Home health care, self-reported gaps in care coordination, and preventable adverse outcomes among older adults

Sterling, MR[1], Lau, J[1], Rajan, M[1], Safford, MM1, Akinyelure, OP[2], Kern, LM[1]

[1] Weill Cornell Medicine; [2]University of Alabama

Background

- Older adults are increasingly using home health care (HHC) services for help at home.
- How HHC impacts care coordination and outcomes, however, is poorly understood.
- We aimed to determine whether receipt of HHC was associated with gaps in care coordination and preventable adverse outcomes from the patients' perspective.

Methods

- Cross-sectional analysis of a care coordination survey (between 2017-2018) and linked Medicare claims among REGARDS participants ≥65 years old.
    - HHC status (yes/no) ascertained 12 months prior to survey in Medicare claims.
    - Perceived gap in care coordination if >1 problem with 6 aspects of care coordination (survey).
    - Preventable adverse event if they reported a a) drug-drug interaction, b) emergency department visit or c) hospital admission that they thought could have been prevented with better communication across providers (survey).
- Poisson models with robust standard errors to determine the associations between HHC and a gap in care coordination and preventable adverse outcomes.
    - Propensity score-based inverse probability weighting to balance samples and adjust for 23 potential confounders.

Results

- Among the 4,296 participants, 430 (10%) received HHC and 3,866 did not (90%).

- Those with HHC: older and had more comorbidities, frailty, functional and cognitive impairments, depressive symptoms, medication burden, and ambulatory doctor visits, than those without HHC.

- Gaps in care coordination *did not* differ by HHC status (**Table 1**). HHC-recipients had more preventable drug-drug interactions (9.1% vs. 4.0%, p<0.001), but not more preventable ED visits or hospital admissions.

- In IPW-adjusted models, HHC was *not* associated with gaps in care coordination (aRR 0.94; CI 0.79, 1.13, p<0.5) but HHC *was* associated with 2 times the risk of a preventable adverse outcome (aRR 2.07; CI: 1.41, 3.04, p<0.001), driven by drug-drug interactions (**Table 2**).

Table 1. Unadjusted Findings	HHC N=430	No HHC N=3,866	p-value
Care Coordination			
Gaps in care coordination (N=4,296)	143/430 (33.3%)	1,256/3,866 (32.5%)	0.7
Preventable adverse outcome			
Had a problem with his or her medications, because different doctors prescribed medications that did not go well together (N=4,296)	39/430 (9.1%)	155/3,866 (4.0%)	<0.001
Preventable ED visit by better communication across healthcare professionals. (N=215)	10/42 (23.8%)	32/173 (18.5%)	0.5
Preventable hospital admission by better communication across healthcare professionals. (N=92)	3/24 (12.5%)	13/68 (19.1%)	0.5

Table 2. Adjusted Findings	aRR[1]	95% CI	p-value
Gaps in care coordination	0.94	0.79, 1.13	0.5
Any Preventable Outcome	2.07	1.41, 3.04	<0.001

[1]Adjusted by age, sex, race, income, education, region, rural, hypertension, lipidemia, diabetes, history of MI, history of stroke, kidney disease, atrial fibrillation, ADL, IADL, PCS-12, MCS-12, self-reported health, CESD, six-item-screener cognitive score, total number of medications, and frailty.

Conclusion

- Older adults who received HHC (vs. no HHC) were more likely to report an adverse event (particularly a drug-drug interaction) that they attributed to poor communication across healthcare providers, even after using robust methods to adjust for the probability of receiving HHC.
- Opportunities to improve patient safety may exist by leveraging the observations of HHC recipients.

WEILL CORNELL MEDICINE
PRIMARY CARE INNOVATION

PROUD TO BE GIM #WeAreGIM

Disclosures: None

Understanding the technological landscape of home health aides: a scoping literature review and a landscape analysis of existing mHealth Apps

Elizabeth Kuo, Jacklyn Cho, Madeline Sterling, Nicola Dell | February 24th, 2022 |

Background

• Home health aides (HHAs) provide necessary hands-on care to older adults and those with chronic conditions.

• HHAs are an overlooked and underutilized group of healthcare professionals who experience challenges caring for patients, particularly with communication and training.

Study Objective

• We conducted a scoping review of the scientific literature to identify existing studies which have described, designed, deployed, and/or tested technology-based tools and apps intended for use by HHAs to care for patients in the home.

• To complement our literature review, we conducted a landscape analysis of existing mobile apps intended for HHAs providing in home care.

Methods- Scoping Review

• The following databases were searched from inception to October 2020: Ovid MEDLINE, Ovid EMBASE, Cochrane Library, and CINAHL (EBSCO).

• Three researchers screened the yield using pre-specified inclusion and exclusion criteria.

• Two researchers independently reviewed these articles and a third arbitrated when needed. Data was extracted from included papers and summarized narratively.

Results

• 8,643 studies were retrieved, 182 underwent full-text review, and 9 met our inclusion criteria.

• Half (n=4) were descriptive in nature, proposing technology-based systems (e.g. web-portal, dashboard) and/or prototypes.

• In 7 (out of 9) papers, HHAs were just one of several users and not the sole/primary intended user of the technology.

• Our initial search of mobile apps yielded 975 Android and iOS apps, 167 apps were screened, and 48 met the inclusion criteria.

• Included apps provided HHAs with one or more of the functions in Table 1.

• The 48 apps were categorized as monitoring HHAs (n=25), supporting HHAs (n=4), or both (n=19).

Methods- Landscape Analysis

• mHealth apps for HHAs were analyzed, using a predefined set of terms to search the Google Play Store and Apple App Store.

• Two researchers independently screened the resulting apps and those that met the inclusion criteria were categorized according to their intended purpose and functionality.

Table 1. Functions of Included Apps	
Function	Number of Apps Performing the Function
Electronic Visit Verification	29
Clocking In and Out	23
Documentation	22
Task Checklist	19
Communication Between HHA and Agency	14
Patient Information	6
Resources	5
Communication Between HHA and Clients	4
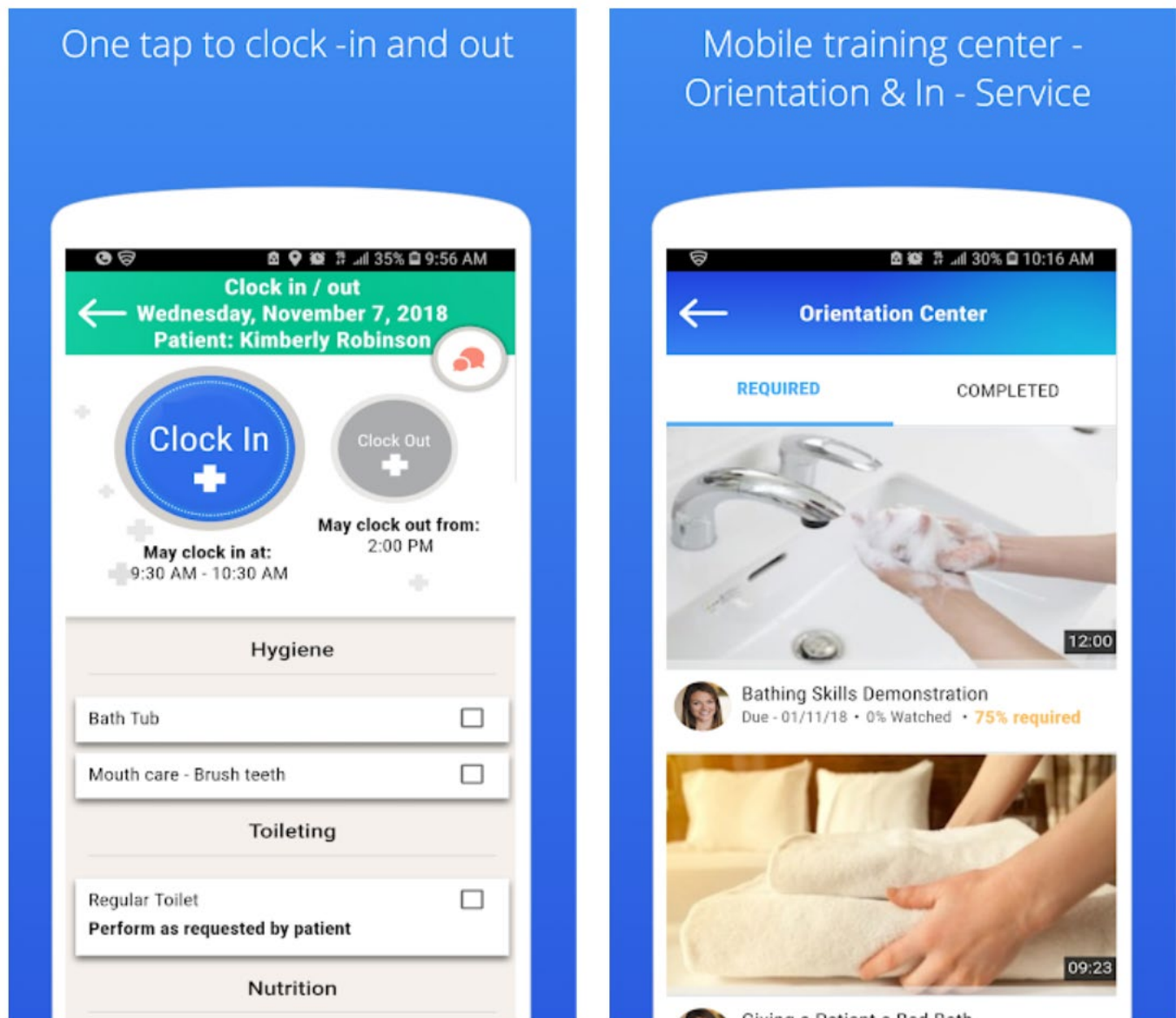
Figure 1. Medflyt mobile app user interface.
Example of an app that both monitors and supports HHAs.

