

Increasing Hepatitis C Screening in Primary Care

Henry L Mascarenhas

College of Nursing, East Carolina University

Doctor of Nursing Practice

Dr. Jan Tillman

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Notes from the Author

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Dedication

I dedicate this to my wife Debra, our children Ashley, Parker and Bryson, whose sacrifices to make my dream come true are too many to count, to my late parents, late Ms. Barbara Whaley (Meema) and late Mr. Rodolph Whaley, Jr, to my family here in US, Canada and India, their prayers have been an oasis of hope during this journey.

Abstract

Infection with Hepatitis C Virus (HCV) is a grave health concern it is also a major cause of liver related morbidity and mortality in the United States (US) and globally. The incidence of HCV infection is increasing rapidly. The United States Preventive Services Task Force recommends one time screening for HCV infection in adults aged 18 to 79 years. People living with HCV are often unaware that they have the infection and are at risk for liver disease and cancer of the liver. Early screening is important to increase diagnosis and treatment of HCV and control the spread of this disease. A quality improvement project was initiated to improve the rates of HCV screening in a rural primary care clinic in eastern North Carolina. Providers and staff were presented with a HCV infection education, ongoing reminders, and feedback. Screening rates were far greater than the set goal of 75%. Replication of this project may benefit the patient population in other clinics.

Keywords: hepatitis C; hepatitis C virus; HCV; quality improvement

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Section I. Introduction

Background

According to The Centers for Disease Control (CDC) an estimated 2.4 million people were living with chronic Hepatitis C Virus (HCV) in the United States (US) in 2016 (Centers for Disease Control and Prevention [CDC] (2020). A total of 3,621 cases of acute hepatitis C were reported to CDC in 2018. HCV is associated with liver cancer. Most people infected with HCV are unaware of the infection, The CDC (2020) recommends one time HCV testing for people 18 years and older. The United States Preventive Services Task Force (USPSTF) now recommends one-time HCV screening of all adults aged 18-79 years old as opposed to previously screening adults born between 1945 and 1965 and those at high risk (USPSTF, 2020). Alzaharani et al. 2018, in their study of HCV screening test compliance in a primary care practice found, despite provider education, only 33% of providers adhered with HCV screening. It is, therefore, paramount to screen this birth cohort for HCV to prevent the spread of infection and offer curable treatment options to those infected with HCV.

Organizational Needs Statement

The project site's need of increased screening aligns with the Healthy People 2030 goal of reducing the incidence of HCV by 1.44 cases per 100,000 population from 3.33 deaths per 100,000 population (Office of Disease Prevention and Health Promotion [ODPHP], n.d.).

The medical director, providers and the staff in the primary care clinic identified a need to screen all adults aged 18 to 79 years old. Staff believe time constraint, lack of funding and knowledge deficits surrounding USPSTF, and CDC guidelines contribute to ineffective screening in this patient population. With the support of a grant and that of local gastroenterologists, the organization strived to increase HCV screening at the clinic

Problem Statement

An estimated 2.4 million people are living with HCV infection in the US, yet it is believed that the actual number may be as low as 2.5 million and may be as high as 4.7 million (Center for Disease Control and Prevention[CDC], 2016). Many people living with HCV infection are not aware that they have the virus and are at risk for liver disease, cancer of the liver, and transmitting the virus to others unknowingly. HCV is a leading cause of liver-related deaths (Millman, Nelson & Vellozzi, 2018). It is paramount to prevent the spread of HCV and the health complications it poses (Corcorran & Spach, 2021).

Purpose Statement

The objective of the DNP Quality Improvement project is to increase the HCV screening rates in the primary care clinic through improved provider compliance with USPSTF recommendation by recognizing and mitigating barriers to HCV screening in the selected patient population at the primary care clinic. This project is aimed to improved provider/staff knowledge of recommendations and compliance with CDC and USPSTF guidelines.

