

Running head: IMPLEMENTATION OF TELEMEDICINE MEDICATION
MANAGEMENT PROTOCOL

Implementation of Telemedicine Medication Management Protocol to Improve
Medication Management for Children with Attention Deficit Hyperactivity Disorder
(ADHD) Children in a General Pediatrics Clinic

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Project Description and Purpose

With over 7 million children diagnosed with ADHD, 63% are on medications according to the Centers for Disease Control and Prevention [CDC] (2019). Medication can only be prepared for three months at a time, requiring a message or call be sent to the office. Because of the controlled nature of the medication, refills often require multiple telephone calls to the office. Controlled medications can only be written for 30 days at a time but allow for 3 prescriptions to be written out in a single episode to be stored at the pharmacy until a specific dispense date (US Department of Justice: Drug Enforcement Administration [DEA], 2020). The average number of telephone calls for refills in pediatric offices are four to six telephone calls per refill. This process can be time consuming and frustrating for both clinical staff and caregivers.

The purpose of this protocol was to improve the clinical process of medication refills for pediatric patients diagnosed with attention deficit hyperactivity disorder (ADHD). Previously four to six calls occurred between a patient/caregiver and a clinic when requesting a refill of stimulant medication for Attention Deficit Hyperactivity Disorder (ADHD) which occurred every three months. Depending on the size of the clinic, this can equal over 5000 calls each year and over \$30,000 dollars in staff time. This project was projected to decrease the telephone calls by over 50% or even 75% over four months as the clinic implemented proactive medication management. This project implementation helped to identify concerns and issues with the medication and disease process and notify the provider prior to an appointment to review and develop a plan of care, thus decreasing the length of in office or telemedicine appointments.

The plan was to proactively manage these telephone calls by utilizing telemedicine visits

by nurses or medical assistants every three months prior to the expiration of the patient's three-month prescription. The goal was to decrease the average amount of telephone calls to and from the office.

Once the intervention was implemented, it became apparent that the process could be used for any chronic disease management with minor adjustments with the template. Asthma, depression, anxiety, weight management, hypertension: the possibilities are endless. Exploring the process of managing patients and families who are experiencing ADHD, streamlining the communication process, simplifying the medication management process, and improving outcomes was the focus of this clinical process.

Relationship of Project to DNP Essentials

Every clinical improvement process created by a Doctor of Nursing Practice (DNP) prepared nurse should encompass at least one of the DNP Essentials. This project followed five of the eight essentials. Quality improvement, analysis of data, technology, advocacy, and population health are all covered in aspects of the project. From creating an algorithm to identify patients needing calls to creating macros within the electronic healthcare record (EHR) to advocating patient care by proactive management and finally the application of this process to many other diagnoses that require close follow up, the project focused on outcome improvement.

- Organization and systems leadership for quality improvement and systems level thinking
- Clinical Scholarship and analytical methods for evidence-based practice
- Information systems/technology and patient care technology for the improved transformation of health care
- Health care policy for advocacy in health care

- Clinical prevention and population health for improving the nation's health

Practice Setting and Target Population/Community

The practice site was the optimal setting for completion of this clinical improvement project. As a small private pediatrics clinic, implementing a new treatment protocol was not difficult as there were fewer barriers to change. The clinical staff was open to change and were not happy with the previous process of medication management. In the beginning stages of thinking about a doctorate in nursing practice, this project started to form. Discussing the current needs of the clinic with the providers, clinical staff, and physician business associates (PBA), the common thread was the vast amount of telephone calls related to medication refills and the frustration that stemmed from that process. The providers at the clinic are known in the area for attention deficit hyperactivity disorder management, so much so that other pediatricians and family practice providers send patients to them for ADHD medication and symptom management. To say that the general pediatrics clinic is a home for patients and families with ADHD diagnosis is not an overreach. With this burden, simplifying the medication refill process was the focus.

