2019 DIALOGUE FOR ACTION®
on Cancer Screening and Prevention
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2019 *Dialogue for Action*®: Poster Abstracts

Listed in alphabetical order by poster name. The bolded names are the in-person presenters.

BOARD 1: *Case Study of a Comprehensive Team-Based Approach to Increasing Colorectal Cancer Screening*

Lauren Wright, MPH[1], Mary Ellen Conn, MS[1], Adam Baus, PhD, MA, MPH[2], Holly Hartman-Adams, MD[3], Susan Eason, MA[1], Taylor Daughtery, BA[1], Cecil Pollard, MA[2] and Stephanie Kennedy-Rea, EdD[1]

1. West Virginia University Cancer Institute, Cancer Prevention and Control
2. West Virginia University Office of Health Services and Research
3. West Virginia University Medicine Cheat Lake Physicians

Background: Colorectal cancer (CRC) is the second leading cause of cancer death in West Virginia despite being the most preventable form of cancer. Over half of CRC cases in West Virginia are diagnosed at either regional or distant stages.

Goals and Objectives: The WV Program to Increase Colorectal Cancer Screening partners with forty-four clinics to facilitate practice-based change through the use of evidence-based interventions (EBIs) with the goal of increasing each clinic's screening rate to 80% or at least 10% over baseline. Cheat Lake Family Medicine is a partner clinic that utilizes an effective team-based approach to CRC screening.

Methods: The clinic implemented a team-based approach to CRC screening consisting of seven staff members from a variety of different positions in the clinic. Members created consistent workflows to track data, ensure patient list accuracy, and send out screening reminders. Nurses and care coordinators created and use a workflow to track fecal immunochemical test (FIT) kits, Cologuard kits, and colonoscopy referrals to ensure data accuracy in this area. Front desk, administrative, and quality improvement staff work together to ensure patients are currently assigned to primary care providers and that the patient list in the electronic health record is updated so that screening reminders are sent out correctly. A provider creates general CRC screening patient reminders to send to patients via mail or online medical chart messages, and a care coordinator completes reminder calls to patients given a FIT kit. A provider on the team serves as an active champion for CRC screening. This champion achieved buy-in from providers, clinic staff, and patients by creating an enjoyable work environment. She creates an atmosphere of healthy competition among provider/nurse care teams through the use of provider assessment and feedback graphs. These graphs show individual provider progress from baseline to the most recent data set on a quarterly basis.

BOARD 1 ***(Continued)***

Results: Within the first year of implementation, the clinic increased their overall CRC screening rate from 63% to 75.2% compared to an average increase from 51.1% to 60% for all cohort clinics from that same year. The clinic's overall CRC screening rate also exceeds the WV state CRC screening rate of 66%. The clinic has a 66% FIT kit return rate and distributed 1013 patient reminders in the form of calls, letters, and online medical chart messages. The providers increased their individual CRC screening rates by an average of 15.8%.

Conclusions: Utilizing a team-based approach is an effective way for primary care clinics to increase CRC screening rates. The success experienced here has implications for other cancer and disease prevention efforts in the primary care setting.

BOARD 2: *Achieving High Compliance with a Noninvasive Home-Based Multitarget Stool DNA Test for Colorectal Cancer Screening*

Emily Weiser, MPH[1], Philip Parks, MD, MPH[1], Rebecca K. Swartz, PhD[1], Jack Van Thomme, MA[1], Bonny Kneedler[1], Paul Limburg, MD, MPH[2], **Mark Mayhew, PhD[1]**, and Barry M. Berger, MD[1]

1. Exact Sciences Corporation
2. Mayo Clinic

Background: Colorectal cancer (CRC) is the fourth most commonly diagnosed cancer in the U.S. and CRC screening is an important component of quality measures, yet screening rates remain below the 80% National Colorectal Cancer Roundtable goal. The multitarget stool DNA (mt-sDNA) test is a safe, effective, patient-centered test approved by the FDA in August 2014 to screen average-risk individuals ages50 and older for CRC and advanced premalignant polyps. Mt-sDNA has an embedded, 24/7 nationwide patient navigation program supporting test compliance and is recommended with a 3-year screening interval for HEDIS, Medicare Advantage Stars, and UDS quality credit.

Goals and Objectives: To report real-world experience with mt-sDNA testing.

Methods: We measured patient compliance, patient-reported screening history, and patient and healthcare provider (HCP) satisfaction with mt-sDNA testing. Compliance was defined as completion of the test (positive or negative result) within 365 days of order date for orders placed October 1, 2016-September 30, 2017 for patients ages 50-85. Phone surveys were conducted monthly October 1, 2016-September 30, 2017 on a random sample of patients after successful completion of mt-sDNA testing (n=6237) to obtain CRC screening history and satisfaction rates. HCP satisfaction was based on responses (n=300) to a double-blinded survey conducted by a third-party market research vendor (ZS Associates, Evanston, IL).