Section II. Evidence

Literature Review

Section II presents a review and synthesis of the literature on improving HCV screening rates in the 18-79 years old population in rural primary clinics. The review of the literature included guidelines and articles identified through electronic searches including the Centers for Disease Control and Prevention (CDC), the US Preventive Services Task Force (USPSTF), the World Health Organization (WHO), CINAHL, and PubMed as data base. The following key words and search terms were used: *Chronic Hepatitis C, Hepatitis C screening, Hepatitis C virus, Hepatitis C genotypes, Improving Hepatitis C screening in primary care clinics, Hepatitis C in pregnancy, Hepatitis C treatment and management*. Studies included qualitative, quantitative, or mixed methods as well as systematic reviews.

Current State of Knowledge

The USPSTF (2020) recommends one-time screening for HCV infection in all adults 18-79 years of age. The recommendations of the task force are based on rigorous review of peer reviewed evidence to help assist patients and primary care clinicians to make the right choice of preventive service.

The WHO plays an important role in screening and treating communicable diseases through its effective global campaigns. Viral Hepatitis is a global health challenge comparable to communicable diseases such as malaria, tuberculosis, and human immunodeficiency virus (HIV). In 2016 WHO adopted “a goal of eliminating viral Hepatitis as a major public health threat by 2030” (WHO, 2019). WHO’s goal is similar to the goal in the past to eradicate smallpox, which was deemed a success in 1980 largely due to the immunization campaign lead by WHO (WHO, 2019).

The CDC protects American from diseases reaching our borders by helping other countries detect and control outbreaks in their own countries. The CDC (2020) recommends one-time HCV screening of adults 18 years and older.

Balise et al. (2017) noted reasons for low rates of HCV screening in one free sexually transmitted Diseases (STD) clinic that served minority population, including, lack of education regarding HCV screening, i.e., transmission and morality that prevents availing appropriate screening. Lack of access to health care resources for vulnerable population such as racial and ethnic minorities, intravenous (IV) drug users, and immigrant populations, stigma associated with screening exams, cost of screening tests, provider reluctance to talk to their patients their patients about IV drug use and sexual practices, and provider knowledge deficit regarding prevalence of HCV infection and screening guidelines were noted. Mitigating these barriers can save lives, as the risk of liver cancer can be reduced by 70% if HCV screening is implemented and the disease is treated, as HCV is a curable disease (Balise et al., 2017)

Harrigan et al. (2016) concluded that the HCV genotype 1a epidemic grew rapidly in North America between 1940 and 1960 and declined during early 1990's. The short period of decline in rates was followed by small increases in rates in the 1990's and 2000's. The authors suggested that the rapid increase in the HCV genotype 1a epidemic between 1940 and 1960 may have been the result of an increase in medical procedures following World War II, compounded by contaminated equipment.

Current Approaches to Solving Population Problem(s)

Best practice advisories (BPA) are pop-ups or electronic medical record (EMR) alerts when a patient's chart is accessed. They are useful in improving patient care and outcomes (Krasuki & Riaz, 2017). Implementing EMR alerts to remind providers has been proven

effective in increasing screening rates. Using EMR alerts in one primary care setting led to increased HCV screening rates from 30% to 55% (Al-Hihi et al., 2017). In addition to the EMR alerts, Masaouel and Sidlow (2015) found triggering a test order for identified patients at the time of office encounter improved screening rates by 254%. With numerous alerts in the electronic medical system, clinicians can become desensitized to alerts and miss an opportunity to order the test (Agency for Healthcare and Quality [AHRQ], 2019).

Evidence to Support the Intervention

This busy rural primary health care clinic is run by two nurse practitioner and two part-time physician assistants. The clinic has a skeletal staff support, rendering patient care time at a premium. An EMR alert and test orders triggered at office encounter for identified patients may result in increasing rates of screening in a busy practice (Masouel & Sidlow, 2015).

Evidence-Based Practice Framework

Identification of the Framework

The development of the Health Belief Model (HBM) took place in 1950, by social scientists at the US Public Health Service to understand people's reluctance to screening test and disease prevention measures. There are six constructs of HBM: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cut to action and self-efficacy (LaMotte, 2019).

The construct of the HBM will be applied to detect the disease early in its progression, improve patient, family, staff, and provider knowledge. Improve provider compliance to HCV screening guidelines to increase the rate of screening in the primary care clinic.

Ethical Consideration & Protection of Human Subjects

This rural health primary care clinic received a grant for HCV screening and linking HCV positive patients to hepatologists for care. Medicare covers the cost of one-time screening test for all eligible patients. There is no potential harm to the patients.

