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IDENTIFICATION AND ENGAGEMENT OF INDIVIDUALS FOR CHRONIC CARE MANAGEMENT IN PRIMARY CARE

By

Patrick R. Oglesby, BSN, RN, CFRN, NRP

A scholarly project

submitted in partial fulfillment

of the requirements for the degree of

Doctor of Nursing Practice in the Department of Health Sciences

Colorado Mesa University

Grand Junction, Colorado

Spring, 2022

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IDENTIFICATION AND ENGAGEMENT OF INDIVIDUALS
FOR CHRONIC CARE MANAGEMENT
IN PRIMARY CARE

Patrick R. Oglesby

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ABSTRACT

IDENTIFICATION AND ENGAGEMENT OF INDIVIDUALS FOR CHRONIC CARE MANAGEMENT IN PRIMARY CARE

Chronic care management services exist but are underutilized in many primary care settings resulting in adverse outcomes for the patient and the healthcare system. Strategies to increase utilization of chronic care management services are needed. The purpose of this scholarly project was to develop and implement a systematic process to identify and engage patients eligible for chronic care management. The Institutional Review Board deemed this project to not be research involving human subjects as defined by CFR 46.102(e). The project facilitator partnered with a healthcare stakeholder in the southwestern U.S. to identify a gap in clinical practice and develop an intervention to address that gap. A needs assessment was completed revealing an underutilization of chronic care management services. Best practices for identification and engagement of patients for chronic care management were identified in the literature. Project methods were developed using literature findings, and were organized using the social ecology model, the Donabedian model, and Lewin's field theory. Implementation took place over a ten-week period. Project procedures were organized by Deming's plan-do-study-act

model. Results suggested that the process utilized in this project did identify and engage patients for chronic care management, resulting in a 163% increase from baseline. Modifications to the planned process were made based on barriers encountered during the project period. Implications for nursing, chronic care management, and primary care are discussed.

Keywords: chronic care management, identification, engagement, systematic process, primary care

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DATE: March 4, 2021

STUDY: Protocol 21-35: Chronic Care Management in Primary Care: A Quality Improvement Project

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Best wishes on your project.

This manuscript is dedicated to my wife and parents for their support and encouragement throughout this journey. Successful completion of this endeavor would not have been possible without them.

ACKNOWLEDGMENTS

I want to thank Dr. Kathleen Hall, Dr. K. Bridget Marshall, Dr. Stacie Schreiner, Dr. Karen Urban, Dr. Seven Malarchick, and Whitney Mick for their guidance, patience, encouragement, and perseverance along this journey.

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SECTION ONE

BACKGROUND & PURPOSE

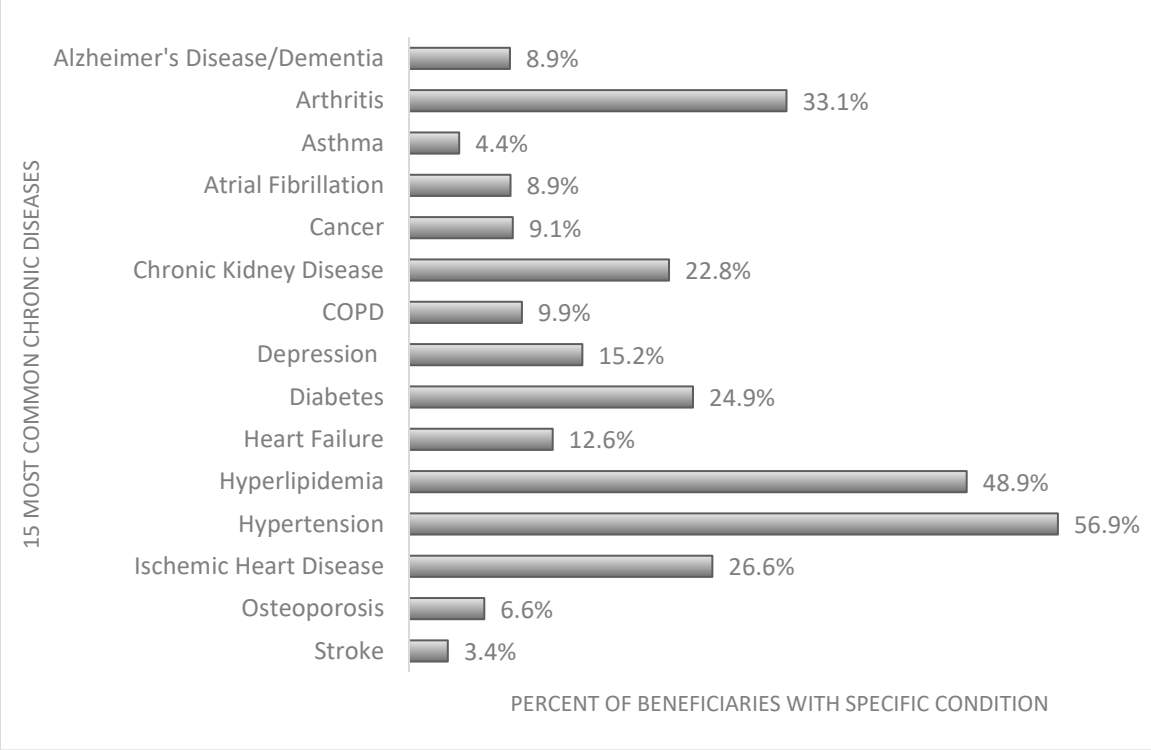
Living with multiple chronic diseases increases the risk of hospitalization, emergency department visits, and hospital readmission within 30 days of discharge (Centers for Medicare & Medicaid Services [CMS], 2012; Conner et al., 2020; Romana et al., 2020). One way to mitigate these risks is to engage individuals living with chronic disease in chronic care management (CCM) services (CMS, 2020). CCM services are care coordinated services rendered outside of regular office visits for patients with two or more chronic diseases (CMS, 2020). This project aimed to develop and implement a process to identify and engage patients eligible for CCM services in a primary care clinic.

A chronic disease is expected to last at least 12 months, or until the patient's death, and put the patient at significant risk of death, functional decline, or decompensation (CMS, 2020). Six out of 10 adults in the United States (U.S.) have at least one chronic disease (National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP], 2021). Four out of 10 Americans have two or more chronic diseases (NCCDPHP, 2021). Chronic diseases are the leading cause of death and disability in the U.S. (Martin et al., 2021; NCCDPHP, 2021). The 15 most common chronic diseases and their prevalence rates are shown in Figure 1.1.

Chronic diseases account for 90% of the $3.8 trillion annual healthcare dollars spent in the U.S. (Martin et al., 2021; NCCDPHP, 2021). Figure 1.2 shows the standardized Medicare payments for 2018 associated with the 15 most common chronic diseases. It is estimated that by 2050, 60 million Medicare beneficiaries will have two or more chronic diseases (CMS, 2020), suggesting an expected increase in the costs of caring for patients with chronic diseases.

