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Increasing Colorectal Cancer Screening Rates Through Education

Kayla Metz
Jacksonville State University, kmetz@stu.jsu.edu

Jacksonville State University
Graduate Studies
700 Pelham Rd N., 320 Angle Hall, Jacksonville, AL 36265
Phone: (256) 782-5348
http://www.jsu.edu/graduate/index.html

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INCREASING COLORECTAL CANCER SCREENING RATES THROUGH EDUCATION

A DNP Project Submitted to the
Graduate Faculty
of Jacksonville State University
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Nursing Practice

By

KAYLA DAWN METZ

Jacksonville, Alabama
June 28, 2021

Kayla Dawn Metz June 28, 2021

ABSTRACT

Colorectal cancer is the second leading cause of cancer deaths in the United States. Adenomatous polyps cause 90% of colorectal cancer. These polyps can be identified before they become cancerous through numerous colorectal cancer screenings. There are many ways to help cover the cost of screenings or to make them no cost to patients, but the number of individuals who have ever been screened or who are current with screening recommendations remains low. This DNP project aims to provide education to providers and individuals regarding the various type of colorectal cancer screening options. A reduction in fears and improved knowledge regarding colorectal cancer screening frequency, type, and meaning was explained. Giving individuals the knowledge needed to make informed decisions regarding their healthcare and preventative health are the researcher's goals. This project's design was quantitative and identified individuals who met the age requirements for recommended colorectal cancer screening. Upon identification, these individuals were provided with educational materials and a referral for colorectal cancer screening. Upon completion of the educational portion of the project, the researcher documented a colorectal cancer screening referral in the electronic medical record and then documented the billing code for preventative education. The implications in nursing that this project provided include compliance with preventative screening recommendations, and improved patient and provider knowledge. The goal was to increase colorectal cancer screening rates to create a reduction in colorectal cancer rates. These would then increase survival rates, job productivity, and reduce healthcare costs.

Keywords: Colorectal Cancer, Colorectal Cancer Screening, Prevention, Cancer

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To all the nursing faculty and staff at Jacksonville State University and Dr. Jason Cleveland, thank you for all your support, encouragement, and constructive feedback. Go Gamecocks!

I would like to dedicate this project and my doctoral work to my husband and biggest supporter, Dave. There were so many times that I did not know if I could complete this work, but you never doubted me. I love you! Secondly, I would like to dedicate this work to my sons, Caden, Chandler, and Cooper. I hope that they know that they can achieve anything and that their dad and I will always love and support them. Lastly, to my brother CJ, I would not be where I am today without your love, support, and daily phone calls. I love you!

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Increasing Colorectal Cancer Screening Rates Through Education

Introduction

Colorectal cancer can be detected early and possibly prevented through colorectal cancer screening. The most significant reason that colorectal cancer screenings are not completed or not up to date is related to fear and embarrassment (Wang et al., 2019). To improve these outcomes the DNP project educated individuals on different types of colorectal cancer screenings to increase awareness of their options. The DNP project focused on quality improvement and aimed to educate both the provider and patient, and to improve screening processes during healthcare visits. The options for screening types were discussed along with reasons that one type may be preferred over another were discussed. Additionally, education on the frequency of these screenings was given. Provider education was provided during an in-service training session.

Background

According to the Centers for Disease Control and Prevention (CDC), "colorectal cancer is the second leading cause of cancer death among cancers that affect both men and women" (DeGroff et al., 2018, pg.1). Adenomas are precancerous polyps, and these are where 90% of colorectal cancer (CRC) originates (Zitella, 2020). The only way to identify these polyps is through some type of colorectal cancer screening. Identifying colorectal cancer screenings have been proven to reduce colorectal cancer by identifying DNA markers for CRC and by identifying adenomal polyps which can then be removed, this reduction was by as much as 67% in a recent study by Perelman School of Medicine

(Doubeni et al., 2016). Whenever these polyps are removed, the chance of CRC decreases significantly.

There are many different options to choose from when having a CRC screening performed. These options should be discussed with the patient's provider and are based on patient preference, family and personal medical history, and preparation of the test. Options include numerous stool tests, including the guaiac-based fecal occult blood test or gFOBT, fecal immunochemical test or FIT, or FIT-DNA (Centers for Disease Control and Prevention [CDC], 2020. Additional endoscopic procedures can be used including sigmoidoscopy or colonoscopy. A computed tomography (CT) colonography is also an option (CDC, 2020).

In 2015, the CDC Colorectal Cancer Control Program collected data to determine the economic burden of CRC and the results were eye-opening. They estimated over 700,000 life years and over $9 billion in potential earnings were lost. Additionally, there are also significant costs for the treatment of CRC (Joseph & DeGroff, 2019).

The risk of colorectal cancer increases as an individual ages. Additional risk factors can be modified, like smoking or consuming alcohol, and other risk factors that cannot be altered, like race (Wang et al., 2019). African Americans are among the largest ethnic group of individuals at risk for CRC (American Cancer Society, 2020).

Problem Statement

Colorectal cancer is responsible for too many deaths in the United States; evidence-based guidelines support the use of screening to reduce these deaths. However, patients self-report fear and embarrassment as barriers that impact whether to be screened for colorectal cancer. Often patients may misunderstand the process, have a fear of pain,

worry that someone they know may perform the screening, or not understand the timing of scheduling screenings. The DNP project evaluated individuals aged 50 to 75-years-old to address the following question: does a colorectal screening educational program lead to an increase in colorectal screening compared with no educational program within one month? The DNP project utilized a multimodal approach with the aim to improve rates of colorectal cancer screening beginning with the providers to educate them on the process and information provided to patients. Providers were given the opportunity to decline participation and a voluntary consent was provided (see Appendix A). Educational pamphlets were distributed to patients and education was provided regarding current evidence-based guidelines for CRC screening (Colon Cancer Coalition, 2020). After this process was completed, the rate of colorectal cancer screening referral including the use of the appropriate billing code was documented.