The medical director of this primary care clinic is actively involved in screening and treating the patients with HCV in the clinic. The online Collaborative Institutional Training Institute course was completed.

Section III. Project Design

Project Site and Population

Description of the Setting

The setting for this QI project is a primary care clinic located in a rural area in eastern North Carolina. The primary care clinic is operated by a nonprofit organization that provides health care to a diverse patient population living in the community

Description of the Population

The population of the city is approximately 55,000 with a diverse population of 63% Black or African American, 28.85% white, and 3.91% Latino. The median age of population is 37.8, median household income is \$37,607 and poverty rate is 22.4%. The city's population is fortunate that 88% of residents have health care.

Project Team

The project team consisted of the following stakeholders: project lead (a Doctor of Nursing Practice Student), faculty mentor, and the site champion. Project lead was responsible for coordinating and implementing the project. Faculty lead advised and guided in the development and implementation of the project. The site champion who is a doctoral prepared family nurse practitioner was instrumental in guiding the strategic planning meetings.

Project Goals and Outcome Measures

The project site does not have an Institutional Review Board (IRB). Permission of East Carolina University IRB was sought for the approval of tis QI project. The project was deemed QI by the University and Medical Center Institutional Review Board, requiring no further IRB action.

The initial screening rate for HCV at this primary care clinic was 20%. The goal of this project was to improve HCV screening rates in the primary care clinic by 75%. The process was collecting data for the number of patients screened daily through daily reports. The daily reports were tabulated weekly and analysis of the weekly accrual of patient screenings were shared with the providers and clinic staff, with changes in the process when necessary.

Description of the Methods and Measurement

The daily and weekly patient accrual data sheets included screening dates, provider identification codes, ICD-10 and CPT codes. Daily and weekly data was gathered and tabulated to determine the number of HCV screening tests that were ordered for the eligible patient population. Meetings were held with the site champion and clinic staff every two weeks to assess progress of the project and to trouble shoot problems.

Discussion of the Data Collection Process

Visits to project site took place at least three times a week. One of the staff from the information technology department posted the daily screening data to a spread sheet maintained by the quality improvement department. The spread sheet was readily available for tabulation. The data was password protected and available to the team members who had the password.

Implementation Plan

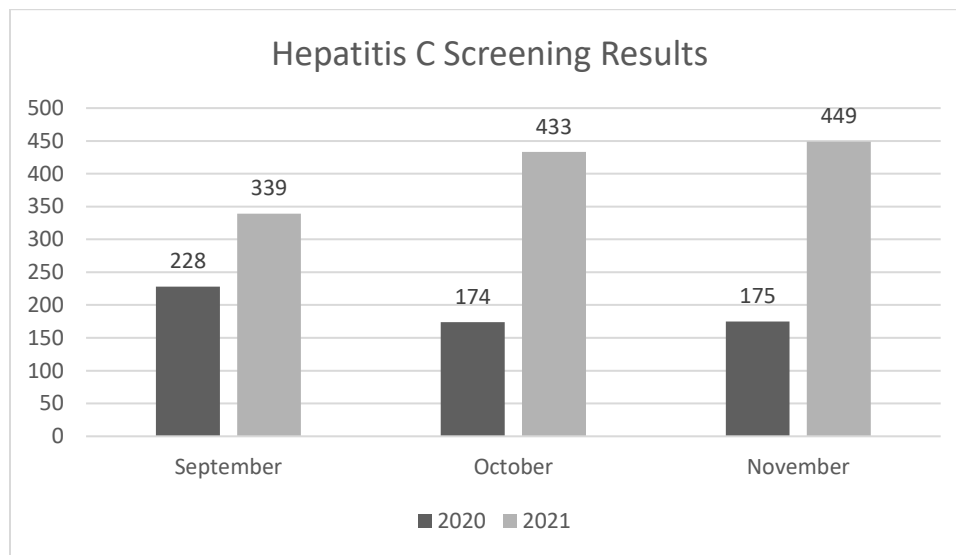
A Pre-Implementation planning meeting was held with the medical director and the site champion of September 8, 2021. A strengths and weaknesses, opportunities, and threats (SWOT) analysis revealed organizational buy-in, a full provider staff, and an in-house laboratory for specimen acquisition. Weaknesses that were observed were additional time that was required for specimen acquisition. Opportunities included improved detection of HCV in its early stages and linkage to treatment within the organization. No significant threats were identified.

