

Comparing Automated Extraction to Manual Abstraction for COVID-Specific Research Data Abstraction: A Case Study

Andrew Yin, Winston Guo, Evan Scholle | May 27th, 2021 | Thomas Campion, Curtis Cole

Background/Relevance:

- Institutions conduct major retrospective studies using data from the EHR (a.k.a. chart review) with data obtained through manual and automated processes or some combination of the two
- Manual abstraction demands time, often from clinical personnel valuable in other capacities
- Our objective is to help institutions improve use of limited resources, by comparing manual abstraction and automated extraction of EHR data regarding medications, and review errors to find areas for improvement

Methods:

- Source: COVID-19 Institutional Data Repository (IDR)
- Population: 4,123 COVID-positive patients in the hospital 3/11/20 to 5/11/20 with data collected by manual abstraction and automated extraction.
- Process: Used SQL queries to extract medication-use data from manual and automated sources
- Evaluation: Quantitatively assessing interrater reliability (Cohen’s kappa) and qualitatively determining causes of error through manual audit.

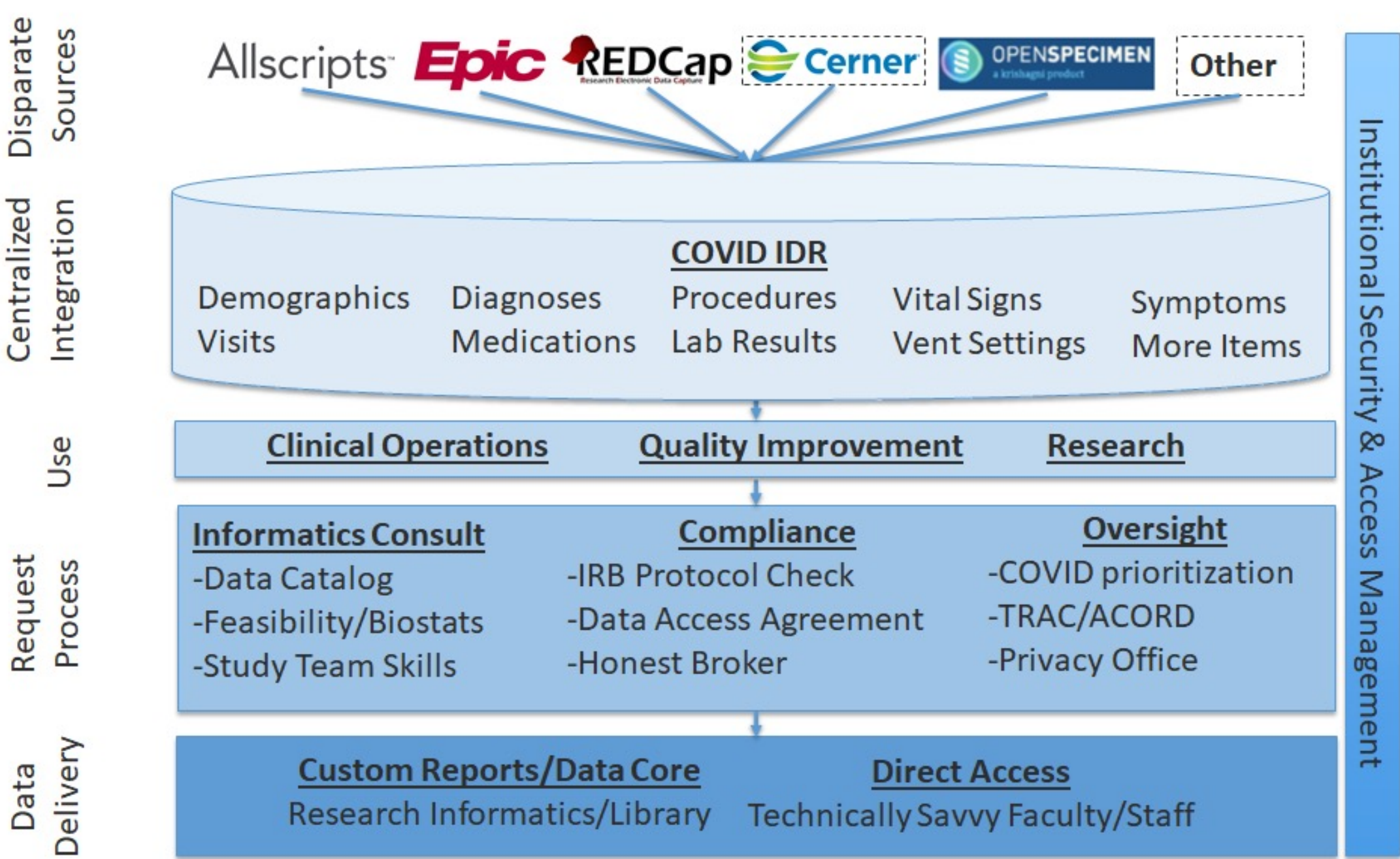


Figure 1: COVID IDR overview

Results:

- Interrater Reliability: Of 16 inpatient medications, 11 (69%) medications demonstrated agreement to the level of moderate or above (7 being strong or almost perfect). Of 9 outpatient medications, 3 (33%) medications demonstrated moderate agreement, while none achieved strong or almost perfect
- Qualitative error analysis: three principal categories: human error (26%), error in the extract, transform, load (ETL) or mapping of the automated data (41%), and abstraction-query mismatch (33%).

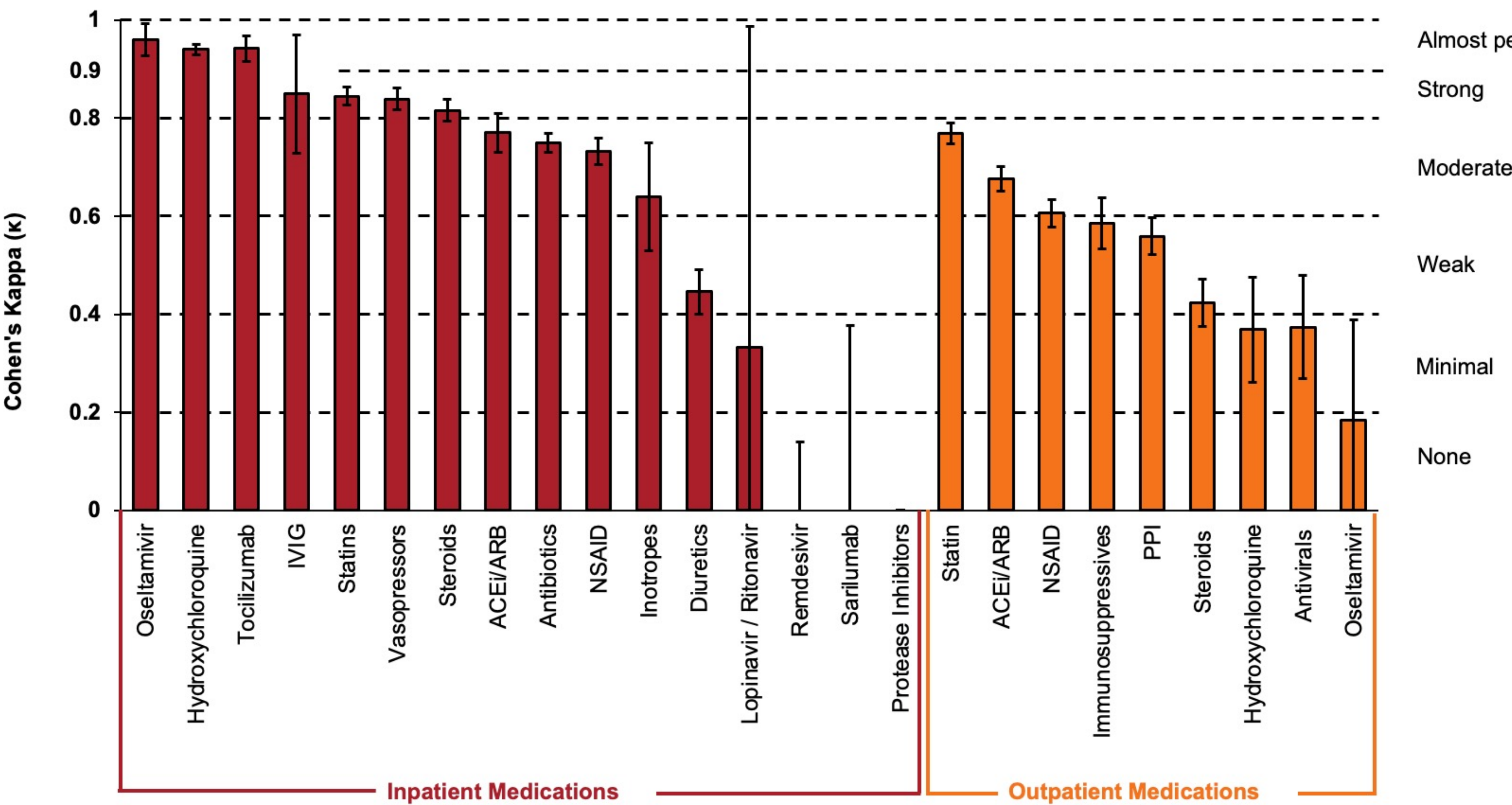


Figure 2. Interrater reliability (Cohen’s kappa) between manual and automated methods of detecting inpatient and outpatient medications

Limitations:

- Our query was tailored to WCM/NYP data infrastructure, replication will need to be site specific
- Auditing focused on discrepancies but may have missed false positives and does not assess error severity
- Potential for bias in the underlying data collection methods of the IDR

Conclusions and Implications:

- Should not assume there is a “gold standard” in data extraction, be rigorous about data sources and transparent about process, accepting that both methods have errors
- During a crisis, institutions must make difficult decisions about where to allocate resources. This work outlines the quality issues to be aware of should they choose one method over another
- Future data abstraction efforts need not rely on collecting inpatient medication data by hand

A Model for Developing a Computable Phenotype for a Social Determinant of Health Using Homelessness as a Case Study

Camyll Harajli, Anurima Sharma, Jack Rossi | Dr. Curtis Cole, Evan Sholle

Background/Relevance

As of September 2019, over 500,000 people in the United States experience homelessness on a given night. Homeless adults have high rates of healthcare utilization including emergency department visits, hospitalizations, increased length of stay and readmissions, compared to adults with stable housing. Identifying patients experiencing homelessness affords the opportunity to address these issues through targeted interventions. However, housing status is not always captured in a structured fashion in the electronic health record, making automated decision support difficult. We demonstrate computable phenotyping techniques for identifying patients experiencing homelessness, using both structured registration data and unstructured clinical notes.

Methods and Results

We collected home address and medical note data from New York Presbyterian Lower Manhattan Hospital (NYP/LMH) and NYP/Weill Cornell Medical Center (NYP/WCM). The total data set consisted of 24,377 high-utilization patients from the ER, but was reduced to 10,820 through random sampling for computational efficiency. Gold standard addresses were labeled as either domiciled (0) or undomiciled (1) through either manual explicit labels, address comparison within the given addresses (to identify frequently used addresses as potential shelters/care centers/etc.), and searches for known shelters in the NY Metro area.

The first computational approach to classify notes as either indicative of housing security or insecurity was to develop a set of phrases that are either “strong indicators” or “weak indicators” of housing insecurity and run a regular expression search for these indicators through each patient’s abridged set of medical notes. The second approach was to build a machine learning classifier where the notes were transformed into numerical vector representations and then classified as either indicative of housing security or insecurity.

In order to label the address data, a first pass was done for keywords such as ‘undomiciled’ or ‘shelter’ listed within the address. Next, addresses of known homeless shelters in the greater New York area were searched within the data in order to identify unhoused patients. This was done in both current addresses and historical addresses listed for the patient. Finally, addresses were compared to each other to search for repeated addresses amongst the data, which upon further investigation, typically belonged to a shelter, hospital, or rehab facility. Those with shelter addresses were labeled as unhoused and the rest of the data was labeled as ambiguous and eventually removed from the overall data set. For all additional methods, there was careful manual review in order to maintain the sensitivity of the classification.

Three classification methods were tested, a vanilla neural network, a multilayer perceptron, and a k-means classifier, and the multilayer perceptron with the TF-IDF embeddings proved to yield the best results on the basis of accuracy, precision and recall. Accuracy on all classification methods was high given the nature of the dataset (mostly housed patients being classified as such), therefore the more important metrics were precision and recall. The classifier chosen had an accuracy of .963, precision of .672, and recall of .609. More data is needed to know whether or not our metrics are reliable enough to put the classifier into practice, but the initial results showed us a promising direction.

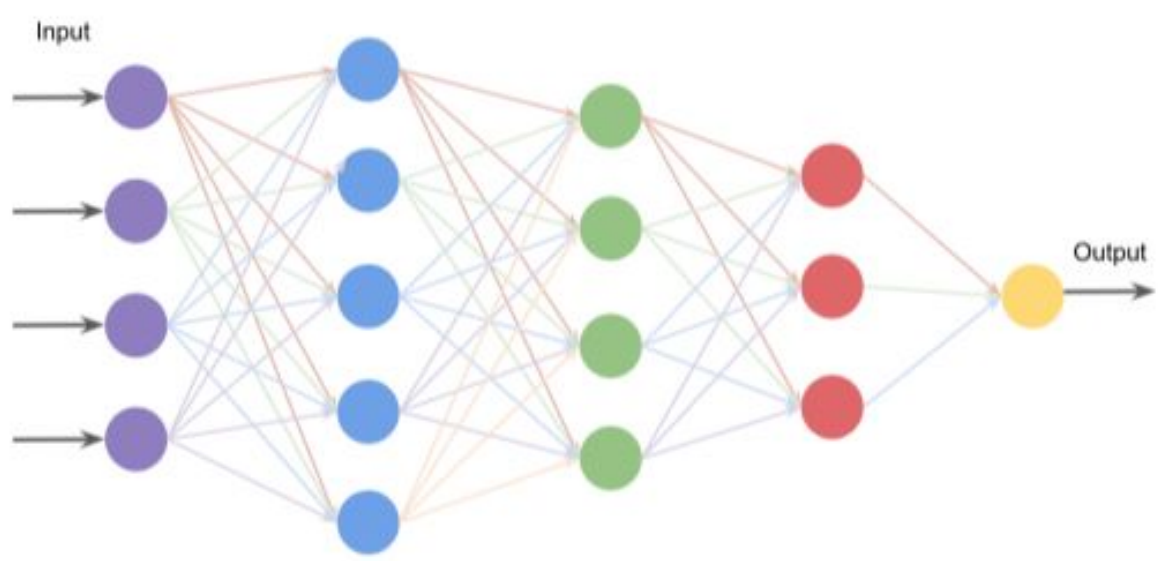


Figure 1: Graphical representation of a generic Multilayer Perceptron Binary Classifier that takes a 4-dimensional input and returns a 1-dimensional output.