Figure 1.1

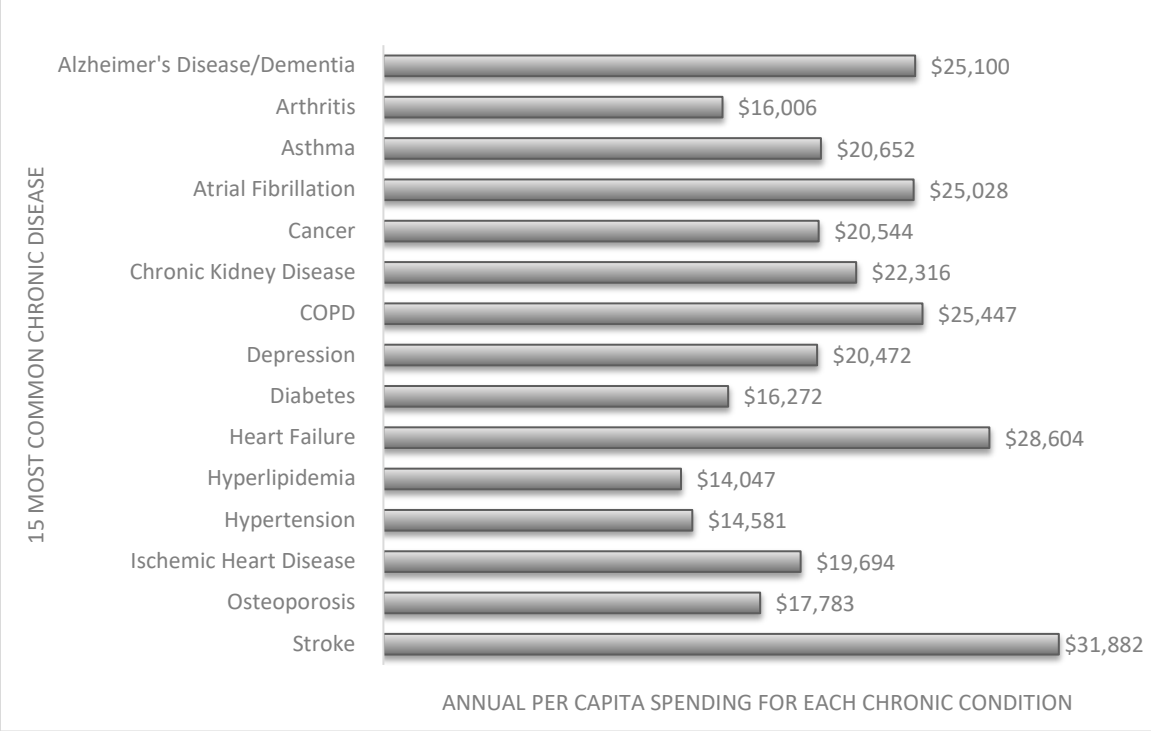
National Chronic Disease Prevalence for 2018



Note. Percentage estimates are calculated by dividing the beneficiaries with a particular disease by the total number of beneficiaries in the fee-for-service population. From "*Prevalence State Level: All Beneficiaries by Medicare-Medicaid Enrollment and Age. 2007-2018" by* Chronic Conditions Data Warehouse, 2018, [Data Set], U. S. Centers for Medicare & Medicaid Services, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/CC_Prev_State_Enrollment_Age.zip.

Figure 1.2

National Medicare Per Capita Spending for All Fee-for-Service Beneficiaries 2018



Note. Standardized Medicare payments for all Medicare-covered services in Parts A & B per beneficiary for 2018. From "*Utilization/spending state level: All beneficiaries. 2007-2018" by* Chronic Conditions Data Warehouse, 2018, [Data Set], U. S. Centers for Medicare & Medicaid Services, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/CC_Util_Spend_State.zip.

In an attempt to mitigate costs associated with chronic disease care, in 2015, CMS established a reimbursement system to support the provision of CCM services. Providers could now bill Medicare part B for CCM services provided to patients insured under Medicare part B (CMS, 2020). There are at least 67 qualifying diseases including chronic physical, mental , and substance abuse conditions (Chronic Conditions Data Warehouse, n.d.). More information can be found at https://www2.ccwdata.org/web/guest/condition-categories-chronic.

Clinical Gap in Practice

Research suggests that CCM services are underutilized in many primary care settings (Schurrer et al., 2017), likely resulting in adverse outcomes for patients and increased spending of healthcare dollars. Individuals living with multiple chronic diseases are at higher risk of hospitalization, emergency department visits, and readmission to the hospital within 30 days of discharge (CMS, 2012). In addition, living with multiple chronic diseases increases the number of prescriptions taken and the number of outpatient visits required to cope with these diseases. In 2014, prescriptions filled by those living with one or two chronic diseases went from nine to 51 for those living with five or more chronic diseases, and medical outpatient visits went from six to 20, respectively (Egan et al., 2019). Living with multiple chronic diseases can affect every aspect of one's life, including personal relationships, lost earnings, decreased self-esteem, and loss of independence (Foster et al., 2017).

The project facilitator (PF) for this scholarly project was a doctoral nursing student at a university in the western U.S. The PF engaged with stakeholders in a primary care clinic to identify a gap in practice. The stakeholders wanted to improve care delivery for patients with chronic diseases and maximize their use of CMS's CCM reimbursement. The identified gap was the lack of a formal process to identify and engage patients eligible for CCM services.

Purpose of the Project & Strategic Planning

This Doctor of Nursing Practice (DNP) scholarly project aimed to develop and implement a process to identify and engage eligible patients for CCM services in a

primary care clinic so that the stakeholders could provide outreach to these individuals. This project served as the first step in increasing CCM utilization for this clinic so that patients with chronic diseases could benefit from these services. Stakeholders voiced support for this project and offered their assistance with printing, postage, and staff hours as needed on a case-by-case basis. No direct financial costs were identified upon project initiation. The terms used in the project are defined in Table 1.1.

Table 1.1

Definitions

Term	Definition
Chronic care management	Care coordination outside of the regular office visit for patients with multiple chronic diseases that place the patient at significant risk of death, acute exacerbation or decompensation, or functional decline (CMS, 2020).
Chronic disease	A disease that is expected to last at least 12 months, or until the patient's death, & that puts the patient at significant risk of death, functional decline, or decompensation (CMS, 2020).
Develop	To elaborate or expand in detail (Dictionary.com, n.d.-a).
Electronic Health Record (EHR)	A digital version of a patient's paper chart; real-time, patient-centered records that make information available instantly & securely to authorized users (HealthIT.gov, n.d.).
Engage	To take part in a particular activity, especially one that involves talking with other people (Macmillan Dictionary, n.d.).
Identify	To recognize or establish as being a particular person or thing (Dictionary.com, n.d.-b).
Implement	To put into effect according to or utilizing a definite plan or procedure (Dictionary.com, n.d.-c).
Outreach	The act of extending services, benefits, etcetera, to a broader section of the population (Dictionary.com, n.d.-d).
Primary care	The provision of integrated, accessible health care services by clinicians accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, & practicing in the context of family & community (Donaldson et al., 1996).
Systematic process	Systematic is defined as arranged in or comprising an ordered system (Dictionary.com, n.d.-f). Process is defined as a systematic series of actions directed to some end (Dictionary.com, n.d.-e). For this project, systematic process refers to a process comprised of an ordered system.

SECTION TWO

REVIEW OF THE LITERATURE

This DNP scholarly project aimed to develop and implement a process to identify and engage patients eligible for CCM services in a primary care clinic. An integrated literature review was performed to obtain theoretical and empirical literature pertinent to patient identification and engagement strategies for CCM. The question used to inform the search was, “How can stakeholders in a primary care clinic identify and engage patients who may benefit from CCM services?” The assistance of a university research librarian was enlisted to help select appropriate databases and search terms to ensure a comprehensive search result.

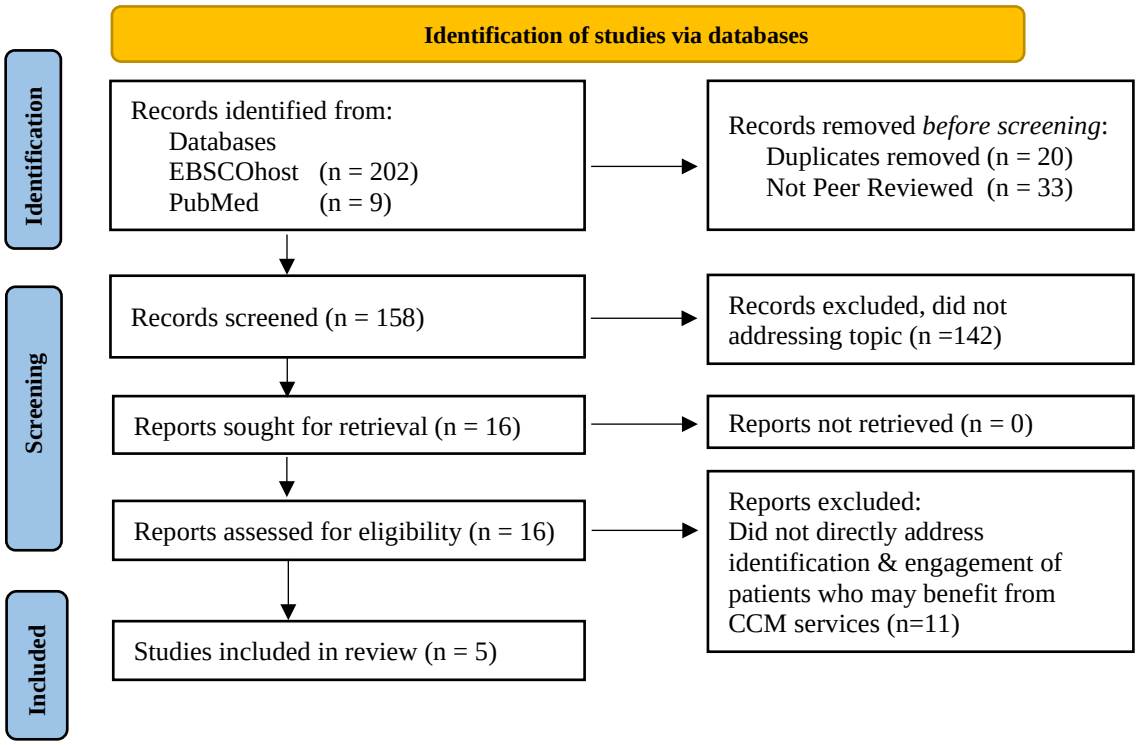
Databases searched were the Cumulative Index to Nursing Allied Health Literature (CINAHL) Complete and PubMed. The Boolean search terms used were “chronic care management” AND services AND (eligib* OR qualify OR benefit) AND (engag* OR identif* OR implement* OR develop* OR outreach) AND “chronic disease” OR “chronic illness” OR “chronic condition”). The exclusion criteria were articles that had not been peer-reviewed, were published in languages other than English, and did not directly address the identification and engagement of patients who may benefit from CCM services. The article selection process was adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) method, as described by

Page et al. (2021). As shown in Figure 2.1, the initial search returned 211 articles. The years of publication ranged from 1999 to 2021. All 211 articles were available in full text.

After the screening process shown in Figure 2.1 was complete, five articles remained and were included in the synthesis. However, only one article thoroughly answered the research question. A summary of the five articles is shown in Table 2.1.

Figure 2.1

PRISMA Diagram



Note. Adapted from"The PRISMA 2020 statement: an updated guideline for reporting systematic reviews" by Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & McKenzie, J. E., 2021, *BMJ*, *372*, n160, https://doi.org/10.1136/bmj.n160.

Table 2.1

Articles Included in Synthesis

Author (Year)	Purpose	Sample	Design	Findings	Unit of Analysis	I / E
Garwood et al. (2016)	To improve care coordination for patients with chronic disease	1 facility	Review article	Description of process used to identify & engage patients for CCM	Individual	E: face-to-face consent; telephone; visit summary
				Staff communication processes implemented	Interpersonal	I/E: staff huddles before patient visits; pharmacist alerts
				Modifications made to systems to support CCM	Organization	I: EHR dashboard notification - eligible, active, inactive (declined) E: Dashboard updates with DOLV, PCP, hospitalizations
Hale et al. (2018)	To describe the development of outpatient rounds performed by an interprofessional CCM team	1 health system	Review article	Home visits	Individual	E: Direct services (e.g., lab testing, wound care, point-of-care testing, refill pillboxes)
				Multidisciplinary weekly rounds	Interpersonal	E: Reports on achievement of patient goals & referrals
van Eeghen et al. (2018)	Describe the structured approach used by a primary care practice to develop & pilot a clinical algorithm for	1 primary care clinic	Case study	Modifications made to the algorithm based on barriers encountered; administrative resistance to EHR change, lack of institutionalization of the algorithm, staff turnover, poor tracking of	Individual	E: Consent to participate & completion of web-based assessment
					Interpersonal	E: with the patient around DM
					Organization	I: EHR identification of eligibility

	integrated medical/behavioral chronic care coordination			patient electronic assessments		
Wilson et al. (2019)	To understand patients' perceptions of the consent process, their reasons for participating, & their experiences receiving CCM services.	48 patients	Qualitative Semi-structured interviews	Engaged by staff at PCP visit; open to the invitation of CCM; a desire to have improved CCM; want a tailored approach focused on health maintenance	Individual Interpersonal Organization	E: face-to-face at PCP visit E: tailored approach focused on health maintenance I: via Medicare billing
Yeager et al. (2018)	To examine the facilitators & barriers to implementing the CMS reimbursement policy; to provide insight into patient & provider experiences	6 health systems	Qualitative Semi-structured interviews	Facilitators: dually enrolled in Medicare & Medicaid, willingness to join, relationships built between patients & healthcare team Barriers: co-pay over $18 per month, large amounts of reading material, the complexity of care, low health literacy, technological barriers	Individual Interpersonal Organization	E: face-to-face more effective for enrollment E: significant time commitment, communication limited to telephone & face-to-face I: dually eligible for Medicare & Medicaid due to no co-pay

Note. CCM = chronic care management; CMS = Centers for Medicare & Medicaid Services; DM = diabetes mellitus; DOLV = date of last visit; E=engagement; EHR = electronic health record; I=identification; PCP = primary care provider.

Synthesis of Findings

A synthesis of the articles revealed identification and engagement strategies, as shown in Table 2.2. Evidence suggested that in order to maximize the use of CMS's CCM reimbursement, patient identification and engagement strategies must be considered at the individual (patient), interpersonal (patient-staff, staff-staff), and organizational (hospital, healthcare organization) levels (Garwood et al., 2016; Hale et al., 2018; van Eeghen et al., 2018; Wilson et al., 2019; Yeager et al., 2018). The literature review revealed sparse evidence specifically related to identifying and engaging patients who would benefit from CCM in the primary care setting. Of the five articles in this analysis, Garwood et al. (2016) was the only article that outlined specific strategies.

Table 2.2

Strategies for Identification and Engagement of Patients for CCM

Unit of Analysis	Identification Strategies	Engagement Strategies
Individual	None	Consent to join; completion of assessment; visit summaries; direct service provision
Interpersonal	Staff huddles; pharmacist alerts	Staff huddles; pharmacist alerts; FTF more effective for enrollment; FTF relationship building; telephone communication; tailored approach; reports on achievement of patient goals & referrals; patient education
Organizational	EHR dashboard; pharmacy alerts; billing; insurance enrollment	Dashboard updates with date of the last visit, hospitalizations, PCP, medical specialists

Note. EHR = electronic health record; FTF = face-to-face; PCP = primary care provider.

Identification Strategies. Findings indicated that patient identification for CCM was primarily the responsibility of the health system and its staff. The literature did not

reveal a single example of an individual seeking out CCM services. However, multiple strategies existed at the interpersonal and organizational levels. Strategies at the interpersonal level included staff huddles before each clinic to identify patients eligible for CCM (Garwood et al., 2016). At the organizational level, strategies included notifications on the EHR of eligibility status (Garwood et al., 2016; van Eeghen et al., 2018) and pharmacy alerts (Garwood et al., 2016), and review of billing and insurance records (Wilson et al., 2019; Yeager et al., 2018) to identify eligible patients.

Engagement Strategies. Strategies for individual engagement included patient consent to participate in CCM services (Garwood et al., 2016; van Eeghen et al., 2018), completion of self-assessments (van Eeghen et al., 2018), and receipt of visit summaries (Garwood et al., 2016; Hale et al., 2018). Engagement strategies at the interpersonal level included face-to-face (Garwood et al., 2016; Wilson et al., 2019; Yeager et al., 2018), telephone (Garwood et al., 2016; Yeager et al., 2018), or electronic communication between patients and staff (van Eeghen et al., 2018), staff tailoring CCM service approaches for each patient (Wilson et al., 2019), and patient education (van Eeghen et al., 2018; Wilson et al., 2019). Finally, engagement strategies at the organizational level included EHR dashboard updates to include the date of the last visit, recent hospitalizations, the patient's primary care provider, and a list of medical specialists involved in the patient's care (Garwood et al., 2016).

Implementation of both patient identification and engagement strategies were facilitated by introducing CCM during face-to-face encounters (Garwood et al., 2016; Wilson et al., 2019; Yeager et al., 2018), limiting co-pays to less than $18 per month (Yeager et al., 2018), and delivering CCM services with a measured approach to avoid

overwhelming or scaring patients (Wilson et al., 2019). In addition, institutional buy-in among stakeholders (e.g., clinic staff, administration, information technology) facilitates the implementation of identification and engagement strategies of patients for CCM (van Eeghen et al., 2018). Barriers to implementation of patient identification and engagement strategies included high co-pays (e.g., greater than $18 per month), large amounts of reading material, highly complex instructions, low health literacy, and technological barriers for patients and clinic staff (van Eeghen et al., 2018; Yeager et al., 2018).

SECTION THREE

THEORETICAL FRAMEWORK

This DNP scholarly project aimed to develop and implement a process to identify and engage patients eligible for CCM services in a primary care clinic. Four frameworks guide this scholarly project. First, the Donabedian model assesses quality in healthcare and consists of three components: structure, process, and outcome (Donabedian, 1988, 2005). Structure refers to the setting in which care occurs. Process refers to steps performed in giving and receiving care. Finally, outcome is the effects of care on the health status of patients and populations.

Second, the nursing metaparadigm (Fawcett & Desanto-Madeya, 2013) includes four concepts: nursing, person, health, and environment. These concepts "identify the unique focus of the discipline of nursing and encompass all relevant phenomena in a parsimonious manner" (Fawcett & Desanto-Madeya, 2013, p. 7). These concepts align with the PF's understanding of the nursing discipline as the nurse's role is to affect change with one or more metaparadigm concepts to facilitate improved health.

Third, the needs assessment (Appendix A) conducted at the beginning of this project, and the results from Section Two indicate that multiple levels of influence exist for patients with chronic diseases in need of CCM services. For this reason, the social-ecological model (Bronfenbrenner, 1979) also guided this project. Finally, Lewin's field

theory and Lewin's three-step model, which came out of field theory (Burnes, 2004; Lewin, 1947a), guide the implementation of the patient identification and engagement processes.

Lewin's field theory posits that behavior is a function of the person and their cultural environment. Lewin's three-step model of change is comprised of three steps: destabilizing of equilibrium to alter behavior or unfreezing; moving or changing; and refreezing or stabilization of equilibrium to ensure new behaviors are relatively safe from regression (Burnes, 2004; Lewin, 1947a, 1947b). Table 3.1 demonstrates the alignment of these frameworks and theories.

Table 3.1

Alignment of Scholarly Project Frameworks & Theories

Donabedian Model		
Structure	Process	Outcome
Unit of Analysis (Nursing Metaparadigm)	Change Theory	
Individual (Patient)	Lewin's three-step model of change	Engagement
Interpersonal (Nurse & Patient)	Lewin's three-step model of change	Identification, Engagement
Organizational (Environment)	Lewin's three-step model of change	Identification, Engagement

Note. The unit of analysis is based on Bronfenbrenner's Social Ecological model. Bronfenbrenner, U. (1979). Cambridge, MA: Harvard University Press.

SECTION FOUR

METHODOLOGY

In early 2020, a primary care clinic was opened in the western U.S. The stakeholders realized that CCM services could enhance the patient-provider relationship by providing a personal point of contact for the patient when they had a question or concern related to their health. The stakeholders' goal was to engage patients with multiple chronic diseases in CCM services. This DNP scholarly project aimed to develop and implement a process to identify and engage patients eligible for CCM services in a primary care clinic.

Structure

The setting for this project was a primary care clinic operated by a community-owned nonprofit healthcare system in the western U.S. The healthcare system was composed of two divisions. The first was an acute care facility with 198 licensed beds. The second division consisted of 19 outpatient clinics, three of which were primary care clinics. The healthcare system shared a common EHR that could run customizable reports. The mission and vision of the clinic of interest were to provide personalized primary care to community members who did not have primary care providers, were underinsured, or were Medicaid or Medicare beneficiaries.

According to the stakeholders, over 70% of the patients who utilized this clinic were Medicare and Medicaid beneficiaries. In addition, the stakeholders estimated they had a panel of approximately 1,400 patients and that 50% of these patients were over 65 years of age. The stakeholders for this project were the clinic manager, physician, and two nurse practitioners.

Process

Prior to this project, the PF obtained Collaborative Institutional Training Initiative program certification. An application for approval was submitted to the university's Institutional Review Board (IRB), which deemed this project to be quality improvement (QI) rather than research involving human subjects as defined by 45 CFR 46.102(e). The PF did not have any patient interactions. The PF's role was to implement and evaluate the plan to help the stakeholders identify and engage patients in CCM.

The implementation process was organized according to the Plan-Do-Study-Act (PDSA) cycles developed by W. Edwards Deming (Joshi et al., 2014). There were four PDSA cycles planned over a 10-week period, encompassing five key steps to identify and engage individuals who could benefit from CCM services. The five key steps are shown in Table 4.1. The four PDSA cycles are shown in Table 4.2.

Table 4.1

Key Steps of Planned Procedures

Step 1 – Establish baseline or compare PDSA cycle outcomes to baseline	Step 2 – Run report* daily to identify patients who may benefit from CCM	Step 3 – Distribute report at morning staff huddles	Step 4 – Utilize report to identify & engage patients face-to-face in the clinic	Step 5 – Hand-off patient to nurse navigator to enroll patient in CCM

Note. *Report contains patients scheduled for the day that qualify for CCM services based on being a Medicare Part B beneficiary & having two or more chronic conditions.

Table 4.2

PDSA Cycles

Week	PDSA Cycle	Levels of Influence	Planned Procedures	Planned Measures	Goals
1 – 2	Cycle 1 (Unfreezing)	Interpersonal engagement (SS) Organizational identification	1. Establish baseline enrollment. 2. Create a CCM fact sheet of best practices for I&E. 3. PF to provide CCM refresher to stakeholders utilizing factsheet. 4. Present plan & receive feedback. 5. Collaborate with stakeholders to finalize the plan for the I&E of patients.	1. Determine the number of patients enrolled in CCM. 2. Construction of factsheet. 3. Document the agreed-upon plan of I&E of patients.	Agreement on plan
3 - 4	Cycle 2 (Change)		1. Operationalize plan to run report* & distribute report at morning huddle. 2. Obtain feedback on the process ≥ 2 times per week & modify the plan as necessary.	1. Number of days huddle took place/number of opportunities. 2. Number of patients identified daily. 3. Update total CCM enrollment weekly & compare to baseline.	Identify 2 patients per week for CCM

5 - 6	Cycle 3 (Change)	Interpersonal (SS, SP) & organizational engagement Interpersonal & organizational identification Individual engagement	1. Continue implementation of plan from cycle 1 & 2. 2. Operationalize providers utilizing the report to I&E patients face-to-face in the clinic & patient hand-off to nurse navigator for enrollment in CCM. 3. Present outcome data from the previous day in daily staff huddles. 4. Obtain feedback on the process ≥ 2 times per week & modify the plan as necessary.	1. Number of days huddle took place/number of days. 2. Number of patients identified, engaged, & enrollment status daily. 3. Update total CCM enrollment weekly & compare to PDSA cycle 2 total.	Increase total patients identified & enrolled in CCM from baseline
7 - 10	Cycle 4 (Refreezing)	Interpersonal (SS, SP) & organizational engagement Interpersonal & organizational identification Individual engagement	1. Institutionalization plan from PDSA cycle 2 & 3. 2. Institutionalization of feedback to staff via outcome data at daily staff huddle. 3. Obtain feedback on process ≥ 1 time per week & modify the plan as necessary.	1. Number of days huddle took place/number of days. 2. Number of patients identified, engaged, & enrollment status daily. 3. Update total CCM enrollment weekly & compare to PDSA cycle 3 total.	Increase total patients identified & enrolled in CCM from baseline

Note. *Report contains patients scheduled for the day that qualify for CCM services based on being a Medicare Part B beneficiary & having two or more chronic conditions. CCM = chronic care management; E = engagement; I = identification; PF = project facilitator; SS = staff to staff; SP = staff to patient.

Outcomes

No patient information was collected. Data were recorded via the double-entry technique in an Excel spreadsheet and stored on a laptop computer utilizing AES-256-bit encryption on a password-protected laptop, ensuring a double layer of security. See Appendix B for a sample of the Excel spreadsheet. In addition, an electronic field notebook was utilized and was encrypted and secured via password and biometrics. Identification and engagement goals are listed in Table 4.2.

Lewin wrote that unfreezing is a change process facilitated by reeducation (Burnes, 2020; Lewin, 1947a). Unfreezing was accomplished via the provision of a CCM refresher in PDSA cycle one. Change occurred during PDSA cycles two and three. Finally, Refreezing occurred in PDSA cycle four as the new process of identifying and engaging patients who could benefit from CCM services became institutionalized and relatively safe from regression, as described by Lewin (1947a).

SECTION FIVE

RESULTS

This DNP scholarly project worked with the stakeholders to develop and implement a systematic process to identify and engage patients eligible for CCM services in a primary care clinic. As a result, four PDSA cycles encompassing the five key steps shown in Table 4.1 were implemented over a 10-week period. In addition, a systematic process was developed, implemented, and modified during PDSA cycles two and three, resulting in 197 patients being identified and 102 patients being engaged for CCM services over the 10 weeks.

Process Evaluation

Lewin's three step model of change was utilized to guide the implementation of the four PDSA cycles as outlined in Section Four. The three steps of Lewin's change model are destabilizing of equilibrium to alter behavior or unfreezing; moving or changing; and refreezing or stabilization of equilibrium to ensure new behaviors are relatively safe from regression (Burnes, 2020; Lewin, 1947a). Table 5.1 summarizes the three-step model stages, the units of analysis, and process outcomes of each PDSA cycle.

Table 5.1

Three-Step Model Stages, Units of Analysis, & Process Outcomes for Each PDSA Cycle

PDSA Cycles & Stages of Lewin's Three-Step Model	*Unit of Analysis*	*Outcome*
Cycle 1 (Unfreezing)	Interpersonal (Staff to Patient) (Staff to Staff)	Lunch-n-learn CCM refresher & agreement on the plan
Cycle 2 (Change)	Individual (Patient) Interpersonal (Staff to Staff) Organizational	Identified patients via the daily report Morning huddle IT department developing the automated report
Cycle 3 (Change)	Individual (Patient) Interpersonal (Staff to Staff) (Staff to Patient) Organizational	Identified patients via the daily report Morning huddle; Engagement of patient by staff during the face-to-face visit; Patient handed off to nurse navigator for CCM; Nurse navigator coached providers on methods to tailor CCM engagement IT department developing the automated report
Cycle 4 (Refreezing)	Individual (Patient) Interpersonal (Staff to Staff) (Staff to Patient) Organizational	Identified patients via the daily report Morning huddle; Engagement of patient by staff during the face-to-face visit; Patient handed off to nurse navigator for CCM IT department developing the automated report

Note. The unit of analysis is based on Bronfenbrenner's Social Ecological model. Bronfenbrenner, U. (1979). Cambridge, MA: Harvard University Press.

The project ran according to plan except for the time required to complete each PDSA cycle and modifications made to the workflow. PDSA cycles one, two, and three were allotted two weeks each. PDSA cycles one and two were allotted more time than

needed, as PDSA cycle one was completed in one day, and PDSA cycle two was completed in one week. However, PDSA cycle three needed three weeks to complete. The process evaluation and modifications made during implementation are outlined in Table 5.2.

Table 5.2

Process Evaluation

	Planned Procedures	Accomplished Procedures	Outcomes
PDSA Cycle 1 (Unfreezing) Week 1	1. Establish baseline enrollment. 2. Create a CCM fact sheet of best practices for I&E. 3. PF to provide CCM refresher to stakeholders utilizing factsheet. 4. Present plan & receive feedback. 5. Collaborate with stakeholders to finalize the plan for the I&E of patients.	1. Determined the number of prior patients enrolled in CCM. 2. Constructed factsheet. 3. Provided CCM refresher 4. Presented plan & received feedback. 5. Finalized & documented plan.	Planed for two weeks. Completed in one day. Driving forces: • Stakeholders were enthusiastic about the project & ready to start immediately • Clinic supportive & provided food for lunch-n-learn CCM refresher • Stakeholders agreed on the plan
Cycle 2 (Change) Week 2	1. Operationalize plan to run report* & distribute report at morning huddle. 2. Obtain feedback on the process ≥ 2 times per week & modify the plan as necessary.	1. Created report manually on Friday. 2. Obtained feedback from stakeholders. 3. Modified report format based on stakeholder feedback.	Planned for two weeks. Completed in one week. Driving forces: • Stakeholders were enthusiastic about the project & ready to start immediately Restraining forces: • Automated report not completed by Information Technology department • COVID surge, providers reassigned to Urgent Care for part of week 2 Corrective measures: • Developed a plan to create the report manually
Cycle 3 (Change) Week 3 - 6	1. Continue implementation of plan from cycle 1 & 2. 2. Operationalize providers utilizing the report to I&E	1. Report created manually. 2. Distributed report at morning huddle.	Planned for two weeks. Completed in three weeks. Driving forces: • Stakeholders were enthusiastic about the project & felt it was important

	patients face-to-face in the clinic & patient hand-off to nurse navigator for enrollment in CCM. 3. Present outcome data from the previous day in daily staff huddles. 4. Obtain feedback on the process ≥ 2 times per week & modify the plan as necessary.	Providers utilized the report for I&E of patients face-to-face in the clinic & handed the patient off to the nurse navigator for enrollment in CCM. 3. Presented outcome data to stakeholders daily. 4. Obtained feedback on the process at least 2 days per week & modified the plan as noted in corrective measures.	• Stakeholders were encouraged by positive results • Identified many patients for Medicare AWV that were not previously being identified • Staff worked well together to achieve the common goal • Friendly competition between providers ensured they engaged most patients on their list • Stakeholders started developing a routine • Set reminder in EHR to flag patients who had already enrolled in CCM Restraining forces: • Automated report not completed by the information technology department • Creating a report manually was time-consuming & resulted in the delayed generation of the report on a few occasions • Providers were unsure about how to engage patients best face-to-face. Asked for coaching • In the busy clinic, providers occasionally forgot to utilize the report to identify patients before the face-to-face visit • Some staff were unclear as to the agreed-upon workflow • Over time, several patients reappeared on the report due to subsequent visits • Students in the busy clinic distracted providers from the new routine

			Corrective measures: • Coaching provided • Modified report form to reflect patients that were rescheduled or when providers forgot to engage a patient • A bulleted workflow list was developed & distributed to clarify the workflow • Started manually creating the report on Friday of the prior week • Developed spreadsheet to help track ongoing engagement of patients, particularly those requiring follow-up • Started reporting provider engagement rates along with weekly numbers
Cycle 4 (Refreezing) Week 7 - 10	1. Institutionalization plan from PDSA cycle 2 & 3. 2. Institutionalization of feedback to staff via outcome data at daily staff huddle. 3. Obtain feedback on process ≥ 1 time per week & modify the plan as necessary.	1. Report created manually. Distributed report at morning huddle. Providers utilized the report for I&E of patients face-to-face in the clinic & handed off the patient to the nurse navigator for enrollment in CCM. 2. Presented outcome data to stakeholders daily. 3. Obtained feedback on the process twice per week.	Planned for 3 weeks. Completed in 3 weeks. Driving forces: • Stakeholders encouraged by project results • Identified many patients for AWV that were not being identified & engaged before • Staff worked well together to achieve the common goal of identification & engagement • Reported provider engagement rates along with weekly numbers • Friendly competition between providers helped to ensure they engaged most patients on their list • Staff developed a routine with no modifications to the process necessary by week 10.

	Restraining forces: • Automated report not completed by the information technology department • The report had to be completed manually. It took longer due to the need to cross-check against prior engagement efforts. • Providers still occasionally forgot to engage individual patients Corrective measures: • Tracked & reported incidence of providers forgetting to engage patients • Encouraged friendly competition between provider engagement rates

Note. *Report contains patients scheduled for the day that qualify for CCM services based on being a Medicare Part B beneficiary. AWV = annual wellness visit; CCM = chronic care management; E = engagement; I = identification; PF = project facilitator; SS = staff to staff; SP = staff to patient.

The modifications made to the identification and engagement workflow resulted from an unforeseen delay in developing the automated daily patient identification report. Three months before implementing the project, the clinic manager ordered the development of a new automated report. This report would have been utilized to identify patients scheduled for the day that qualified for CCM services based on being a Medicare Part B beneficiary and having two or more chronic conditions.

Unfortunately, this automated report was still not available at the completion of this project. The initial alternative plan was to manually create the report by examining the list of the patients scheduled for an upcoming day and highlighting the Medicare Part B beneficiaries. The next step was to view the patients' problem lists in the EHR to determine if they had two or more chronic conditions.

Through manually creating the report, it was evident that limiting the patient identification list to patients with two or more documented chronic conditions would omit approximately 50% of the patients from the list. The omission was due to new patients without documented chronic conditions or patients having incorrectly documented chronic conditions. Therefore, during PDSA cycle three, the decision was made to identify patients solely based on being a Medicare Part B beneficiary. The next step was to have the provider or nurse navigator assess for CCM eligibility based on the number of chronic conditions during the face-to-face visit. If the automated report had been available at the point of the project implementation, manually cross-checking the list may not have occurred, and as many as 50% of patients may not have been identified.

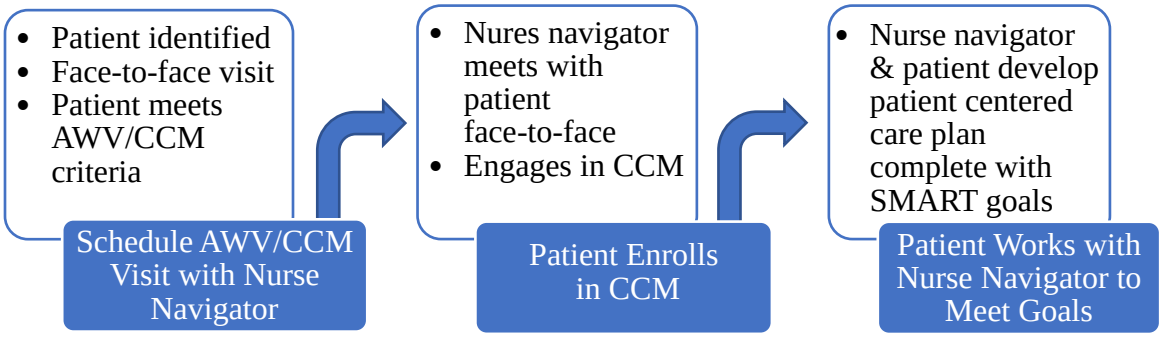
The original workflow called for the providers to utilize the report to identify patients for CCM and then perform a warm hand-off to the nurse navigator. However, the

stakeholders expressed frustration at the time needed to engage the patients in CCM. Due to the hectic pace of the clinic, it was decided that a warm hand-off was not practical most of the time as the nurse navigator was not always immediately available due to being busy with their patient schedule.

The stakeholders discovered that in addition to identifying patients that may benefit from CCM, the patient identification report was an excellent tool to identify patients due for their Medicare annual wellness visit (AWV). Therefore, during PDSA cycle three, it was decided that the most effective method to engage most of the patients in CCM was to schedule an AWV with the nurse navigator. The AWV generally provides ample time to engage the patient in CCM by utilizing a tailored approach. The modified flow change made during PDSA cycle three is shown in Figure 5.1.

Figure 5.1

Modified Clinic Flow



Note. The patient is initially identified via the daily report identifying potential candidates for Chronic Care Management (CCM) by Medicare beneficiary status. AWV = Medicare annual wellness visit. SMART = specific, measurable, achievable, relevant, time-bound.

Project Evaluation

There were three project outcomes. The first was the stakeholders agreeing upon the systematic process in PDSA cycle one. The second and third were the identification of 197 patients via the daily report and the engagement of 102 patients by the end of PDSA cycle four.

The baseline CCM enrollment was eight patients who had been enrolled using various methods over the previous 12 months. After implementing the systematic process, by the end of PDSA cycle four, the baseline enrollment in CCM had risen to 21 patients, for a 163% increase in just 10 weeks. Additionally, 73 patients were still considering CCM or scheduled for an AWV with the nurse navigator. The CCM enrollment is expected to grow as the stakeholders continue utilizing the process, and the remaining 73 patients are engaged in CCM at the AWV. Table 5.3 displays the number of engagements each week and the total for the project.

Table 5.3

Total Number of Engagements During the Project

	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Grand Total
Daily Huddle	5	4	5	5	5	5	5	5	39
# Identified	24	22	29	28	28	27	24	15	197
# No show or rescheduled	7	13	8	2	8	6	3	5	52
# Forgot	1	2	3	11	5	1	5	2	30
# Not Needed*	4	0	3	0	4	1	0	1	13
# Engaged	12	7	15	15	11	19	16	7	102
# Enrolled at face-to-face visit	1	0	0	2	0	0	0	0	3
# Delayed**	11	6	8	9	6	13	13	7	73
# Declined	0	1	7	4	5	6	3	0	26

	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Total
Percent Huddles Completed	100.0%	80.0%	100%	100.0%	100%	100%	100%	100%	97.5%
Percent Identified & Engaged	50.0%	31.8%	51.7%	53.6%	39.3%	70.4%	66.7%	46.7%	51.8%
Percent Identified & Forgot	4.2%	9.1%	10.3%	39.3%	17.9%	3.7%	20.8%	13.3%	15.2%
Percent Identified & No Show/Rescheduled	29.2%	59.1%	27.6%	7.1%	28.6%	22.2%	12.5%	33.3%	27.5%
Percent Identified & Enrolled	4.2%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	1.4%
Percent Identified & Delayed	45.8%	27.3%	27.6%	32.1%	21.4%	48.1%	54.2%	46.7%	37.9%
Percent Identified & Declined	0.0%	4.5%	24.1%	14.3%	17.9%	22.2%	12.5%	0.0%	11.9%

Note. A baseline of 8 patients enrolled in CCM. At the completion of the project, 21 patients enrolled, with more awaiting nurse navigator engagement. * Indicates provider determined patient did not qualify (i.e., the patient was not establishing care, did not have more than one qualifying chronic disease, etc.); ** Indicates patient is considering CCM or awaiting follow-up with the nurse navigator.

Post-Implementation

By the end of PDSA cycle 4, the project was firmly in the refreezing stage of Lewin's three-step model. The project was handed over to the stakeholders to continue the quality improvement project. The clinic manager will ensure the systematic process continues to be utilized to identify and engage patients for CCM. The stakeholders and the PF plan to stay in contact if further assistance is needed in modifying this project. The nurse navigators continued to track the engagement and enrollment of patients in CCM.

Recommended next steps were to continue using PDSA cycles for periodic reevaluation and modification of the process. The stakeholders verbalized understanding of how to utilize PDSA cycles and to continue making improvements to the project as needed in the future. In addition, the process is transferable to other gaps that may be identified in the future.

SECTION SIX

DISCUSSION

To implement this DNP scholarly project, I worked with the stakeholders over three semesters to develop and implement a systematic process to identify and engage patients eligible for CCM services in a primary care clinic. We started with a needs assessment and gap analysis as described in section one. Then I performed an integrated literature review and synthesized the literature to find strategies for identifying and engaging patients for CCM in a primary care setting, as described in section two. Section three described the theoretical foundations, and section four described the development of the methods utilized to develop and implement the systematic process.

Lessons Learned

Upon reflecting on what I learned from this project and the DNP program, I learned that the success of any QI project requires buy-in from everyone involved. Buy-in helps ensure everyone’s values align with the project and helps prevent the sabotage of efforts (Fixsen et al., 2020). I was fortunate that all the stakeholders were invested in my success and the success of this project.

Success also requires a culture broker. A culture broker is already familiar with the organization's unique culture and acts as a liaison between the stakeholders and the

project facilitator (Georgetown University, n.d.). In this project, I was the culture broker because I was already embedded in the clinic, and the stakeholders were invested in my success. I believe this played a considerable role in the success of the project. Therefore, if I were asked to come into a clinic from the outside as a project facilitator, I would need to enlist the help of a culture broker already working in the clinic.

Mutuality is also imperative as it increases buy-in and ensures everyone is on the same level in the power structure. Mutuality means having shared power over decisions (Curley, 1997). If there is an unequal power structure, the project is not likely to succeed in the long run. If the goal is to create and sustain change, it is not helpful for a project facilitator to tell the stakeholders what changes to make. There needs to be mutuality and shared decision-making.

Throughout the DNP program, we were taught the empirical concepts of making changes to a complex open system. The concepts apply to many systems ranging from an individual who wants to change their behavior and improve their health to a community that wants to implement specific changes to improve the health of its population. This project helped me gain experiential knowledge of process change in a complex open system.

Since completing this project, through the newfound experiential knowledge, I was able to identify another gap in the healthcare system in which I currently work. I then collaborated with interdisciplinary stakeholders to develop a pilot program to address this gap. If I had selected the master's tract rather than the doctoral track, I do not think I would have recognized the gap in the healthcare system, much less known what to do about it.

Another of the many concepts I learned during the DNP program is the value of nursing theories and models. In the undergraduate nursing program, I was taught that the discipline of nursing is unique and different from medicine. At that time, I felt nursing theory was just nursing's attempt at validating itself as a legitimate discipline. In the DNP program, I learned that theories predict outcomes and that models organize phenomena of interest. I finally understood why nursing theories and models were so important when this sank in. I believe that if someone had helped me to make that connection during the undergraduate nursing program, nursing theory would have been a much more interesting class. I now understand the value of nursing theories and models and can apply them in real-world cases.

Contributions to Nursing Science

How did this project contribute to nursing science? First, we need to ask what is nursing? For many decades when one thought of a nurse, they pictured a woman dressed in white coming into a hospital room with a bedpan or syringe to give a patient a shot. While that is a small part of what nurses do, it is not even close to the whole picture.

My view of nursing aligns with the four core concepts of nursing explained by Fawcett and Desanto-Madeya (2013). First, the patient could be an individual or group of people such as a community, organization, or nation. The second core concept is the environment in which the act of nursing occurs. The third is health, which is whatever the patient says that means to them. Finally, the fourth is the act of nursing, which is everything a nurse does to help the patient thrive in their environment.

It is important to note that the discipline of nursing is an intellectual pursuit of nursing science and is not merely defined by technical expertise. For example, I used models and theories from other disciplines to meet the patient, in this case, the stakeholders, where they were. Then through the act of nursing, I helped them develop and implement a plan to get where they wanted to go, which they told me was to be able to consistently identify and engage their patients in chronic care management.

This project contributes to nursing science through synthesizing the evidence found in the literature and applying it to the development of this QI project. The potential benefits of this project include potentially improving the patient's health and well-being and potentially benefiting the healthcare system by helping them to capture reimbursement through Medicare. In addition, potential benefits to the community may include improving the health, well-being, and productivity of the individuals, resulting in decreased healthcare spending.

Cost considerations for this project were minimal, considering that the systematic process did not require the addition of new staff members. The staff was already performing many of the tasks, except for the nurse navigator having to create the report manually. The stakeholders did not know if there was an additional cost to building the automated report. They believe the cost of the report was covered by the information technology portion of their monthly budget. In addition, after implementing the systematic process, the clinic was able to bill for CCM services for which they were not previously billing. Therefore, it is believed that this project will generate a net increase in funding.

Contributing to nursing science also requires that we disseminate any new information gained through the intellectual pursuit of nursing science. I have already started the process of dissemination of information gained from this project. For instance, the needs assessment results were disseminated at the 2021 Colorado Mesa University student showcase via a poster presentation. I presented the project results to the stakeholders and the Colorado Mesa University graduate program advisory board in April of 2022. The literature review results will be presented at the 2022 National Nurse Practitioner Symposium in Keystone, CO, in July of 2022. In May of 2022, this manuscript will be uploaded into the doctoral project's repository, a national database of doctoral projects completed across the United States. Finally, the entire project abstract will be submitted to the 2023 National Nurse Practitioner Symposium in Keystone, CO.

DNP Essentials

The American Association of Colleges of Nursing (2006) outlines eight essentials for nurses obtaining a DNP degree. Therefore, it is incumbent on all DNP students to meet these essentials throughout their DNP program. The DNP Essentials and how they were being met by this scholarly project is shown in Table 6.1. In addition, the DNP program outcomes (Colorado Mesa University, 2021) are developed based on the DNP essentials and were met through meeting all eight DNP essentials.

Table 6.1

AACN DNP Essentials & Evidence of Operationalization of Essentials by this Scholarly Project

DNP Essential	Evidence of Operationalization
Essential I - Scientific underpinnings for practice	Integration of nursing science with social science through: • Systematic, integrated literature review • Synthesis of evidence • Development & implementation of an evidence-based quality improvement project
Essential II - Organizational & system leadership for quality improvement systems thinking	Development & implementation of the quality improvement project to improve the overall health of individuals with multiple chronic diseases
Essential III - Clinical scholarship & analytical methods for evidence-based practice	Submission of abstract of the systematic, integrated literature review (Section Two synthesis of findings) for national presentation; scholarly project proposal defense to university faculty
Essential IV - Information systems/technology & patient care technology for the improvement & transformation of healthcare	Utilization of evidence-based databases to identify strategies for patient identification & engagement for CCM services; collaboration with health system stakeholders to propose modifications to EHR
Essential V - Healthcare policy for advocacy in healthcare	Policy or procedure development for health system changes (e.g., EHR, insurance enrollment, billing)
Essential VI - Interprofessional collaboration for improving patient & population health outcomes	Collaboration with a multidisciplinary team to develop & implement patient identification & engagement strategies for CCM
Essential VII - Clinical prevention & population health for improving the nation's health	Implementation of patient identification & engagement strategies for CCM to increase utilization of clinical preventive services
Essential VIII - Advanced nursing practice	Translation of evidence into best clinical practice for patients with chronic diseases

Note. Adapted from "The Essentials of Doctoral Education for Advanced Nursing Practice" by American Association of Colleges of Nursing, 2006, https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf.

Summary

To implement this DNP scholarly project, I worked with the stakeholders over three semesters to develop and implement a systematic process to help them identify and engage patients eligible for CCM services in their primary care clinic. While I did not have direct patient contact as the PF, I was still utilizing nursing actions to affect the care upstream of direct patient care at the organizational and interpersonal level of the social ecology model. I also helped the stakeholders access funding available at the policy level through Medicare reimbursement of CCM services.

My newfound empiric and experiential knowledge of affecting change in a complex open system, coupled with my experience as a nurse, makes me uniquely suited to work within the healthcare system to improve the health of individuals, organizations, and communities. For example, I can now look at a process utilized in caring for patients, be they individuals or groups of people, and perform a needs assessment and gap analysis. I can then collaborate with the stakeholders to formulate a plan to bridge the gap and implement changes that will take them from where they are to where they want to be. I am excited to see where I can utilize this new knowledge next.

References

American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Burnes, B. (2004). Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies, 41*(6), 977-1002. https://doi.org/10.1111/j.1467-6486.2004.00463.x

Burnes, B. (2020). The origins of Lewin's three-step model of change. *The Journal of Applied Behavioral Science, 56*(1), 32-59. https://doi.org/10.1177/0021886319892685

Centers for Medicare & Medicaid Services. (2012). *Chronic conditions among Medicare beneficiaries: Chartbook* (2012 ed.). U.S Department of Health and Human Services. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/2012Chartbook.pdf

Centers for Medicare & Medicaid Services. (2020). *The chronic care management resource: Health care professional resources*. U.S. Department of Health & Human Services. https://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/CCM-Toolkit-Updated-Combined-508.pdf

Chronic Conditions Data Warehouse. (n.d.). *Condition categories*. Centers for Medicare & Medicaid Services. https://www2.ccwdata.org/web/guest/condition-categories

Colorado Mesa University. (2021). *Department of Health Sciences: Graduate nursing programs student handbook*. https://www.coloradomesa.edu/health-sciences/documents/graduate-nursing-program-handbook.pdf

Conner, K. O., Meng, H., Marino, V., & Boaz, T. L. (2020). Individual and organizational factors associated with hospital readmission rates: Evidence from a U.S. national sample. *Journal of Applied Gerontology*, *39*(10), 1153-1158. https://doi.org/10.1177/0733464819870983

Curley, M. A. Q. (1997). Mutuality-an expression of nursing presence. *Journal of Pediatric Nursing*, *12*(4), 208-213. https://doi.org/10.1016/S0882-5963(97)80003-6

Dictionary.com. (n.d.-a). Develop. In *Dictionary.com*. Retrieved September 7, 2021, from https://www.dictionary.com/browse/develop

Dictionary.com. (n.d.-b). Identify. In *Dictionary.com*. Retrieved September 7, 2021, from https://www.dictionary.com/browse/identified

Dictionary.com. (n.d.-c). Implement. In *Dictionary.com*. Retrieved September 7, 2021, from https://www.dictionary.com/browse/implement

Dictionary.com. (n.d.-d). Outreach. In *Dictionary.com*. Retrieved September 22, 2021, from https://www.dictionary.com/browse/outreach

Dictionary.com. (n.d.-e). Process. In *Dictionary.com*. Retrieved September 7, 2021, from https://www.dictionary.com/browse/process

Dictionary.com. (n.d.-f). Systematic. In *Dictionary.com*. Retrieved September 7, 2021, from https://www.dictionary.com/browse/systematic

Donabedian, A. (1988). The quality of care: How can it be assessed? *Journal of the American Medical Association, 260*(12), 1743-1748.

Donabedian, A. (2005). Evaluating the quality of medical care. *The Milbank Quarterly, 83*(4), 691-729. https://doi.org/10.1111/j.1468-0009.2005.00397.x

Donaldson, M. S., Yordy, K. D., Lohr, K. N., & Vanselow, N. A. (1996). *Primary care: America's health in a new era*.

Egan, B. M., Sutherland, S. E., Tilkemeier, P. L., Davis, R. A., Rutledge, V., & Sinopoli, A. (2019). A cluster-based approach for integrating clinical management of Medicare beneficiaries with multiple chronic conditions. *PloS One, 14*(6), e0217696. https://doi.org/10.1371/journal.pone.0217696

Fawcett, J., & Desanto-Madeya, S. (2013). *Contemporary nursing knowledge: Analysis and evaluation of nursing models and theories* (3rd, Ed.). FA Davis.

Fixsen, A., Seers, H., Polley, M., & Robins, J. (2020, Jun 24). Applying critical systems thinking to social prescribing: A relational model of stakeholder "buy-in". *BMC Health Services Research, 20*(1), 580. https://doi.org/10.1186/s12913-020-05443-8

Foster, J. M., McDonald, V. M., Guo, M., & Reddel, Helen K. (2017). “I have lost in every facet of my life”: The hidden burden of severe asthma. *European Respiratory Journal, 50*(3), 1700765. https://doi.org/10.1183/13993003.00765-2017

Garwood, C. L., Korkis, B., Mohammad, I., Lepczyk, M., & Risko, K. (2016). Implementation of chronic care management services in primary care practice. *American Journal of Health-System Pharmacy, 73*(23), 1924-1932. https://doi.org/10.2146/ajhp150985

Georgetown University. (n.d.). *What is the role of cultural brokers in health care delivery?* https://nccc.georgetown.edu/culturalbroker/2_role/index.html

Hale, G. M., Joseph, T., Moreau, C., Prados, Y., Gernant, S., Schneller, M., Jones, R., Seamon, M., & Rodriguez, H. (2018). Establishment of outpatient rounds by an interprofessional chronic care management team. *American Journal of Health-System Pharmacy, 75*(10), 598-601. https://doi.org/10.2146/ajhp170106

HealthIT.gov. (n.d.). *What is an electronic health record (EHR)?* HealthIT.gov. Office of the National Coordinator for Health Information Technology. Retrieved October 2, 2021, from https://www.healthit.gov/faq/what-electronic-health-record-ehr

Joshi, M., Ransom, E. R., Nash, D. B., & Ransom, S. B. (2014). *The healthcare quality book: Vision, strategy, and tools* (3rd ed.). Health Administration Press.

Lewin, K. (1947a). Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change. *Human Relations, 1,* 5-41. https://doi.org/10.1177/001872674700100103

Lewin, K. (1947b). Frontiers in group dynamics: II. Channels of group life; social planning and action research. *Human Relations, 1*(1), 143-153. https://doi.org/10.1177/001872674700100201

Macmillan Dictionary. (n.d.). Engage. In *MacmillanDictionary.com*. Retrieved September 25, 2021, from https://www.macmillandictionary.com/us/dictionary/american/engage-in

Martin, A. B., Hartman, M., Lassman, D., Catlin, A., & Team, N. H. E. A. (2021). National health care spending in 2019: Steady growth for the fourth consecutive year. *Health Affairs, 40*(1), 14-24. https://doi.org/10.1377/hlthaff.2020.02022

National Center for Chronic Disease Prevention and Health Promotion. (2021). *Chronic diseases in America*. Centers for Disease Control and Prevention. https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm

Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & McKenzie, J. E. (2021). PRISMA 2020 explanation and elaboration: Updated guidance and exemplars for reporting systematic reviews. *BMJ, 372*, n160. https://doi.org/10.1136/bmj.n160

Romana, G. Q., Kislaya, I., Gonçalves, S. C., Salvador, M. R., Nunes, B., & Dias, C. M. (2020). Healthcare use in patients with multimorbidity. *European Journal of Public Health, 30*(1), 16-22. https://doi.org/10.1093/eurpub/ckz118

Schurrer, J., O'Malley, A., Wilson, C., McCall, N., & Jain, N. (2017). *Evaluation of the diffusion and impact of the Chronic Care Management (CCM) services*. https://hthu.net/wp-content/uploads/2019/10/Innovations-in-Care-Coordination_CMS_report_2017.pdf

van Eeghen, C. O., Littenberg, B., & Kessler, R. (2018, May 23). Chronic care coordination by integrating care through a team-based, population-driven approach: A case study. *Translational Behavioral Medicine, 8*(3), 468-480. https://doi.org/10.1093/tbm/ibx073

Wilson, C., O'Malley, A. S., Bozzolo, C., McCall, N., & Ma, S. (2019, Feb). Patient experiences with chronic care management services and fees: A qualitative study. *Journal of General Internal Medicine, 34*(2), 250-255. https://doi.org/10.1007/s11606-018-4750-x

Yeager, V. A., Wharton, M. K., Monnette, A., Price-Haywood, E. G., Nauman, E., Angove, R. S. M., & Shi, L. (2018). Non–face-to-face chronic care management: A qualitative study assessing the implementation of a new CMS reimbursement strategy. *Population Health Management, 21*(6), 454-461. https://doi.org/10.1089/pop.2017.0196

APPENDIX A

SUMMARY OF NEEDS ASSESSMENT

Summary of Needs Assessment Conducted Spring Semester of 2021

Gaps identified

- Insufficient care for patients with multiple chronic diseases
- Lack of provider awareness & understanding of current chronic care management (CCM) program
- Poorly organized community-based systems for individuals living with chronic diseases
- Lack of a systematic process for implementing CCM
- Select populations have lack of funding to pay for access to CCM

Needs identified

- Improved patient access to CCM
- Provider awareness &utilization of CCM
- Community based system to offer beneficial services to individuals living with chronic conditions
- Implementation of a systematic process to identify& engage individuals living with multiple chronic diseases in CCM
- Funding for select populations to access CCM

Note. Summary of needs assessment adapted from "Chronic care management in primary care: Needs assessment," by P. R. Oglesby, 2021, [Unpublished manuscript], Department of Health Sciences, Colorado Mesa University.

APPENDIX B

EXCEL SPREADSHEET DEVELOPED TO TRACK
PROJECT MEASUREMENTS

PDSA Cycle __ Week __	M	T	W	T	F	Total for Week	Total for Cycle __
2/7/22 to 2/11/22							
Daily Huddle							
# Identified							
# No show or Rescheduled							
# Engaged							
# Enrolled							
# Delayed							
# Declined							
						Total CCM Enrollment	

Baseline of __ patients enrolled in CCM
Delayed indicates patient is considering CCM or awaiting follow-up with nurse navigator