Key Stakeholders

Key stakeholders included:

- Providers – physicians, nurse practitioners, physician assistants
- Registered nurses (RN)
- Medical assistants (MA)
- Physician business associates (PBA)
- Patients and caregivers
- Community

Needs Assessment

Understanding the needs of the site where a project will be implemented helps to ensure the success of the clinical improvement project. At the project site, there were 3,875 total patients, with 175 or 4.5% of the patients between six and eighteen years of age being diagnosed with attention deficit hyperactive disorder on controlled stimulant medications. While these patients only make up 4.5% of the patient population, they accounted for almost 4,000 calls to and from the clinic regarding medication refills. On average, there were four to six calls between the clinic for each medication refill that occurred every three months. The providers see patients with ADHD every six-months in the office. As controlled medications can only be filled for ninety days, a gap in care was created. The previous process was not effective or efficient. When the three months of medications are completed, the caregiver called the office for a refill. The call went through the front desk, who then created a patient case within the electronic health record that was forwarded to the clinical staff. The triage nurse reviewed the patient case and called the caregiver back to verify dosing, pharmacy, and side effects of the medication. Sometimes this portion of the refill takes a few days if the caregiver did not answer right away or called back when the nurse was on the other line. The nurse documented all the information within the electronic health record then prepared three prescriptions and sent them to the provider who had 72 hours to sign off on the prescription. Once the prescriptions were sent in, the provider routed a note to the nurse that the medication has been filled. The nurse then called the caregiver again and let them know that the medication has been filled. The community needed a clinical process like this to help manage medication proactively. Every medication refill was reactive across healthcare. Traditionally, it is up to the patient to notify their provider that they need a refill on medications. This is not best practice. Proactively managing medications for

certain disease processes can also help to identify patients who may have compliance issues with medications, whether it is affording medication or a lack of education regarding medication. This new clinical process helped to improve outcomes for patients in a general pediatric clinic with a specific disease process as well as the local and national community with many different disease processes.

Review of Literature

Databases used for the review of literature including:

- CINAHL
- EBSCOHOST
- PubMed
- Cochrane database

Other resources including:

- Medline Plus
- Centers for Disease Control and Prevention (CDC)
- World Health Organization (WHO)

Key words used for searching included:

- Attention Deficit Hyperactivity Disorder (ADHD)
- Pediatrics
- Adolescents
- Rate of ADHD
- Cost of ADHD
- Telephone management of medications

- Pre-visit planning
- Primary care needs

Literature Review

There is a common thread within research regarding management of patients with ADHD. That thread is minimal unplanned interruptions in medication therapies. In a randomized control trial (n=674) effortful management of ADHD means that the provider partners with the patient and caregiver to proactively manage ADHD symptoms with behavioral therapy and medication (Atherton et al., 2020). This study assessed the ability of adolescents between 10 and 16 to identify inattentive vs hyperactive symptoms and use effortful management to control their symptoms. ADHD is a common diagnosis across the nation (Block et al., 2019). First-line treatment includes medication with stimulants. Stimulants are controlled medications and require frequent monitoring; every six months when stable. As ADHD has a strong genetic component, caregivers often have the same symptoms as the child undergoing treatment. Inattention to prescriptions running out often creates a panic on the caregiver's part, placing increased pressure on the office to meet the need and decrease the panic that arises from the caregiver.

Another common thread is the impact of ADHD on the quality of life of patients diagnosed with ADHD. A longitudinal study over 20 years with n=604 (n= 240 non-ADHD, n= 364 with ADHD) looked at the cost to socioeconomic status of patients diagnosed with ADHD (Pelham et al., 2020). This study showed that there is a substantially decreased income rate in patients diagnosed with ADHD, especially when not consistently managed well. There was a 75% lower rate in total wealth and over \$1 million less in potential earnings over the lifetime. These children struggle in learning and focusing on school which can continue into adulthood in the workforce. Also, in another randomized control trial (n= 579) a propensity of substance

abuse from controlled medications is high (Howard et al, 2020). Children diagnosed and treated with ADHD medication had a higher rate of substance abuse, 58% vs 40%, than those who had no diagnosis of ADHD. All substances were abused equally: tobacco, drugs, and alcohol. This study shows that careful management and screening is vital to help decrease the rates of substance abuse in patients diagnosed with ADHD. Another study focuses on male prisoners between the ages of 16 to 25 and two different medication treatments for ADHD (Asherson et al., 2020). This study will be highly useful when it comes out as 1 in 4 prisoners have the diagnosis of ADHD. Understanding which medication is more effective in treatment of symptoms may lead to changes within childhood to potentially prevent incidences of incarceration in children with ADHD.