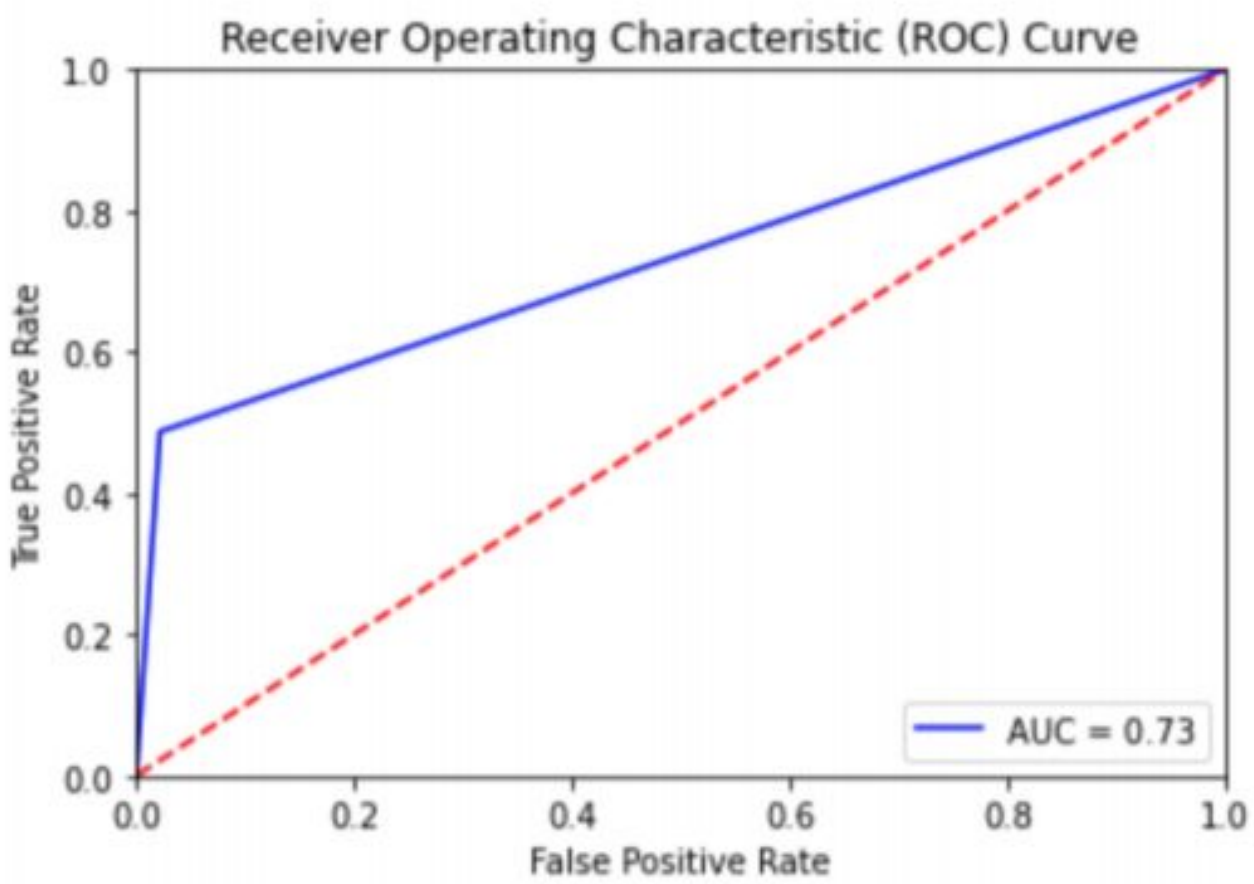


Figure 2: Receiver Operating Characteristic (ROC) Curve for the Multilayer Perceptron with TD-IDF word vectorizations.

- The x-axis is False Positive Rate (probability that a note predicted as unhoused will actually be housed) and the y-axis is True Positive Rate (aka recall, or the probability that an unhoused note will be classified as unhoused).

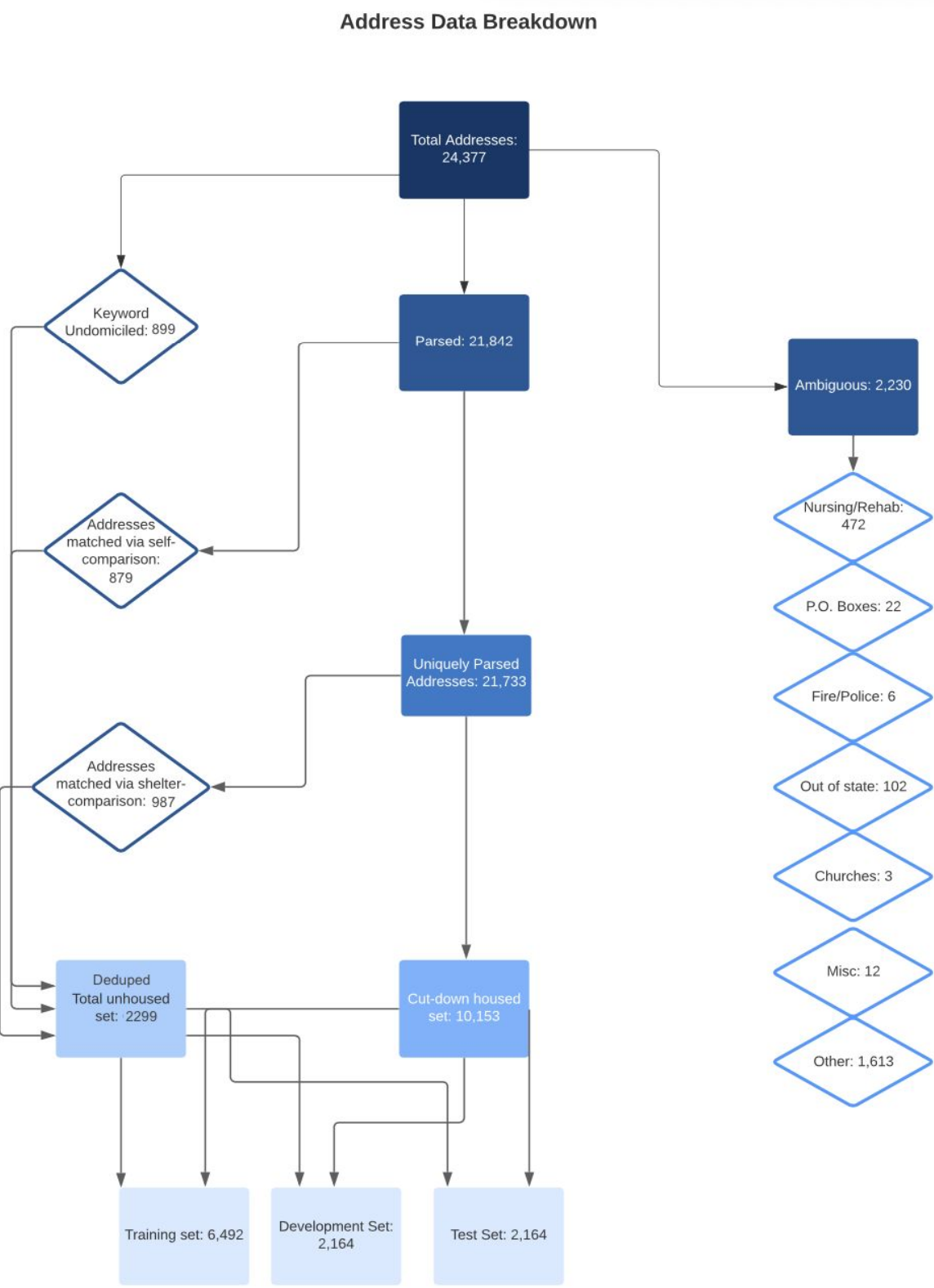


Figure 3: A breakdown of how the address data was sorted, labeled, and narrowed down.

Anticipated Impact

While enabling researchers to further understand and comprehend the comorbidities around unhoused populations can hugely benefit the medical field, building a real-time homelessness predictor can have potential ethical ramifications. Allowing physicians to learn the housing status of the patient, unbeknownst to the patient, may affect the quality of care the physician provides. Patient autonomy should be prioritized when discussing how to utilize this classifier in a clinical setting. One potential method to limit bias could be only enabling this classifier’s use upon discharge of a patient, after their care has already been completed. In addition, we maintain that patients should always be granted the opportunity to refuse any hospital resources if they choose and physicians should trust the word of the patient over the classifier’s prediction. This tool is meant to offer often unknown options to those who would receive the most benefit and not to create any potential change in how patients are cared for up until the point of discharge.

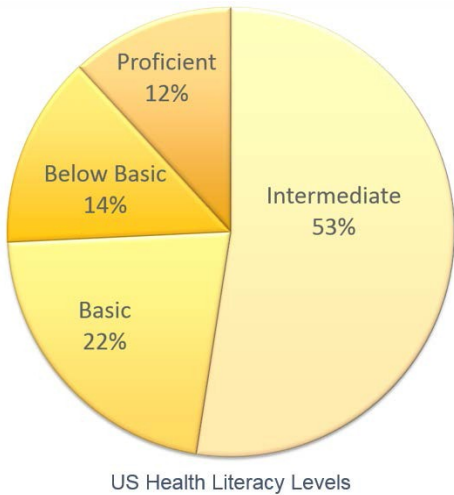
The Patient Activated Learning System (PALS): A Web-based Patient Education Platform to Alleviate Health Disparity



Elizabeth Baquero, EdD; Laura Gingras, MD; Fred Pelzman, MD; Sanjai Sinha, MD; Keith Roach, MD; Monika Safford, MD Weill Cornell Medicine

IntroductionObjectives

Shared decision-making is increasingly emphasized as the US healthcare system moves toward more patient-centered care. However, shared decision-making hinges on patients understanding their options. This is challenging since it is estimated that only 12% of the US adult population has proficient health literacy. While it is clear that patient education is critical for shared decision-making, current patient education materials are often too difficult for most patients to understand. Furthermore, the authorship and the source of information are often difficult to ascertain.



- The PALS is designed to overcome these barriers by:
- (1) Providing engaging, easily understood, and focused answers to health-related questions to a worldwide audience, targeted at populations with low literacy.
 - (2) Allowing patients to be the drivers, encouraging patient activation and engagement.
 - (3) Supporting shared decision-making by enhancing patients’ understanding of their conditions, thereby sparking more in-depth discussions between patients and their providers.

Patient Education Content Development

What should you do if you are confused about the medicines you were told to take when you get home from the hospital?

Don't wait, or it might be too late!



People are often confused about their medications after going home from the hospital – they’re not sure why they’re taking certain medications, what the doses are, or when they should take them. If you get home and find that you are confused about the medicines you were told to take, call your regular doctor as soon as possible to ask questions. Many patients have harmful side effects from taking the wrong medications or taking the right medications the wrong way. This can lead to patients coming back to the emergency room. So don't wait, or it might be too late.

Even if you have a follow up visit scheduled, it's better to call and get your questions answered rather than to wait for an appointment. If you can't get in touch with your doctor, try your pharmacist or call the number on your discharge instructions from the hospital.

It's a good idea to go over your medications with your medical team before you leave the hospital. Ask why you are taking each medication, how much to take, and when to take it. And remember if you are confused when you get home, call your doctor, your pharmacist, or the hospital – don't wait or it might be too late!

See what you learned!
Answer this question to help us make PALS better.

You have just gotten home from the hospital and have a follow up appointment with your regular primary care doctor in two weeks. What should you do if you are confused about the medicines you were told to take when you get home from the hospital?

☒ Call your regular doctor or pharmacist right away. Don't wait, or it might be too late.

☐ Don't take any medications until you get in touch with your doctor

☐ Take only the medications you feel confident about until you see your doctor

☐ I don't know

Try Again

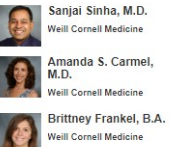
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Users also read...

- What should I do if I forget to take a dose of an angiotensin-converting enzyme (ACE) inhibitor?
- Which medications should you take when you come home from the hospital?
- What are the common side effects of angiotensin receptor blockers (ARBs)?
- What do I do if I forget to take a dose of hydrochlorothiazide (HCTZ)?
- How do angiotensin receptor blockers (ARBs) work?

Authors



Meet our Team

Next Topic

Competitive Environment

Platform Features	PALS	WebMD	health wise	MODASTA
Promotes shared decision-making	✓			
Free to patient	✓	✓	✓	✓
Directly addresses Health Literacy Issues	✓		✓	✓
Double Peer- Reviewed	✓			
Academic Foundation	✓			
Focuses on answering specific questions.	✓	✓	✓	✓
Translated to 6th Grade Reading level	✓			

Source: Grandview Research



Partnership Opportunities

Create content; Research effectiveness; Peer review

Funding: WCM, UAB, Lowenstein Foundation, Winters Family

Conflicts of Interest: Authors have intellectual property but not financial interests in PALS

PALS Research

Published Research

What to expect that you’re not expecting: A pilot video education intervention to improve patient self-efficacy surrounding discharge medication barriers – **Sinha et al., 2018**

Evaluation of the PALS to improve knowledge acquisition, retention, and medication decision making among hypertensive adults: Results of a pilot RCT – **Carmel et al., 2019**

Ongoing & Future Research Opportunities

RA Collaboration between the PALS and the Division of Nutritional Sciences to Develop Nutrition Content for Populations with Health Disparities; A Multisite Pilot Study in New York State – **Cassano, PhD & Roach, MD**

Teaching doctor-patient communication in the digital age: A curriculum for Internal Medicine residents – **Gingras, MD & Strauss, MD**

Utilization of a web-based platform (PALS) to improve knowledge and follow-up among women with abnormal cervical cancer screening –**Chapman, MD**

Heart failure training for home health aides in New York City – **Sterling, MD, MPH, MS**

Cardiovascular risk reduction program for patients with Rheumatoid Arthritis – **Navarro-Millán, MD**

Southeastern Collaboration to improve blood pressure control – **Safford, MD & Cherrington, MD, MPH**

Reducing Disparities by Targeting Shared Risk Behaviors Between Cardiovascular Disease and Cancer – **Phillips, MD**

Can the Digital Patient Activated Learning System Increase Racial Minority Engagement with Health Information? A Multi-Site Pilot Examination in New York State – **Lewis, PhD, Safford, MD, & Baquero, EdD**

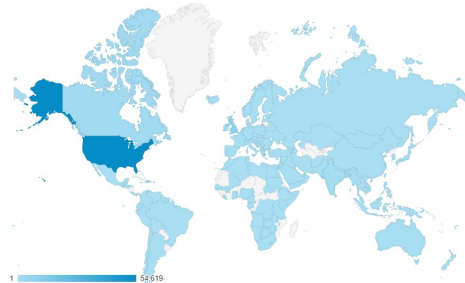


Figure 1. Although the site is still in production, palsforhealth.com has already received over 300,000 hits from 190 countries (Google Analytics)

Heart Failure Training Course for Home Health Aides in New York City: A Mixed Methods Pilot Study

Jacklyn Cho, BS and Madeline Sterling, MD, MPH, MS

Background

Although home health aides (HHAs) frequently care for adults with heart failure (HF), the majority have not received HF training and many lack confidence with HF caregiving. To address these gaps, we tested the feasibility, acceptability and effectiveness of a virtual HF training course for HHAs.