Organizational Description of Project Site

Overall, the rate of colorectal cancer screening compliance is low. In 2018, the CDC reported that over 21 million people who were between the ages 50 and 75 had never been screened CRC (CDC, 2020). Even individuals who have been screened may not be current on their recommended screening and, therefore, are not up to date and compliant with the recommendation (Leonard, 2020). This rate is even higher in rural areas. The DNP project site is a primary and urgent care clinic in a rural area of the southeastern United States. The patient population at this clinic includes many middle-aged to older adults. Many of these patients utilize urgent care as a primary care provider but only visit during urgent needs causing a potential gap in service for primary care needs. This gap in service, where patients do not consistently utilize a primary care provider and CRC

screenings may not be addressed, presents a unique opportunity to access primary care issues that are not being treated in this population.

Review of the Literature

Using literature databases including CINAHL Complete, The Cochrane Library, and PubMed, a systematic review was conducted through Medline, Embase, and Scopus that accessed articles from 2002 to 2019. These searches were conducted to determine ways to increase rates of colorectal cancer screenings (CRC). The literature outlines self-reported barriers that individuals experience regarding colorectal screenings and ideas to incentivize screenings to raise rates. Patient teaching strategies were also reported with a diversity of methods utilized, and the results of these methods were reported. Clinical trials and a systematic review were assessed to create ways to increase rates of colorectal cancer screenings in individuals aged 50 to 75-years-old in a rural primary and urgent care setting.

This review included 27 articles that reported patient barriers to colorectal cancer screenings. The most-reported barriers were cost and affordability, lack of insurance, or issues with coverage (for example, insurance considering the testing as diagnostic), embarrassment, fear, and pain. Additionally, in rural areas, individuals were worried that providers conducting the test might know them which would be embarrassing; this was a more common concern for women. Men reported being more concerned with pain, discomfort, and a feeling of being violated. Some patients stated that they only visit a doctor for urgent needs (Wang et al., 2019).

Additional reviews of literature included one cluster-randomized trial and three clinical trials. A large percentage of individuals aged 50 to 75 reported never having any

type of colorectal cancer screening, while many others who had were not currently up to date. Surveys were completed by individuals to identify demographics and reasons that they felt they had not been screened. Demographically African Americans were less likely to have a CRC screening or be current on the screening; living below the poverty level was also common for this demographic. Fear, financial concerns, and difficulty scheduling appointments due to the required time and preparation were all reported barriers (Muthukrishnan, Arnold & James, 2019).

Provider-related barriers included financial burdens being too high for their patient populations. Financial incentives were studied, and it was found that they did not increase the rates of colonoscopy and only slightly improved the rate of fecal biomarker testing (Green et al.,2019). Many patients report that CRC screenings were not recommended, although providers state that the recommendation was given. Patients said that their provider was more likely to encourage other preventative screenings like pap smears and mammograms. Some providers were less likely to recommend fecal occult blood testing (FOBT). Patients also reported feeling like FOBT was not a suitable method of screening and thought that this type of screening was inaccurate (Wang et al., 2019).

Education for patients and providers proved to increase CRC screening rates (Spataro, Denicola & Kotler, 2017). One trial studied the effects of three different methods to teach individuals about CRC screenings by providing educational videos, these videos plus a phone call, and regular care and education. While the study concluded in October 2020, the results have yet to be released. Pending results are shown in Appendix B (Rawl, 2019).

Access to care provides an additional barrier to specialized healthcare in rural areas. Patients have a difficult time seeing specialists that are not readily available in rural areas, and the requirement to travel is not possible for many rural patients. Traveling specialists in this area do not statistically stay long-term.

Evidence-Based Practice: Verification of Chosen Option

This project implemented portions of the Colorectal Cancer Control Program (CRCCP) conducted through the CDC. This program has been utilized by 25 states and four tribal organizations (Joseph & DeGroff, 2019). It was intended to be utilized as a variation of all or some evidence-based interventions (EBIs). The EBIs include "client and provider reminders, provider assessment and feedback, reduction of structural barriers, and small media" (Joseph & DeGroff, 2019, Program Overview section, para. 4). In this clinic, the variation applied included client reminders, provider education and feedback, and small media as pamphlets (see Appendix C). The program began in 2004 and ended in 2015 but currently has a proposal with the Federal Register for modifications and reimplementation (Federal Register, 2020).

Theoretical Framework/Evidence-Based Practice Model

Prochaska and DiClemente's Transtheoretical Model is a theoretical framework that includes six stages of change that begin with an individual not being ready to make a change and navigates through the process that a person goes through as they become ready to change (LaMorte, 2019). This framework assumes the theory that individuals only change when they are ready to do so. This model includes strategies to help guide individuals to the next step in the process. The final goal is for individuals to continue the implied change and to not revert to previous stages in the process (LaMorte, 2019).

This DNP project utilized the Transtheoretical Model to assess whether patients and providers were open to changing their plan of care for CRC screening if screening was due and had not been performed or when patient referrals for screening were not discussed. This theory was openly accepted by most patients and all providers in the clinic to implement the use of CRC screening pocket guides to refer all patients who met the criteria for referral.

Goals, Objectives, and Expected Outcomes

The goals of this project are as follows:

1. To increase the incidence of colorectal cancer screenings referrals in individuals aged 50 to 75 years of age in this clinic by 50%;
2. To improve provider knowledge of current screening rates and guidelines reported by individual providers in the clinic by 50%;
3. To improve knowledge regarding different colorectal cancer screening methods in this clinic by 50%; and
4. To improve knowledge regarding the frequency of testing needed for different screening methods in this clinic by 50%.

The objectives of this project are as follows:

1. Implementation of an educational CRC screening session with all individuals who give consent that are between the ages of 50 and 75-years-old;
2. An in-service, educational session on CRC screenings for all providers in the clinic;
3. Discussion with all providers in the clinic and all patients within the age range regarding the different methods of CRC screenings; and

4. Discussion of the frequency of CRC screenings by type with all providers in the clinic and all patients within the age range.

The expected outcomes of this project are as follows:

1. A 50% increase in patients between age 50 and 75-years-old who are referred for any type of colorectal cancer screening tool that has visited the clinic in the last month post-implementation;
2. A 50% increase in provider's reported knowledge of the types of colorectal cancer screening options and current guidelines for CRC screening;
3. A 50% increase in provider reported knowledge of reimbursement strategies for preventative screening education provided during an office visit; and
4. A 50% improvement in colorectal cancer outcomes through an increase in colorectal cancer screening referrals in the clinic.

Project Design

A quantitative, quality improvement design approach was conducted to improve practice regarding colorectal cancer screening rates. This DNP project began with the education of all providers in the clinic on current evidence-based guidelines for CRC screening referrals, documentation, and education for patients through an in-service training session. The project leader then distributed pamphlets at Covington Healthcare, LLC to individuals who met the criteria and recommendations for colorectal cancer screening for one month during implementation. Individuals that were between the ages of 50 and 75-years-old could participate. Sex, race, religion, socioeconomic status, employment status, or risk category for CRC did not affect eligibility for participation. The researcher triaged patients at the clinic one and two days per week for one month

during implementation. During triage for their clinic visit, an initial explanation of the project was given, and consent was discussed for individuals who elected to participate (see Appendix D). After consent was completed, an educational component including a pamphlet of information was provided and discussed with all participants (see Appendix E). The last colorectal cancer screening date was documented by the researcher, in the electronic medical record; then a new referral order was sent for the appropriate CRC screening when indicated. For patients whose CRC screening was up-to-date, education and encouragement to follow guidelines and keeping their next CRC screening appointment were discussed. After completion, the billing code was entered for screening for colorectal cancer in the patient's chart. This data was then logged in the journal for the researcher's data collection (see Appendix F). This journal was stored in a locked cabinet, in a locked office, in the clinic where the researcher held the key and could access it during implementation.

Project Site and Population

The practice site for project completion was a rural health clinic serving patients from all socioeconomic backgrounds. Medicare and Medicaid patients, private insurance, and uninsured individuals all seek care in this Primary/Urgent Care clinic. In the small rural town with a population of fewer than five thousand people, where the clinic is located, there is a small community hospital and one Gastroenterologist in practice. Other facilities are over 30 miles away. The population to be addressed included individuals between the ages of 50 and 75-years-old. The researcher spent one to two days per week in the clinic for one month during implementation to recruit individuals and to implement it. During this time, the researcher assisted the clinic by

providing triage to all patients between 50 and 75-years-old. During the triage process, an introduction to the project was given. At that time, if the individual elected to participate, consent was explained and completed. After completing the consent, an educational pamphlet was provided, and the patient was educated on the information included. After this information was given, the researcher documented the triage findings, last colorectal cancer screening data, referral for a new colorectal cancer screening when applicable, and billing code for preventative screening education provided was documented.

Setting Facilitators and Barriers

The resources in the clinic where this project was conducted include Quest Diagnostics, one gastroenterologist, a community hospital with approximately forty-seven beds, Cologuard home test kits, and the ability to refer patients to larger cities in the surrounding area. Quest Diagnostics performs blood testing, including FIT, FIT fecal DNA, and gFOBT tests (Quest Diagnostics: Test Directory, 2020). Local Gastroenterologists and other surrounding Gastroenterologists perform colonoscopies and other endoscopic exams of the colon. Cologuard is an at-home test that is recommended more frequently at this clinic whenever patients refuse colonoscopy. This clinic's current referral system includes discussing preventative care screenings during primary care appointments. The provider then discusses colorectal cancer screening options and places a referral in the computer for the type of screening that was discussed with the patient. The only educational materials currently provided to patients are the instructions from a Cologuard referral if that method is selected for a screening or via a verbalized discussion with the provider and patient if another testing is selected. The gap in practice

occurs in this clinic because many individuals do not see a provider for primary care and only come in for urgent needs which can cause primary/preventative care needs to be overlooked.

Implementation Plan/Procedures

Implementation for this project began with evaluating charts of individuals between the ages of 50 and 75 years of age. This retroactive chart review assessed whether preventative colorectal cancer screening status was assessed at their last office visit. An in-service educational session was then provided for the two providers in the clinic (see Appendix G). The researcher then spent one to two days per week in the clinic for project implementation for one month. The researcher completed triage for all patients in the project population, and an explanation of the project was given during their triage to the clinic. If the individual elected to participate in the project, then consent was discussed and completed. Next, a pamphlet of information was provided to individuals who visited the clinic between the ages of 50 and 75-years-old to increase their knowledge and decrease their fears regarding CRC screening. The triage was then documented in the patient's chart along with their last colorectal cancer screening date, their new colorectal cancer screening referral when indicated, and billing code for preventative screening education.

Measurement Instruments

Measurement instruments included past medical records at Covington Healthcare, current medical records, referral tracking, and tracking of preventative education that was provided. These instruments were utilized throughout the process of the DNP project, beginning with project planning. During implementation, an educational pamphlet was

given. Upon completion, medical records and referral status were documented and journaled to collect data regarding screening referral rates during implementation.

Data Collection Procedures

An in-service educational session was conducted for the providers in the clinic before educational pamphlet delivery. For this in-service session, providers were given one continuing education (CE) credit hour. A pamphlet was then given to all patients in the target population during their triage to the clinic. The providers and researcher documented in the chart the preventative screening education provided, and type of referral that was given or when the next referral would be needed. No identifiable data was collected. HIPAA procedures were followed to ensure privacy and protection of data.

Data Analysis

The researcher retroactively reviewed charts for all individuals who visited the clinic in the two months before implementing the project. Data were identified and collected through journaling to include age, race, sex, insurance status, and colorectal screening status. Family medical history and personal medical history were collected. If pertinent data were found to include a personal history of any type of cancer, family history of cancer, prior abnormal findings during colonoscopy or FIT testing, and preexisting conditions to include Chron's disease or Irritable Bowel Syndrome (IBS), this was noted. This journal was used exclusively for the collection of data during this DNP project. Upon the completion of the evaluation of data, all records were destroyed.

Results

During implementation, the journal was kept in a locked desk drawer, inside a locked office where only the researcher had access. Implementation results included identifying areas for project improvement, areas of strength, and ways that this project can continue to be implemented in other urgent and primary care settings. Results were analyzed by Dr. Jason Cleveland using a Bayesian statistical model. The prior was set with alpha equal to one and beta equal to assuming one occurrence rate per month. This rate is indicated as the MAP for prior on Appendix H. After implementation, the posterior MAP almost doubled from 1.0 to 1.99. The P-value suggests that there is a 15.6% chance of three referrals happening per month after implementation. Limitations with this statistical data include the limited amount of data collected and the short duration of implementation. With more time, additional data could be analyzed to be more relevant. In the two months prior to implementation, there were three referrals for CRC screening and in the month of implementation, there were also three referrals for CRC screening.