Timeline

The QI project was implemented on September 8, 2021, for a period of 12 weeks. EMR alerts were put in place by the information technology (IT) department, alert sticky notes were placed on patient visit encounters to alert the providers. A 30-minute lunch and learn in-service was provided to the team. The QI project was introduced and shared information included the early detection of HCV infection as recommended by the USPSTF and the coding for the laboratory and clinic visits were presented.

Section IV. Results and Findings

Results



An increase of 112% in screening rates for 2021 compared to 2020

Outcomes Data

The pre-implementation screening rate for HCV in the primary care clinic was 20%. A goal to increase the screening rate by 75% was set for this QI project, however there was an increase in screening of 112% when data were analyzed. Early detection may prompt early treatment and result in prevention of loss of lives and reduce health care cost to the nation.

Discussion of Major Findings

There was no provider or staff turnover during the twelve-week period. The team demonstrated enthusiasm and commitment in keeping up with daily screenings. The information technology and the quality department provided ongoing support. The inhouse laboratory played a major role in specimen collection and made it convenient for participants to have blood drawn at the project site. The cumulative screening rate at the end of the twelve-week period was 112%.

Section V. Interpretation and Implications

Project Costs

The organization identified participants who were either uninsured or underinsured and funded screening for those patients through a grant they had secured to increase HCV screening. An education session was provided for the team during a lunch break so as not to interrupt patient care. The cost of refreshments at the education session was \$55.00.

Resource Management

The expected outcome for this QI project was to improve the screening rates by 75% or higher. Ongoing data reflected this goal was achieved. Weekly PDSA and Driver diagram were utilized for outcome measurements and feedback to and from the team. Data was gathered at the end of every week and was shared with the providers. Data was stored on a data collection tool without any identifying patient information. The tool was secured on a password protected laptop that belonged to the organization and was placed at the clinic under lock and key. Data was also stored in a password protected University Cloud Drive. After the completion of the project, the data was deleted entirely.

Implications of the Findings

Improved screening rates demonstrated that the interventions put in place worked. This is a significant achievement for the primary care clinic.

Implications for Patients

Objective Hepatitis C-IID-12 of Healthy people 2030 proposes to reduce the rate of acute Hepatitis. Increases in screening provides diagnosis of HCV in early stages and can result in cure, prevent long term illness and improve quality of life for patients.

Implications for Nursing Practice

Essential I: Scientific underpinnings for practice. There is a great need for this project at this organization. Applying science and theory through a DNP project can result in reducing the lifelong complications of HCV infection.

Essential II: Organization and systems Leadership for quality improvement and systems thinking. The organization has a robust quality improvement department. A project such as this has the potential to pave way for other quality improvement initiatives.

Essential III: Clinical scholarship and analytical methods for EBP: This DNP project exemplified essential III in the application of QI to improve population care.

Essential IV: Information systems/technology and patient care technology for the improvement and transformation of healthcare. This organization has a highly efficient information systems department. Utilization of EMR system has been very helpful in collecting and analyzing data to determine outcome measures. EMR also has been helpful in this organization in alerting providers to screen eligible patients.

Essential V: Healthcare policy for advocacy in healthcare. Though this organization had a policy for screening HCV infection in eligible patients, it lacked a systematic approach. This DNP project provided the planning, implementation, and evaluation of the QI initiative and can serve as a model for other QI initiatives and policy implementation.

Essential VI: interpersonal collaboration for improving patient and population health outcomes: Planning and Implementation of this project was seamless due to the exceptional leadership of the medical director and commitment to care by the providers

Essential VII: Clinical prevention and population health for improving the nation's health: The focus of this DNP project in this rural primary health care clinic is to diagnose early, prevent the spread of infection and potentiate possible cure for the disease.

Essential VIII: Advanced nursing practice: This organization has more than one clinic serving the rural patient population. This QI project can be replicated to their other clinics.

Impact for Healthcare System(s)

Objective Hepatitis C-IID-12 of Health People 2030 proposes to reduce the rate of acute Hepatitis. Forty percent of all chronic liver disease is caused by HCV and is a common indication for liver transplantation (Keeshin et al., 2020). Between 2003 and 2014, there were 20,782 liver transplantations in the US which were related to HCV. HCV also accounted for 18,000 deaths in the US in 2016. The cost of HCV screening is \$140/person whereas a cost of one liver transplantation is \$812,000 (Keeshin et al., 2020). Diagnosing HCV at early stages can reduce the spread of HCV infection and reduce the burden to the health care systems.

Sustainability

This health care organization has an excellent linkage to care for patients infected with HCV. With continued financial grant and provider and staff interest, this QI project has a great potential for growth and sustainability, however frequent turnover in medical staff may pose a detriment to success of this QI project.

Dissemination Plan

The outcome of the quality improvement project was shared with the providers, certified nursing assistants, laboratory technicians and receptionists/clerks on September 26, 2021, at the primary care clinic during a lunch and learn meeting. A poster representing pre- and post-implementation HCV screening rates in the clinic was displayed during the dissemination meeting. The team was commended for their enormous contribution to quality patient care in the early detection, treatment of those participants who were diagnosed with HCV infection and for

their contribution to the health care system in general. The abstract will be shared with the local hepatologists and will be submitted to the Journal of Hepatology and Gastroenterology.

Section VI. Conclusion

Limitations

The quality improvement project was held in a rural primary care clinic that provides care to a large percentage of underinsured and uninsured patients. The organization provides free HCV testing for underfunded participants via a financial grant. Therefore the results may not be reproduceable in other settings. Linkage to continuum of care is available in this organization, yet may not be available in other settings. This primary care clinic has a history of large turnover of clerical, certified medical assistants, and provider staff, which could impact process and outcome measures.

Recommendations for Others

Early diagnosis directly relates to timely treatment of HCV. This writer proposes that this QI initiative can be easily adopted at other primary care clinics. Medicare and most other insurances cover the cost of one-time screening for HCV. With the advent of DAA treatments, patients who are found positive to HCV infections can be treated in the primary care clinics without requiring specialty referrals.

References

- Agency for Healthcare Research and Quality. (2019, September 7). *Alert Fatigue*.
<https://psnet.ahrq.gov/primer/alert-fatigue>
- Al-Hihi, E., Gibson, C., Shankweiler, C., Stricklen, D., & Dunn, W. (2017). Electronic medical record improves HCV testing for baby boomers in primary care setting: Adults born during 1945-1965. *BMT Open Quality*: 6(2).
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5704105/>
- Alzahrani, T., Fadalalla, M., Cioletti, A., Gendell, J., & Rieders, B. (2018). *Hepatitis C Virus screening test compliance at primary care clinic* [Poster presentation].
https://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?article=1008&context=researchdays_2015
- Balise, R., Feldman, E.B., Schiff, E., Thomas, E., & Whitehead, N. (2017). Barriers to hepatitis C screening in a minority population: A comparison of hepatitis C and human immunodeficiency virus screening rates at a community STD clinic in Miami, Florida. *Journal of Community Health*, 42(5), 921-925.
<https://pubmed.ncbi.nlm.nih.gov/28353008/>
- Centers for Disease Control and Prevention. (2020). *Hepatitis C questions and answers for the public*. <https://www.cdc.gov/hepatitis/hcv/cfaq.htm>
- Corcorran, M.A., & Spach, D.H. (2021). HCV epidemiology in the United States. *Hepatitis C Online*. <https://www.hepatitisc.uw.edu/go/screening-diagnosis/epidemiology-us/core-concept/all>
- Harrigan, R., Joy, J. B., Khudyakov, Y., Krajden, M., Liang, R.H., McCloskey, R. M., Montanert, J.S.G., Nguyen, T., Olmstead, A., Ward, J.W., & Ypoon, A.F. (2016). The

- spread of hepatitis C virus genotype 1a in North America: A retrospective phylogenetic study. *The Lancet Infectious Diseases*, 16(6), 698-702. [https://doi.org/10.1016/S1473-3099\(16\)00124-9](https://doi.org/10.1016/S1473-3099(16)00124-9)
- Keeshin, S.W., Mailliard, M., Tatar, M., & Wilson F.A. (2020). Cost-effectiveness of universal and targeted hepatitis C virus screening in the United States. *Journal of American Medical Association*, 3(9). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7489814/>
- Krasuki, R. A., & Riaz, A. (2017). Best practice advisories should not replace good clinical acumen. *The American Journal of Medicine* (130)3. DOI: 10.1016/j.amjmed.2016.08.035.
- LaMotte, W.W (2019). The Health Belief Model. <https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/behavioralchangetheories2.html>
- Masaouel, P., & Sidlow, R. (2015). Improving hepatitis C virus screening rates in primary care: A targeted intervention using the electronic medical record. *Journal for Healthcare Quality* 37(5). <https://pubmed.ncbi.nlm.nih.gov/26186704/>
- Millman, A.J., Nelson, N.P., & Vellozzi, C. (2018). Hepatitis C: Review of the epidemiology, clinical care, and continued challenges in the direct acting era. *Current Epidemiol Rep*, 4(2), 174-185. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5544136/pdf/nihms880880.pdf>
- Office of the Disease Prevention and Health Promotion. (n.d.). *Reduce the rate of death with hepatitis C as a cause – IID-16*. Healthy People 2030. U.S. Department of Health and Human Services. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/infectious-disease/reduce-rate-deaths-hepatitis-c-cause-iid-16>
- U.S. Preventive Services Task Force. (2020). *Hepatitis C virus infection in adolescents and*

adults: Screening.

<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/hepatitis-c-screening>

U.S. Department of Health and Human Services. (2016). *Viral hepatitis in the United States: Data and trends.* <https://www.hhs.gov/hepatitis/learn-about-viral-hepatitis/data-and-trends/index.html>

World Health Organization. (2019). *Emergencies, preparedness, response.* <https://www.who.int/csr/disease/smallpox/en/>

World Health Organization. (2016). *World Health Organization global health sector strategy on viral hepatitis, 2016-2021; towards ending viral Hepatitis.* <https://apps.who.int/iris/handle/10665/246177>

Appendix A

Project Timeline

Date	Activity
August 24, 2021	Complete Plagiarism document
August 24, 2021	Start reviewing literature for HCV screening in primary care
August 24, 2021	Review Moran, K., Burson, R., & Conrad, D. The DNP scholarly project book
August 24, 2021	Meet with site champion to discuss project management strategy
August 25, 2021	Submit DNP paper baseline
August 30, 2021	Driver diagram due
August 30, 2021	Project management Strategy document due
September 7, 2021	Project time log#1 due
	Thinking about thinking assignment due
September 8, 2021	Meet with Dr. Tisa Roberts and Ms. K. Brown data manager
	Lunch and Learn thirty-minute Inservice to team participants increasing Hepatitis C screening in primary care clinic
	Implementation of Project
September 13, 2021	Faculty Meeting #1
	Project Management Report#1 Due (Form 8274.12)
	Weekly Data Collection and PDSA
September 20, 2021	Weekly Data Collection and PDSA
September 27, 2021	Project time log#2 due
	Weekly Data Collection and PDSA
October 4, 2021	Faculty Meeting #2 due

	Project Management Report #2 Due (Frm 8274.12)
	Weekly Data Collection and PDSA
October 11, 2021	Weekly Data Collection and PDSA
October 18, 2021	Project Time Log#3 due
	Weekly Data Collection and PDSA
October 25, 2021	Project Management Report #3 due
	Weekly Data Collection and PDSA
November 1, 2021	Faculty Meeting #3 deadline
	Weekly Data Collection and PDSA
November 8, 2021	Registration for next semester
	Weekly Data Collection and PDSA
	DNP Paper – Outlined Sections IV, V and VI
	Project management report #4 due
November 15, 2021	Project Time Log #4 due
	Peer review feedback assignment due (Outline section IV, V and VI
	Weekly Data Collection and PDSA
November 22, 2021	Weekly Data Collection and PDSA
November 29, 2021	Project Implementation Summary Report due
	Weekly Data Collection and PDSA
November 29, 2021	Faculty Meeting #4 due
December 6, 2021	Final Time Log #5 due
	Weekly Data Collection and PDSA
	Compile final data and compare it to data collected during the previous Quarter