The cost of a diagnosis of ADHD is significant. This study discovered that the annual cost of management of ADHD is \$6203 to \$8606 (Quintero et al., 2020). Almost \$4000 was spent on office visits annually to discuss medication and management of symptoms. In another study (n=9108; n=458 with the diagnosis of ADHD) there was a 58% increase rate of healthcare costs associated with ADHD versus children without the diagnosis of ADHD (Gupte-Singh et al., 2017). On average, stimulant medication can run in the hundreds of dollars without insurance. There are medication programs but as most stimulants are brand only and not generics, there are not many assistance programs available. Even with insurance, medication is very expensive. Prior authorizations have to be obtained with all ADHD medications. Most prior authorizations have to be completed every six months and can delay medication therapy. A systematic review of over 60 articles related to ADHD showed that there needs to be further randomized control trials to examine the relevance of current procedural codes (CPT) codes to change clinical process (Hall et al., 2016). CPT codes help to identify the lengths of visits

associated with certain diagnoses. In many cases, the ADHD diagnosis requires longer visits and more complex CPT codes which leads to higher costs to the patient and longer appointment times in office. Understanding the impact of ADHD on the cost of healthcare show that CPT codes are accurate for tracking patients with ADHD but not to adequately adjust practice.

Nationally, children on Medicaid with ADHD cost taxpayers over \$200 billion every year (U.S. Department of Health and Human Services: Office of Inspector General, 2019). This is due to medication cost, lack of follow-up, hospitalization, and medication side effects. High costs are often secondary to reactive management versus proactive management.

Pre-visit telephone calls have been recently used solely for Medicare patients. Pre-visit telephone calls have saved an average of \$26,000 dollars per year for patients (Sinsky & Sinsky, 2015). This savings is due to the time spent prior to the office visit and the identification of concerns prior to meeting with the provider. Being preemptive on medication management within Medicare patients has been successful and can be applied to the pediatric population with ADHD. Pre-visit planning has also been shown to identify concerns that often would be forgotten about in a visit (n=272) (Weaver et al., 2019). While this clinical process was not specifically a pre-visit project, elements of pre-visit planning were implemented within the template and identification of patients needing refills of medication.

Literature Synthesis

The synthesizing of literature helps to define the clinical process question and support the project. Using the hierarchy of evidence, analyzing the data used for this project was simple. The data used falls within the top four tiers of evidence which adds validity to the project. While there is not many research articles or studies specifically on telephone management of ADHD medications, research regarding ADHD, the medications used, and pre-visit planning are levels

1,2,3, and 4 on the hierarchy scale. There is a focus in the literature on cost of management of ADHD and symptom control with uninterrupted medication management.

Theoretical Framework for the Project

The nursing theory used for this project is Peplau's Theory of Interpersonal Relations (Peplau, 1952). The theory focuses on developing a good rapport with patients and families and providing support to encourage relationship development. Understanding the importance of building relationships with caregivers by being proactive in care will help this project to succeed. Peplau's theory has been applied to data collection and the usefulness of improving patient satisfaction rates with good results (Hagerty et al., 2017).

The change theory that helped to develop this project is Rogers Diffusion of Innovation Theory which applies five steps to the implementation of change (Rogers, 2003; Barrow et al., 2020). The first step of this theory is knowledge when this project was presented to the staff after the Institutional Review Board (IRB) granted approval for this project. Next, persuasion on the positive impact of this project occurred during the education session as well as the formative evaluation check-ins with staff that occurred bi-monthly. The staff and providers then made the decision whether to accept the process. Implementation of changes and updates to the process occurred as concerns arose (Appendix B). The final step, confirmation of process occurred when the providers and staff have positive feedback on the summative evaluation and the adoption of the process as a permanent change.

Project Timeline

The timeline of the project occurred over a four-month period after IRB approval was obtained. This allowed for adjustments with the process and effected all patients within the clinic

at least once, perhaps twice in some cases. Four months allowed for data collection to determine if the call volume decreased due to the implementation of the process.

Project Budget

This project was low cost as it requires only a short education session during normal business hours and utilizes established staff members. The cost to the clinic was minimal to none as the goal is to reduce the amount of time spent on calls. This decreased time saved the clinic money on staff time with calls related to ADHD.