Results: Through September2018, over 131,000 HCPs ordered the mt-sDNA test, with over 1.56 million tests completed. Compliance with mt-sDNA screening during the study period was 65.3% overall, with 47% of screened individuals reporting they had never been screened for CRC prior to mt-sDNA testing. Overall, 97%of HCPs reported their experience with mt-sDNA testing met or exceeded expectations; 89% of patients were satisfied or very satisfied with their experience.

Conclusions: Compliance with mt-sDNA testing was higher than compliance rates reported with other stool-based CRC screening modalities[2,3] and screening colonoscopy[4] in non-programmatic settings. This suggests that a noninvasive, home-based option such as the mt-sDNA test, with its embedded patient navigation system supporting compliance, is favorably received by both patients and HCPs. The mt-sDNA system has the potential to increase CRC screening rates; improve quality metrics for health systems, HCP groups, and payers; and positively contribute to reaching national CRC screening goals.

BOARD 3: *Addressing Gastric Cancer Risks via General Infection Rates of Helicobacter pylori in an Urban Chinese Population*

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1. Rush Medical College
2. Midwest Asian Health Association
3. Rush University Medical Center

Background: Despite a lower incidence rate in the United States, gastric cancer affects a disproportionate number of cases in high-risk groups such as populations of *East Asian* descent, who are also at higher risk for infection by *Helicobacter pylori*, a class I carcinogen for gastric cancer. Infection rates are further aggravated in *urban* areas. With a growing Asian population in the United States' *urban* areas, there is an increasing need to address this health disparity in primary gastric cancer prevention.

Goals and Objectives: 1) Demonstrate that *H. pylori* prevalence in Chicago's Chinese population is significantly higher than the prevalence in Chicago's general population. 2) Determine if *H. pylori* prevalence in Chicago's Chinese population is consistent with previously reported prevalence in China.

Methods: A total of 288 *East Asian* patients (124 males, 164 females) were tested for *H. pylori* at Midwest Asian Health Association (MAHA) Gastroenterology Clinic from June 2016 to June 2017 via IgG seropositivity. Positive patients (>1.0 U/mL) were prescribed either triple, quadruple, concomitant, or second-line therapy. Demographics and relevant gastric cancer risk factors data was collected from the MAHA population and another population of 71 patients (30 males, 41 females) seen at Rush University Medical Center (RUMC). The two populations were compared to determine discrepancies between an East Asian population and general hospital population in an urban setting.

Results: Compared to the RUMC population (38.03%), the MAHA population had a higher seropositivity (51.74%). *East Asians* comprised of 2.82% and 100% of RUMC and MAHA populations, respectively. Within the MAHA population, males and females had infections rates of 71.77% and 36.59%, respectively. First generation immigrants comprised of 26.76% of the RUMC group versus 97.51% of the MAHA group. When comparing median household income ranges, RUMC was significantly higher than MAHA ($40,000 to $49,000 versus $0 to $15,000, respectively). The distribution of household sizes between RUMC and MAHA were similar, but discrepancies were observed when looking at age and level of education.

Conclusions: The MAHA population results were consistent with our hypothesis that *H. Pylori* prevalence in Chicago's *East Asian* population, primarily Chinese, is high and comparable to reported prevalence in China. Rates are also significantly higher than that of a general population in Chicago, suggesting Chicago's *East Asian* population is a high-risk group. This would suggest that a patient identified as high-risk for *H. pylori* infection should be treated with guidelines more consistent with his or her country of origin.

BOARD 4: *Addressing Liver Cancer through Hepatitis B and C Screening in Philadelphia's African Immigrant Communities*

Catherine Freeland, MPH[1], Oni Richards[2] and Amy Jessop, PhD, MPH[3]

1. Hepatitis B Foundation
2. African Family Health Organization
3. HepTREC

Background: Liver cancer is the 3rd deadliest cancer worldwide, with 5-year survival rates of only 15%. In the U.S., liver cancer incidence and death rates are increasing at a faster rate than any other cancer. Approximately 78% of primary liver cancer, is attributable to infection with hepatitis B (HBV) or hepatitis C (HCV) viruses. It is estimated that 2.2 million people are chronically infected by HBV and 2.7 to 5.2 million live with chronic HCV infection, and most are unaware of their infection. People of African origin have higher rates of HBV and HCV infections, and have an increased chance of developing liver cancer, at younger ages, compared with others.

Goals and Objectives: Screening is essential to identify those infected and at-risk for liver cancer. This project focuses on addressing barriers within the African immigrant population through a train the trainer education model and community based screening followed by linkage to care for all individuals in need of follow up. At the conclusion of this poster presentation, attendees should understand the epidemiology of hepatitis B and C within the African Immigrant population as well as the need for increased screening and prevention measures as a result of this community based study.