Methods

- Partnered with the Education Fund of the 1199SEIU United Health Care Workers East, the largest healthcare union in the US.
- The 2-hour course utilized case-based learning and motivational interviewing to engage HHAs in discussions on HF signs and symptoms and principles of HF care.
- Inclusion criteria: English or Spanish speaking; access to Zoom.
- Feasibility and acceptability assessed with surveys and semi-structured interviews.
- Effectiveness outcomes assessed with pre/post surveys; HF knowledge was assessed with the 15-item Dutch Heart Failure Knowledge Scale (scores range from 0-15; higher scores indicate greater knowledge); HF caregiving self-efficacy was assessed with the 10-item Caregiver self-efficacy scale (scores range from 0-100, with higher scores indicating greater self-efficacy).

Results

48 HHAs employed by 15 distinct home care agencies enrolled; course size ranged from 4-9 participants. The majority were middle-age women (60% Hispanic, 10% non-Hispanic Black). (Table 1). To participate, 59% used a smartphone, 32% a computer, and 10% a tablet. All 48 HHAs completed the course. Post-course data showed significant and clinically meaningful improvements in HF knowledge and caregiving self-efficacy. (Table 2). Participants and course instructors reported high levels of satisfaction and engagement. (Table 3).

Table 2. HF Knowledge and Caregiving Self-Efficacy Scores

Pre-survey DHFKS Mean	Post-survey DHFKS Mean	P-value*
11.21	12.21	0.0000

Pre-survey HF Self-efficacy Mean	Post-survey HF Self-efficacy Mean	P-value*
75.21	82.29	0.0017

Table 1. Participant Characteristics

Characteristics	N = 48 (%)
Age, years	
18-30	5 (12%)
31-45	10 (24%)
46-55	17 (41%)
56-65	9 (22%)
Race/ethnicity	
Non-Hispanic Black	5 (10%)
Hispanic	29 (60%)
Asian/Pacific Islander	2 (4%)
Other	5 (10%)
Not reported	7 (15%)
Years worked	
1-5	26 (63%)
6-10	6 (15%)
11-15	2 (5%)
16-20	3 (7%)
20+	4 (10%)

Conclusion

A virtual HF training course was feasible and acceptable among HHAs and improved their HF knowledge and caregiving confidence. Efforts to scale and disseminate the course may be warranted. Future studies are needed to test the effect of the course among HHAs and their patients.

Table 3. Participants' Course Experience

Course Experience	N = 48 (%)
How smoothly did this online course run?	83%
How convenient was it to take this online course?	83%
How engaging or easy was it to pay attention during this online course?	78%

Resident Led Quality Improvement Project to Improve Postpartum Depression Screening



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Erika Abramson MD MS¹, Snezana Nena Osorio MD MS¹, Niki Kyvelos MD¹

Department of Pediatrics, NewYork-Presbyterian Hospital / Weill Cornell Medical Center, New York, NY¹



#WeAreGIM



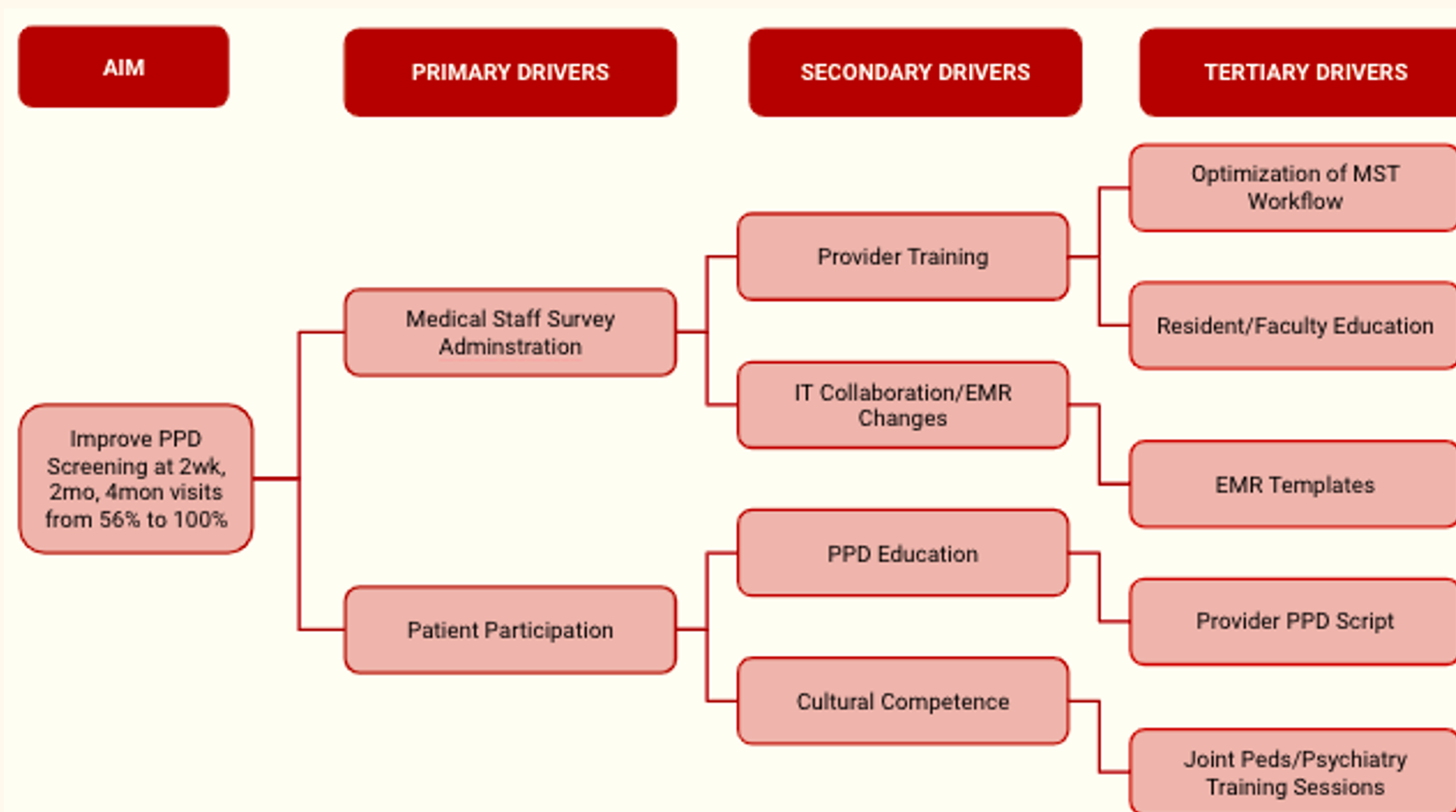
Background

- **Definition:** Postpartum Depression (PPD) describes a heterogeneous group of depressive symptoms that occurs during the first year following birth
- **Prevalence:** PPD is estimated to affect up to 15% of women, but up to 25% in low income families
- **Impact:** Decreased breastfeeding rates, developmental delay, failure to implement safe practices
- **Our Clinic:** Our clinic has a baseline screening rates were estimated to be 57% in 2019.

SMART AIM

Increase Edinburgh Postpartum Depression Screens (EPDS) completed and scored by residents at infant well visits to 100%.

Key Driver Diagram



Methods

Study Design:

Observational time series study with multiple planned sequential interventions.

Patient population:

461 well-child visits over 17 months at inner-city, lower-income pediatrics primary care clinic.

Process Measure:

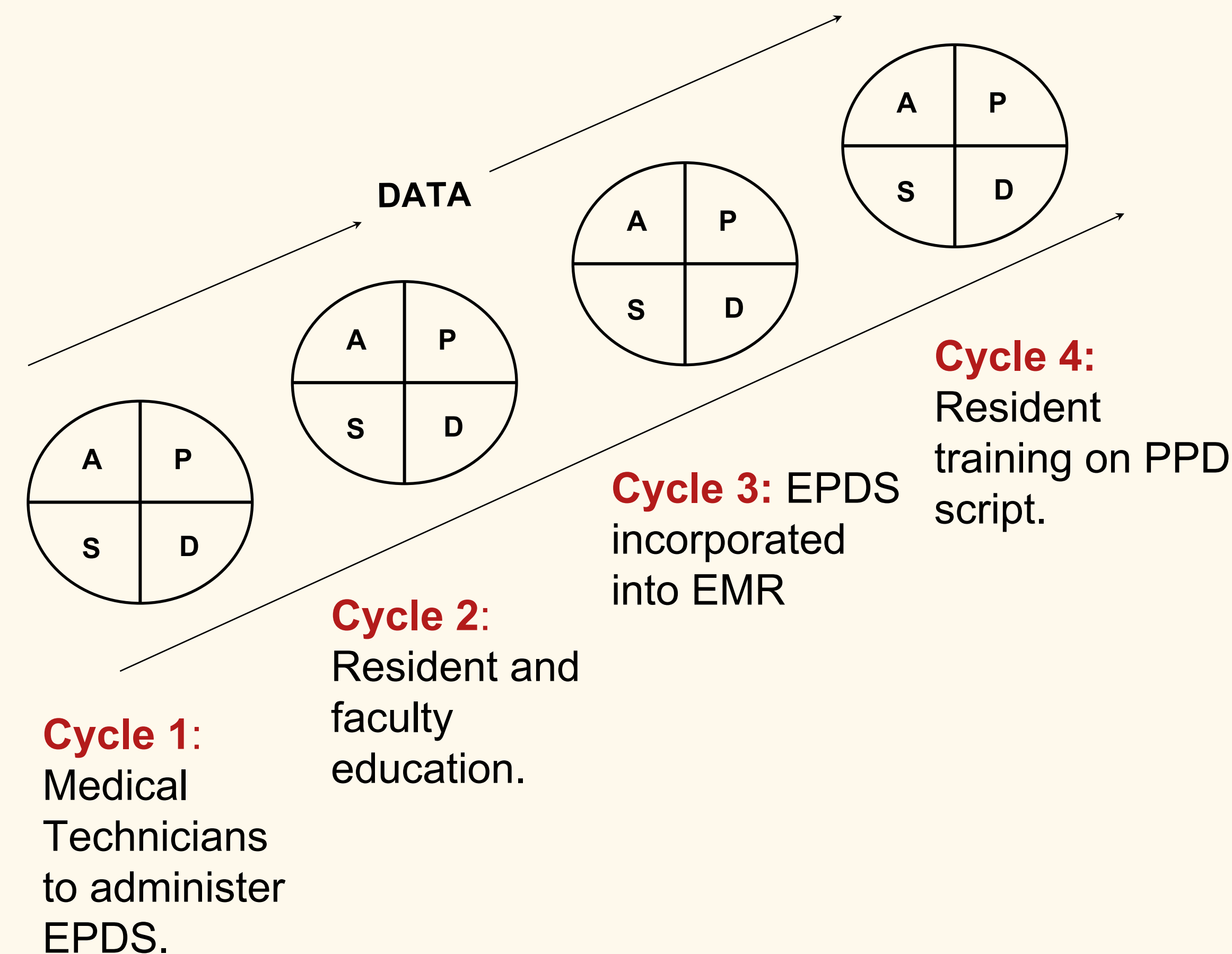
EPDS administered and scored.

Outcome Measure: Positive EPDS referral

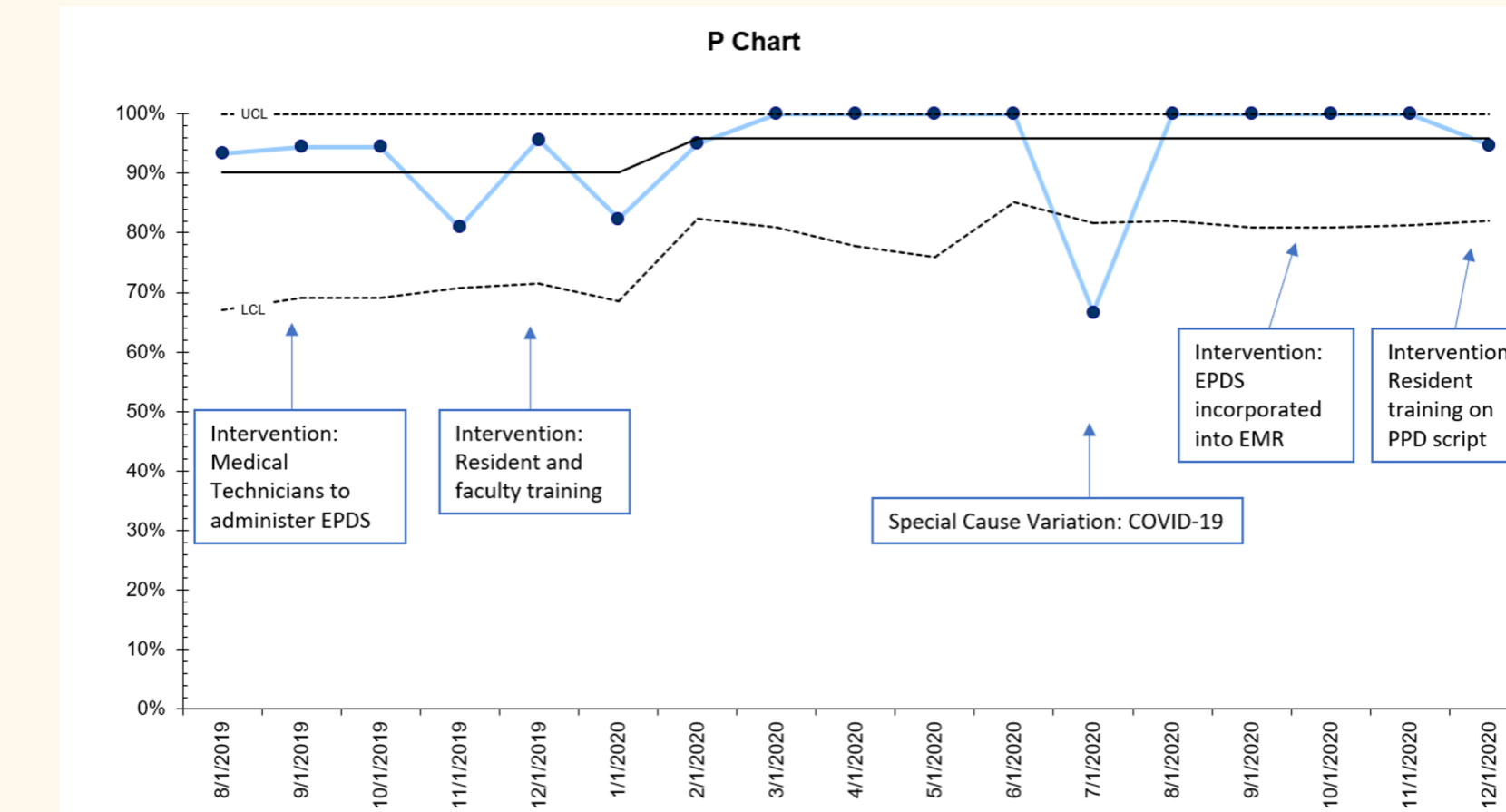
Analysis:

Data interpreted with statistical process control charts using API rules for detecting special cause variation

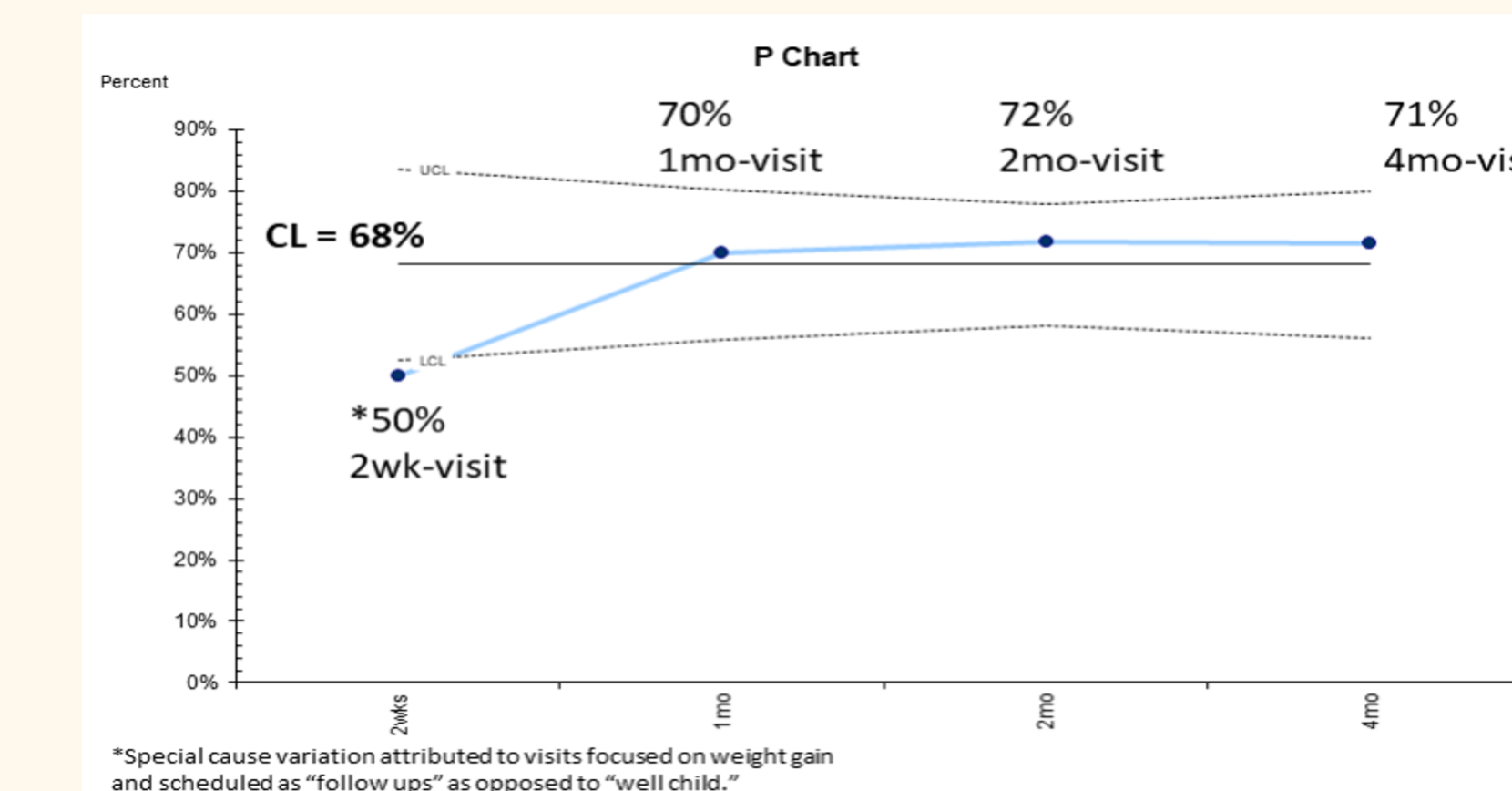
Plan Do Study Act Cycles



Results



- 461 charts were reviewed and the total screening rate remained below goal at 66%.
- Screens scored showed modest but consistent improvement (90%-95%) with special cause in 7/20 attributed to a new academic year .



- Data was stratified by age with special cause variation at 2 weeks (47% administered).
- Positive screen rate was 7% overall and highest at 2 month visits (12%).
- Most patients with positive EDPS were referred to social work (80%).

Impact and Future Directions

- Screens scored increased after intervention 2 but screens administered did not, indicating educational interventions were successful, but more workflow interventions are needed.
- Variation observed at 2 week visits may be because these visits are scheduled as follow-ups and focus on weight trends.
- Given our improvements were in screen scoring, rather than administration, improving workflow and educating staff on how and when EPDS should be administered is important for further success.
- Future cycles will focus on ensuring 100% referral and follow up for mothers who screen positive.

Acknowledgements

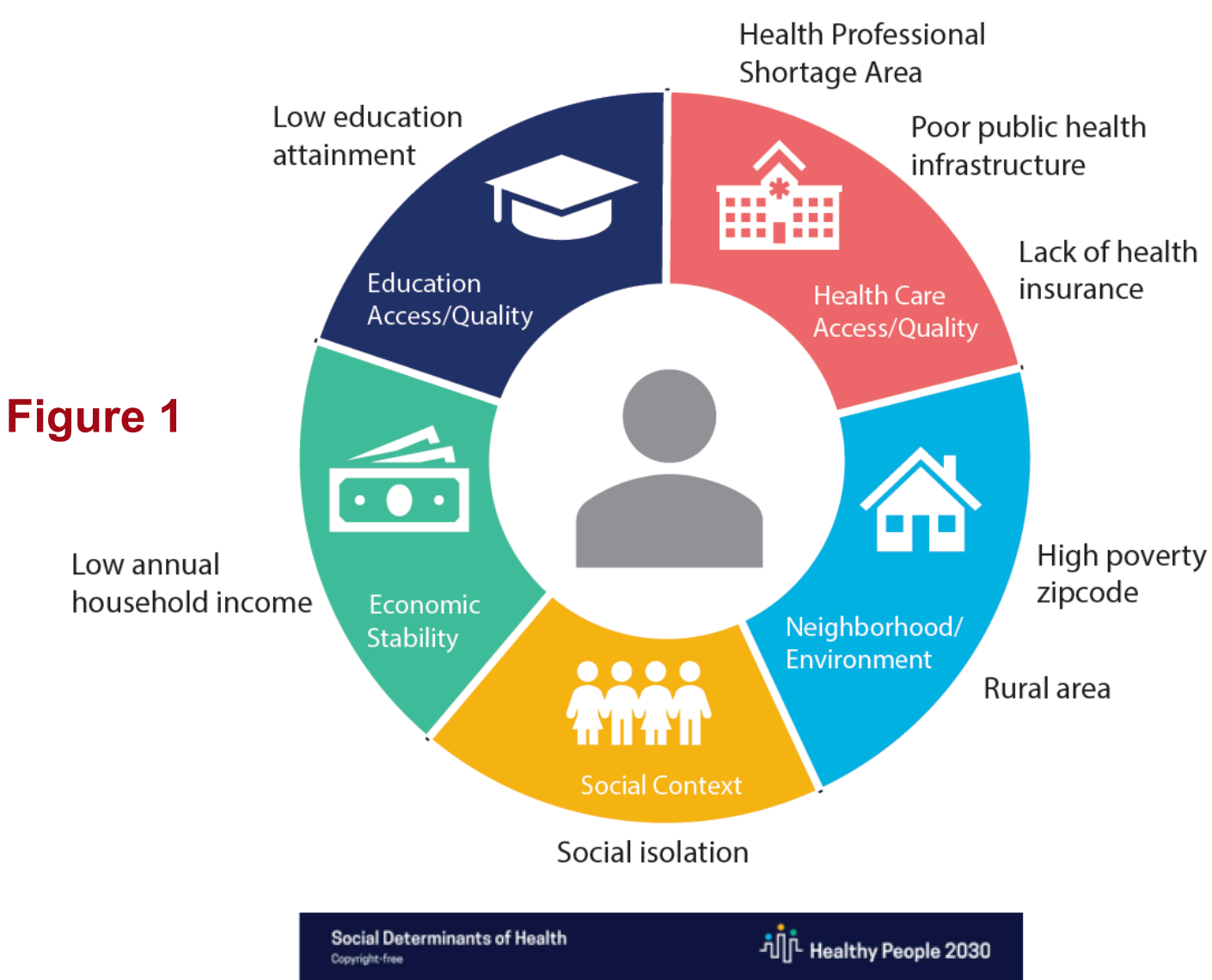
Special thanks to all members of the Resident Group Practice.

Background/Relevance

- Social determinants of health (SDOH) cluster together and have deleterious impacts on health outcomes
- Individually, SDOH increase risk of cancer mortality, but their cumulative burden is not well understood
- The objective of this study is to determine the combined effect of SDOH on cancer mortality

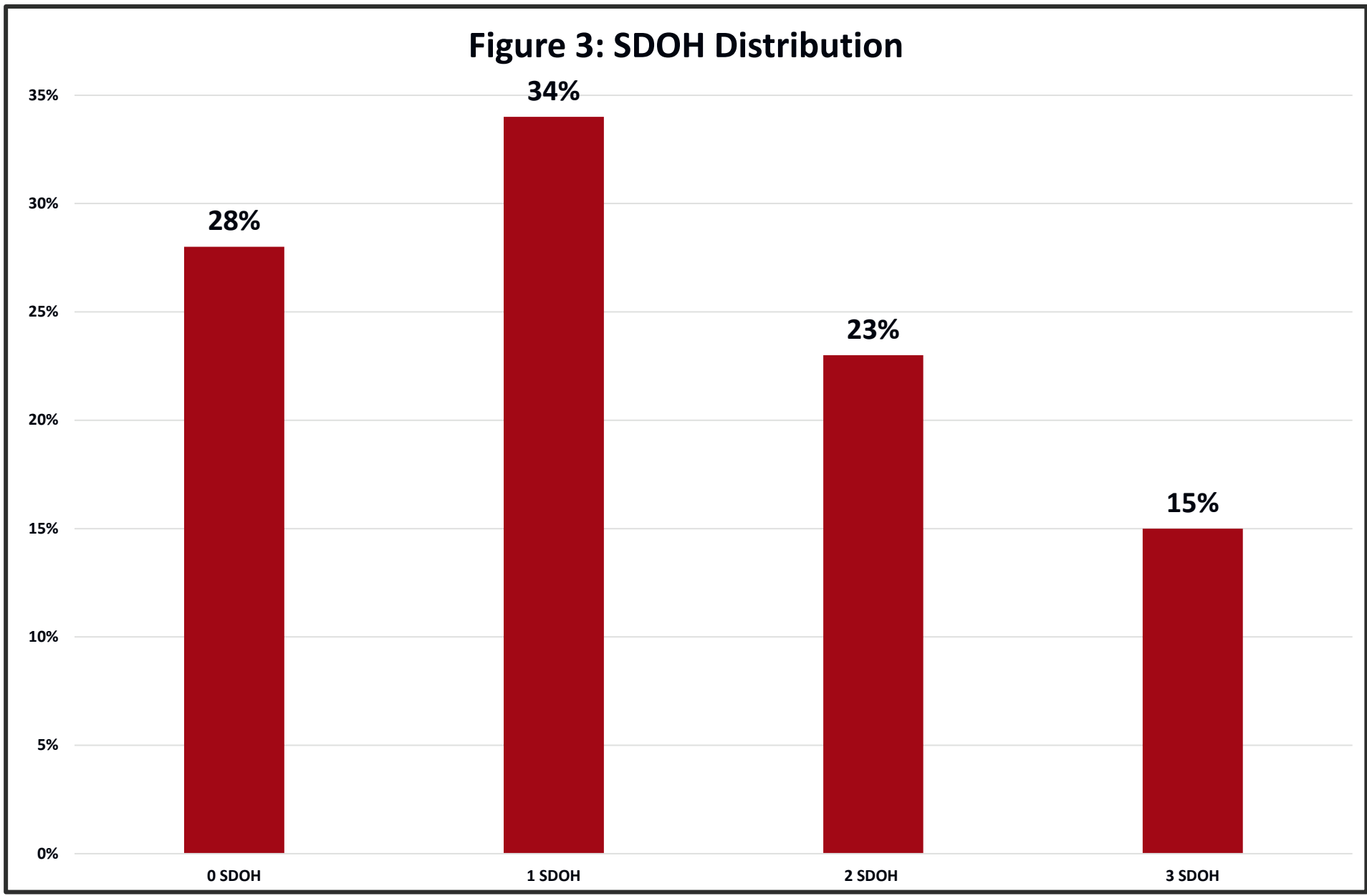
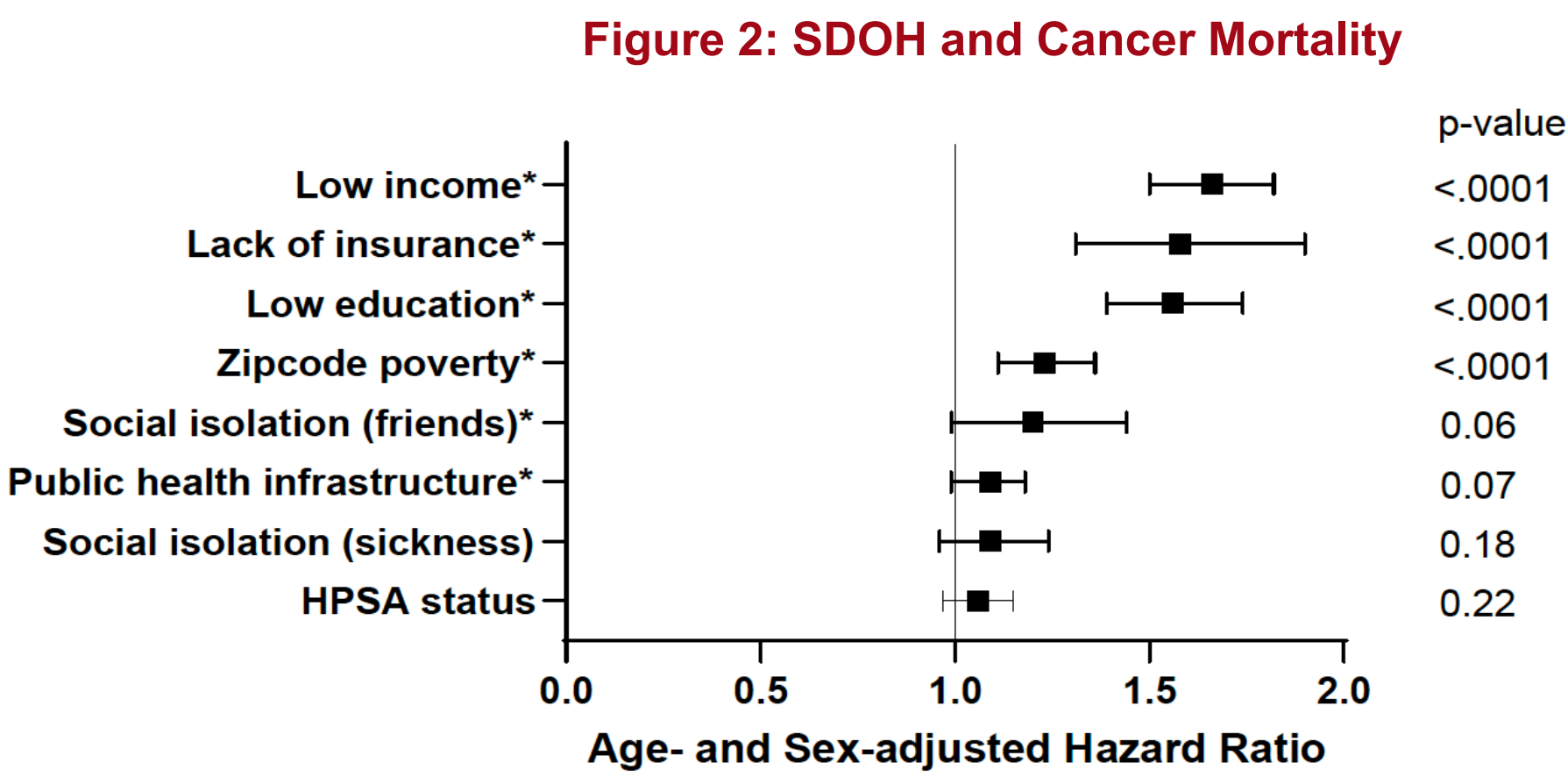
Methods