Project Implementation

Having a clear plan for implementation is vital to the success of a clinical improvement project. The plan for implementation requires education for clinical staff and providers. This education session covered the protocol, the flow of the calls, and the purpose of the clinical intervention. Identifying patients who require telephone calls for their refills was the first step of the process. Weekly, this list was collected from the EHR and showed which patients needed a call based on the date of their last appointment and refill. Once this list was identified, the template with the EHR was created to ensure proper documentation. This template was created within the EHR after IRB approval. This template included date of last medication refill, verification of pharmacy, medication dose and frequency, and any concerns about the medication. If the call is made 7 days prior to the office visit, the clinical staff ensured that ADHD screening forms were available to the patient caregiver to fill out prior to the office visit. Once the call was made, the clinical staff prepared a three-month refill of the medication and sent the encounters to the provider. The template also included an automatic message to the caregiver that the medication had been sent to the pharmacy. Clinical staff made the calls out to the caregivers. It is a very simple answer to a time-consuming problem.

The steps of the implementation process were as follows:

- IRB approval
- Template creation in the electronic healthcare record (EHR) (Appendix A)
- Obtain informed consent from participants (Appendix E)
- Education session with clinical staff (Appendix C)
- Implementation of the calls
- Call log use and review
- Formative evaluations weekly
- Monthly evaluations on status of project
- Summative evaluation
- Final data collection from the EHR
- Analysis and synthesis of data
- Publication of results in final paper

IRB Approval

Although this project was implemented in a pediatrics clinic, clinical staff made the telemedicine telephone calls to caregivers and had no interactions with the patients themselves. No patient information was saved. The clinical staff kept a log of the dates and how many calls go back and forth between the patients without patient identifiers. The clinical staff only interacted with the caregivers of the patients thus an informed consent from caregivers was not necessary.

Instruments for Data Collection

A call log was used for data collection. The log had the date and time of the call, the total number of calls between the clinic and patient, the title of the staff member making the calls, and

any concerns or comments regarding the call (Appendix H). Periodically, the Project Manager pulled a list of calls pertaining to ADHD medication refills to see if the total number of calls is trending down. At the end of the four-month period, the Project Manager compiled the total number of calls made in the past month using the EHR and compare them to the total number of calls made in the month before implementation. This provided a clear picture of percentages as to whether the clinical process was successful.

Plan for Data Analysis

Data analysis used percentages: i.e., the total number of calls made each month of the project with a projected decrease, the total number of calls made prior to the implementation of the project, and the total number of calls made in the last month of the project. Data analysis of the clinics telephone calls in the month of August 2020 was 230 calls regarding ADHD medication management. Once the project was implemented, the goal was for incoming calls to the clinic regarding ADHD medication refills to decrease by 50-75%, or less than 20 calls per month incoming to the clinic from caregivers. The goal of less than 20 calls per month allowed for missed calls from the clinic, patients who are missed, and other unplanned issues such as medication side effects and new concerns.

Evaluation

Formative evaluation

Formative evaluations were conducted by the project manager on a weekly basis. The project manager reviewed the call logs with the clinical staff and discussed their concerns regarding the process, template, and medication questions on a group and one-on-one basis. Formative evaluation was an essential aspect of the implementation process as the template was adjusted slightly during the first week based on recommendations from the clinical staff.

Summative evaluation

The summative evaluations were completed by the clinical staff and providers within the office at the end of the implementation phase (Appendix D). Staff and providers were asked to complete the summative evaluation regarding the project, template, and continued implementation of the protocol. The final evaluation tool used a Likert scale grading system of 0-5, least likely to most likely to use/recommend the project for use. The total scores for each section were calculated and presented in the final paper regarding this project.