Methods: In order to address liver cancer caused by hepatitis B and C within African immigrant communities, the Hepatitis B Foundation (HBF), HepTREC and African Family Health Organization (AFAHO) implemented a program to provide education, free screening and linkage to care for high-risk individuals in the greater Philadelphia, PA metro area. This project aims to screen 150 African immigrants for hepatitis B and C and educate over 200 individuals for hepatitis B and C.

Results: Results thus far indicate that 7% of those tested had an HBV infection, 47% were immune and 46% were susceptible and would benefit from vaccination. No individuals tested positive for HCV within this sample. Individuals screened on average have been living in the U.S. for 12 years and all but two individuals were born outside the U.S. Country of origin for participants included Sierra Leone (58%), Liberia (10%) Sudan (10%), Ghana (5%), Mali (4%) and other countries within Africa (n=76). All individuals have been contacted in need of follow up care if they test positive for hepatitis B or are in need of vaccination to prevent future infection.

Conclusions: This study highlights the need for increased HBV and HCV testing and collection of disaggregated data among African immigrant populations which can allow for targeted language and messaging of cancer prevention and education. This presentation also will discuss challenges associated with recruitment of participants, strategies for partnering within African immigrant communities, and future directions for addressing and preventing liver cancer within this high-risk population.

BOARD 5: *Barriers to Low Uptake of Cervical Cancer Screening: A Community –Based Approach in Lagos State, Southwest Nigeria*

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1. Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria
2. MicCom Cancer Foundation, Ada, Osun State, Nigeria

Background: Cervical Cancer (CC) is of public health concerns globally. Sexually active women are at risk of cervical cancer1. Nigeria is the most populous country in Africa and, has high CC mortality attributed to low uptake of cervical screening as a preventive strategy among women of the reproductive-aged group.

Goals and Objectives: To improve the uptake of CC screening among the target population.

The study aimed to identify barriers to low uptake of CC screening among women of the reproductive-aged group, as this will provide useful data for designing interventions aimed at improving the uptake of CC screening.

Method: Cross-sectional descriptive research design was used to conduct a household survey using a pre-tested, semi-structured, interviewer-administered questionnaire. The secondary health facilities providing cervical screening in selected communities were considered as the Primary Sampling Unit (PSU) in this study. Multistage sampling technique was used to recruit 348 respondents that participated in the study. The respondents were reproductive age women (30-49 years) resident in selected communities. Multi-variate logistic regression statistical analysis was used and data presented using descriptive and inferential statistics.

Results: The mean age of the respondents who participated in the study was 32 ± 5 years. Of the 384 reproductive-aged women, only 236 (61.5%) respondents have heard about CC. Very few (19%) of the respondents are aware that CC is preventable. Lack of awareness (94%), Sex of the provider (64%), Language barrier (62%), Fear of CC screening outcome (59%), Misconception about sex and CC (52%), lack of spousal support (50%), and lack of community support (49%) respectively were indicated as barriers to uptake cervical cancer screening among the respondents. However, fatalism towards CC (34%) was the least indicated barrier to uptake cervical cancer screening among the respondents.

Conclusion: Women's identified contextual factors are vital for effective strategies for designing interventions aimed at improving the uptake of CC screening.

BOARD 6: *Deployment of a Sustainable Patient Navigation Model to Increase Colorectal Screening Rates in Hispanic and Latino Communities*

Mike Flicker, MBA[1], Abdifatah Haji, MD[1] and Michael Peters, MD[1]

1. Minnesota Department of Health

Background: Sage Program at the MN Department of Health was one of six programs selected by the CDC for funding to enhance CRC screening (DP15-1502) with evidence- based interventions and free screening for uninsured eligible clients. Under the direction of CRC Screening Director Mike Flicker, Sage Program invited stakeholders in March 2017 to discuss a patient navigation model utilizing international immigrant medical doctors as patent navigators.

Key attributes of the model would be

- Patient navigators would share a universal cultural awareness as the client served
- Site selection would be based on detailed clinic-level data reflecting the country of origin and preferred language provided under existing data provided to MN community Measurement

Stakeholders on this project include:

- New Americans Alliance for Development (NAAD) (MN- based organization serving international medical graduates)
- Somali Medical Association of America
- UCare (the largest Medicaid Managed Care Plan in Minneapolis/ St. Paul)
- Minnesota Cancer Alliance
- Colon Cancer Coalition
- MN Association of Community health Centers
- American Cancer Society

Goals and Objectives: The initial goals of this intervention were:

- Contact 200 never screened immigrants with education and offer screening options
- Prioritize site selection based on countries of origin (East African, West African, Latin America)
- 10% of those contacted complete CRC screening
- Track and publish cost-effectiveness of the intervention
- Secure funding from Medicaid MCO to fund future patient navigation

Methods: The patient navigation model developed was developed and refined based on shared experiences of the navigators and the clients. It evolved into greater time spent assessing the patients personal history within the electronic health record before contact with the patient is made. The team of international medical graduates providing patient navigation came from Somalia, Kenya, Nigeria, Ethiopia and El Salvador. Client education was completed over the telephone or in-person during face to face sessions.

BOARD 6 ***(Continued)***

Results: The project exceeded our expectations. The total community impact from the calendar year 2018 includes over 3,400 clients received CRC education and over 1,225 completed screening (as of 12/31/18) We will include detailed information from each the ten sires including iFOB return rate, iFOB positive rate, and number of completed colonoscopies. Special attention will be spent on the selection of preferred screening test based on country of origin and preferred language.

Conclusions: This project affirms the effectiveness of culturally appropriate patient navigation, besides, providing a model for cost- effectiveness that attracted the funding of a Medicaid Managed Care Organization. The attributes of a model that incorporates robust data collection and reporting in the population served, real-time access to patient's electronic health records, and navigation as an embedded element in team-based care all contribute critical components to a sustainable model.

BOARD 7: *Exploring the Effect of the Composition and Combinations of Evidence-based Intervention Implementation to Increase Colorectal Cancer Screening Rates*

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2. American Cancer Society

Background: *The Community Guide* identifies provider reminders, provider assessment and feedback, and client reminders as three recommended, evidence-based interventions (EBIs) to increase colorectal cancer screening (CRCS). Previous research has shown multicomponent EBIs to be effective at increasing CRCS. Less is known about which combinations are most effective in increasing CRCS rates.

Goal and Objectives: The goal of this study was to examine the combination of EBIs (specifically provider reminders, provider assessment and feedback, and client reminders) to increase CRCS being implemented simultaneously with federally qualified health centers (FQHCs). FQHCs are an important setting for medically underserved individuals to obtain cancer screening.

Methods: Our program supports implementation of two priority EBIs (two of the following: provider reminders, provider assessment and feedback, and client reminders) plus supportive (e.g., professional education) and additional activities (e.g., standing order policy development) with FQHCs in South Carolina. For this study, we assessed combinations of EBIs and supportive and additional strategies with CRCS data. Each selected EBI was tailored to the FQHC site's culture and capacity. Our evaluation team works with the FQHC sites to collect baseline, quarterly, and annual CRCS data to assess progress towards their goal of increasing CRCS.

Results: Nine FQHC sites have reported three years of annual CRCS data. Baseline CRCS rates ranged from 3 to 65%. Of the nine sites, four had a 15% or greater percent change in CRCS rates (range 15-42%) from 2015 to 2017. All four of these sites used a combination of provider reminders and provider assessment and feedback strategies. Of those sites with smaller increases (range 10-12%), a combination of provider reminders and client reminders were used. None of the nine sites used a combination of provider assessment and feedback and client reminders. Of the six sites who selected the combination of provider reminders and provider assessment and feedback, two originally selected client reminders. After one year of implementation, these two sites changed from client reminders to provider assessment and feedback. The EBI change was due in part to challenges with tracking the client reminders.

Conclusions: The combination of provider reminders and provider assessment and feedback yielded the greatest increases in CRCS rates for the FQHC sites. Understanding the combination of EBIs being implemented simultaneously to increase CRCS rates can inform selection of EBIs for other health care providers and settings. This is particularly important in settings with fewer resources and those serving patients with low rates of CRCS.

BOARD 8: *Families First Health and Support Center: A Colorectal Cancer Screening Success Story*

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1. New Hampshire Colorectal Cancer Screening Program
2. New Hampshire Colorectal Cancer Screening Program- Dartmouth- Hitchcock Medical Center

Background: In 2014, Families First Health and Support Center (FFHSC), a NH Federally Qualified Health Center (FQHC), had a colorectal cancer (CRC) screening rate of 29%. The national FQHC screening rate at the time was 42%. FFHSC served 1240 patients aged 50-75, the generally recommended age for average risk individuals to have CRC screening. This clinic struggled to screen more patients, many of whom faced barriers such as lack of access to colonoscopies and lack of knowledge about CRC and screening. 93% of households were under 200% of the federal poverty level, 21% of patients were uninsured, 45% were insured through Medicaid, and 25% were homeless.

Goals and Objectives: To decrease barriers to screening and increase CRC screening rates, FFHSC worked with the New Hampshire Colorectal Cancer Screening Program (NHCRCSP), a Centers for Disease Control (CDC) funded statewide grant, to increase CRC screening rates by implementing evidence-based interventions (EBIs). Together, a CRC screening rate goal of 39% by 2017 was set.

Methods: Progress was tracked at a system and provider level. Providers viewed each other's rates and reviewed them quarterly at QI focus meetings. Staff received feedback at weekly meetings. Working toward high-quality processes, FFHSC transitioned to a high-sensitivity stool kit to increase screening for average risk patients. This stool kit does not require bowel preparation or special diet and is effective in detecting CRC. It includes a return mailer and postage to further decrease barriers to completion. With NHCRCSP resources, FFHSC implemented a community health worker (CHW) role to assist with a patient reminder process. CHW calls to patients assessed barriers to screening and assisted in overcoming them. If needed, patients were reminded about screening a second and third time.

Results: FFHSC exceeded its CRC screening goal of 39% by reaching 50% in 2017. More FFHSC patients continue to be screened for CRC as a result of using a high-quality stool testing process and multiple EBIs. Staff have incorporated patient reminders into their processes and CHWs help patients overcome barriers to screening. In addition to a significantly increased CRC screening rate, the long-term impact is an expected decrease in CRC mortality.

Conclusion: Families First's success in increasing their CRC screening rates was accomplished though teamwork. Provider and non-provider internal champions were key, as was buy-in from the entire care team. Setting a goal and providing feedback, maintaining flexibility with competing priorities, and recognizing the relationship between increasing screening rates and improving the health of patients was paramount to FFHSC's success.

BOARD 9: *Exploring Health Literacy Barriers to Lung Cancer Screening: A Grounded Theory Study*

Heather Platter, MS[1]

1. University of Maryland, School of Public Health & Horowitz Center for Health Literacy

Background: Lung cancer is the leading cause of cancer-related death in the United States and more than 230,000 Americans are diagnosed with lung cancer each year. Recent advances in screening technologies have proven effective in reducing mortality and increasing early stage detection of lung cancer, yet only 3.9 percent of the 6.8 million eligible Americans were screened in 2015. Patient-provider conversations about lung cancer have also decreased since the release of the United States Preventive Task Force guidelines for the low-dose computed-tomography lung cancer screening in 2013. Current research has examined potential barriers to lung cancer screening, such as low perceived risk, lack of health insurance, and fear of results. However, there is limited research available on health literacy factors that may influence screening for lung cancer.

Goals and Objectives: The objective of this grounded theory study is to explore how health literacy may relate to intentions and behaviors to screening for lung cancer among older adult long-term smokers.

Methods: Semi-structured interviews were completed with adults aged 55 to 80 years who have a 30 pack-year smoking history, currently smoke or have quit within the past 15 years, have health insurance, and have a regular doctor seen in the past two years. The interview guide included questions that targeted four domains of health literacy: patient-provider communication, stigma, access and navigation of the healthcare system, and health information seeking behaviors. Interview audio files were transcribed and cleaned, then coded using the four stages of data analysis in grounded theory (open, focused, axial, and selective coding). A constant comparison method was used, which combined data collection, coding, and analysis to generate theory “grounded” in the collected data.

Results: Preliminary results include insight on where participants prefer to find health information with a focus on the digital divide and patient-provider communication; who participants trust most for learning about screening for lung cancer; and how participants make healthcare decisions and what they need to make an informed decision about lung cancer screening. Key barriers to screening for lung cancer are also described.

Conclusion: Given the current dismal screening rates, it is critical that potential health literacy barriers to lung cancer screening are explored to inform future lung cancer screening interventions. The results of this study have implications for public health research, practice, and policy. This study may inform future implementation science research on lung cancer screening guidelines by providing a clearer understanding of the ways in which health literacy barriers are related to screening outcomes. Results of this study may also be relevant for training in health literacy and health communication for clinical and public health professionals.

BOARD 10: *Identifying Optimal Approaches to Scale Up Colorectal Cancer Screening: An Overview of the Centers for Disease Control and Prevention (CDC)'s Learning Laboratory*

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1. Centers for Disease Control & Prevention
2. RTI International
3. Colorado Department of Public Health
4. Washington Department of Health
5. HealthPoint
6. West Virginia University Cancer Institute, Cancer Prevention and Control

Background: The Centers for Disease Control and Prevention (CDC) funded 30 grantees for its Colorectal Cancer Control Program (CRCCP). The purpose of the CRCCP is to use evidence-based interventions (EBI) to increase uptake in colorectal cancer (CRC) screening. Currently, screening uptake is approximately 68% nationally; however, uptake is only 40% at federally qualified health centers (FQHCs). The CRCCP Learning Laboratory was created to bring together a selected group of awardees and partner health systems to perform targeted evaluations and identify optimal approaches to scale-up interventions and increase uptake of CRC screening.

Goals and Objectives: The objective of this study is to present findings from the implementation of EBIs at four FQHCs that are participants in the CRCCP Learning Laboratory.

Methods: Using a tailored cost data collection tool, CDC and RTI International collected cost and effectiveness data from participating grantees and FQHCs [Colorado Department of Public Health and Environment (CO); Washington State Department of Health (WASDOH) and West Virginia University (WVU)]. We also collected screening rates at baseline and during implementation. The data collected were based on different lengths of time ranging from 12-36 months. Cost and effectiveness data were used to estimate incremental intervention cost per person successfully screened.

Results: We analyzed data from 2 FQHCs in CO – one over 24 months, the second for 36 months. Both FQHCs implemented patient reminders and provider assessment and feedback (PAF) interventions, while one also implemented provider reminders. The increase in screening uptake ranged from 9.7 percentage points to 18.1 percentage points, and incremental cost per person screened ranged from $23.78 to $29.16.

The FQHC in WA implemented 4 EBIs: patient and provider reminders, PAF and reduction of structural barriers. Over the course of 12 months, screening uptake increased 7.1 percentage points. Incremental cost per person returning a FIT kit was $18.76.

One FHQC in WV implemented patient reminders and PAF. Over 12 months, its screening uptake increased 18.9 percentage points and the incremental cost per person screened was $40.00.

BOARD 10 ***(Continued)***

Conclusions: We found that screening uptake increased across all FQHCS during the implementation period. Cost per person successfully screened differed across FQHCs; however, there appeared to be some economies of scale associated with the cost of implementing the EBIs. That is, interventions aimed at a larger volume of individuals may have lower average cost per person. Implementation sites differed in the types and combination of EBI(s) and supporting activities implemented, how the EBI(s) and supporting activities are implemented, and the amount of resources utilized for development and implementation. Therefore, comparison across programs should include an in-depth description or mapping of intervention processes to understand how programs are similar and how they differ to support future implementation efforts.

BOARD 11: *Optimizing the Utilization of Health Information Technology to Link Hospital and Community Health Systems to Increase Colorectal Cancer Screening and Reduce Disparities among Vulnerable Population*

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1. Asian Health Coalition, Center for Asian Health Equity
2. University of Chicago Medicine

Background: Colorectal cancer (CRC) is the second leading cause of cancer death in the United States. Screening for CRC not only detects the disease early when treatment is more effective but also prevents cancer by removing precancerous polyps. Screening rates are lowest among populations who seek health care at community health centers (CHCs). The United States Preventive Services Task Force recommends screening using stool-based tests, sigmoidoscopy, or colonoscopy. Positive stool-based FIT (Fecal Immunochemical Test) screenings require timely follow-up with a colonoscopy. Failure to complete a diagnostic evaluation following a positive FIT undermines the benefits of screening and increases disparities.

As part of an ongoing Centers for Disease Control and Prevention funded program, an innovative web platform was developed – IL Colon CARES.org – to link uninsured FIT positive patients with donated colonoscopy appointments and to provide a platform for bidirectional communication between providers. Success depends on effective training of staff, successful onboarding of new health systems, and utilization of colonoscopy slots. The portal was piloted with two major urban health systems and two CHC systems. To build on the success of this pilot, development of manuals is underway.

Goals and Objectives:

Goal 1: Increase the utilization of IL Colon CARES portal by 30% to enhance access to care for CRC screening completion.

Objective 1: Develop two operational manuals targeting the staff at CHCs and hospitals, with the aim of improving the utilization of the portal and establishing linkage to care.

Goal 2: Onboard at least one new health system to the ILColonCARES.org portal for expanding the reach of linkage to care for diagnostic colonoscopy services using the manuals.

Objective 2: An additional health system will be trained for the portal to increase and enhance access to care for FIT positive patients needing diagnostic colonoscopies.

Methods: The user manuals were developed with guidance and feedback from a working group comprised of one CHC and one hospital. The feedback was incorporated in the revised manual and the manual will be used to train additional CHCs and hospitals in spring 2019.

Results: Two user manuals were pilot tested and successfully developed to onboard new systems, increasing the crucial diagnostic follow-up to a preliminary stool test screening for early detection.

In addition, 98% of scheduled patients completed colonoscopies with 91% of patients being adequately prepped. 92% of portal colonoscopy slots were used and polyps were found and removed in roughly half of the patients scheduled through the portal.

BOARD 11 ***(Continued)***

Conclusions: ILColonCARES.org allows CHCs and hospital systems to share patient responsibility in the management of CRC screening and reduces the time for follow-up care. The portal user manuals ensure successful onboarding of new partners to increase CRC screening rates among the vulnerable patient population.

BOARD 12: *Outcomes from a Cancer Screening, Training, Education & Prevention Program (Texas C-STEP) serving Low-income Uninsured/Underinsured*

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1. Texas A&M School of Public Health
2. Texas A&M College of Medicine
3. Texas A&M College of Nursing

Background: Improving cancer prevention and screening in rural areas and among health-disparate populations has been the focus of significant and prolonged concern. Low-income persons residing in rural and medically underserved areas (MUAs) suffer from significantly higher incidence and mortality rates associated with breast, cervical and colorectal cancer (CRC). Barriers to cancer screening include lack of insurance, transportation, language, fear, lack of knowledge, and even cultural distrust. Family medicine physicians, nurse practitioners, and community health workers (CHWs) can play an important role in insuring provision of cancer prevention and screening services. The purpose of this paper is to summarize findings from the Texas Cancer Screening, Training, Education & Prevention program (C-STEP).

Goals/ Objectives: Goals were to: (1) increase access to cancer screenings and diagnostics for low-income, underserved and rural residents of Texas; (2) improve prevention education services for breast, cervical and CRC through use of a CHW model; and (3) increase the pool of family medicine physicians and nurse practitioners who receive direct training in cancer screening and/or diagnostic procedures.

Methods: This project allowed Texas A&M's Family Medicine Residency, College of Nursing, and School of Public Health to provide evidence-based cancer screening and diagnostic services, prevention education, and patient care and navigation, through a unique interdisciplinary training program. Safety-net persons (up to 250% of FPL) in 17 central Texas counties (12 rural, 15 whole-county MUAs), received colonoscopy, pap, and/or mammogram services through Texas C-STEP, funded by the Cancer Prevention & Research Institute of Texas. Education and outreach were accomplished through a CHW model.

Results: Between 12/1/2013 & 8/31/2018, a total of 1,872 women received the following grant-funded services: 1,319 mammograms; 636 pap tests; 451 clinical breast exams; 223 breast ultrasounds; 52 breast biopsies; 238 colposcopies; and 53 loop electrosurgical excision procedures. Nineteen cases of breast cancer and two of cervical cancer were found. Between 3/1/2012 & 8/31/2018, 2,236 colonoscopies were provided to 2,162 people, with 1,702 procedures fully grant-funded. Twenty-one people were diagnosed with CRCs. Bilingual CHWs provided direct (face-toface) prevention education, navigation assistance, and outreach to 19,631 people, while >2,700 professionals and students received specialized, hands-on training.

BOARD 12 ***(Continued)***

Conclusion: Improved access to cancer screening for low-income uninsured/underinsured persons, through subsidized screenings and use of CHWs for outreach and education, can contribute to decreasing screening barriers. The overall number of cancer-related prevention services associated with this project, may contribute to earlier detection of breast, cervical, and CRCs - and reduction of mortality rates - for this area of TX. This interdisciplinary program may also serve as a model for addressing the significant need for greater numbers of providers, nurses, public health professionals, and CHWs who are trained in various aspects of evidence-based cancer prevention and care.

BOARD 13: *Tablet-Based Patient Education Regarding HPV Vaccination in Colposcopy Clinic: A Prospective Study of Patient Knowledge and Satisfaction*

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Background: Human Papillomavirus, or HPV, is the most common sexually transmitted infection in the USA. Approximately 79 million people are infected with HPV nationwide, with an estimated 14 million new infections each year. HPV has been implicated in almost all cases cervical and anal cancers, as well as linked to vulvar, penile, and oropharynx cancers. Some of the rates of these HPV-related cancers in men and women are increasing in frequency, even though they are very much preventable. Although cervical cancer rates decreased 1.6% per year, oropharyngeal and anal cancer rates have both increased (2.7% and 2.1% respectively. This is particularly troublesome because HPV related cancers are very much preventable through early detection and vaccination.

Objective: The aim of the study is to assess the efficacy of electronic tablet-based education regarding human papilloma virus infection and prophylactic vaccination among women presenting for their initial appointment in a specialized pap smear evaluation clinic.

Methods: A prospective study was conducted of all new patients presenting to the pap smear evaluation clinic. Each new patient was approached by a patient navigator and, if willing to participate, took a 4 question pre-test and then completed an education module on the electronic tablet followed by a 5 question post-test. The questions and module focused on the pathogenesis of cervical abnormalities and the connection between HPV and cervical cancer. All materials were available in both English and Spanish.

Results: Between June 2017 and December 2017 118 patients voluntarily participated in the tablet education. One-hundred and nine patients (92%) were English speaking. Following the tablet education, 108 (92%) of women identified cervical cancer as a problem that can be caused by HPV, as compared to 104 women (88%) in the pre-test. Knowledge of head and neck cancer as a problem that could be caused by HPV was also increased from 10% to 77%. Before the module, 76% of women answered that they would definitively recommend the HPV vaccine for a child in their family. In the post-test 83% of women answered "definitely would". Eighty-nine percent of patients rated the tablet module as "extremely" or "very" helpful.

Conclusions: Tablet –based education improves patient knowledge of HPV-associated cancers and is feasible in an outpatient clinic setting.

BOARD 14: *Validation of the Assess Your Risk tool for breast and ovarian cancer prevention*

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Background: Among breast cancer gene (*BRCA*) 1 and 2 carriers, the cumulative risk of breast cancer by 80 years of age is 69-72% versus 17-44% for ovarian cancer. However, studies estimate that current practices identify at most 10% of asymptomatic carriers of cancer susceptibility genes. Bright Pink developed the Assess Your Risk (AYR) tool to estimate breast and ovarian cancer risk through a user-friendly, informative online quiz with superior-rated readability. AYR provides breast and ovarian cancer risk assessment, cancer prevention education, and connections to genetic testing and support resources.