Conclusions

• Further research and rigorous evaluation of technology-based tools are needed to assess their impact on HHAs work providing care in patients' homes.

• There are currently multiple apps that support HHAs, but testing and feedback will allow for a human-centered design that begins the development of technology based on the needs of the HHA.

Weill Cornell Medicine
Primary Care Innovation

PROUD TO BE GIM #WeAreGIM

Soluble ST2 Predicts Mortality in ART-naïve people with HIV

Taylor K. Brashear | February 24, 2022 | Justin R. Kingery

Background/Relevance

— Life expectancy of people with HIV (PWH) is below the general population despite recent advances in care
  » Greatest mortality risk = two-year period after diagnosis

— Serum biomarkers in the peri-diagnostic period may aid in risk-stratification
  » Providers may use biomarkers associated with mortality to target interventions for high-risk PWH
  » This period is the time at which PWH are typically most connected to care in low-resource settings

— Soluble ST2 (sST2) is a cardiac biomarker previously associated with mortality in ART-experienced PWH
  » This association with mortality has not been established in the highest-risk, peri-diagnostic period
  » Association between sST2 and ART-experienced PWH may be influenced by survivor bias

— We hypothesized that serum sST2 concentration would be significantly associated with mortality in the first year after ART initiation. We further hypothesized that sST2 would add additional predictive value to CD4 count.

Methods

— Serum from 448 PWH and 503 HIV-uninfected adults enrolled in the Hypertension in People Living with HIV in Tanzanian study biobank were tested

— Serum sST2 concentration was measured by ELISA

Results

— Serum concentration of sST2 in the peri-diagnostic period of HIV infection is associated with an 8% increased risk of mortality in ART-naïve PWH in Tanzania

— Combining serum sST2 and CD4 count improves mortality prediction (ROC AUC = 0.82) compared to CD4 count (AUC = 0.78) or sST2 concentration (AUC = 0.78) alone.
  » This model has a 78% sensitivity and 79% specificity for predicting mortality in the one-year period following HIV diagnosis.
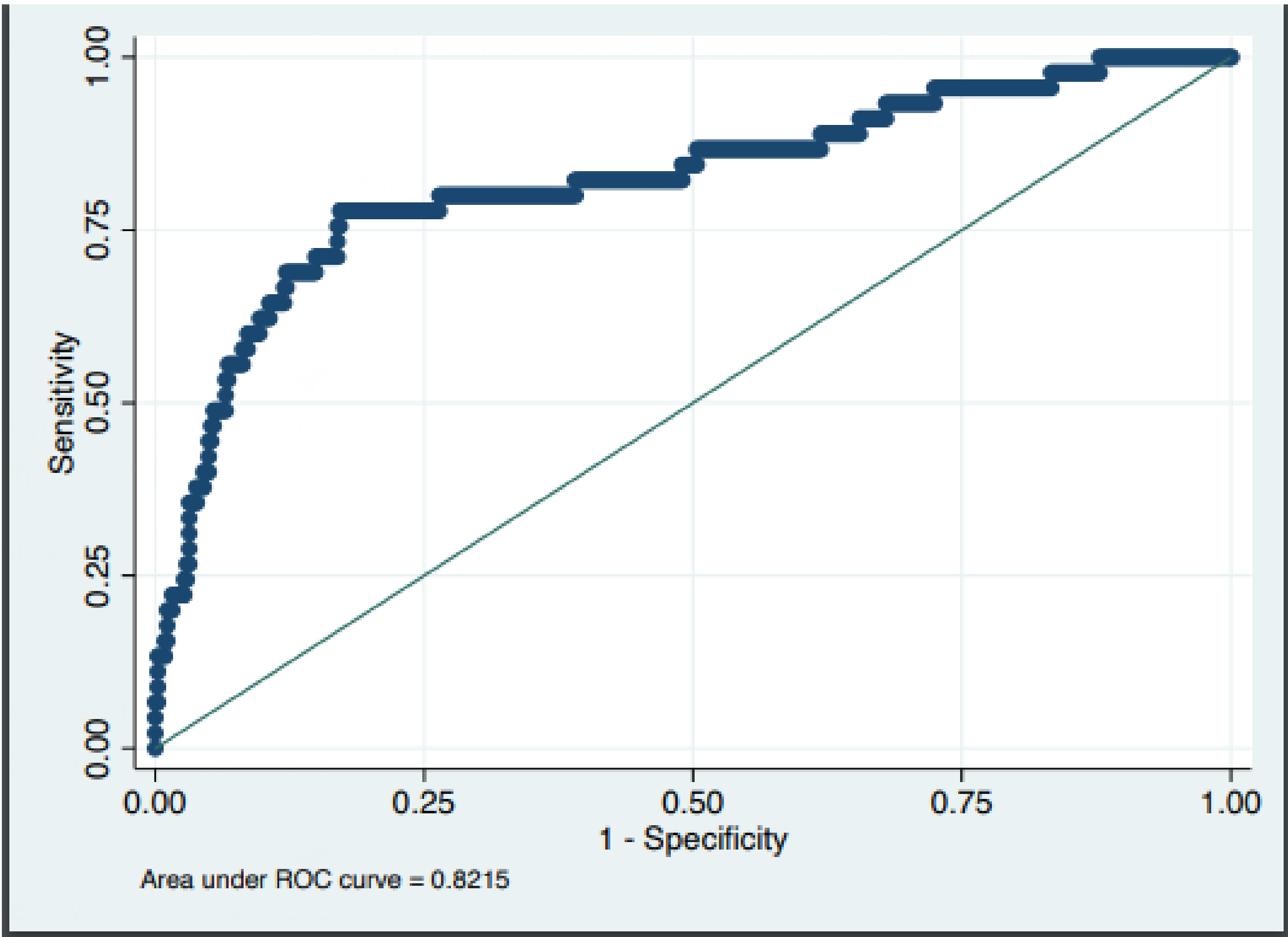
Figure 1. Receiver Operator Curve (ROC) with model using serum sST2 and CD4 count (Sensitivity = 78%, Specificity = 79%).

Conclusions

— This is the first study to our knowledge to report this association in ART-naïve PWH

— Serum sST2 adds value to CD4 count in predicting one-year mortality at the time of HIV diagnosis
  » sST2 may be a valuable biomarker to predict mortality at the time of HIV diagnosis

— This is useful for providers of PWH to target interventions to reduce mortality at the time of HIV diagnosis, especially in low resource settings (targeted linkage-to-care and follow-up, etc.)

— Further studies should investigate interventions demonstrated to reduce mortality in individuals with elevated sST2 at the time of HIV diagnosis.

Weill Cornell Medicine
Primary Care Innovation

PROUD TO BE GIM #WeAreGIM

Implementation of a Hybrid Peer Coach Training Program for Patients Preparing to Undergo Total Knee Replacement: Moving Well Intervention

Mackenzie Brown MPH, CHES, CPH | 2.24.22 | Iris Navarro-Millan MD, MSPH

Background/Relevance

Peer coaching interventions may be successful in reducing lasting pain from total knee replacement (TKR), but few peer coach training programs have been described in the literature. We present the processes used to train peer coaches in motivational interviewing skills (Mo-Int), positive thinking, and in the content of the Moving Well (MW) intervention – which combines physical activity, peer support, and positive thinking.

Proposed Methods

We recruited and interviewed six individuals with knee OA 60 years of age or older that received a TKR at the Hospital for Special Surgery (HSS) with successful results (Knee Injury and Osteoarthritis Outcome Score Activities of Daily Living subscale (KOOS ADL) > 65). The candidates were hired by Weill Cornell Medicine and were considered research subjects per HSS IRB. Virtual training was schedule for 12 sessions over the course of 5 months. Training focused on listening to mock participant and coach interactions, discussing these mock interactions, practicing intervention content with a mock participant, and certifying in each intervention session. Feedback was gathered from the peer coaches throughout the training program and incorporated back into the training and the MW intervention. We administered a pre and post training survey to the candidates to evaluate knowledge on Mo-Int and aspects about TKR.

Anticipated Impact

While virtual training of peer coaches has shown to be feasible, a hybrid training model might need to be considered in scenarios where interventions include principles of cognitive behavioral therapy, are long in duration, and the peer coaches encounter challenges engaging virtually or with technology itself. Investigators considering using peer coaches should be observant of the needs of their peer coaches and make adjustments based on their needs.

Managing Diabetes During Treatment for Breast Cancer:
Oncology & Primary Care Providers' Views on Barriers and Facilitators

Laura C. Pinheiro, PhD, MPH, Jacklyn Cho, BS, Lisa M. Kern, MD, MPH, Noel Higgason, BA, Ronan O'Beirne, EdD, MBA,
Rulla Tamimi, ScD, Monika Safford, MD

Weill Cornell Medicine | NIH NATIONAL CANCER INSTITUTE | UAB

Background/Relevance

- Diabetes is prevalent among 20% of cancer patients and cancer treatments are known to negatively impact glucose levels.
- Diabetes receives less attention than usual during cancer treatment because patients, oncologists, and primary care providers (PCPs) prioritize cancer care
- We sought to elicit the perspectives of providers about a novel diabetes care delivery intervention for women undergoing chemotherapy for breast cancer.

Methods

- Virtual nominal group sessions with PCPs and oncologists across the U.S. were conducted from November to December 2020.
- We introduced a novel care delivery model, which involved a nurse practitioner (NP) trained in diabetes to work within the oncology team to manage diabetes for women with breast cancer during chemotherapy.
- Providers identified potential barriers and facilitators to the intervention's success and then voted on the top three most important barriers and facilitators, separately.
- Votes were aggregated across sessions and presented as frequencies and weighted percentages.

Table 1. Provider Perceived Barriers

Framework Level	Subthemes	Oncology Votes	PCP Votes
Health System / Environment	Financing	14 (18%)	14 (15%)
Organization	Endocrine v. Primary care oversight	11 (14%)	1 (1%)
Organization	Clinical workflow	5 (6%)	8 (8%)
Care Team	Uncertainty regarding goals of care	12 (15%)	11 (11%)
Care Team	Reconciling recommendations from different providers	8 (10%)	10 (10%)
Care Team	Challenges with communication	7 (9%)	3 (3%)
Care Team	Uncertainty regarding suitability of combining DM* and cancer	10 (13%)	7 (7%)
Care Team	Unclear scope of NP's responsibilities	2 (3%)	6 (6%)
Care Team	Primary care responsibilities and scope of care	1 (1%)	5 (5%)
Care Team	Uncertainty regarding who is in charge	1 (1%)	13 (14%)
Patient	Provider-perceived patient challenges	--	5 (5%)
Patient	Risk of missing other preventive primary care	--	5 (5%)
Patient	Uncertainty regarding patient willingness to participate	--	5 (5%)
Patient	Need for cancer-specific diabetes education for patients	--	3 (3%)
Total Points		78	96

Subthemes are listed in alphabetical order. Total votes and percentages were calculated and ranked based on priority. Percentages were calculated based on the total number of available points in each session.

Table 2. Provider Perceived Facilitators

Framework Level	Subthemes	Oncology Votes	PCP Votes[1]
Organization	Stakeholder engagement	13 (17%)	--
Organization	Getting buy-in from institution	12 (15%)	4 (10%)
Organization	Integrate intervention into the existing clinical window	6 (8%)	--
Organization	Leveraging telehealth to support patients and providers	2 (3%)	3 (7%)
Organization	Experienced NP to deliver intervention	--	3 (7%)
Organization	Endocrinology support for NP	1 (1%)	1 (2%)
Organization	Administrative support for NP	--	1 (2%)
Care Team	Clearly define roles for each care team member	7 (9%)	23 (55%)
Care Team	Expand NP's responsibilities	18 (23%)	--
Care Team	Clear communication across providers	10 (13%)	7 (17%)
Care Team	Getting buy-in from providers	4 (5%)	--
Total Points		78	96

[1]*PCP percentages were calculated based on the total number of available points for PCPs from the first session.*

*PCP: primary care provider; NP: nurse practitioner, DM: diabetes mellitus. "--" = the subtheme did not receive any votes.

Results

- Two sessions with 29 PCPs and two sessions with 13 breast oncologists were held.
- Financial support for the NP-led intervention was identified as the most important barrier
- Clearly defined roles for each care team member were identified as the most important facilitator.

Conclusions

- This qualitative study of oncology and academic PCPs identified multi-level barriers and facilitators to a NP-led intervention aimed to care for adults with diabetes undergoing breast cancer treatment.
- A successful NP-led intervention would need: financial/administrative support from the healthcare institution; coordination across primary care and oncology; clear oversight of the NP; to integrate the NP into the oncology clinical workflow; standardized communication across primary care and oncology; to potentially leverage telehealth; and to provide cancer-specific diabetes education for patients.

Limitations

- May not generalize to providers in non-academic and community settings.

Weill Cornell Medicine Primary Care Innovation | PROUD TO BE GIM #WeAreGIM

Weill-Ithaca Cornell Collaboration Yields Evidence-Based and Stakeholder Approved Nutrition Content on the Patient Activated Learning System (PALS)

LK Barré, MD, RD; A Gaines, PhD, CHES; T Young, PhD, RD; E Riddle PhD, RD; G Orie, BS; L Profeta; M Stafford, MD; K Roach, MD; E Baquero, EdD; J Paddock, PhD, RD; PA Cassano, PhD

Background/Relevance

WHY did we do this study?

- Nutrition-related chronic diseases disproportionately affect socioeconomically disadvantaged populations
- Need for novel approaches to deliver relevant, trusted healthy eating supports to populations experiencing health disparities

What were the AIMS for our work?

(1) Develop evidence-based nutrition content for Weill Cornell PALS site
(2) Evaluate content acceptability by community stakeholders, i.e., Cornell Cooperative Extension Expanded Food and Nutrition Education Program (EFNEP) educators & their low-income participants

Methods

2 online surveys with EFNEP nutrition educators (n=12, n=45)
- To determine common questions about CVD and nutrition
- Informed selection of 4 novel PALS nutrition topics: coconut oil, saturated & unsaturated fat, dietary fiber and heart health

Built pipeline for developing nutrition content, including a replicable process for **rapid systematic review of nutrition scientific evidence & practice guidelines**
- Drafted 4 PALS pages

6 semi-structured focus groups with EFNEP educators (n=10) to assess acceptability of 4 PALS nutrition pages for educators & participants

Semi-structured individual interviews with EFNEP participants (n=12) to provide feedback on PALS nutrition page content clarity, appeal & helpfulness

Results

EFNEP Educator Feedback
- Clear, concise information
- Acceptable for educators & participants
- Combination of text &figures helpful for range of learning needs
- Appreciated behaviorally-focused content

EFNEP Participant Feedback
- Relevant, easily digestible content
- Appealing aspects, e.g. practical information in colorful figures
- Demonstrated understanding of content
- Most found content helpful
- Most would return to PALS, citing clarity of information & trustworthiness of source

Impact

♡ PALS Patient Activated Learning System

- Collaborative effort by Cornell Division of Nutritional Sciences and Weill Cornell PALS team led to creating a strong pipeline to produce nutrition-related PALS content

- Engaging EFNEP educators & participants in development & review helped generate relevant, useful, clear & appealing content that stakeholders found trustworthy

- The PALS nutrition content development process is a replicable method to produce acceptable evidence-based nutrition information for underserved populations

The Impact of Physician-Led Conversations on Adherence to COVID-19 Vaccinations

Joann P. Wongvravit, DO; Camille Sirotnikov, MD; Peter Dehazya, DO; Rehan Muhammad, DO; Sing Yeung, DO; Nafiz Karim, MD

February 24, 2022 | NewYork-Presbyterian Queens Hospital, Department of Internal Medicine

Background

The first COVID-19 vaccine was approved under emergency use authorization on December 11, 2020. Since then, approximately 64% of Americans and 78% of patients at the New York-Presbyterian (NYP) Queens Hospital resident-run primary care clinic have been fully vaccinated (2-doses of Pfizer-BioNTech or Moderna or 1-dose of Janssen) against COVID-19. Currently, our resident-run clinic cares for 2,748 patients of which 2,137 (77.7%) are fully vaccinated, 161 (5.9%) are 1-dose vaccinated, and 450 (16.4%) are unvaccinated. Our goal was to identify the main reasons for vaccine hesitancy and determine if physician-led conversations would increase adherence by at least 10%.

Methods

All patients at our primary care clinic were eligible for inclusion; upon identification of unvaccinated patients by reviewing the electronic medical records, further data was collected including age, sex, and race. Five PGY-2 internal medicine residents contacted a subpopulation of unvaccinated patients via telephone who had in-person appointments within the next 2 months. For each encounter, specific reasons for being unvaccinated against COVID-19 were recorded, and questions regarding the vaccine were addressed using physician-led motivational interviewing. Our primary endpoint was to have at least 10% of patients agree to receive a COVID-19 vaccine dose following the physician-led phone conversation.

Results

Of the 272 unvaccinated patients contacted for our study, a total of 66 patients agreed to discuss the COVID-19 vaccine via telephone. The demographics of those patients are as follows: ages 24-92 years old; 57.6% female and 42.4% male; 45.5% Black, 27.3% Hispanic, 13.6% White, 3% Asian, and 10.6% declined to identify by race. Overall, 13 (19.7%) patients intended to get vaccinated against COVID-19 after speaking with a resident physician, while 45 (68.2%) patients remained opposed to vaccination and 8 (12.1%) were undecided. The main reason for vaccination hesitancy was mistrust (27.3%), followed by fear of side effects (21.2%), existing comorbidities (12.1%), necessity of vaccine (9.1%), refusal (7.6%), religion (6.1%), lack of time (6.1%), indifference to the vaccine (3%), not ready/unsure (3%), refused further conversation (1.5%), preferred in-person conversation (1.5%), and pending vaccination (1.5%).

Limitations

The main limitations of our study included a short timeframe, a small sample size, and being a single ambulatory clinic. We conducted all conversations over the phone rather than in-person, which may have limited the impact of our intervention.

Conclusions

In an unvaccinated cohort of patients at one primary care clinic, a majority of patients cited mistrust as the main reason for not receiving a COVID-19 vaccine. Following physician-led motivational interviewing, approximately 20% agreed to receive a dose by the time of their next visit. We believe that patients regard their doctors as one of their most important sources of medical advice. Therefore, physician-led conversations on the COVID-19 vaccine are essential in addressing vaccine hesitancy and improving COVID-19 vaccinations.

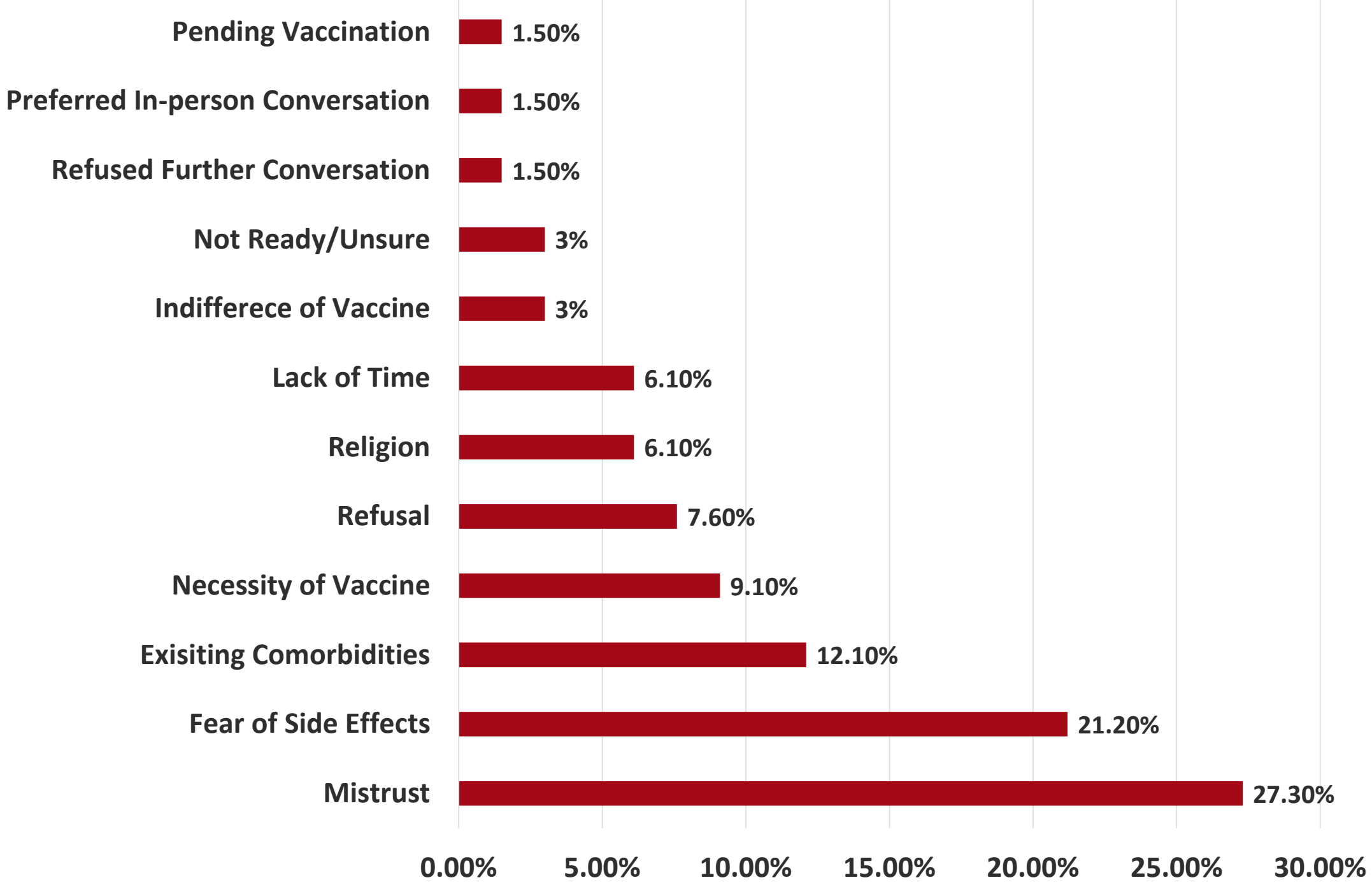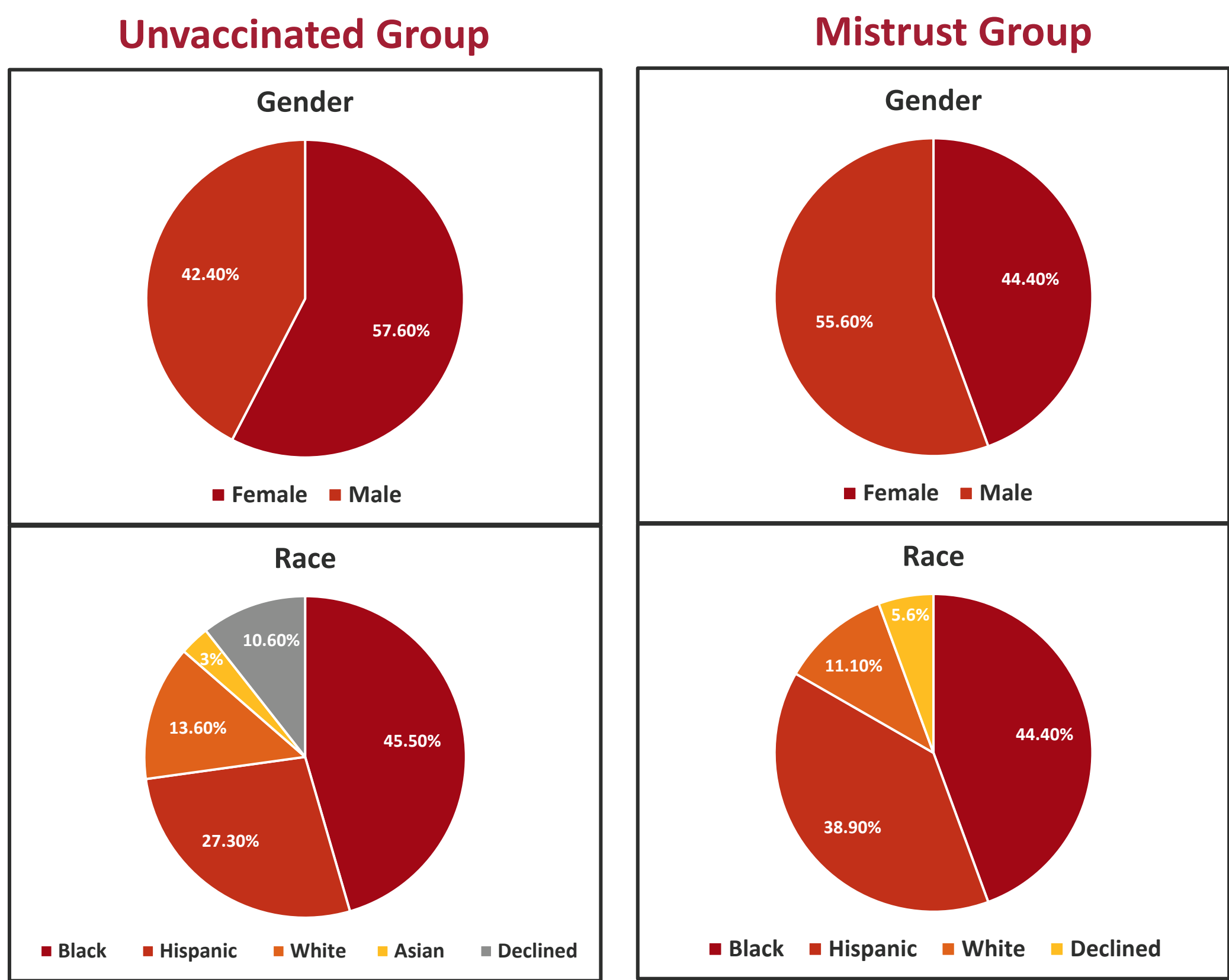**Figure 1: Reasons for COVID-19 Vaccine Non-Adherence**

Reason	Percentage
Pending Vaccination	1.50%
Preferred In-person Conversation	1.50%
Refused Further Conversation	1.50%
Not Ready/Unsure	3%
Indiference of Vaccine	3%
Lack of Time	6.10%
Religion	6.10%
Refusal	7.60%
Necessity of Vaccine	9.10%
Exisiting Comorbidities	12.10%
Fear of Side Effects	21.20%
Mistrust	27.30%

Figure 2: Demographics of Unvaccinated and Mistrust Groups

Unvaccinated Group — Gender: Female 57.60%, Male 42.40%
Unvaccinated Group — Race: Black 45.50%, Hispanic 27.30%, White 13.60%, Asian 3%, Declined 10.60%

Mistrust Group — Gender: Female 55.60%, Male 44.40%
Mistrust Group — Race: Black 44.40%, Hispanic 38.90%, White 11.10%, Declined 5.6%

Implications

Adopting a physician-led intervention throughout multiple primary care clinics within the NYP enterprise may decrease vaccine hesitancy, as demonstrated in our study. Combating vaccine hesitancy plays a pivotal role in reducing COVID-19 morbidity and mortality. Further studies are needed to examine the social determinants of health that may affect vaccine adherence.

Weill Cornell Medicine — Primary Care Innovation

PROUD TO BE GIM #WeAreGIM

Evaluating Physician Decision Making in Inpatient Antibiotic Prescription for Suspected Urinary Tract Infection

Celine Arar | February 24, 2022 | Marshall Glesby, MD, PhD, Justin Choi, MD

Background/Relevance

Physicians are constantly asked to evaluate inpatients for possible antibiotic treatment. As part of antibiotic stewardship it is imperative to understand the decision-making process behind a physician's choice to prescribe antibiotics appropriately in an inpatient setting. Fuzzy Trace Theory (FTT) suggests that physicians use one of two methods in medical decision making; verbatim, employing a comprehensive risk benefit analysis, and gist, considering a bottom-line analysis.

Proposed Methods

Seventy-six hospitalists at Weill Cornell Medicine in Manhattan, New York received a survey with two reminders to evaluate their decision-making process. Five basic demographic questions regarding participant gender, race, background, age, and years in practice were asked. A clinical vignette describing an inpatient with a possible urinary tract infection (UTI) was followed with statements framing hypothetical antibiotic prescription decisions. A seven-point Likert scale with response choices from Strongly Disagree scored as one to Strongly Agree scored as seven was used to assess degree of participant agreement with each statement. Questions were presented in a random order to eliminate possible effects of questions clusters or question order. Twenty-six hospitalists completed the survey.

Anticipated Impact

Consistent with previous literature, the hospitalists surveyed displayed a gist interpretation of the risks and benefits of antibiotics. However, the clinicians surveyed ultimately found antibiotics to be a necessary risk given the possible benefit of improving patient health. The hospitalists surveyed also did not view antibiotic prescription to be a product of pressure from patient families. These findings suggest that physician education to reduce overprescribing of antibiotics should underscore possible antibiotic risk.

Assessing self-reported persistence of COVID-19 symptoms after initial hospitalization

Olivia Fankuchen, MD| February 24, 2022| Laura Pinheiro, PhD; Manish Shah MD; Mangala Rajan, MBA; Jennifer Lau, MPH

Background/Relevance

Post-acute sequelae of SARS-CoV-2 infection (PASC) is a prevalent medical condition that has not been fully studied and will have lasting impacts on survivors globally. It is unclear which risk factors influence who will develop PASC. We previously examined a group of patients admitted to New York-Presbyterian (NYP) with SARS-CoV-2 infection and found that cancer patients did not suffer higher rates of death, ICU transfer, or intubation during initial hospitalization compared to age and comorbidity-matched controls. Less is known about post-discharge, long-term outcomes for COVID-19 patients. Cancer patients appear at particular risk for PASC from immune compromise and weakened physiologic reserve. This study evaluated whether patients reported PASC symptoms and if cancer patients report higher rates of PASC compared to controls; these findings will improve the ambulatory follow-up for COVID-19 patients.

Proposed Methods

1935 adults who were hospitalized with PCR-confirmed SARS-CoV-2 infection at two NYP hospitals (Weill Cornell Medical Center and Lower Manhattan) between 3/1/20 and 5/15/20 were enrolled in the Cornell COVID Registry; 585 were included in this study. We identified patients with a confirmed cancer diagnosis (active malignancy under surveillance or treatment within 6 months of initial hospitalization) and matched them 1:4 to non-cancer controls by age, sex, and comorbid conditions. Approximately 9-12 months after discharge, patients were contacted by phone and completed a survey regarding PASC symptoms, health service use, and quality of life with results recorded in REDCap. Death data was collected from death notes in NYP charts. Wilcoxon rank sum, Pearson's Chi-squared, and Fisher's exact tests were used to compare prevalence of PASC symptoms between cancer patients and non-cancer controls. A p-value of 0.05 was used to determine statistical significance.

Anticipated Impact

Identifying individuals at risk for PASC is critical for focusing resources on patients requiring additional care for these symptoms. These subjective reports suggest biologic sex, race/ethnicity, and number of comorbidities are predictive factors for PASC symptoms while obesity was not. These results help identify ambulatory patients benefitting from closer follow-up and attention to PASC symptoms after initial infection with SARS-CoV-2 to minimize long-term morbidity.

Weill Cornell Medicine Primary Care Innovation

PROUD TO BE GIM #WeAreGIM

Bridging the patients and physicians Gap by building the Patient-Oriented Framework During Uncertainty time

Yuexing Hao| Feb. 24, 2022 | College of Human Ecology

Background/Relevance

Making an optimal decision for health care management is hard. When confronted with multiple options, choosing the best option requires assessing the validity of each option, comparing the options against each other, and considering the potential trade offs within the options.

During the Covid-19 pandemic, decision-making for healthcare management became even more challenging as many patients had limited access to their physicians. During this unprecedented time of uncertainty, patients turn to maintaining same quality care management at home, under physicians' suggestions. These patients self-monitor their daily health conditions, treatment progress, and future treatment options, etc. However, without support, it can be difficult for these patients to make sense of their treatment options and make a decision that best meet their needs and conditions.
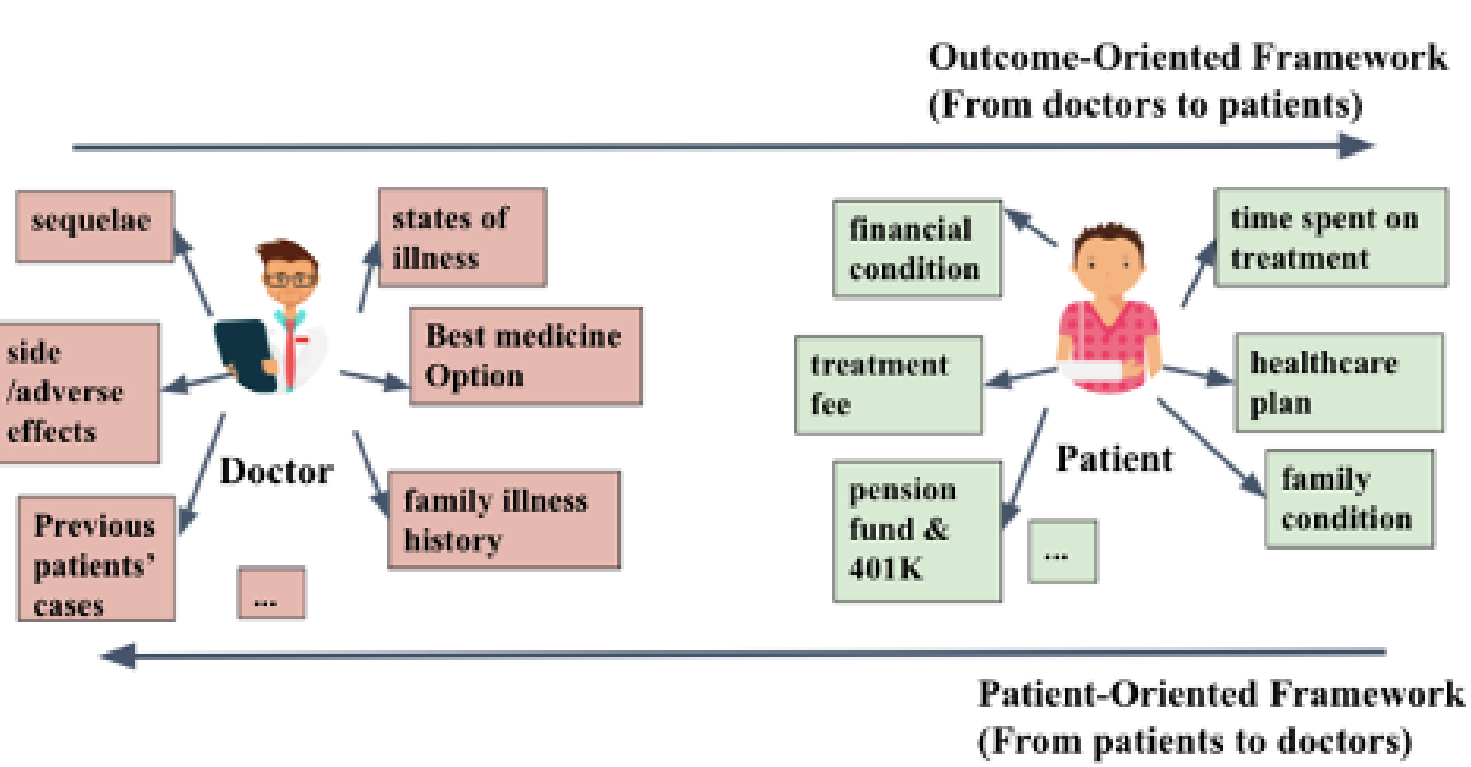

Figure 1. the differences between OOF and POF.

Proposed Methods

We employ technologies from Artificial Intelligence and Health data analytics and propose a patient-oriented framework (POF) for decision-making in healthcare. POF shows patient-centric thought, which starts from patients' preferences and basic demands and matches these criteria with the care management plans recommended by physicians. Patients first receive the approved options based on their preferences and health conditions, then they compare the selected plan and other options. POF collects the data from physicians' suggested options and patients' final decisions and displays the options with visualizations. In POF, patients can visually compare the differences of each care management plan. Under this framework, patients can find the targeted treatment faster and also gain some understanding toward other potential care management options.
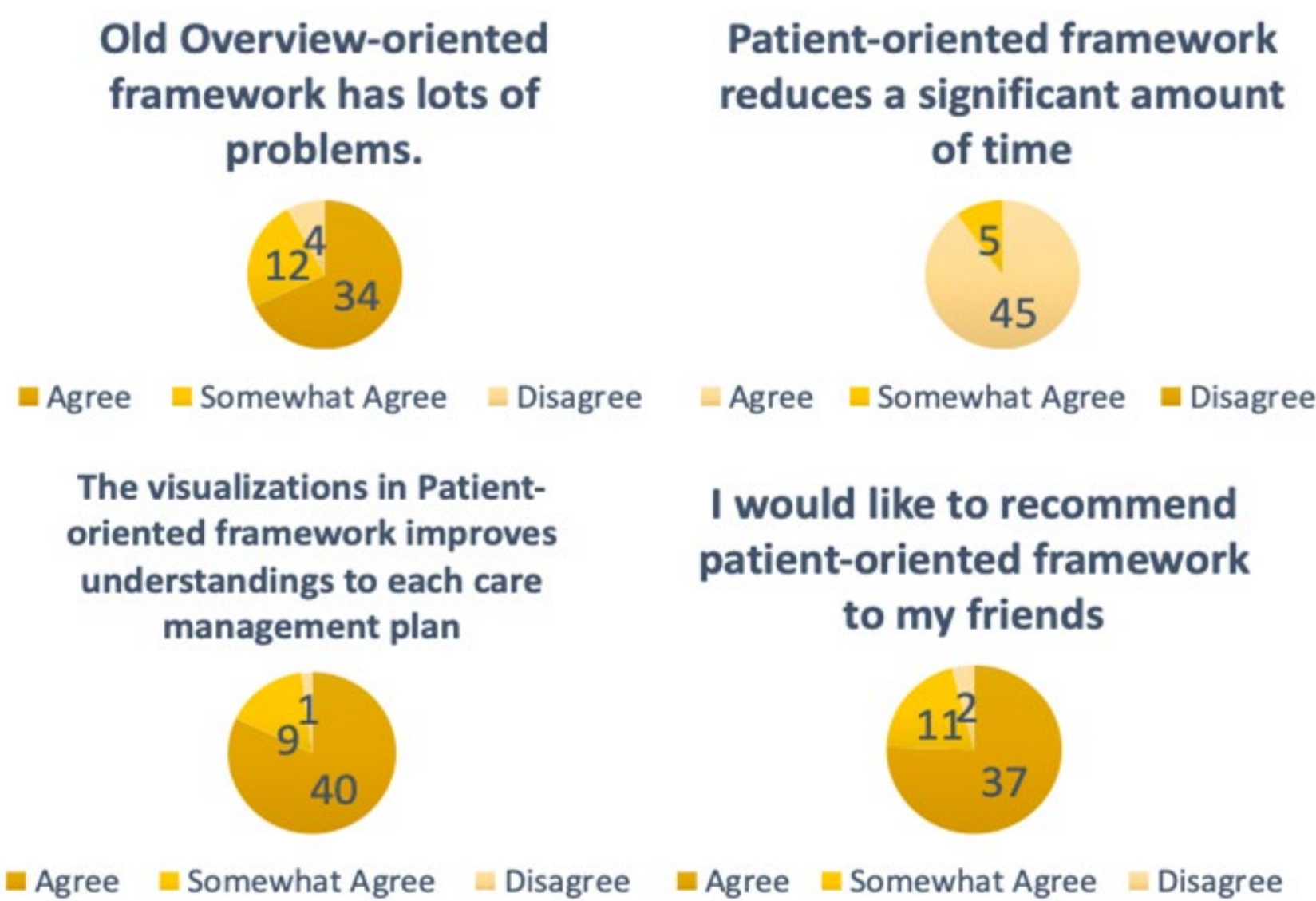

Figure 2. User Evaluation from Baystate Health. The evaluation results from Baystate Health clinicians and patients
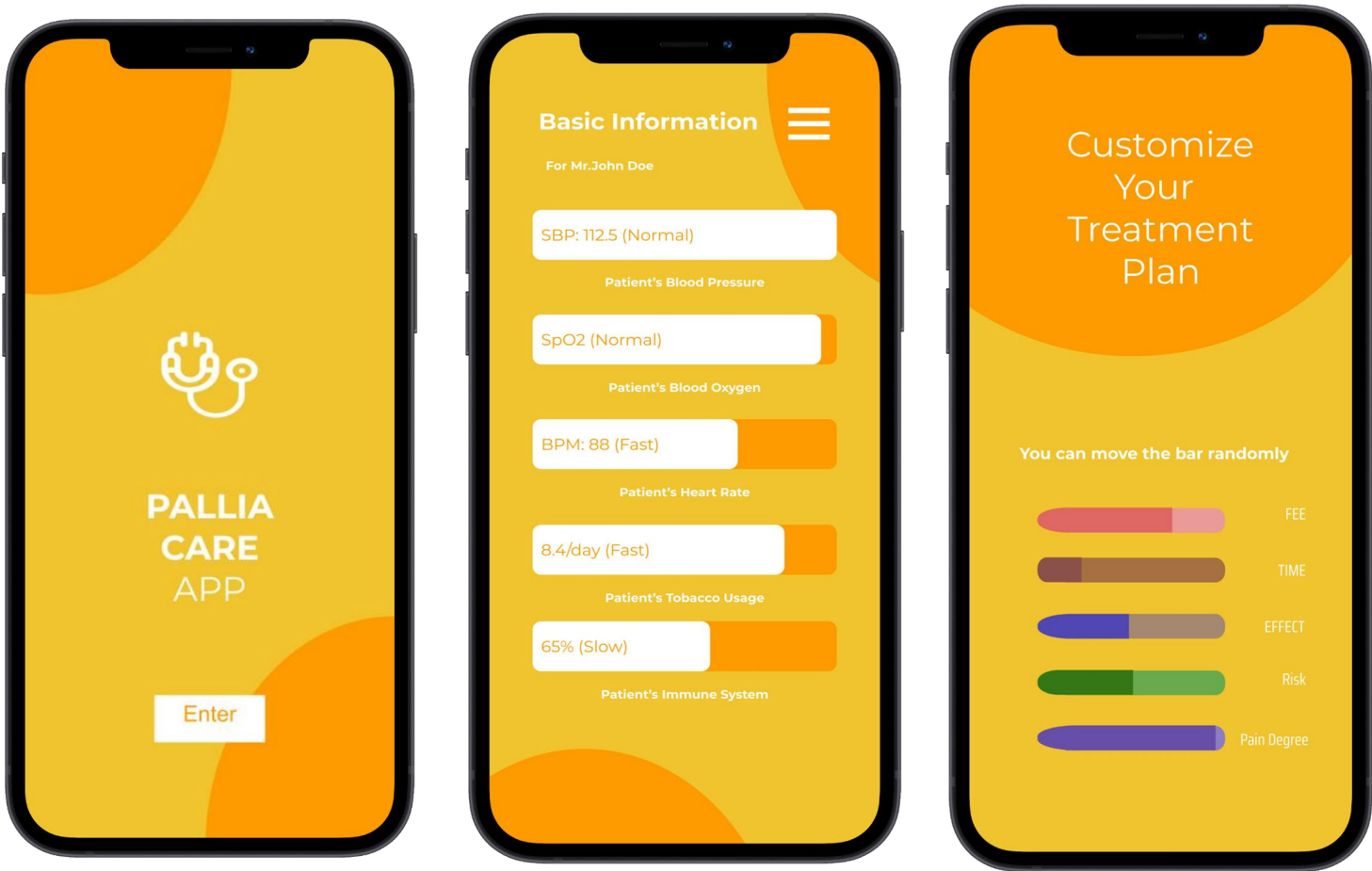

Figure 3. The prototype screenshots of Pallia Care App. Pallia app displays basic information about patients' daily health condition. Patients and their family members can also customize their treatment plan.

We evaluate and demonstrate the effectiveness of our proposed patient-oriented framework through conducting an exploratory study to evaluate the frameworks based on patients' feedback.

We conducted the physician satisfaction survey among Massachusetts Baystate Health chronic disease departments on 25 clinicians and 25 patients (50 participants in total). Figure 2 displays the evaluation results from Baystate Health clinicians and patients. 68% of the participants agreed that 'the old overview-oriented framework has lots of problems' and 90% said 'POF reduces a significant amount of time'. 80% of participants agree the visualizations in POF improves understandings to each care management plan, and 74% of them would like to recommend this POF to their friends.

Anticipated Impact

In this project, we proposed an innovative patient-oriented framework and designed a prototype Pallia Care for patients to select treatment plans using simple visualization tools and keep track of their daily health conditions.

For the impact side, patients can customize their treatment plans based on their own conditions under physician's instructions. It provides some free space for patients without clinical background. This gives patients access to all their possibilities prior to making their choice and allowing them to chart the best possible path forward in regards to their treatment.

More importantly, patients family members or guardians can have the opportunity to keep track of patient's treatment options and daily health conditions. They don't need to contact physicians or clinics for details, which significantly reduced physicians time and burdens. Therefore, under the patient-oriented framework, patients' family members and physicians or hospitals can develop closer ties and gain better relationships.

Figure 3. The display of different treatment plans: Safest Option, Cheapest Option, and Fastest Option. Patients can see the five evaluations of the options: Fee, Time, Effect, Risk, and Pain Degree. Detailed treatment plan explanations are also attached in the bottom page. Here is the demo video about Pallia Care: https://www.youtube.com/watch?v=crqDgkjShyo.

Weill Cornell Medicine
Primary Care Innovation

PROUD TO BE GIM
#WeAreGIM

Barriers to Colorectal Cancer Screening in African American Population

Priyamvada Pillai MD[1]; Silvia Soto, DO[1]; Woosuk (Will) Choi, DO[1]; Omar Saab, MD[1] | 02.22.21| Mentor: Blanca Sckell, MD[1]

[1]New York Presbyterian Hospital-Queens

Background

- Colorectal cancer (CRC) is the **third leading cause of death** related to cancer in the United States.

- The rate of decline in CRC related death in African Americans have been much lower than the general population. As per the 2019-2021 cancer data, CRC death rates are **47% higher in African American men and 34% higher in African American women** when compared to their White counterparts respectively.

- Colorectal screening rates, based on the National Health Interview Survey data showed **that African Americans had a lower rate of screening completion compared to non-African Americans (55.5% vs. 59.2%).**

- Study aims to identify **specific barriers to CRC screening** in **African American population** in an ambulatory setting.

Methods

Study population: **45-75 year old, African American** individuals in NYP-Q ambulatory service with at least 1 office visit who had not completed CRC screening during **January 2018 to December 2021.**

Method : **Multiple-choice question survey was conducted telephonically** for each individual, which addressed demographic information, number of PCP visits in the past 12 months, discussion of CRC screening with PCP, and the reasons for non compliance with CRC screening.

Results

- Study population (n=30) revealed mainly female subjects and individuals with more than High School (HS) level of education.