Data Interpretation

In the general pediatrics clinic, there are 158 patients diagnosed with ADHD requiring a minimum of four telephone calls for medication refills a year and two medication review appointments. In the first month of implementation of the protocol, a total of 23 patients needed refills. For these 23 patients, a total of 24 outgoing calls were made with only one message left to the patient caregivers. That first month, comments from caregivers were overwhelmingly positive about the process. The first month alone compared to the previous month prior to the implementation of the protocol showed a 79% decrease in telephone calls regarding medication refills (24 calls versus 230). In the second month of implementation, there was a total of 55 patients needing medication refills. That second month, there was a total of 65 calls made, 55 outgoing calls and 10 incoming calls in response to a message left by the clinical staff. The third month of implementation, 64 patients needed medication refills. A total of 70 calls were made with 2 patients unable to be contacted and 2 patients initiating the call to the clinic who were not on the list. In the fourth month of implementation, 33 patients needed medication refills. A total of 40 calls were made with 7 incoming calls in response to a message. Overall, there was a total of 199 calls completed during the implementation phase, 179 outgoing calls and 20 incoming

calls. With an average prior to protocol implementation of 135 calls a month, there is a 75% decrease in calls regarding medication refills over a four-month period. An interesting secondary benefit is patient caregivers opted to schedule their medication appointments 3 months in advance when discussing their child's refill. The providers in the clinic went from 25 medication review appointments in the previous year to over 50 after the implementation of the project by the third month. This overall data met the project objectives of decreasing the overall calls incoming to the clinic by 50-75% with a result of 75%.

Implications

The significant decrease in the incoming calls, amount of time spent on calls, and an increase in scheduling medication review appointments in advance proves the positive implications on practice within a general pediatrics clinic. Any clinic that manages medications that require routine monitoring can apply this proactive protocol to improve patient outcomes by ensuring better follow up and better medication compliance. As population health is the focus of many organizations, this protocol embodies population health by taking a population and focusing in on the issues that arise regarding medication management and refills.

Sustainability

As this protocol uses already established clinical staff, electronic templates in the current electronic healthcare record, and is focused on saving time, this protocol will save the clinic money in time spent on telephone calls. Prior to the implementation of the protocol, the cost per call was \$1.85 per minute per call or over \$3000 per month for the average amount of calls per month. After the protocol, the average length of call was three minutes, and the total cost was \$370 for a month of calls. With this cost saving benefit, the sustainability is easy. No single staff member completed calls, but instead the entire team made telephone calls as there was time

between in-clinic patient care which allowed certain staff members to become more comfortable with scheduling patients which allowed them to be cross-trained to other areas within the clinic. Also, with the added benefit of scheduling double the number of appointments, which are coded at 99215 with an average of \$180 per appointment, the clinic went from \$4500 per provider per month to \$9000 per provider per month or over \$100,000 per year.

Plan for Dissemination of Information

Executive Summary

In general pediatric offices across the country, frustration with controlled medication refill processes for patients with Attention Deficit Hyperactivity Disorder (ADHD) is felt by both parents and healthcare providers. This frustration stems from governmental restrictions on the amounts that can be prescribed at a time as well as office policies on timing on refills. Due to the nature of controlled medications, prescriptions can only be written for 3 months at a time with medication review appointments every 6 months. There are many telephone calls to and from a pediatrics office regarding refills which includes medication side effects, dosing, effectiveness of medications, and pharmacy locations, which, if all information is gathered at one time would decrease the time it takes to refill the medications. The purpose of the Doctor of Nursing Practice (DNP) project was to implement and evaluate a protocol to significantly decrease telephone calls to and from a general pediatrics office regarding controlled medication refills for patients with ADHD. 175 patients were contacted during the 4 months of this protocol implementation. The data used was length of call, how many calls went to and from the office for each patient, who made the call, and any qualitative data from patient caregivers regarding the process. Evaluation of the protocol was completed after the implementation phase for effectiveness, ease of use, and continued use within the clinic. The data was collected on log

sheets to track incoming and outgoing calls which ensured that patients who were not on the master list of the clinic were tracked. As a population health project, the primary goal was to improve the medication refill process and minimize interruptions in therapeutic medication management of ADHD symptoms. After the 4-month implementation of this project, there was a significant decrease in the number of calls to and from the clinic with an incidental finding of increased scheduling of medication review appointments in advance. The project was adopted by the clinic due to the promising data of a significant decrease in calls regarding medication refills. With the success of the protocol within a short timeline, the opportunity for application to other specialties is available.

Written dissemination

A thorough written scholarly paper will be completed after IRB approval, six-months of implementation, data analysis, and summative evaluation completion. This paper will discuss the process of the project, implementation of the project, issues that arose during the project with the solutions to those said issues, and the data from the project. A cost analysis will be included as well as clinical staff engagement with the process. Discussion of how the nursing framework, