits. *Pediatrics*, *132*, 1037-1046.

Case Study 2:
How do Providers get Parents to Vaccinate their Children?

- **Using CA, we discovered that there are two basic strategies:**

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     - **E.g., “We have to do some shots.”**
     - **E.g., “We’ll do three shots and the drink. Is that okay?”**
     - **E.g., “So for vaccines, he gets the ones he got at two months.”**

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1. Presumptive Format

Extract 4

```
01   DOC:   Uhm s:o: fo:r=h vacci:nes he gets thuh ones th’t=‘e
02          got at two months p[lus  ] (.) thuh flu shot?
03   MOM:                      [Okay.]
04   MOM:   Okay,
```

1. Presumptive Format

Extract 4

```
01   DOC:   Uhm s:o: fo:r=h vacci:nes he gets thuh ones th’t=‘e
02          got at two months p[lus  ] (.) thuh flu shot?
03   MOM:                      [Okay.]
04   MOM:   Okay,
```

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2. **Participatory Initiation: Utterances that linguistically provide parents with latitude to make the vaccination decision themselves**

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    - **E.g., "We'll do three shots and the drink. Is that okay?"**
    - **E.g., "So for vaccines, he gets the ones he got at two months."**

2. **Participatory Initiation: Utterances that linguistically provide parents with latitude to make the vaccination decision themselves**

    - **E.g., "Are we going to do shots today?"**
    - **E.g., "What do you want to do about shots?"**
    - **E.g., "You're still declining shots?"**

Opel, D., Heritage, J., Taylor, J., Mangione-Smith, R., Salas, H., Nguyen, V., Zhou, C., & Robinson, J. D. (2013). The architecture of provider-parent vaccine discussions at health supervision visits. *Pediatrics*, *132*, 1037-1046.

2. Participatory Format

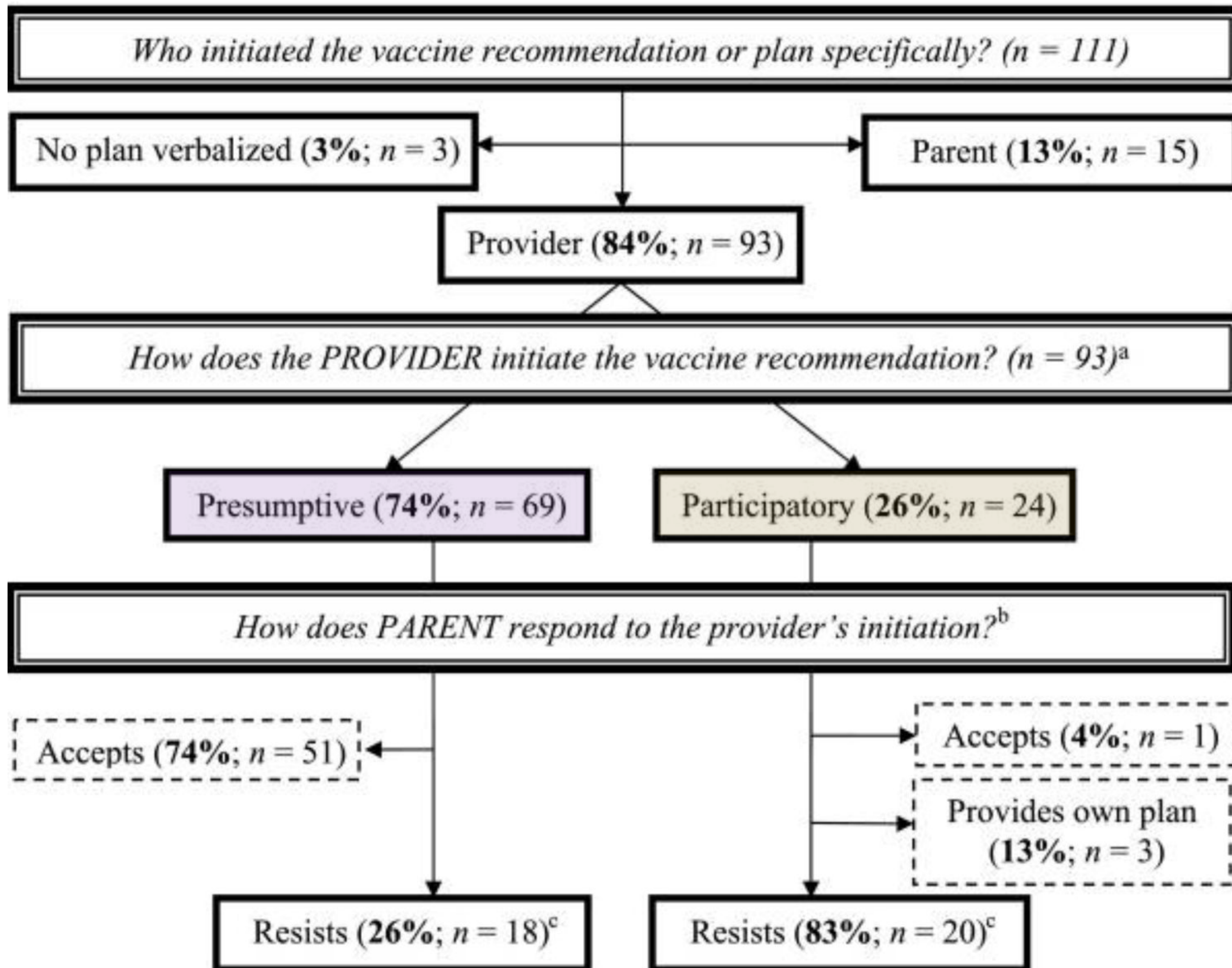
Extract 5

```
01   DOC:   So .hhh a:ny thoughts you guys had on:: thuh- (.)
02          thuh no:rmal one year shots of which you may or
03          may not want to do.
04   MOM:   Uh::m (.) (                        ) I think I just wanna
05          do thuh (.) pneumococcal?
```

2. Participatory Format

Extract 5

01 **DOC:** So .hhh a:ny thoughts you guys had on:: thuh- (.)
02 thuh no:rmal one year shots of which you may or
03 may not want to do.
04 **MOM:** Uh::m (.) (   ) I think I just wanna
05 do thuh (.) pneumococcal?



Who initiated the vaccine recommendation or plan specifically? (n = 111)
No plan verbalized (3%; n = 3)
Parent (13%; n = 15)
Provider (84%; n = 93)
How does the PROVIDER initiate the vaccine recommendation? (n = 93)a
Presumptive (74%; n = 69)
Participatory (26%; n = 24)
How does PARENT respond to the provider's initiation?b
Accepts (74%; n = 51)
Accepts (4%; n = 1)
Provides own plan (13%; n = 3)
Resists (26%; n = 18)c
Resists (83%; n = 20)c

Case Study 2:
How do Providers get Parents to Vaccinate their Children?

- **Compared to participatory formats, presumptive formats resulted in children receiving significantly more vaccines by the ends of visits, and in being significantly less under-immunized over the course of multiple visits.**

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- Compared to participatory formats, presumptive formats resulted in children receiving significantly more vaccines by the ends of visits, and in being significantly less under-immunized over the course of multiple visits.

- **Compared to presumptive formats, participatory formats resulted in an increased odds of a highly rated parental visit experience**

Opel, D. J, Mangione-Smith, R., Robinson, J. D., Heritage, J., DeVere, V., Salas, H. S., Zhou, C., & Taylor, J. A. (2015). The influence of provider communication behaviors on parental vaccine acceptance and visit experience. *American Journal of Public Health*, *105*, 1998-2004.

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Case Study 3:
How to Solicit Patients' Full Agenda of Concerns?

Robinson, J. D., Tate, A., & Heritage, J. (2016). Agenda-setting revisited: When and how do primary-care physicians solicit patients' additional concerns? *Patient Education and Counseling*, *99*, 718-723.

Case Study 3:
How to Solicit Patients' Full Agenda of Concerns?

- **Primary-care patients often leave visits with 'unmet' concerns, which can complicate health conditions and is costly for healthcare systems**

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Extract 6

```
             [[Patient Completes Chief Complaint]]
             ↓
01   DOC:    Yeah. We can definitely push you in to see ortho.
02   PAT:    Okay.
03   DOC:    That's no problem.
04   PAT:    Alright.
05   DOC:    How are you otherwise? Any other concerns?
06   PAT:    I'm doing fine, I had a slight reaction to
07           the flu shot, you know I woke up with kinda
08           sore throat.
```

Extract 6

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07        the flu shot, you know I woke up with kinda
08        sore throat.
```

↑

Patient presents a second, new concern

Extract 6

[[Patient Completes Chief Complaint]]
↓

01 DOC: Yeah. We can definitely push you in to see ortho.
02 PAT: Okay.
03 DOC: That's no problem.
04 PAT: Alright.
05 DOC: How are you otherwise? Any other concerns?
06 PAT: I'm doing fine, I had a slight reaction to
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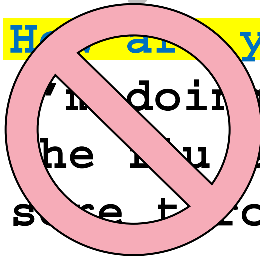

Providers almost never do this in actual practice (05%)

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1. "Is there ANY-thing else you would like to address in the visit today?"

2. "Is there SOME-thing else you would like to address in the visit today?"

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  1. **"Is there ANY-thing else you would like to address in the visit today?"**

     - **"Any" is a negative-polarity device that builds in a linguistic preference for a 'No'-answer**

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    - "Any" is a negative-polarity device that builds in a linguistic preference for a 'No'-answer
2. **"Is there SOME-thing else you would like to address in the visit today?"**
    - **"Some" is a positive-polarity device that builds in a linguistic preference for a 'Yes'-answer**

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Are these formats different in terms of soliciting patients' unmet concerns?

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Extract 6

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<u>Randomized, Controlled Intervention</u>: Trained providers to solicit additional concerns

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Randomized, Controlled Intervention: Trained providers to solicit additional concerns

- **20 family-practice providers seeing patients with acute problems**

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<u>Randomized, Controlled Intervention</u>: Trained providers to solicit additional concerns

- **20 family-practice providers seeing patients with acute problems**
  - **10 from urban Los Angeles; 10 from rural Pennsylvania**

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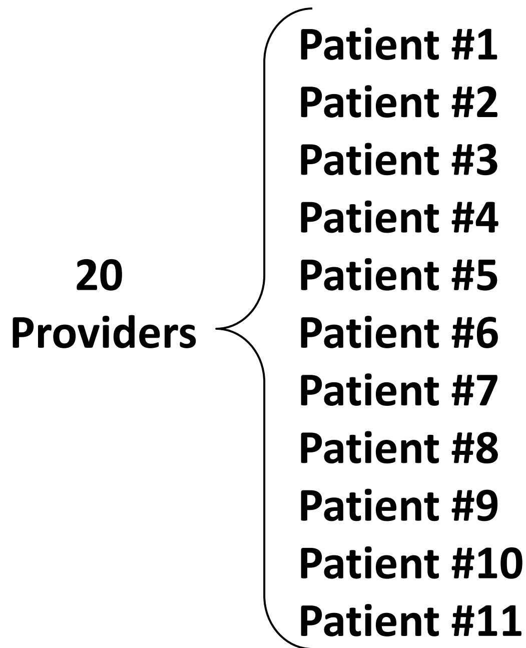

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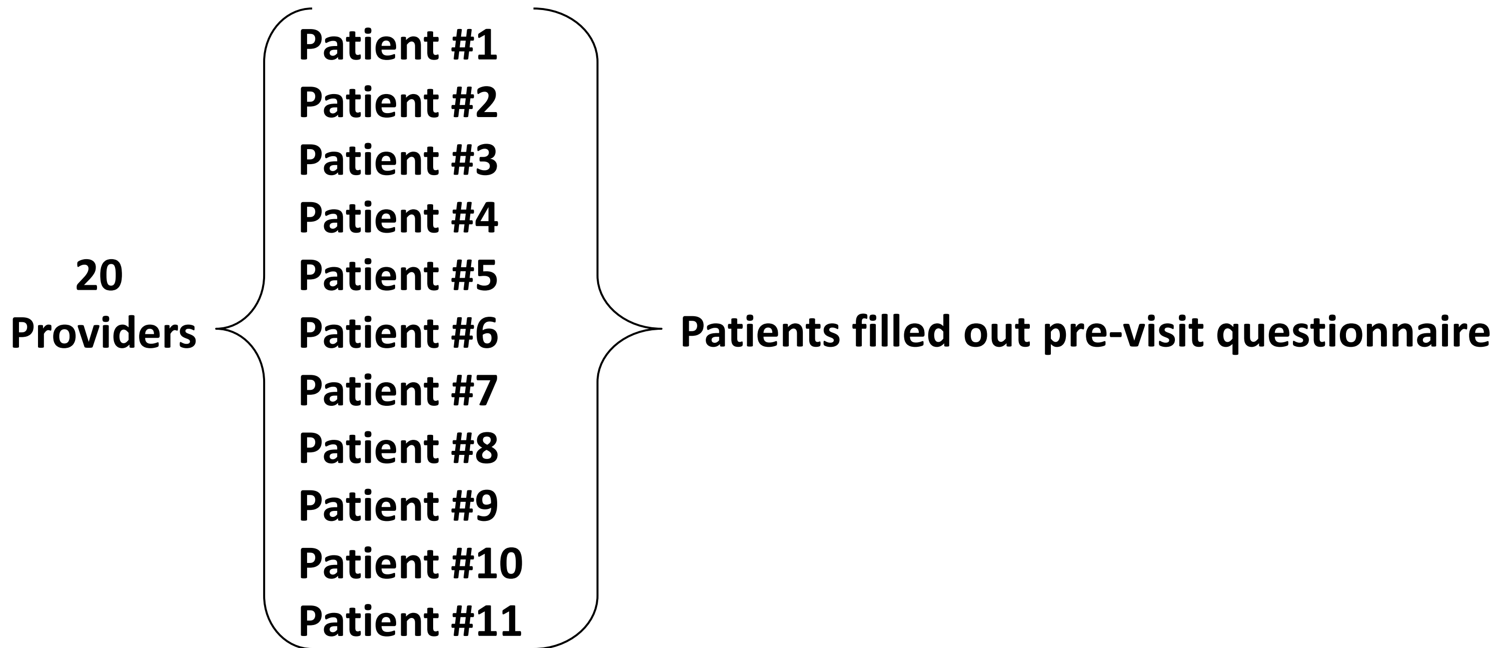

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MC – 14 – 07

We would like to get some information about your perceptions and your health. We are interested in your *honest* opinions, whether they are positive or negative. All of your answers are *totally confidential* – they will not be seen by the doctor or the medical staff. *Please answer all of the questions*. Thank you very much – we really appreciate your help!

Please CIRCLE the SINGLE, most appropriate answer.

1. Do you agree or disagree with the following statement: "Most people receive medical care that could be better."

1	(2)	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

2. Please list and describe your *primary* reason for visiting the doctor today?

lower back pain

3. In addition to your primary reason (above), what *other* issues, problems, or concerns do you want to talk to the doctor about today?

FATIGUE, CONSTIPATION

CONTINUED ON NEXT PAGE ⇒

Three Concerns:

1. Back Pain
2. Fatigue
3. Constipation

MC – 14 – 07

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lower back pain

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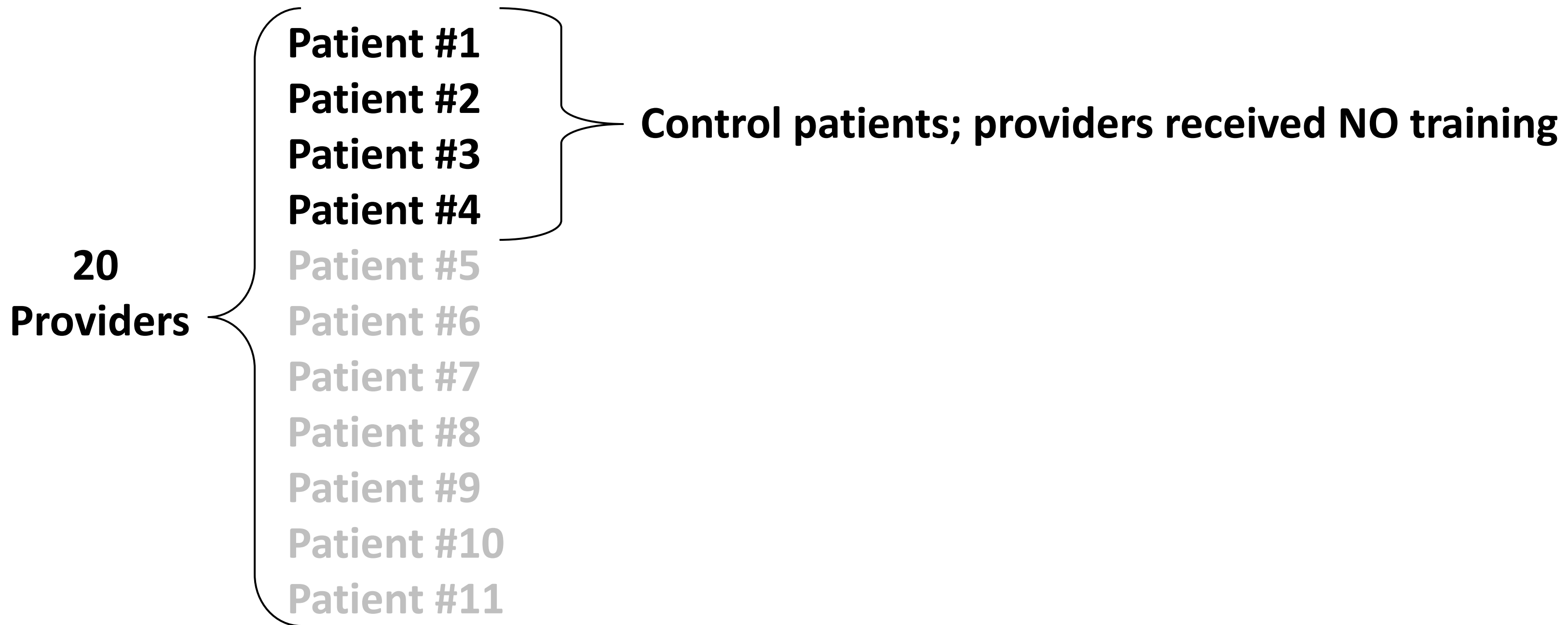
FATIGUE, CONSTIPATION

CONTINUED ON NEXT PAGE ⇒

Randomized, Controlled Intervention: Trained providers to solicit additional concerns



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Randomized, Controlled Intervention: Trained providers to solicit additional concerns

20 Providers

- Patient #1
- Patient #2
- Patient #3
- Patient #4
- Patient #5
- Patient #6
- Patient #7
- Patient #8
- Patient #9
- Patient #10
- Patient #11

All providers received 'Any' or 'Some' intervention

Are there
ANY OTHER issues
you'd like to discuss?

Are there
SOME OTHER issues
you'd like to discuss?

1. "Any" Format

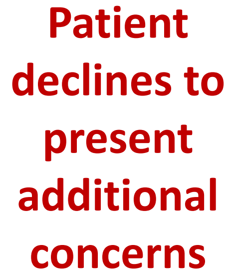
Extract 7

```
01   DOC:   Is there anything else that you wan'ed tuh
02          talk tuh me about today?
03   PAT:   N:o, that's i:t.
04   DOC:   Okay.
```

1. "Any" Format

Extract 7

01 DOC: Is there anything else that you wan'ed tuh
02 talk tuh me about today?
03 PAT: N:o, that's i:t.
04 DOC: Okay.



2. “Some” Format

Extract 8

```
01   DOC:   Are there some other issues you’d like to discuss?
02   PAT:   Uh:m I do have some family history things that I
03          wan’ed to discuss with you too.
04   DOC:   Oh: okay,
```

2. “Some” Format

Extract 8

```
01   DOC:   Are there some other issues you’d like to discuss?
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04   DOC:   Oh: okay,
```

Case Study 3:
How to Solicit Patients' Full Agenda of Concerns?

6.7x more likely than no question at all

Table 2. Variables Associated with Patients' Unmet Concerns (n=99)

Variables	Odds ratio	Std Error	Z	P	CI
"Some" intervention	.15	.08	−3.45	.001	.054–.45
"Any" intervention	.213	.213	−1.55	.122	.030–1.5
3+ previsit concerns*	7.2	3.67	3.88	<.001	2.66–19.6

*Omitted variable is 2 previsit concerns.

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Case Study 3:
How to Solicit Patients' Full Agenda of Concerns?

Table 2. Variables Associated with Patients' Unmet Concerns (n=99)

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2. **Subtle communication strategies can be trained; CA can be used to design healthcare interventions**

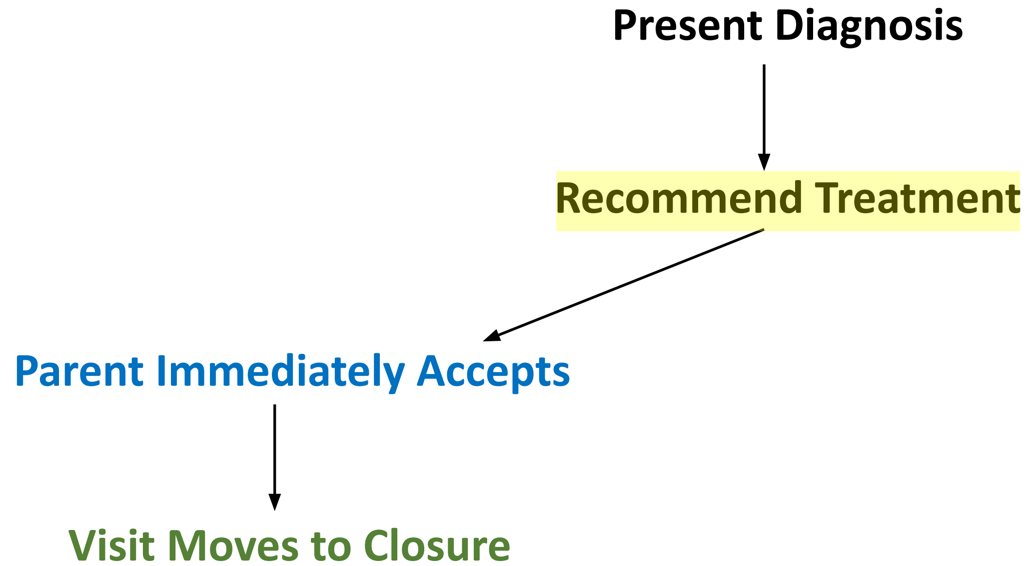
Case Study 4: Decreasing Prescription of ABX
Context: Pediatricians seeing children for acute respiratory track infections (ARTIs)

Case Study 4: Decreasing Prescription of ABX

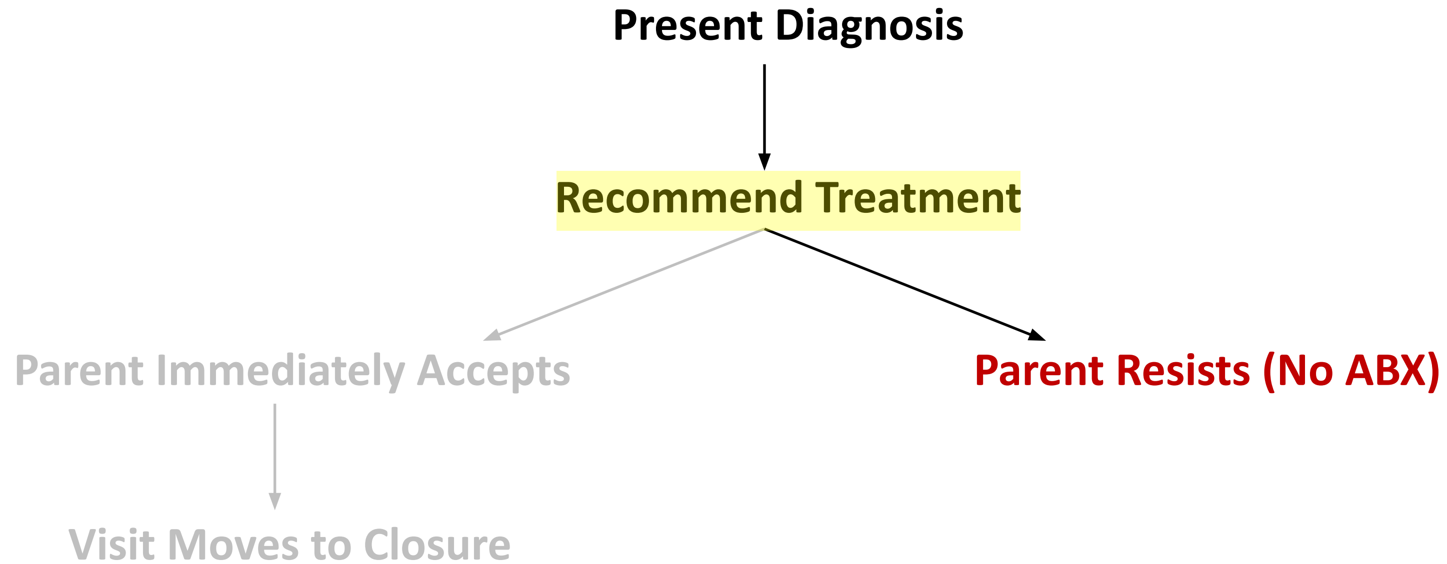
Present Diagnosis

Recommend Treatment

Case Study 4: Decreasing Prescription of ABX



Case Study 4: Decreasing Prescription of ABX



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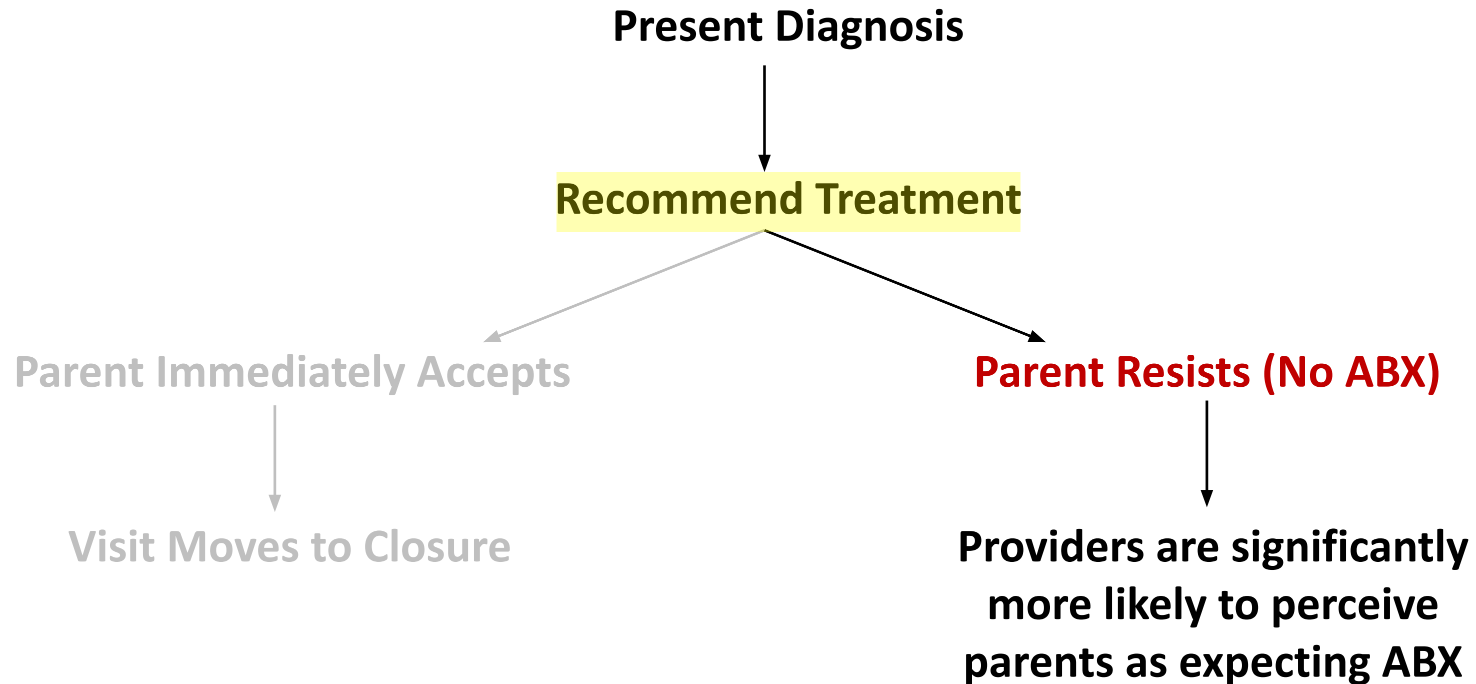

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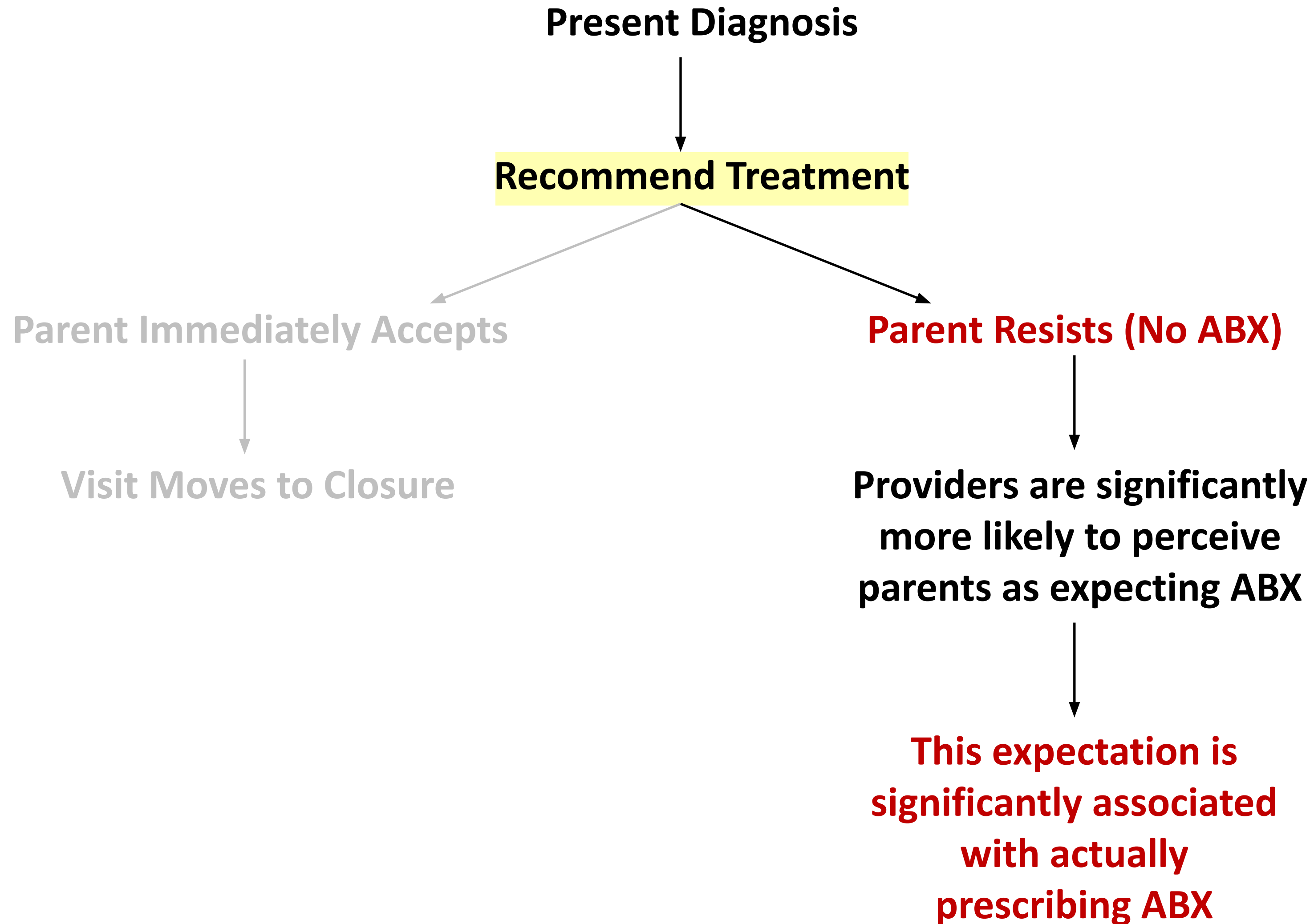

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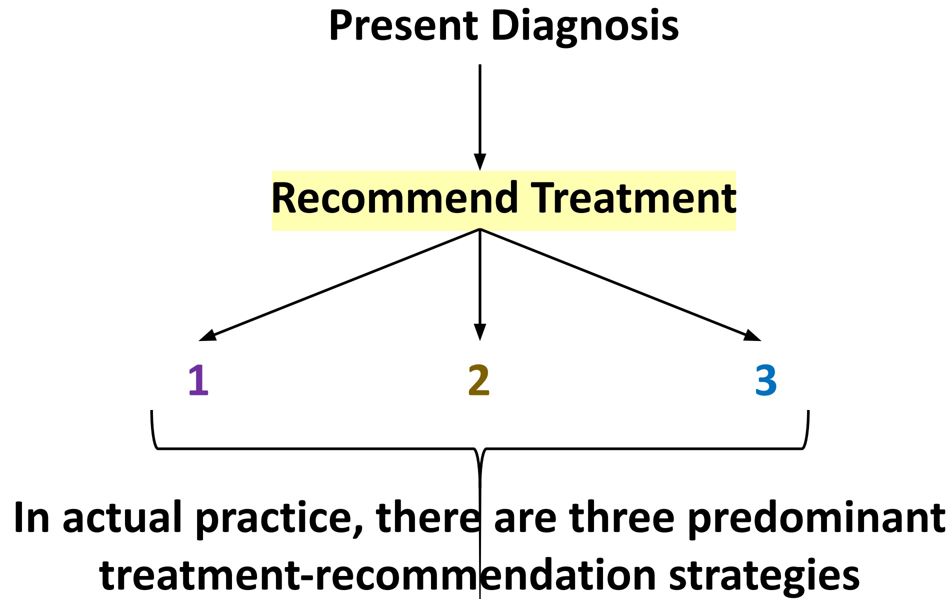

Stivers, T. (2005). Non-antibiotic treatment recommendations: delivery formats and implications for parent resistance. *Social Science & Medicine*, *60* (5), 949-964.

1. Positive Treatment Recommendation (i.e., What Will Work)

```
(2) 15-06-01[6]
 1   DOC: ->   .hh So wha- what I can do is
 2        ->   give her uhm .h(ml) cough
 3        ->   medication 't=has a little
 4        ->   bit of combination of uhm .h
 5        ->   decongestan:t, and also
 6        ->   clearing up the
 7   DAD:      [Oh okay.
 8   DOC:      [.hh
 9   DOC: ->   no:se, dry it up uh little
10        ->   bit so .h at night she
11             can: sleep a little better.
12   DOC:      .h[h
13   DAD:        [Okay.
```

Informs patient of treatments that will work

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Informs patient of treatments that will work

Resistance or questioning plan

- "What about antibiotics?"

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2. Negative Treatment Recommendation (i.e., What Won't Work)

```
(5)  15-06-07
1    DOC:   ->   But in the meanti::me no::
2                antibiotics or anything yet.
3    DOC:        Okay?,
4    MOM:        Yeah.
```

Informs patient of treatments that won't work

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```

Informs patient of treatments that won't work (lines 1–4)

Resistance or questioning plan

- **Silence or "Hmm"**
- **"Why not?"**
- **"They worked for me."**
- **"But he's just so sick!"**

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3. Two Part Recommendations (e.g., Negative + Positive)

```
(13) 38-34-12
1    DOC:        .hh Which is goo:d that
2                means that she doesn't
3                need any antibiotics.
4                (.)
5    DOC:        because this is probably,
6                (.) caused by uh virus,
7    DOC:        .hh [an:d=eh as you may=
8    MOM:            [Mm hm,
9    DOC:        =kno:w antibiotics don't
10               kill viruses. [so-
11   MOM:                      [Mm hm,
12   DOC:        .hh uh: and this is- (p)/
13               (.) uh lotta kids this,
14               [(i's) pretty common;=
15   MOM:        [Mm hm,
16   DOC: ->     =so .hh treatment will be:
17               you know medicine-
18               that're gonna make her
19               comfortable and treat her
20               symptoms. so .hh you c'd
21               get her medicine that's
22               gonna make her nose less
23               stuffy an' °make it° less
24               runny, an' uh medicine
25               for thuh cou:gh?,
```

Negative Treatment Recommendation (1) — lines 1–9

Positive Treatment Recommendation (2) — lines 16–25

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Case Study 4: Decreasing Prescription of ABX

- **RCT in 8 states, 19 practices, 57 providers, 72,723 visits, with 29,762 patients**

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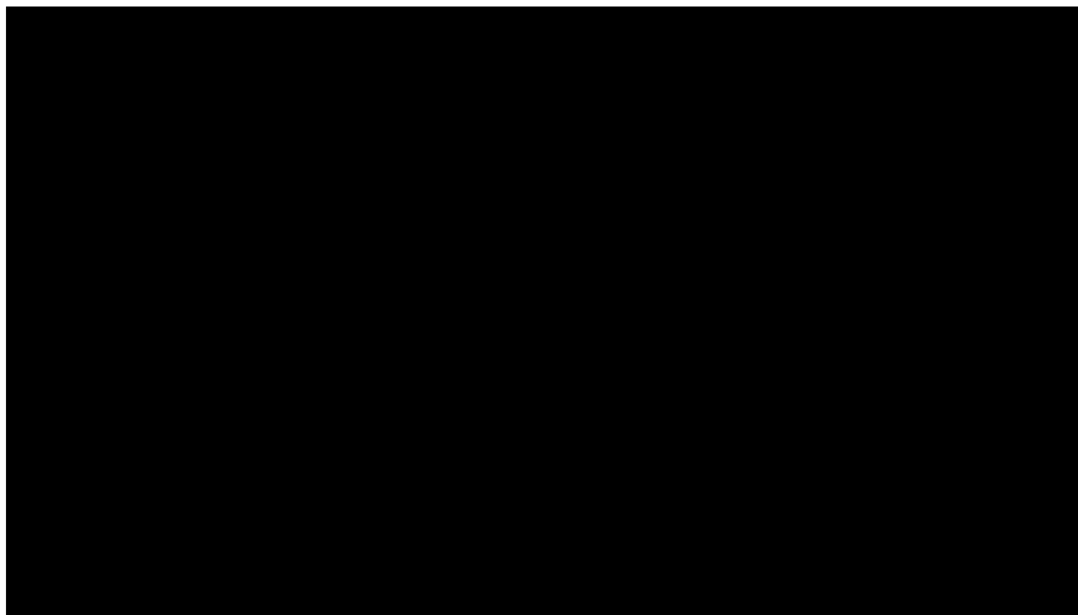

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(Centers for Disease Control and Prevention, 2000)

Thank You!

Portland State
UNIVERSITY

Jeffrey D. Robinson

Extract XX

01 DOC: M[ister Bald]win,
02 PAT: [Hello.]
03 PAT: Ye:s.
04 DOC: Hi. I’m doct’r Mulad I’m one o’ thuh interns
05 he:re?
06 (.)
07 PAT: <Okay,>
08 (1.1)
09 DOC: How are you today. ← Understood as a ‘social’ inquiry into patient’s general state of being
10 PAT: Alright,
11 (1.7)
12 DOC: Okay. So. >Can I ask< you what brings you in
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15 PAT: Yeah. I have lumps, in my uh breasts:.

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Extract XX

01 DOC: Mister Ha:ll?
02 (0.5)
03 PAT: Yes ((gravel voice))
04 (0.2)
05 PAT: Mmhhm ((throat clear))
06 (1.9)
07 DOC: Have a seat
08 (2.4)
09 DOC: I'm doctor Masterso[n.
10 PAT: [.h I: believe so.
11 DOC: How are you.
12 PAT: hhhhhh I call down fer som::e=uh::(m) (0.6)
13 breeth- eh: ( ) tablets: water tablets.

Understood as a 'medical' inquiry into patient's chief complaint

Extract XX

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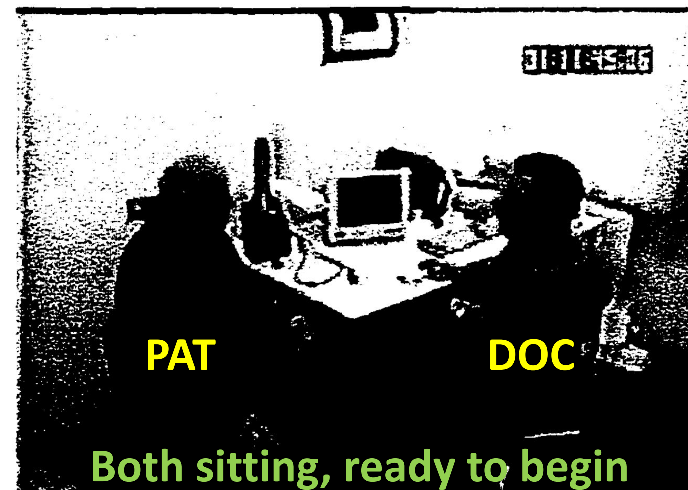

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