- Using the Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort, we studied 29,766 participants aged 45+ years and followed them for 10+ years
- We considered 8 potential SDOH and retained SDOH that were associated with cancer mortality ($p < 0.10$) to create a count (Figure 1)
- Fine and Gray’s sub-distribution hazard models estimated associations between the SDOH count and cancer mortality through 12/31/2017, adjusting for potential confounders



Results

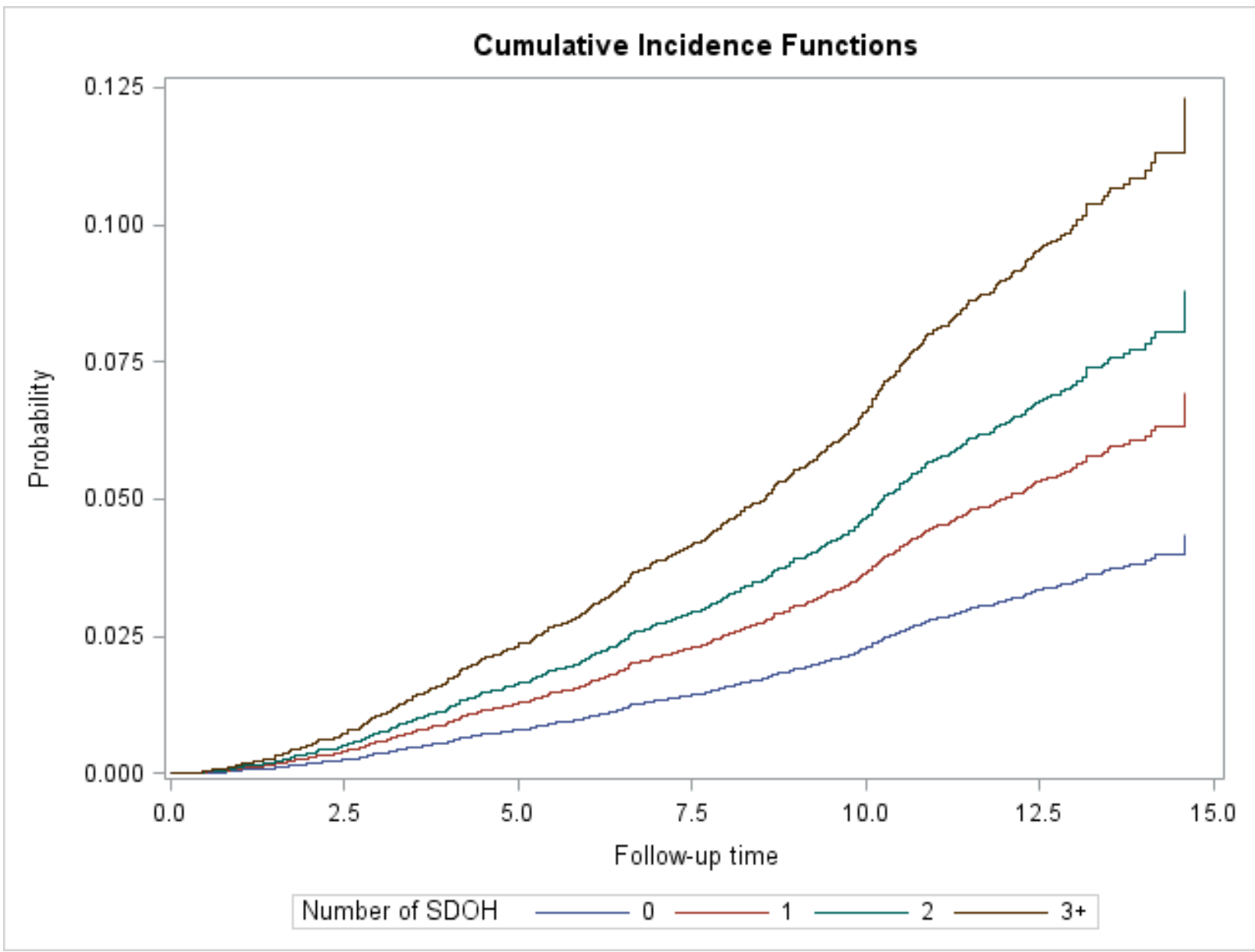
- 6 SDOH were included in our count variable (Figure 2). Overall, 28% had 0 SDOH, 34% had 1 SDOH, and 38% had 2+ SDOH (Figure 3)
- Among those <65 years, compared to no SDOH, having 1 SDOH (aHR 1.39; 95% CI 1.11-1.75), 2 SDOH (aHR 1.61; 95% CI 1.26-2.07) and 3+ SDOHs (aHR 2.09; 95% CI 1.58-2.75) was associated with cancer mortality (p for trend $< .0001$).
- Among those 65+ years, compared to no SDOH, having 1 SDOH (aHR 1.16; 95% CI 1.00-1.35) and 3+ SDOHs (aHR 1.26; 95% CI 1.04-1.52) was associated with cancer mortality (p for trend 0.032)



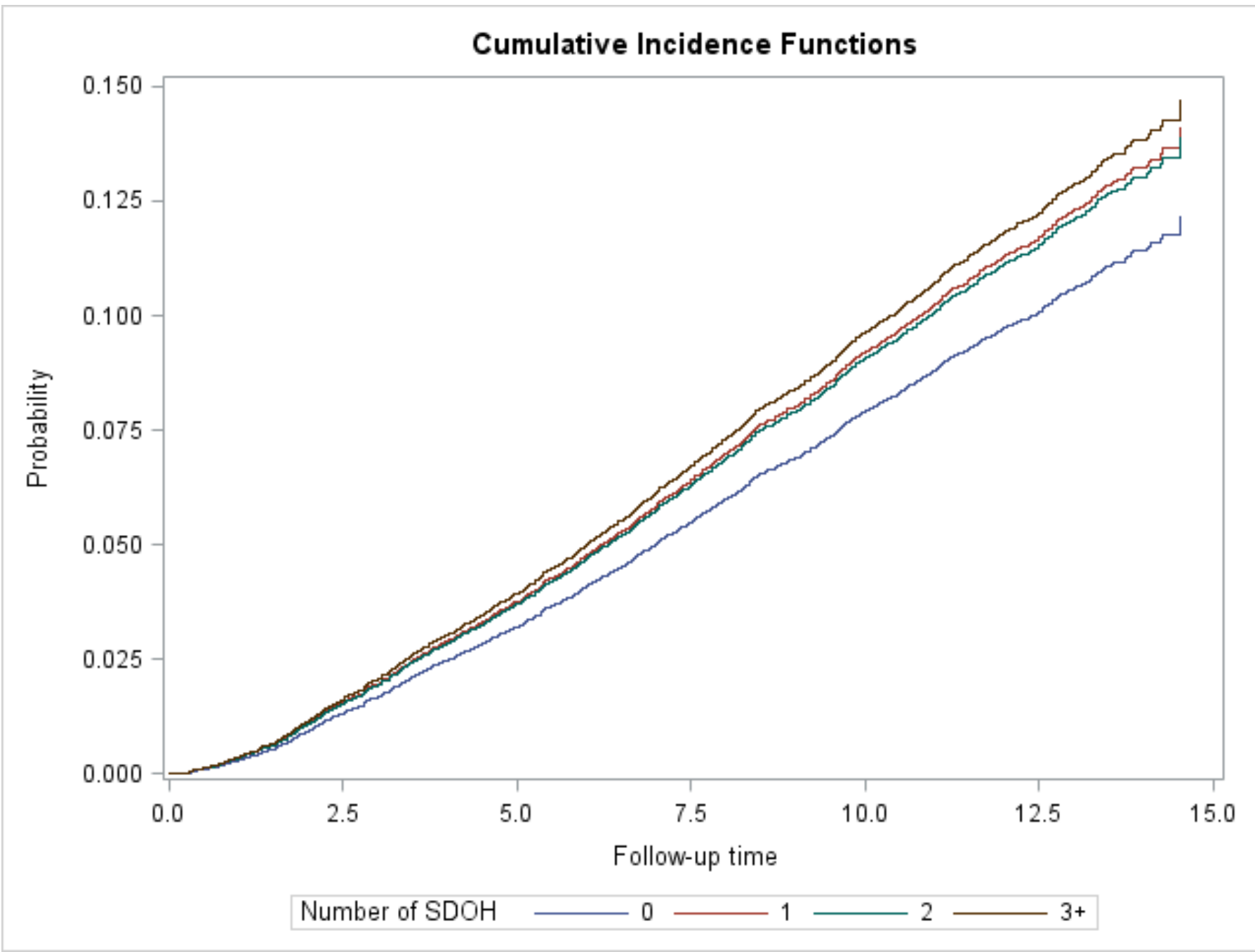
Conclusions

- Multiple SDOH in the same individual negatively impact cancer mortality across racial and age groups
- Successful cancer prevention and treatment efforts should consider multiple SDOHs instead of focusing only on one
- Strategies targeting multiple SDOH may benefit a broad range of cancer patients

Age-adjusted Cumulative Incidence Function <65 years old



Age-adjusted Cumulative Incidence Function 65+ years old



Cardiovascular disease risk prediction in Haiti: implications for primary prevention

Lily D Yan | May 27 2021 | Margaret L McNairy

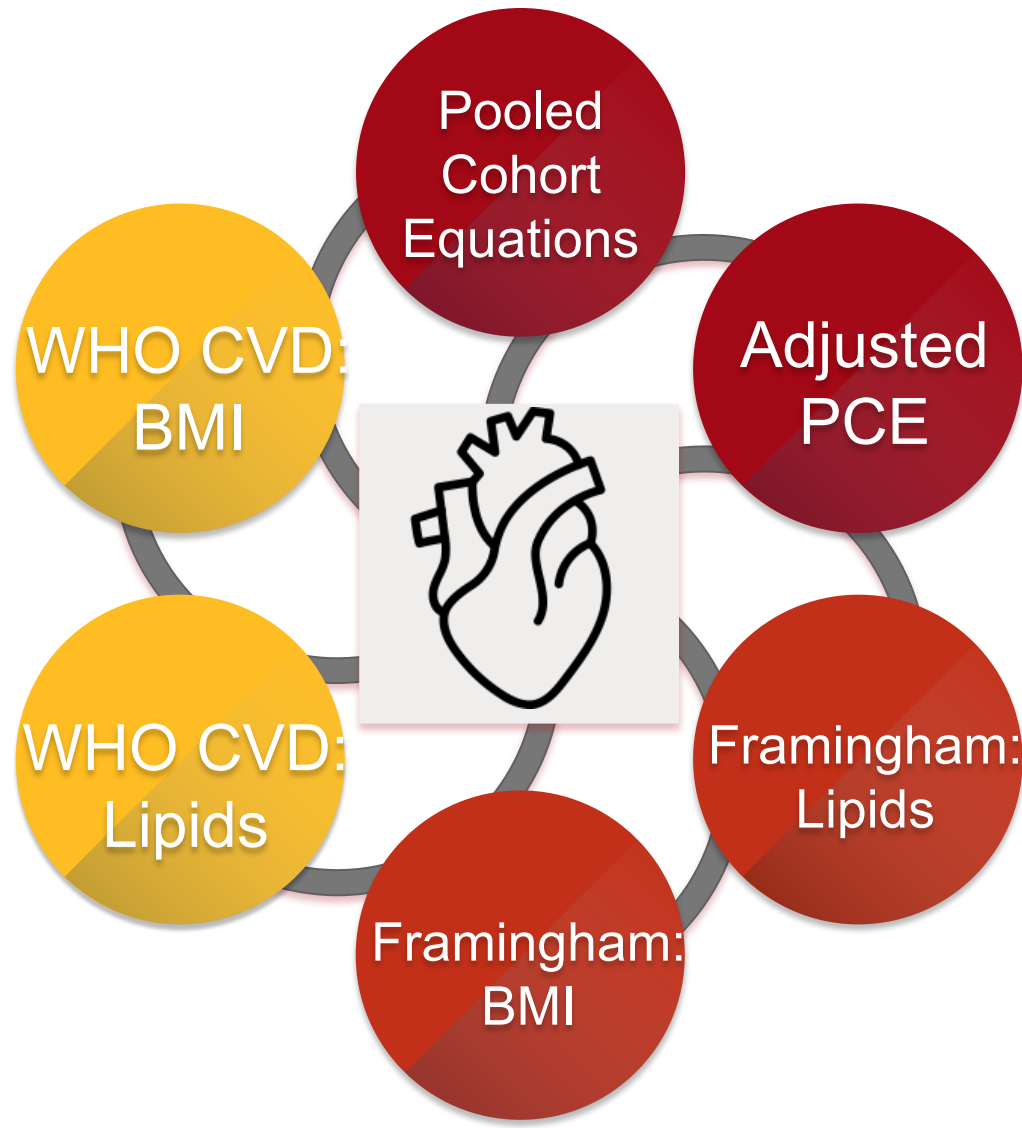
Background/Relevance

- Cardiovascular diseases (CVD) are rapidly increasing in low-middle income countries (LMIC)
- Reducing premature CVD requires accurate risk assessment for targeted interventions on primary prevention and risk factor treatment. BUT available CVD risk prediction models are built on predominantly Caucasian, high-income country populations, and have not been evaluated in LMIC populations.