Cost-Benefit Analysis/Budget

The cost associated with the implementation of this project included time and financial responsibilities. The researcher bore the cost of time, including planning, research, implementation, and analysis, to include six hundred and thirty hours. The nurse practitioners in the clinic bore the cost of time related to attending an in-service educational session held by the researcher. The time of screening patients for qualifying age between 50 to 75, providing an educational session, and distributing pamphlets to those identified individuals was also an expense of the researcher. All costs associated with this project were the sole responsibility of the researcher. These included printing

consents, pocket guides, educational materials, and pamphlets, including ink, paper, laminator, and cutting supplies (see Appendix I).

Timeline

This project's timeline spanned six hundred and thirty hours from October of 2020 until the present. The project planning portion was from October of 2020 through December of 2020, and included submitting the project proposal, completing the project proposal application, and submitting it to the IRB committee. In January of 2021, IRB approval was obtained, and data collection began, including retroactive chart reviews and a provider in-service training session. Implementation began at the end of January and continued into late February of 2021 with the distribution of educational pamphlets to patients and an educational session. Analysis was conducted in April of 2021. The interpretation of outcomes was completed in May and June of 2021 (see Appendix J).

Ethical Considerations/Protection of Human Subjects

The Jacksonville State University Institutional Review Board (IRB) approval was obtained before initiating this DNP project (See Appendix K). The participants participated in this project on a voluntary basis and signed informed consent. HIPPA privacy rights were respected throughout the project. All data were de-identified and kept in a locked desk inside of a locked office. The only person with access to the data collected in this journal was the researcher conducting the project. Participants could withdraw from the project at any time without penalty. There were no emotional risks anticipated; however, if this process were to trigger negative memories or emotions, then a referral would have been given for counseling services. The risks of this project were

the same as the risks associated with the usual care provided for colorectal cancer screening, education, and referral.

Conclusion

Colorectal cancer rates can be reduced with the identification of and removal of precancerous polyps. This disease is more prevalent the older a person gets. By receiving a colorectal cancer screening via stool testing, endoscopic testing, or computed tomography, the rate of colorectal cancer can be significantly reduced. The researcher conducted a quality improvement educational project to increase the providers' and patients' knowledge in this rural Alabama primary and urgent care clinic. Upon completion, data were collected to analyze the effectiveness of the modified CRCCP provided.

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APPENDIX A

Provider Informed Consent

Informed Consent Form for Increasing Colorectal Cancer Screening Rates Through Education

You are being invited to participate in a research project conducted by Kayla Metz, who is a graduate student at Jacksonville State University.

You are invited to participate in a research study about increasing colorectal cancer screening rates through education.

You will be asked to attend a 1-hour in-service training session where you will be provided a pocket guide and pamphlet about the different types of colorectal cancer screenings and how often these exams may be needed.

No potential risk is foreseeable. We expect the project to benefit you in these ways; give you a better understanding of colorectal cancer screenings, how often your patients need a colorectal cancer screening, and ways to be reimbursed for providing this education to your patients. You will not receive any compensation for your participation.

If you have decided to participate in this project, please understand that your participation is voluntary, and that you have the right to withdraw your consent or discontinue participation at any time with no penalty. To withdraw from the program, just notify Kayla Metz by email at kmetz@stu.jsu.edu that you are withdrawing. You also have the right to refuse to answer any question(s) for any reason with no penalty.

In addition, your individual privacy will be maintained in all publications or presentations resulting from this study. No names or identifiers will be utilized in the final project.

If you have any questions regarding this project, you may contact the researcher at kmetz@stu.jsu.edu. If you have questions regarding your rights as a research participant or any concerns regarding this project, you may contact my advisor/project chair, Dr. Donna Dunn, at dcdunn@jsu.edu

A copy of this consent form will be provided to you.

I understand the above information and voluntarily consent to participate in the research. I further attest that I am at least 19 years of age.

Participant/Provider Signature:
_____Date:_____

IRB Approval Number: _____ IRB Expiration :_____

APPENDIX B

Evidence Table

Condition	Study Design	Author, Year	N	Statistically Significant?	Quality of Study (Jadad score)- I replaced with Strength of Evidence Hierarchy	Magnitude of Benefit	Absolute Risk Reduction	Number Needed to Treat	Comments
1. Barriers of Colorectal Cancer Screening	Systematic Review	Wang, Roy, Kim, Farazi, Siahpush, & Su 2019	Unk	Yes	Level 1	Large	NA	NA	27 articles reviewed across Medline, CINAHL, Embase, & Scopus regarding barriers to colorectal cancer in rural USA

2. Barriers to Colorectal Cancer Screening	Cluster Randomized Trial	Muthukrishnan, Arnold, & James 2019	483	Yes	Level 2	Medium- does not increase screening rates just identifies barriers	NA	NA	Identifies self-reported barriers including cost, uninsured, and fear
3. Colorectal Cancer-Increasing Screening Rates through education	Randomized Trial	Spataro, Denicola, & Kotler 2017	164	Yes	Level 2	Large- Absolute increase 14%, relative increase 31.5%	NA	NA	Identifies barrier and provides education regarding FIT testing and CRC screenings
4. Colorectal Cancer Interventions to increase screening	Randomized Clinical Trial	Rawl, 2017 Indiana University, Patient-Centered Outcomes Research Institute, Ohio State University	750	Yes	Level 2	Medium- 3 methods compared	P	P	Estimated Completion Date 10/31/2020
5. Financial Incentives to Increase Colorectal	Randomized Clinical Trial	Green, Anderson, Cook, et al 2019	838	Yes	Level 2	Medium	NA	NA	Financial incentives significantl y increased participatio

Cancer Screenings									n in FIT but not CRC

APPENDIX C

Colorectal Cancer Educational Pamphlet (front)

WHICH TEST IS RIGHT FOR YOU?

There is no single "best test" for any person. Each test has advantages and disadvantages. Talk to your doctor about which test or tests are right for you, and how often you should be screened.

RESOURCES

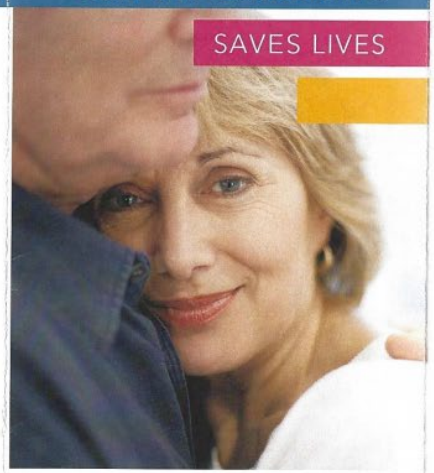
For more information:
Visit **www.cdc.gov/screenforlife**
Call 1-800-CDC-INFO (1-800-232-4636)
For TTY, call 1-888-232-6348

Screen for life
National Colorectal Cancer Action Campaign

CDC
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CDC Publication #99-6948, Revised April 2017

COLORECTAL CANCER SCREENING SAVES LIVES



Colorectal cancer is the second leading cancer killer—but it doesn't have to be.

Screen for life
National Colorectal Cancer Action Campaign

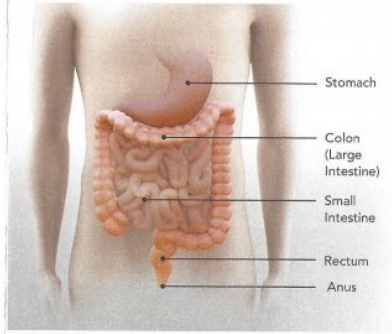
BOTH MEN AND WOMEN ARE AT RISK FOR COLORECTAL CANCER.

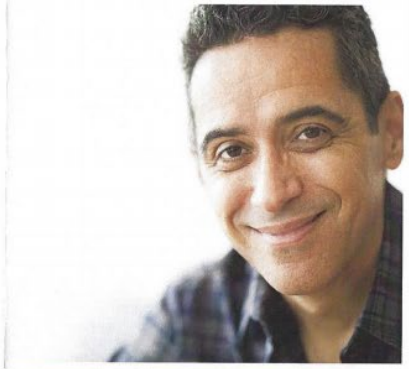
SCREENING SAVES LIVES

Among cancers that affect both men and women, colorectal cancer is the 2nd leading cancer killer in the U.S. But it doesn't have to be. There is strong scientific evidence that screening for colorectal cancer beginning at age 50 saves lives!

WHAT IS COLORECTAL CANCER?

Cancer is a disease in which cells in the body grow out of control. Cancer is always named for the part of the body where it starts, even if it spreads to other parts of the body later. Colorectal cancer is cancer that occurs in the colon or rectum. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.





If you're 50 or older, getting a colorectal cancer screening test could save your life.

HERE'S HOW:

- Colorectal cancer usually starts from precancerous polyps (abnormal growths) in the colon or rectum. A polyp is a growth that shouldn't be there.
- Over time, some polyps can turn into cancer.
- Screening tests can find precancerous polyps, so they can be removed before they turn into cancer.
- Screening tests can also find colorectal cancer early, when treatment works best.

Colorectal Cancer Educational Pamphlet (back)

WHO GETS COLORECTAL CANCER?

Colorectal cancer occurs most often in people aged 50 years or older. The risk increases with age. Both men and women can get colorectal cancer. If you are 50 or older, talk to your doctor about getting screened.

AM I AT INCREASED RISK?

Your risk for colorectal cancer may be higher than average if:

- You or a close relative have had colorectal polyps or colorectal cancer.
- You have inflammatory bowel disease, Crohn's disease, or ulcerative colitis.
- You have a genetic syndrome such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colorectal cancer.

If you think you may be at increased risk for colorectal cancer, speak with your doctor about when to start screening, which test is right for you, and how often you should be tested.

COLORECTAL CANCER IS THE SECOND LEADING CANCER KILLER — BUT IT DOESN'T HAVE TO BE.

WHAT ARE THE SYMPTOMS OF COLORECTAL CANCER?

People who have polyps or colorectal cancer don't always have symptoms, especially at first. Someone could have polyps or colorectal cancer and not know it.

If there are symptoms, they may include:

- Blood in or on your stool (bowel movement).
- Pains, aches, or cramps in your stomach that don't go away.
- Losing weight and you don't know why.

If you have any of these symptoms, talk to your doctor. They may be caused by something other than cancer. However, the only way to know what is causing them is to see your doctor.

FREE OR LOW-COST SCREENING

Colorectal cancer screening tests may be covered by your health insurance policy without a deductible or co-pay. Check with your plan to find out which tests are covered for you.

Where feasible, some states in CDC's Colorectal Cancer Control Program provide free or low-cost screenings to those who are eligible. To learn more, visit **www.cdc.gov/cancer/crccp/contact.htm** or call **1-800-CDC-INFO** (1-800-232-4636).

TYPES OF SCREENING TESTS

The U.S. Preventive Services Task Force recommends that adults aged 50–75 be screened for colorectal cancer. The decision to be screened after age 75 should be made on an individual basis. If you are aged 76-85, ask your doctor if you should be screened.

Several different screening tests can be used to find polyps or colorectal cancer. They include:

Stool Tests

There are two types of FOBT tests. ***Guaiac-based Fecal Occult Blood Test (gFOBT)*** uses the chemical guaiac to detect blood in stool, while ***Fecal Immunochemical Test (FIT)*** uses antibodies to detect blood in the stool. You receive a test kit from your health care provider. At home, you use a stick or brush to obtain a small amount of stool. You return the test to the doctor or a lab, where stool samples are checked for blood.

The third type of stool test is the ***FIT-DNA test (or Stool DNA test)*** which combines the FIT with a test to detect altered DNA in stool. You collect an entire bowel movement and send it to a lab to be checked for cancer cells.

How often: gFOBT once a year. FIT once a year. FIT-DNA test once every year or three years.

Flexible Sigmoidoscopy (Flex Sig)

The doctor puts a short, thin, flexible, lighted tube into your rectum, and checks for polyps or cancer inside the rectum and lower third of the colon.

How often: Every five years, or every 10 years with FIT every year.

Colonoscopy

Similar to flexible sigmoidoscopy, except the doctor uses a longer, thin, flexible, lighted tube to check for polyps or cancer inside the rectum and the entire colon. During the test, the doctor can find and remove most polyps and some cancers. Colonoscopy also is used as a follow-up test if anything unusual is found during one of the other screening tests.

How often: Every 10 years.

CT Colonography (Virtual Colonoscopy)

Computed tomography (CT) colonography, also called a virtual colonoscopy, uses X-rays and computers to produce images of the entire colon. The images are displayed on a computer screen for the doctor to analyze.

How often: Every five years.

APPENDIX D

Patient Informed Consent

Informed Consent Form for Increasing Colorectal Cancer Screening Rates Through Education

You are being invited to participate in a research project conducted by Kayla Metz, who is a graduate student at Jacksonville State University.

You are invited to participate in a research study about increasing colorectal cancer screening rates through education.

You will be asked to review a pamphlet about the different types of colorectal cancer screenings and how often these exams may be needed.

No potential risk is foreseeable. We expect the project to benefit you in these ways; give you a better understanding of colorectal cancer screenings, how often you need a colorectal cancer screening, and what the screenings are looking for. You will not receive any compensation for your participation.

If you have decided to participate in this project, please understand that your participation is voluntary, and that you have the right to withdraw your consent or discontinue participation at any time with no penalty. To withdraw from the program, just notify Kayla Metz by email at kmetz@stu.jsu.edu or Covington Healthcare at 334-283-2291 that you are withdrawing. You also have the right to refuse to answer any question(s) for any reason with no penalty.

In addition, your individual privacy will be maintained in all publications or presentations resulting from this study. No names or identifiers will be utilized in the final project. You will be given a number to maintain anonymity.

If you have any questions regarding this project, you may contact the researcher at kmetz@stu.jsu.edu. If you have questions regarding your rights as a research participant or any concerns regarding this project, you may contact my advisor/project chair, Dr. Donna Dunn, at dcdunn@jsu.edu

A copy of this consent form will be provided to you.

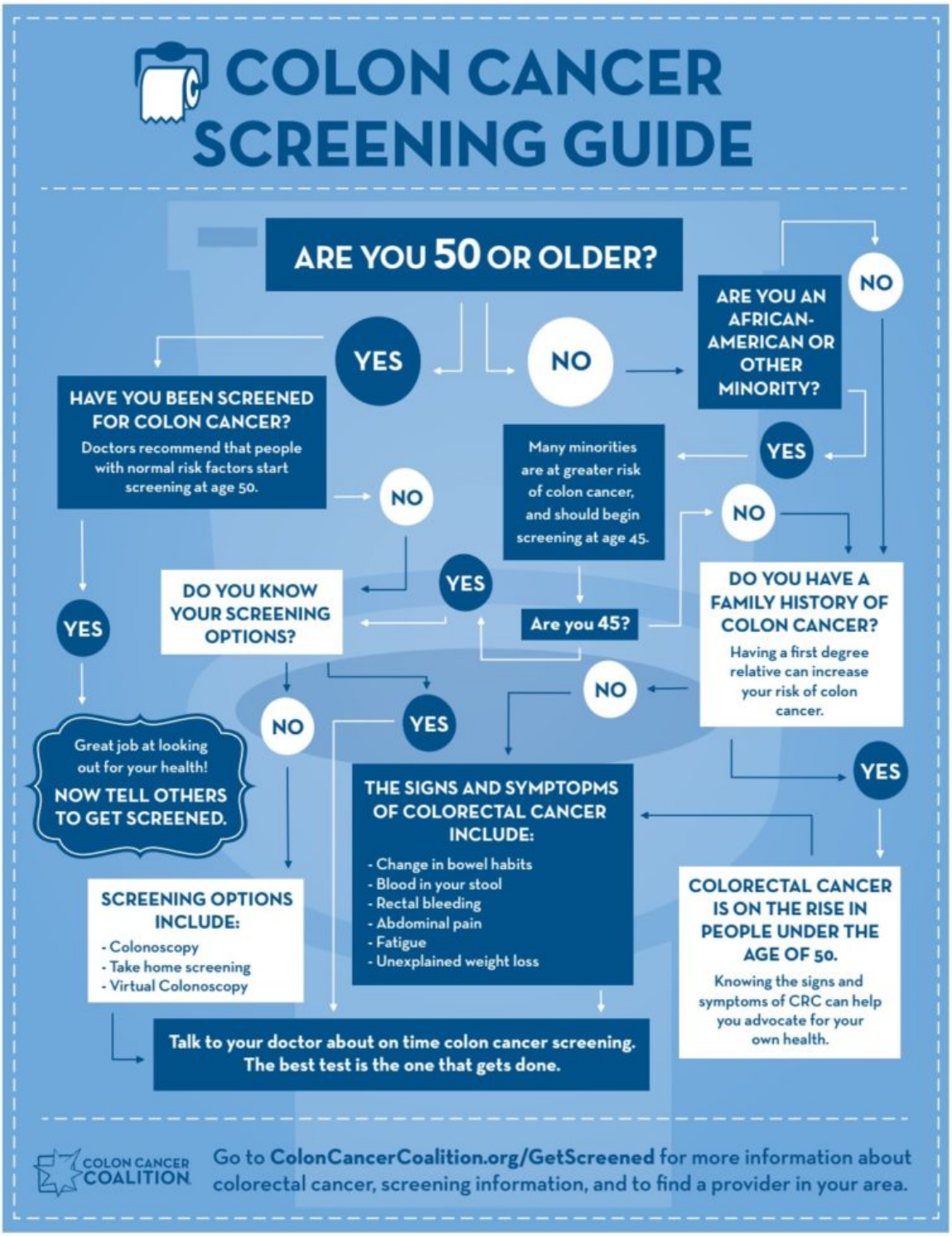
I understand the above information and voluntarily consent to participate in the research. I further attest that I am at least 50 years of age.

Participant Signature: _____Date:_____

IRB Approval Number: _____ IRB Expiration :_____

APPENDIX E

Colorectal Cancer Screening Guide- Image



(Colon Cancer Coalition, 2020)

APPENDIX F

Data Collection Tool

Consent x2	Age (50-75)	Gender	Race	Insurance	Last CRC Screening type & date	Family Hx	Type of Screening Today	Charted	Notes

APPENDIX G

Outline for Provider In-Service Educational Session

Increasing Colorectal Cancer Screening Rates Through Education

Kayla D. Metz

Jacksonville State University

Department of Nursing

Outline of Provider Education for Increasing Colorectal Cancer Screening Rates Through Education

1-hour In-Service Training given by Kayla Metz, CRNP a JSU DNP Student

- Introduction of Researcher and Topic (Evidence-Based Practice Guidelines) — 10 minutes
- Reviewal of American Society of Colon & Rectal Surgeons handout (See Attached) — 15 minutes
- Reviewal of Informational Pamphlet that will be provided to all patients between ages 50 and 75 years old — 10 minutes
- Pocket Guide's given to providers and education given on how to use the information provided — 10 minutes
- Reimbursement Strategies and Documentation Training — 10 minutes
- Questions and Answers — 5 minutes

_____ _____

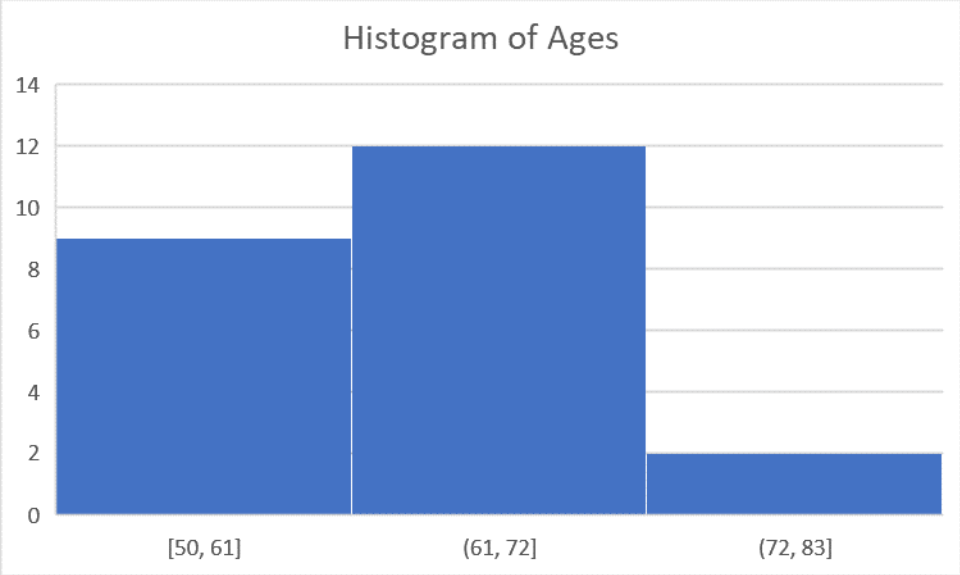
Sarah Covington, CRNP Date

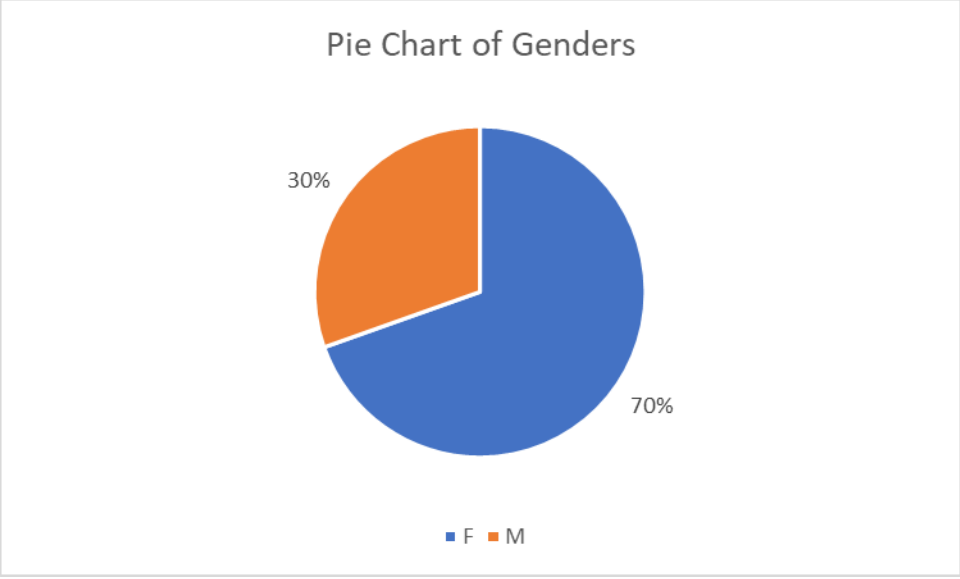
_____ _____

Sekeita Clausell, CRNP Date

APPENDIX H

Statistical Anaylsis Conducted by: Dr. Jason Cleveland, Ph.D, Jacksonville State University





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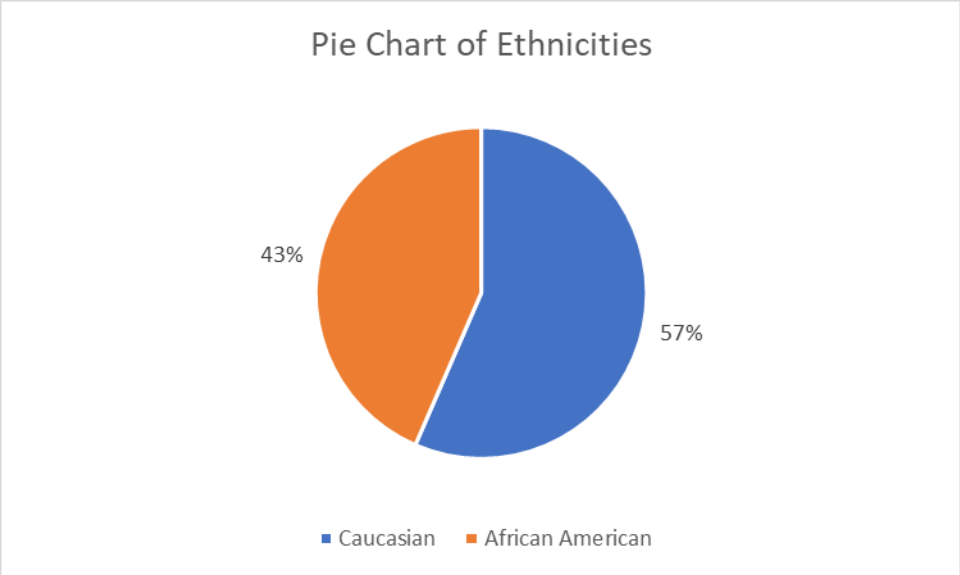

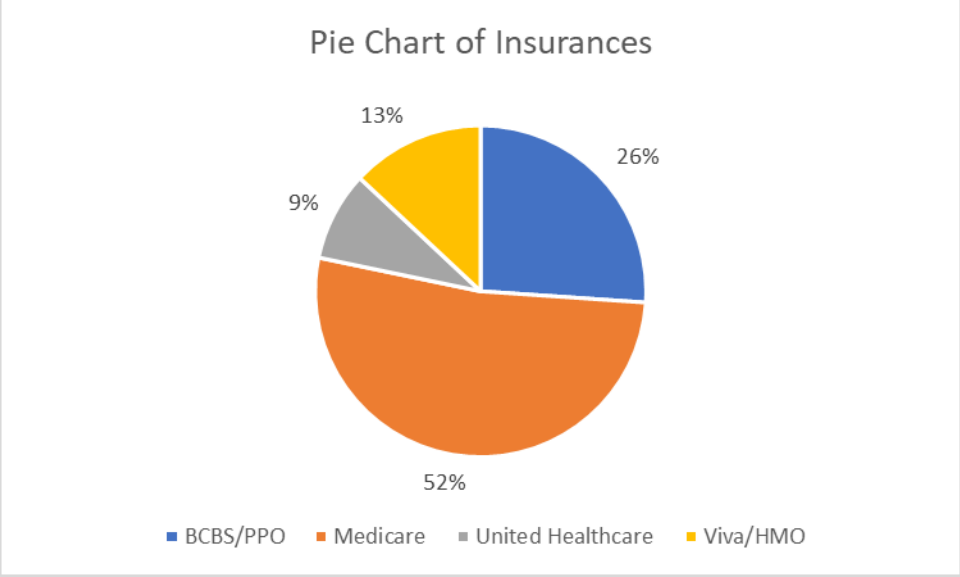

APPENDIX I

Provider Pocket Guide (front and back)

Colorectal Cancer (CRC) Screening and Post-Polypectomy Surveillance

Average Risk: *Begin at age 50 (age 45 for African Americans per USMSTF, or at age 45 for all av. risk per ACS) with:*

- Yearly FIT or High Sensitivity guaiac FOBT* **or**
- Flexible Sigmoidoscopy every 5 years, OR every 10 years with FIT / HS-gFOBT* yearly **or**
- Colonoscopy every 10 years, if normal exam or distal small hyperplastic polyps only **or**
- Stool DNA* (Cologuard) every 3 years **or**
- CTC* (virtual colonoscopy) every 5 years

If the test is positive, a colonoscopy should be done.

In-office DRE is not appropriate for screening

Increased Risk*: Family History CRC or Polyps*

- One 1st degree relative with CRC or advanced adenoma# >60 years **or**
- Two 2nd degree relatives at any age with CRC **or** advanced adenoma#

Colonoscopy begins age 40, then every 5-10 yrs.

- One 1st degree relative with CRC or advanced adenoma# <60 years **or**
- Two 1st degree relatives at any age with CRC **or** advanced adenoma#

Colonoscopy begins age 40 OR 10 years before the age of the youngest relative at time of diagnosis, *whichever comes first,* and then every 5 years or as per findings.

ACG now recommends that family history of polyps be counted as equal to family history of CRC when family members had advanced adenoma: # >1cm, villous, high grade dysplasia (HGD).

New Hampshire Colorectal Cancer Screening Program
(603) 653-3702

Increased Risk: Personal History of Polyps

- 1-2 small tubular adenomas: repeat in 5-10 years based on the specific findings
- 3 to<10 adenomas/advanced adenomas completely resected, repeat in 3 yrs. If normal, repeat in 5 yrs.
- Large sessile polyp removed piecemeal or w/ HGD:
  - Repeat colonoscopy in 3 months, if normal repeat colo in 1 yr., if normal, repeat colo in 3 years
  - If residual polyp, remove and repeat colo in 3-6 mos.
  - If still residual polyp, consider surgical resection
- Sessile serrated polyps (SSP): Follow surveillance guidelines as for adenoma, if SSP with dysplasia follow as if advanced adenoma, close follow-up if incomplete resection
- > 10 adenomas, repeat colonoscopy in 1 year. Consider underlying familial syndrome.

Increased Risk: Personal History of Colon Cancer

Following curative resection, colonoscopy 1 year post-op, if normal, repeat colo in 3 years, then 5 years.
Rectal cancer: Follow up per surgeon

Inadequate Prep: Semi-solid stool, inadequate to detect polyps > 5mm, repeat colo with extended prep as soon as feasible. **Other Prep Limitations:** As per endoscopist.

HNPCC: Genetic counseling and possible testing should be offered to patients with suggestive family history. If known HNPCC, colonoscopy every 1-2 years beginning around age 20, then yearly after age 40.

Screening/surv colos (incl. polypectomies) have NO cost-sharing to pt, for many insurances. Pt should ask insurer pre-colo. *1/2020*

APPENDIX J

DNP Project Timeline

Task		October	November	December	January	February	March	April	May	June	July
Project Planning	Submit Project Proposal	X									
	Proposal Approval		X								
	Submit IRB Application			X							
	IRB Approval			X	X						
Data Collection	Retroactive Chart Reviews				X						
Implementation	In-Service Training Day for Nurse Practitioners				X						
	Educational Pamphlets Disbursed to Patients					X	X				
Analysis	Chart Reviews, Analysis of Data							X			
Interpretation of Outcomes	Interpretation of Outcomes								X	X	

APPENDIX K

IRB Approval Jacksonville State University

JSU | OFFICE OF THE VICE PROVOST
JACKSONVILLE STATE UNIVERSITY

December 1, 2020

Dear Kayla Metz:

Your proposal submitted for review by the Human Participants Review Protocol for the project titled: "Increasing Colorectal Cancer Screening Rates Through Education" has been approved as exempt. If the project is still in process one year from now, you are asked to provide the IRB with a renewal application and a report on the progress of the research project.

Sincerely,

Joe Walsh
Executive Secretary, IRB

JW/dh

201 Bibb Graves Hall
700 Pelham Road North
Jacksonville, AL 36265-1602
P. 256.782.5284
P. 800.231.5291
F. 256.782.5541
ejwalsh@jsu.edu
www.jsu.edu