Goals and objectives: The objective of this study is to determine the validity of AYR to identify women at increased risk of breast and ovarian cancer.

Methods: Bright Pink released the most recent update of AYR in Fall 2018 and includes 26 questions based on the National Cancer Center Network (NCCN) criteria for "Genetic/Familial High-Risk Assessment: Breast and Ovarian." The NCCN criteria that trigger consideration of genetic testing among asymptomatic individuals include: 1) a family history of *BRCA1/2* or other gene variants, 2) a family history of high-risk cancers such as Triple negative or male breast cancer, or 3) family history of more than 3 cancers on either side. AYR also uses components from the Gail and Tyrer-Cusick models including a personal history of childhood radiation to the chest, abnormal breast biopsy, or polycystic ovary syndrome (PCOS). We included women of any age and race-ethncity who completed AYR between November 2018 and January 2019. We excluded women with self-reported breast or ovarian cancer and those with no knowledge of family medical or genetic testing history. We conducted univariates analyses of the AYR population. We examined agreement between AYR and NCCN criteria using McNemar's Test and Kappa ($\alpha<0.05$).

Results: There were 57,932 AYR completions and the majority of participants were either at increased or average risk for breast cancer, with only 5.2% reporting high risk. The mean age was 27.1 (standard deviation (SD) 10.0). White race was the most commonly reported race (62.1%) compared to 7.4% for Black and 3.5% for Asian. The majority of women reported private health insurance (60.7%) compared to public (27.1%) or no insurance (12.1%). For analysis of agreement between AYR and NCCN categories, when we followed only the exact critieria included in the NCCN guidelines, the estimate of agreement between the NCCN and AYR was 0.9156 (95% CI 0.9127, 0.9184) with McNemar's p= <0.001. However, when we included the additional AYR questions, the estimate of Kappa was 0.9998 (95% CI 0.9997, 1.000) with McNemar's p= 0.008.

Conclusions: These results demonstrate that Bright Pink's AYR is a valid tool for identifying women at increased risk of breast and ovarian cancer.

BOARD 15: *Variation in Breast Cancer Screening Recommendations by Primary Care Providers*

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Background: Cancer screening exists to improve the health of a population and is often executed using primary care providers (PCPs) who rely on organizational screening guidelines. These guidelines provide evidence-based recommendations; however, they are often without unanimity, leading to potential divergent screening recommendations.

Goals and Objectives: Due to the high incidence of breast cancer, availability of screening methods and presence of multiple incongruent guideline recommendations, we sought to recognize breast cancer screening practices in Wisconsin to identify patterns that would allow us to improve evidence-based screening adherence in our state.

Methods: A 46-question survey on breast cancer screening beliefs and practices for average-risk women was sent to PCPs in four health systems in Wisconsin. Providers included physicians, nurse practitioners, physician assistants and midwives practicing in internal medicine, family medicine and gynecology who provide cancer screening services to women. Of the 298 providers who responded to the survey, 253 providers were identified as being eligible to participate in the study.

Results: Most respondents were physicians (64.2%), followed by nurse practitioners (25.7%), physician assistants (5.3%) and midwives (1.5%). Of physicians, most practiced family medicine (65.3%), followed by internal medicine (25.3%) and gynecology (9.4%). Of the 244 providers who responded, 48.8% believed that the clinical breast exam is ‘somewhat effective’ with 35.2% stating it is not effective; the response was similar for self-breast exam. Mammography was believed to be ‘very effective’ for patients aged 50-74 years old by 74.6% of providers; this decreased to 47.5% for patients 40-49 years old and 20.1% for patients greater than 75 years old. For questions regarding influence of guidelines on screening practices, the United States Preventive Services Task Force (USPSTF) was reported as being ‘very influential’ for 60.5% of providers, followed by the American Cancer Society (ACS) at 46.4%. Of respondents, 83.1% only ‘usually’ followed the guidelines they find most influential. For patients 40-49 years old, 75.6% of providers performed clinical breast exams and 58.5% recommended self-breast exams; these numbers increased for women 50+ to 78.7% and 61.2%, respectively. Mammography was recommended to women aged 40-49 by 87.9% of patients; this increased to 99.6% for women 50+ years old.

Conclusions: PCPs in Wisconsin continue to over-estimate the efficacy of clinical and self-breast exams as well as overuse these in clinical practice. Providers find multiple screening guidelines influential, but favor the USPSTF; however, these guidelines are frequently not being followed. Further research needs to be done to investigate the lack of national guideline adherence by providers to improve compliance with evidence-based screening recommendations.