Methods

- We applied six common CVD risk models to compare the predicted 10-year risk of CVD, and identification of high-risk groups for targeted prevention and treatment in Haiti.
- Data source: Haiti CVD Cohort Study, a population-based cohort in Port-au-Prince.
- Included: 776 adults ≥ 40 years enrolled between March 2019 to April 2020. Excluded participants already on a statin (n = 11), with history of angina, myocardial infarction, stroke (n= 69), or with missing data required for risk prediction (n = 72)
- Primary outcome: predicted 10-year risk of CVD as 1) a continuous score and 2) a categorical score (low, intermediate, high). Continuous scores compared using Spearman rank correlation coefficients. Categorical scores compared using chi square tests of independence

CVD Risk models



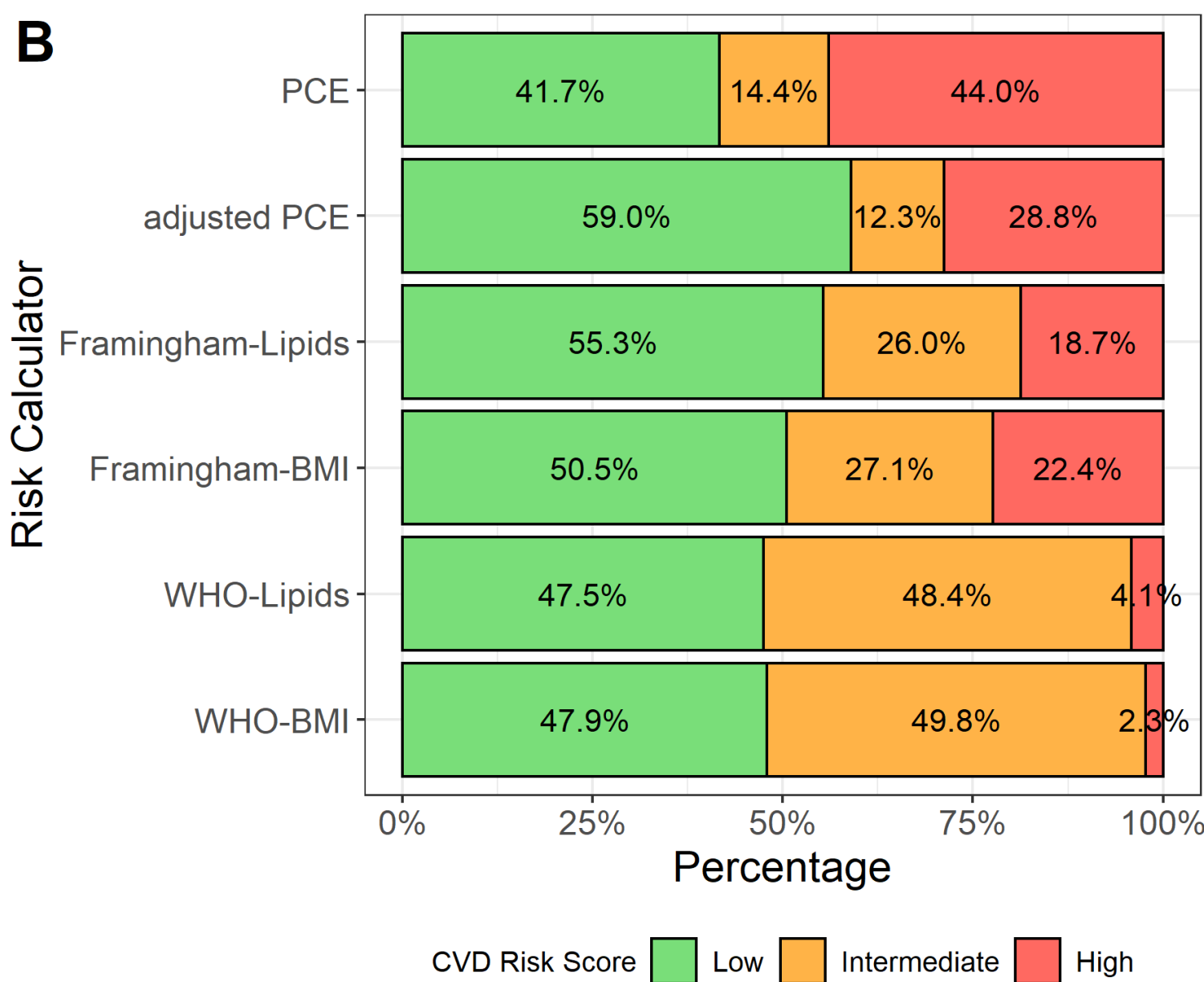
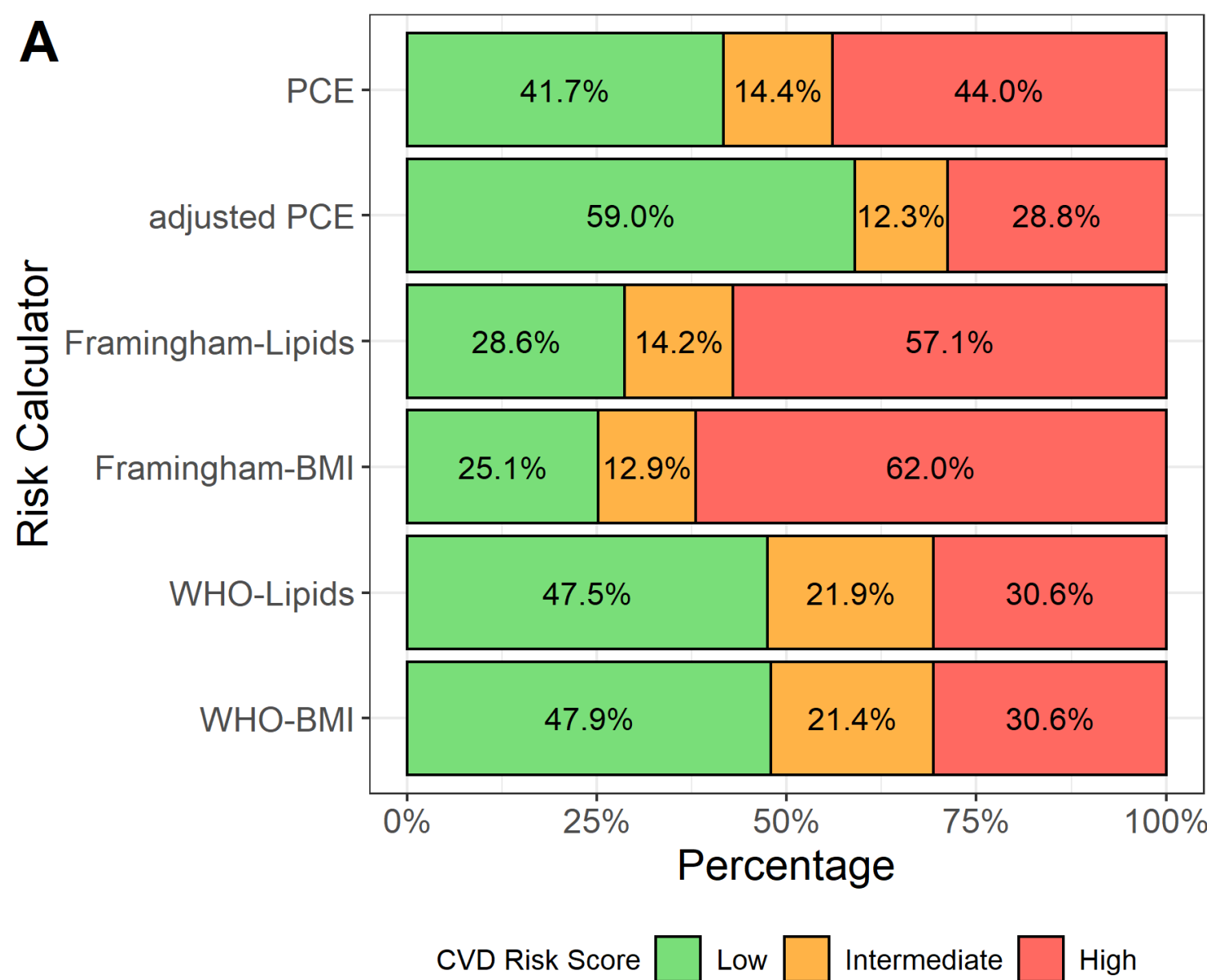
Results

Ranking of people from lowest to highest risk is highly concordant for each pair-wise model comparison

Spearman correlation coefficients

	PCE	adjusted PCE	Fram lipids	Fram BMI	WHO Lipids	WHO BMI
PCE	--	0.98	0.97	0.96	0.93	0.89
adjusted PCE		--	0.97	0.97	0.92	0.88
Fram Lipids			--	0.96	0.91	0.87
Fram BMI				--	0.91	0.89
WHO Lipids					--	0.95

Predicted 10-year CVD risk categorizations by model



Proportion of cohort with high risk varied widely across models, whether uniform thresholds were used (Panel A), or model specific thresholds (Panel B)

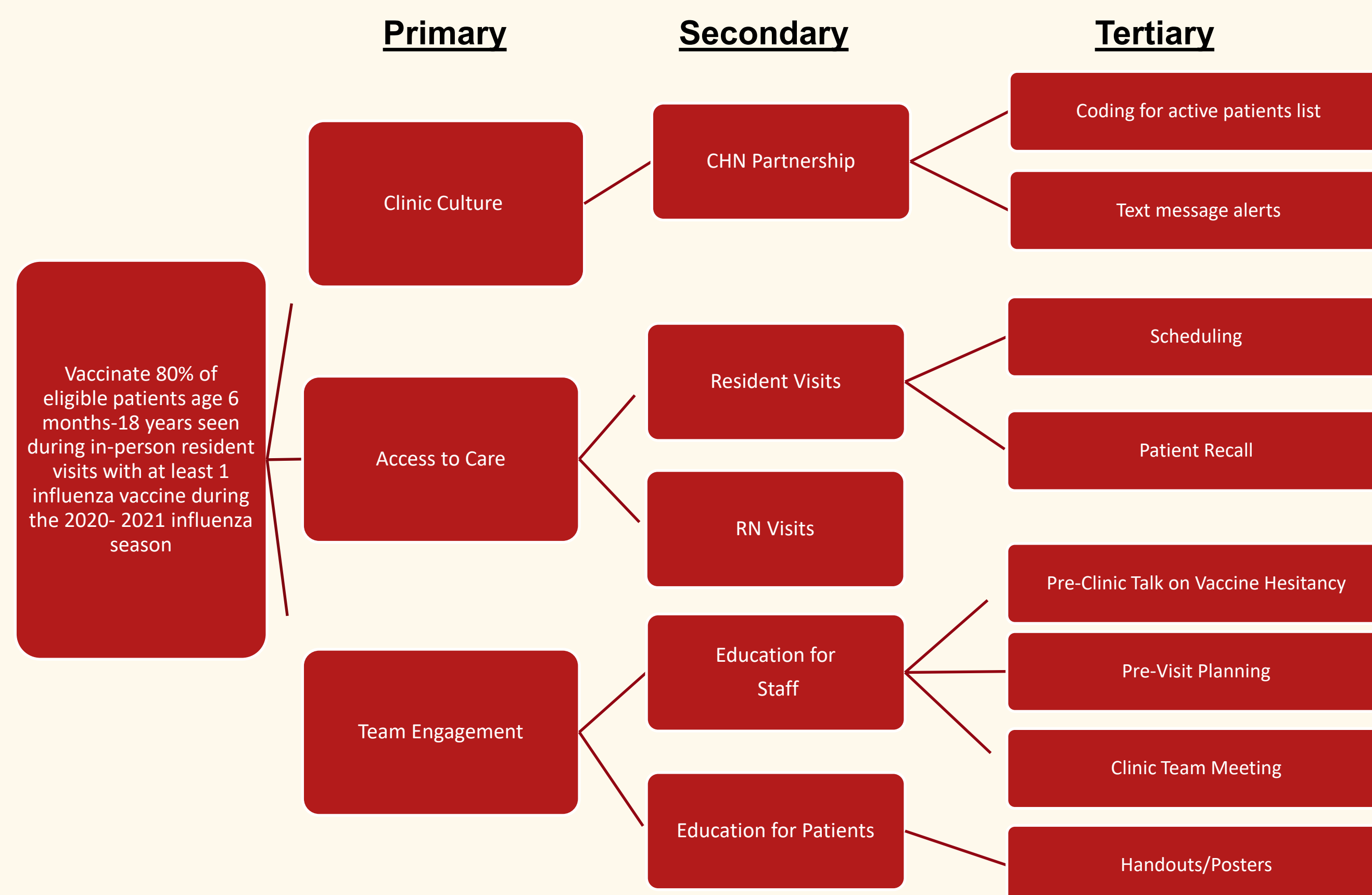
Background/Relevance

- In the pediatric population, up to 80% of influenza-associated deaths have occurred in unvaccinated children 6 months and older.
- A higher incidence of hospitalization and complications from the flu occur in asthmatic patients
- Lower income, non-white, and urban populations report lower vaccination rates, which have been attributed to barriers accessing healthcare and inadequate vaccine education
- Given these factors, particularly during COVID-19 pandemic, influenza

Objectives

- To vaccinate 80% of eligible patients age 6 months-18 years seen during in- person resident visits with at least 1 influenza vaccine during the 2020- 2021 influenza season
- To increase the influenza vaccination rate among asthmatic patients from historical baseline of 46% to 60% during the 2020-2021influenza season

Key Driver Diagram



Methods

Study Design

- Quality improvement observational study with multiple planned interventions

Study Population

- Included patients aged 6 months to 18 years at a Federally Qualified Health Center resident clinic in Long Island City, NY; those patients also with coded diagnosis of asthma