- Major barriers noted to be **lack of available appointments** (16%) and **lack of time to schedule an appointment** (20%) which attributed to **36% of the study population.**
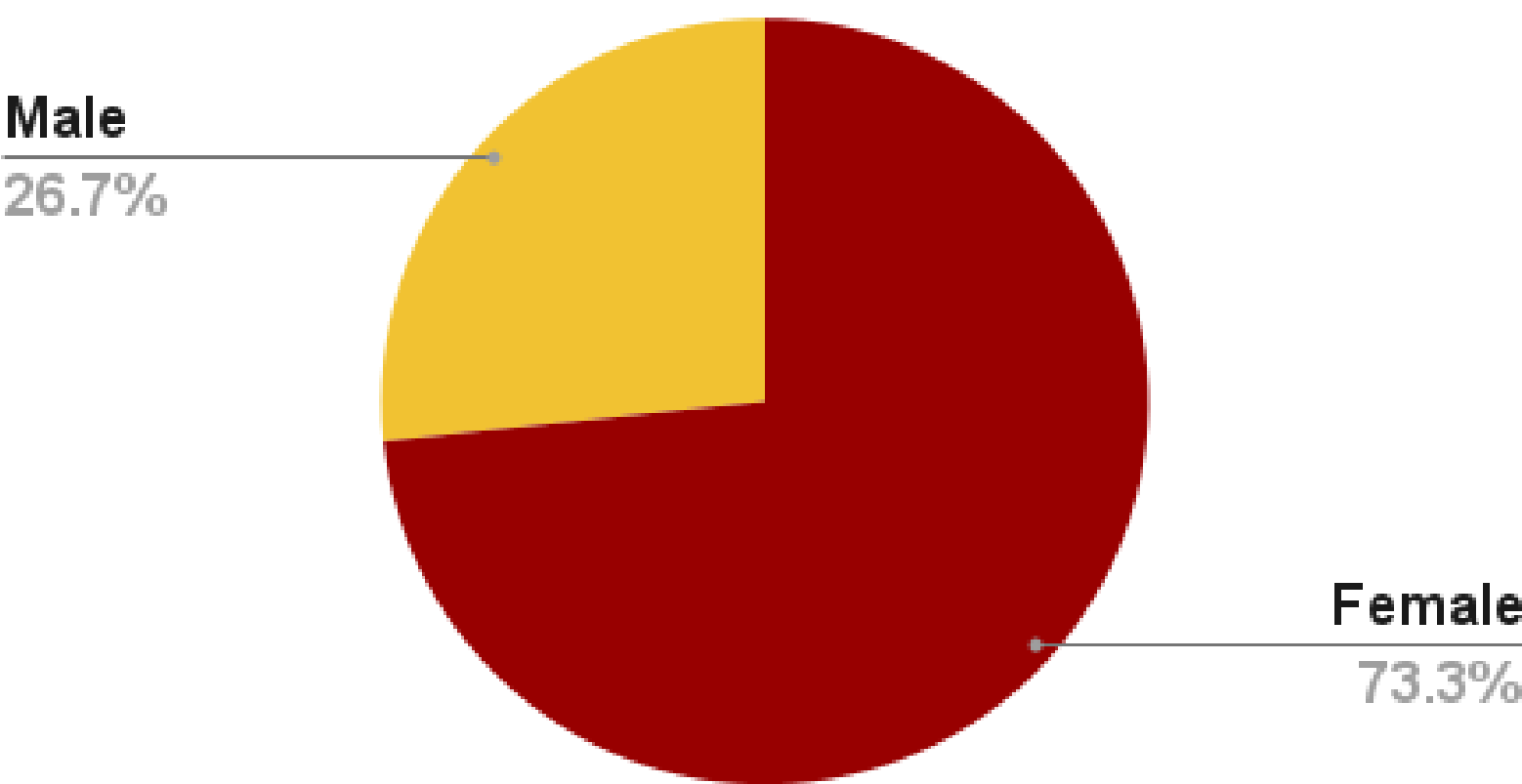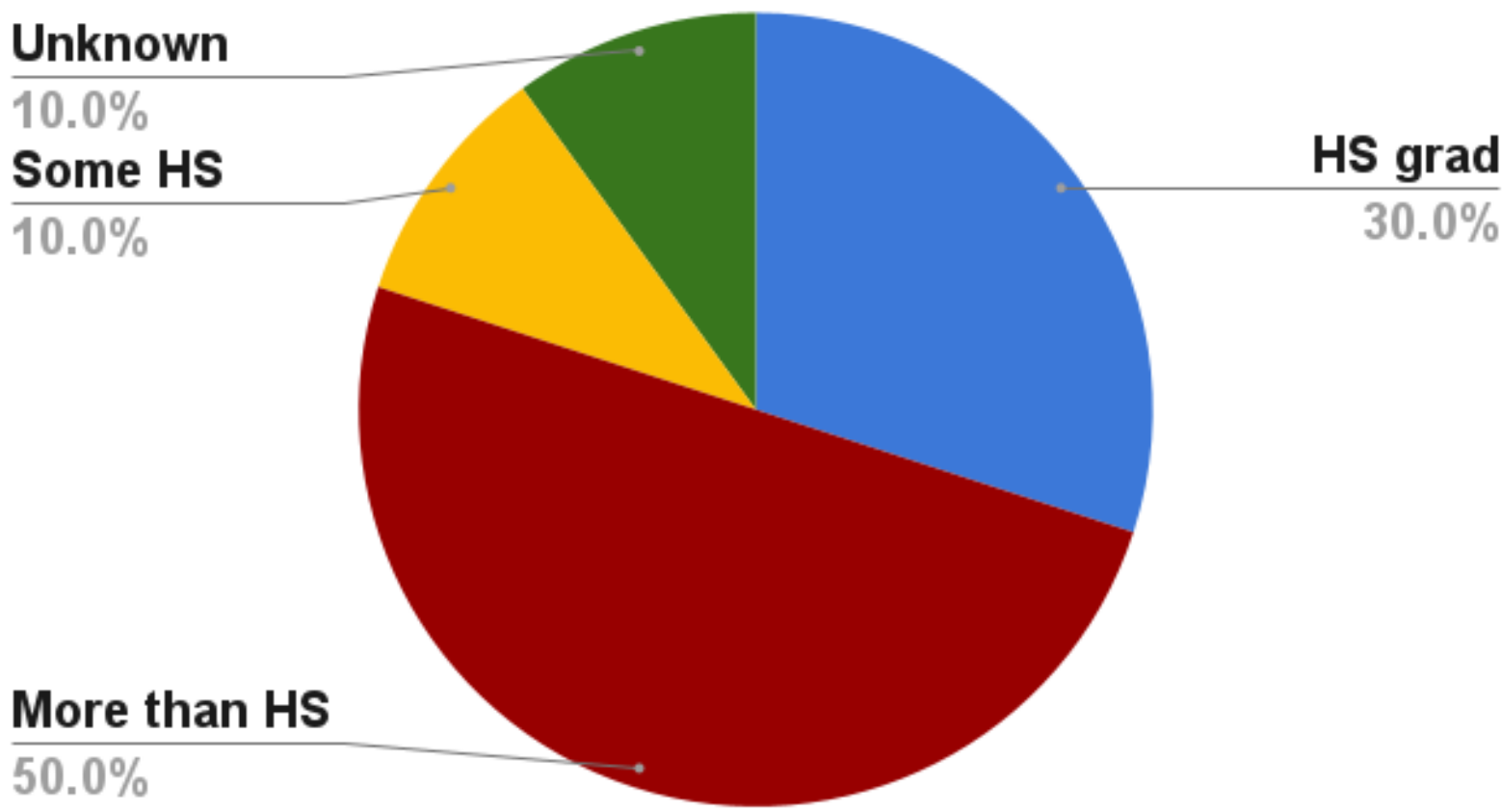

Figure 1. Percentage of Male and Female included in the study

Results

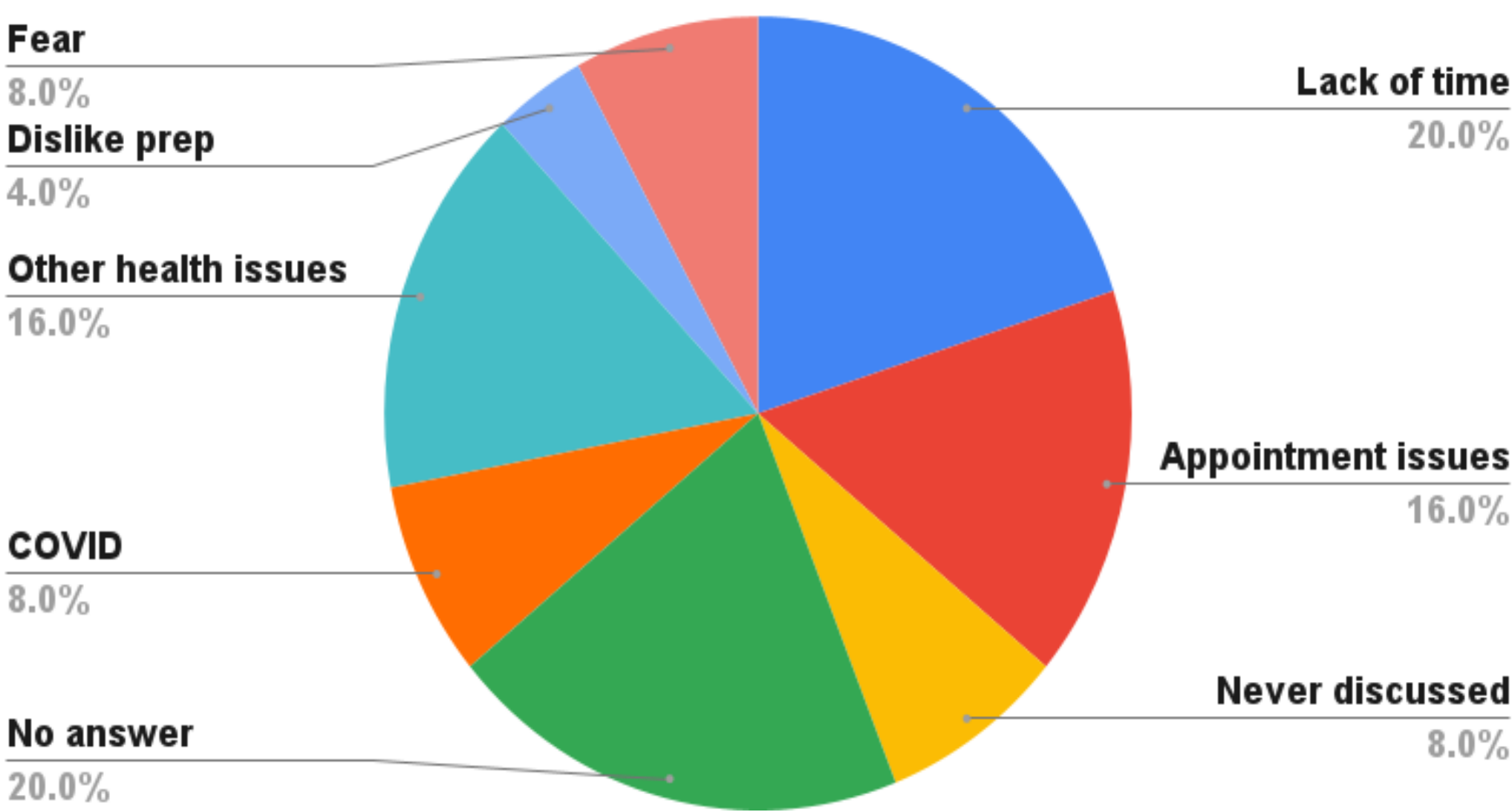Figure 2. Educational Background of the study population

Figure 3. Barriers to CRC screening as reported by individuals

Limitations

- Study limited by the **small size of the study population** which can be attributed to the low prevalence of African Americans visiting the ambulatory service and the lack of patients availing primary care services since the COVID-19 pandemic.

Conclusions

- Highlights **the need to focus on a different aspect of CRC screening besides increasing awareness** as major barriers to screening seems to be **related to lack of time and appointments.**

- Changes to make the system more efficient to **enable easier patient access to avail CRC screening appointments and promotion of less time-consuming alternatives to CRC screening like Cologuard** to patients who refuse colonoscopy may alleviate the barriers associated with time identified in this study.

Acknowledgement

Department of Internal Medicine, New York Presbyterian-Queens Ambulatory Center

Weill Cornell Medicine
Primary Care Innovation

PROUD TO BE GIM #WeAreGIM