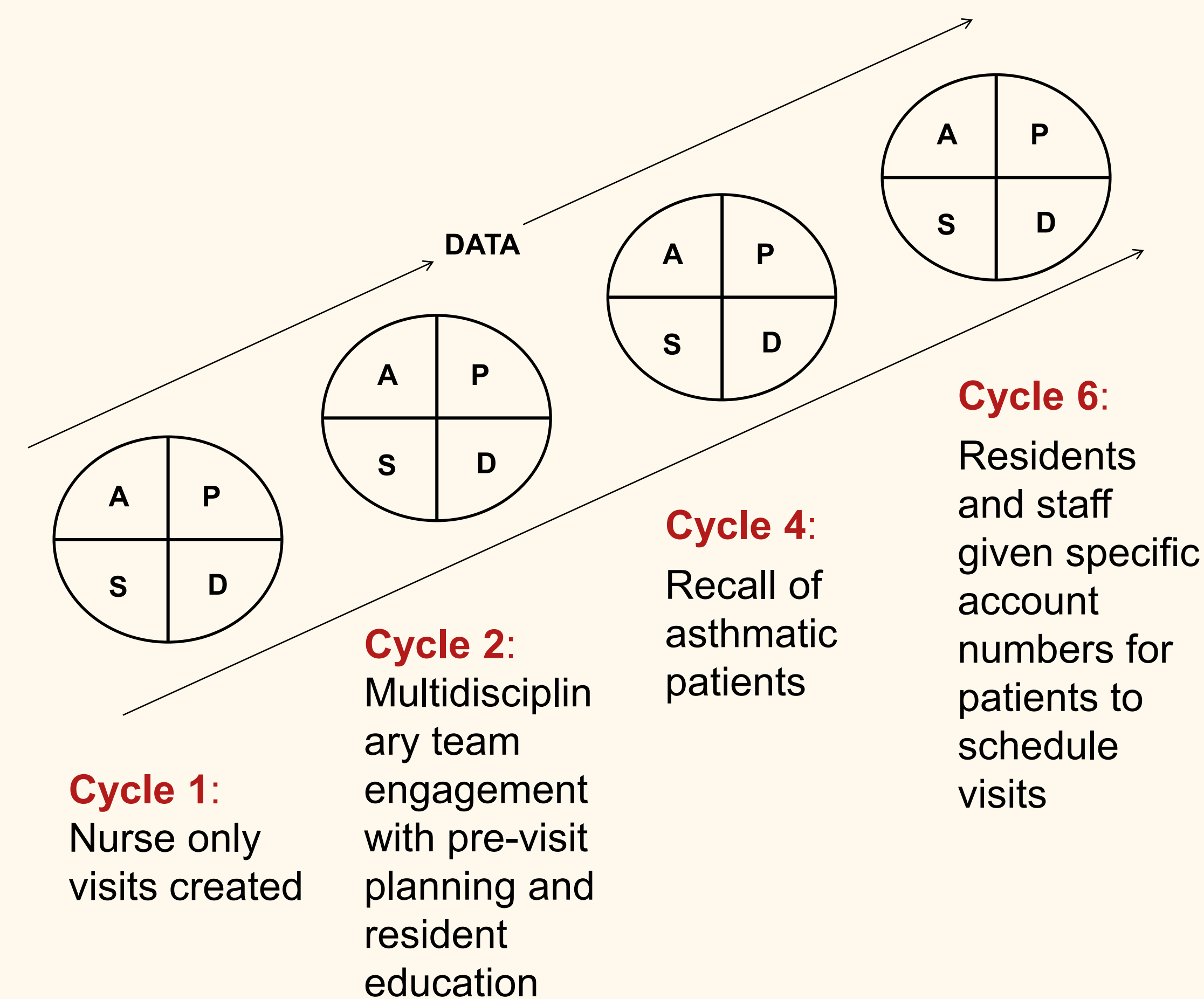
Data Extraction

- A retrospective chart review with data extracted from the electronic medical record was used to acquire vaccination and visit show rates throughout the season.

Analysis

- Data interpreted with statistical run charts

Plan Do Study Act Cycles



Progress to date

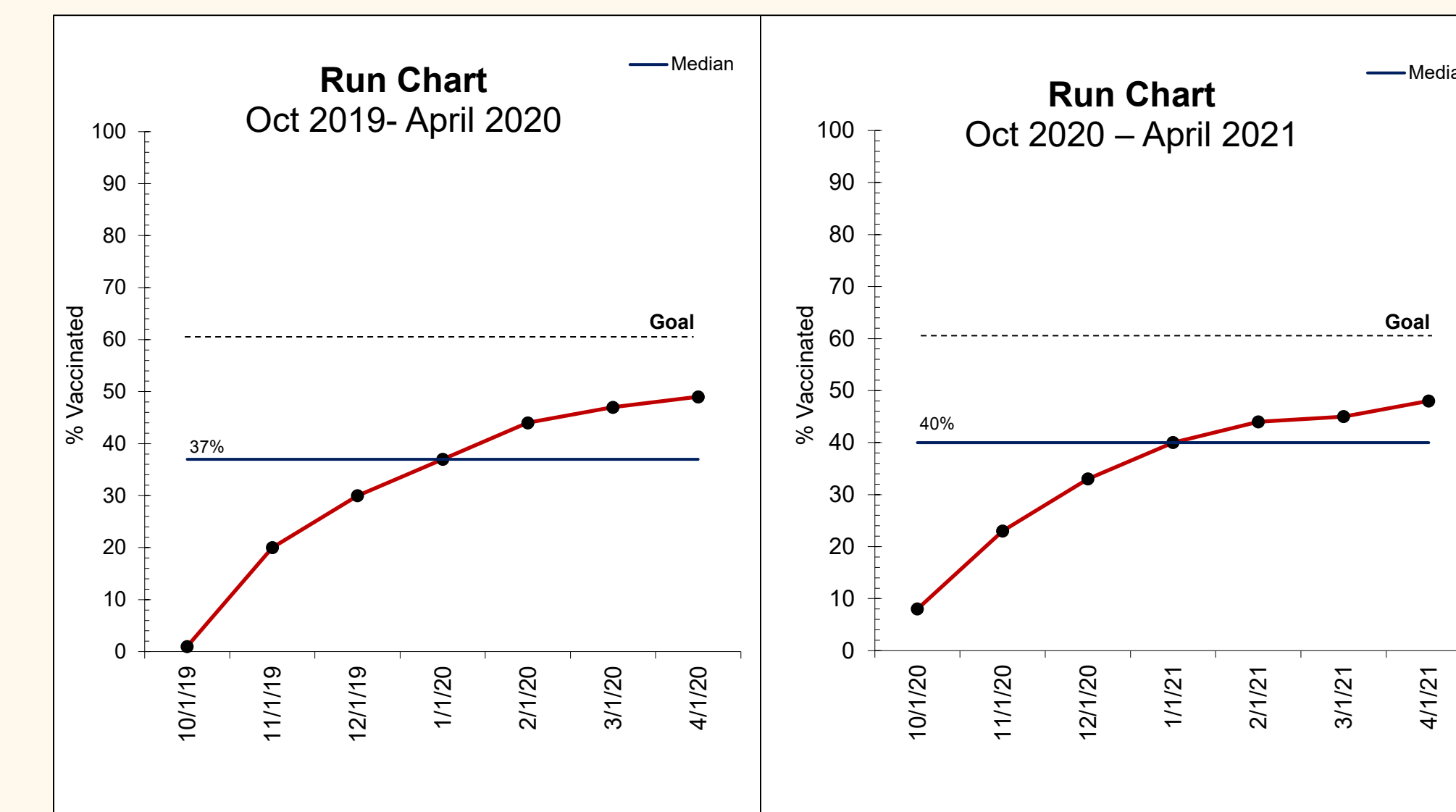


Figure 1: Cumulative Asthmatic Patients Vaccinated during 2019-2020 and 2020-2021 Influenza Seasons

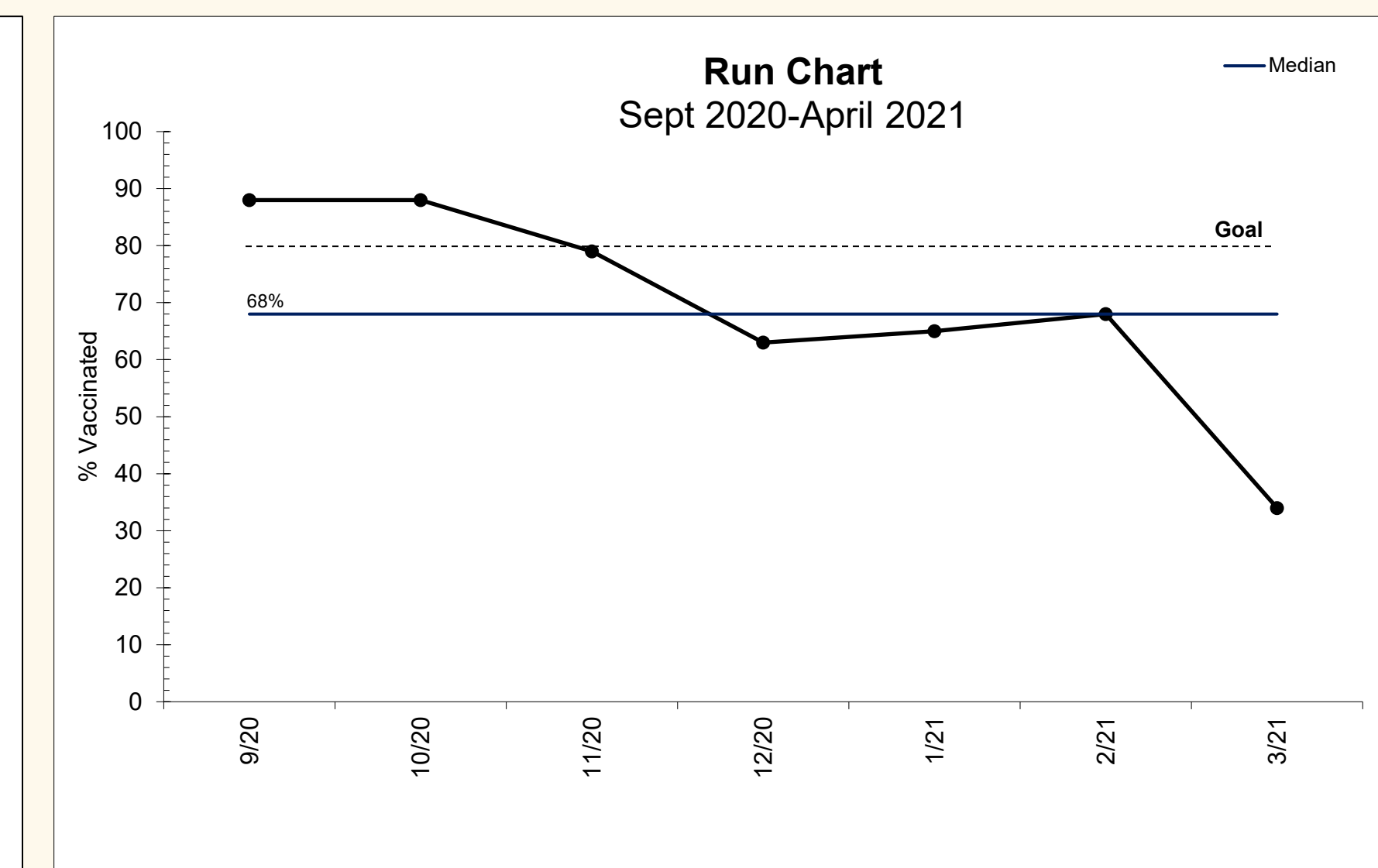


Figure 2: Patients Vaccinated During In-Person Resident Visits

Limitations

- The school closures and shift to remote-only learning was an unanticipated impediment to vaccinate our high risk population.
- Parents perceived their risk of influenza to be low due decreased exposure during the COVID-19 pandemic, in addition to heightened vaccine hesitancy, made influenza vaccine refusal higher than expected

Anticipated Impact

- An infrastructure is now in place to improve vaccination rates in vulnerable pediatric populations for future influenza seasons, with a potential shift to the COVID-19 vaccine (if or when it becomes available).
- Our increased team engagement and focus on addressing vaccine hesitancy will be particularly important in the upcoming seasons.

Acknowledgements

Special thanks to the LIC continuity clinic attendings Dr. Rolston, Dr. Lee and Dr. Amin, to the amazing LIC clinic residents, and to all of the nurses and medical staff for their hard work on this project to improve the health of our pediatric patients

Social Determinants of Health and 30-Day Readmissions among Adults Hospitalized for Heart Failure in REGARDS

Madeline R. Sterling, MD, Joanna Ringel, MPH, Laura C. Pinheiro, PhD, Monika M. Safford, MD, Emily Levitan, ScD, Erica Phillips, MD, Todd M. Brown, MD, Oanh Nguyen, MD, Parag Goyal, MD

Background

- It is not known which social determinants of health (SDOH) impact 30-day readmission after a heart failure (HF) hospitalization among older adults.
- We examined the association of 9 individual SDOH with 30-day readmission after a HF hospitalization.

Methods

- Using The REasons for Geographic and Racial Differences in Stroke (REGARDS) Study, we included Medicare beneficiaries who were discharged alive after a HF-hospitalization between 2003 and 2014.
- We assessed 9 SDOH based on the HealthyPeople2020 Framework (**Figure 1**): race, education, income, social isolation, social network, residential poverty, Health Professional Shortage Area (HPSA), rural residence, and state public health infrastructure.
- The primary outcome was 30-day all-cause readmission.
- For each SDOH, we calculated incidence per 1000-person years and multivariable-adjusted hazard ratios of readmission.

Figure 1. Healthy People 2030 Framework



Table 1. SDOH of Participants Hospitalized for HF by Readmission Status

SDOH	Total (690)	No 30-Day Readmission	30-Day Readmission	P-Value
Black Race	245 (35.5%)	185 (346%)	60 (38.7%)	0.34
Low Educational Attainment	162 (23.5%)	124 (23.2%)	38 (24.5%)	0.73
Low Income	377 (630%)	295 (63.3%)	82 (62.1%)	0.8
Zip code level poverty	143 (21.0%)	109 (20.6%)	34 (22.4%)	0.64
Health Professional Shortage Area (HPSA)	300 (43.5%)	219 (40.9%)	81 (52.3%)	0.01
Poor Public Health Infrastructure	271 (39.3%)	213 (39.8%)	58 (37.4%)	0.59
Social Isolation	88 (13.1%)	64 (12.3%)	24 (15.8%)	0.26
Poor Social Network	85 (13.3%)	67 (13.5%)	18 (12.6%)	0.78
Rural Residence	64 (10.2%)	47 (9.7%)	17 (12.0%)	0.43

Results

- Among 690 participants, the median age was 76 years at hospitalization (IQR 71–82), 44.3% were female, 35.5% were black, 23.5% had low educational attainment, 63.0% had low income, 21.0% had zip code-level poverty, 43.5% resided in HPSAs, 39.3% lived in states with poor public health infrastructure, 13.1% were socially isolated, 13.3% had poor social networks, and 10.2% lived in rural areas ((**Table 1**).
- The 30-day readmission rate was 22.4%. In an unadjusted analysis, only HPSA was independently associated with 30-day readmission; in a fully-adjusted analysis, none of the 9 SDOH were individually associated with 30-day readmission.

Conclusion

- In this national cohort, although prevalent, none of the SDOH were associated with 30-day readmission after a HF-hospitalization.
- Policies or interventions that only target SDOH to reduce readmissions after HF hospitalizations may not be sufficient to prevent readmission among older adults.



Exploring Tensions in Professional Identity During a “Resident-As-Attending” Rotation

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BACKGROUND

- One of the primary goals of medical education is **development of a professional identity** among trainees.
- Coaching** is an ideal strategy for fostering professional identity formation, and is defined by orientation towards growth, continuous reflection, and use of failures for learning.
- However, key principles of coaching (e.g. embracing vulnerability, welcoming failure) may **directly conflict** with the current culture of competency-based medical education and its focus on frequent assessments.
- This study investigated **sociocultural tensions** that arose during a “resident-as-attending” coaching rotation designed to promote professional identity formation.

METHODS

- We created a novel two-week inpatient internal medicine rotation designed to **foster deliberate practice and leadership skills** among senior internal medicine residents.
- Each resident was placed in the **role of the acting attending** on service to simulate independent practice. The attending physician served as the resident’s coach. A peer attending provided feedback to the attending on their coaching.
- Post-hoc semi-structured interviews of all residents and attendings were conducted and analyzed for themes using a phenomenological approach.

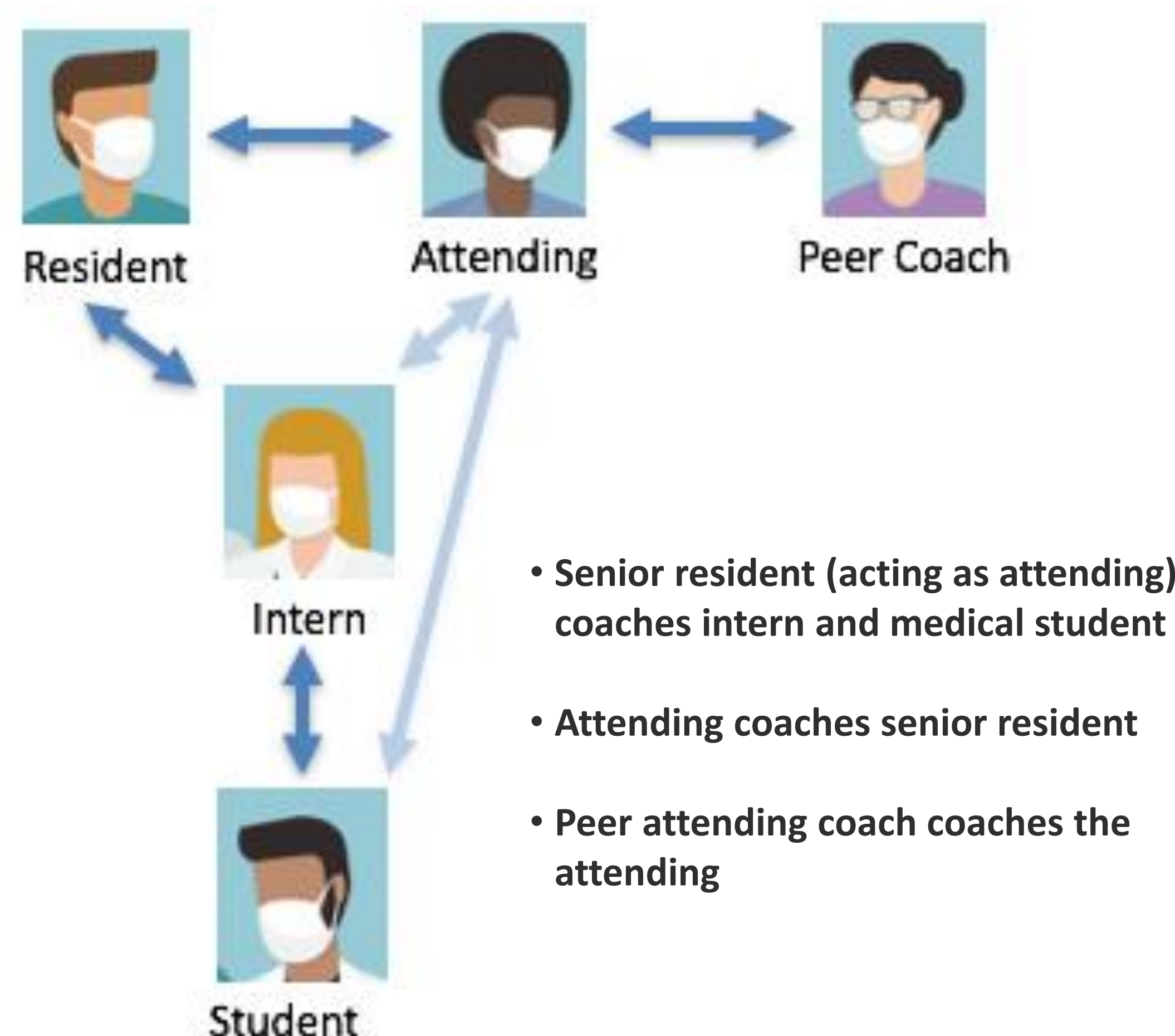


Figure 1: Rotation Structure

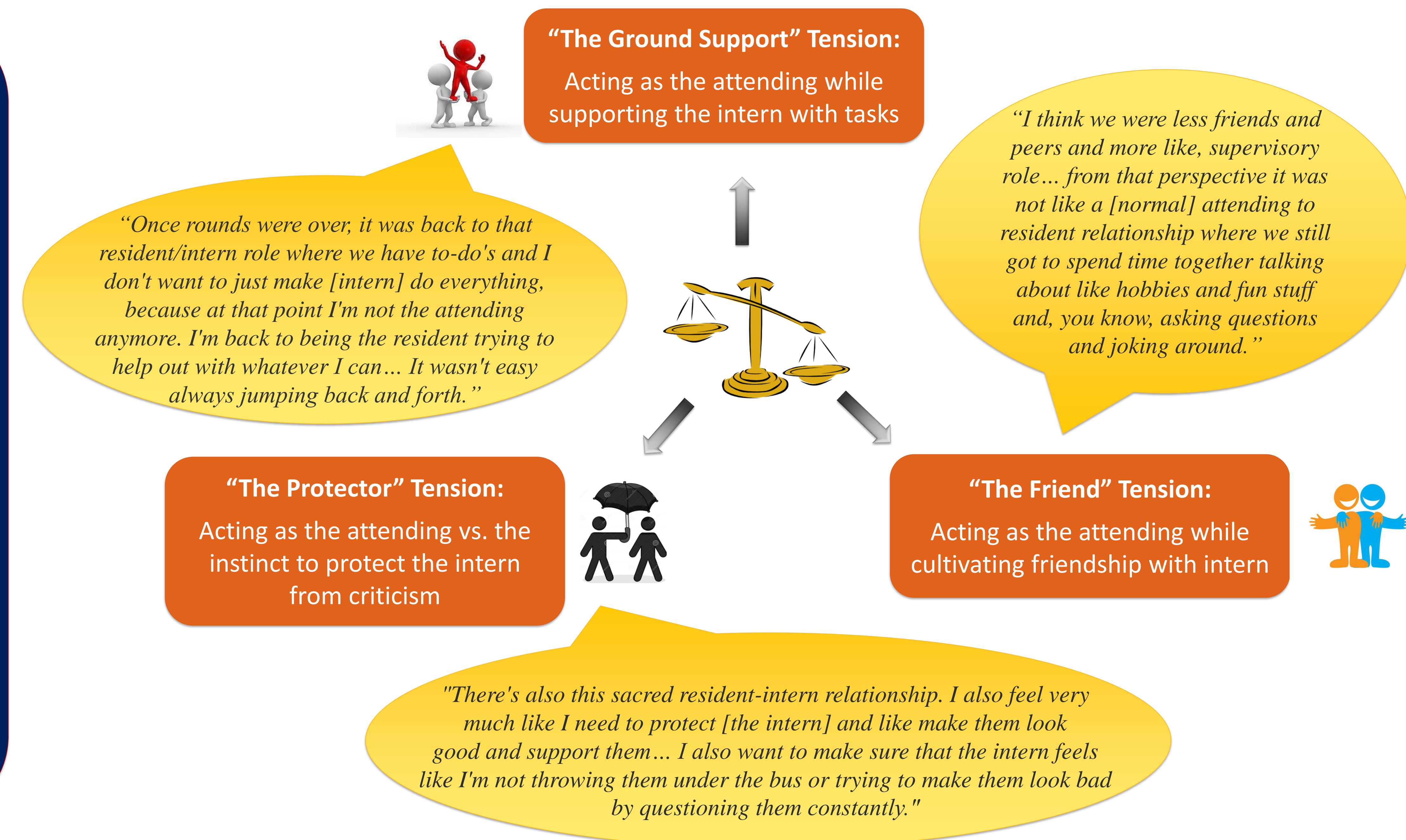
RESIDENT INTERVIEW RESULTS

Residents identified 3 primary tensions emerging from the challenge of acting as the attending while balancing “traditional” resident roles:

1. “Ground Support”
2. “Protector”
3. “Friend”

Implications:

While the “Ground Support” and “Friend” tensions may represent a natural part of growth, the “Protector” tension may signify a deeper cultural tendency to avoid criticism or vulnerability that may impede coaching effectiveness.



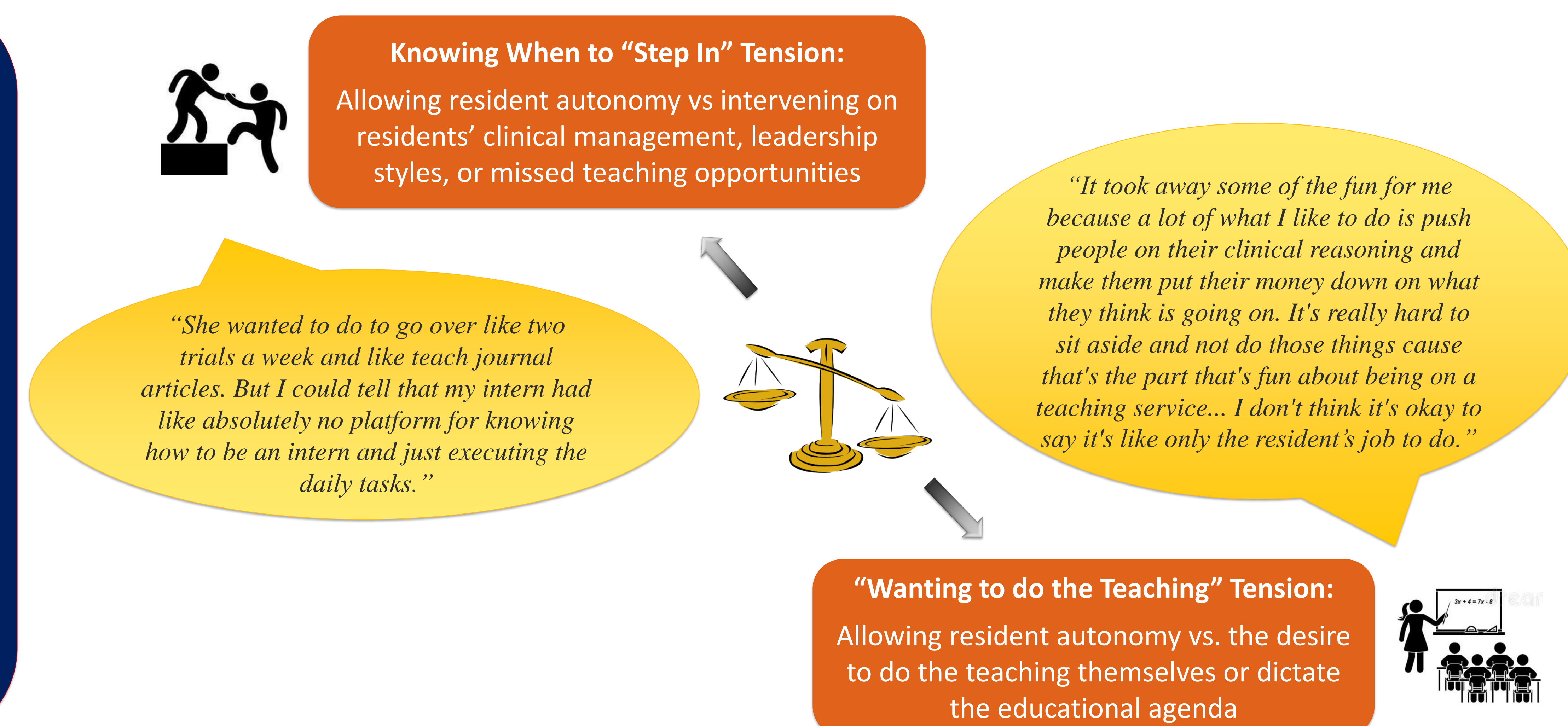
ATTENDING INTERVIEW RESULTS

Attendings identified 2 primary tensions emerging from balancing the traditional attending leadership role with allowing resident autonomy:

1. Knowing When to “Step In”
2. Wanting to do the Teaching

Implications:

Expanding resident autonomy is essential to a coaching strategy, but it remains challenging even for trained faculty to balance supervision and autonomy.





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- Facing a higher number of medication adherence barriers is associated with MCI in a population of hypertensive African Americans living in the southeastern United States.
- **Limitations:** The findings were reported from a trial population. Having impaired cognition may limit ability to recall troubles with medication adherence.
- **Strengths:** This study had a large sample size. To our knowledge, this was the first study to analyze MCI and specific barriers to medication adherence in this population: African Americans with persistently uncontrolled hypertension living in the Black Belt of the United States.
- Black Belt populations have great needs in terms of healthcare innovations, but they are rarely studied. This study identifies a population at high risk for medication non-compliance and resulting suboptimal blood pressure control. Developing interventions to increase adherence in this vulnerable population may be a missing piece of the larger puzzle of persistently uncontrolled hypertension in the Black Belt and Stroke Belt of the United States.

- Division of General Internal Medicine at Weill Cornell Medicine.
- The Southeastern Collaboration to Improve Blood Pressure Control Study Team.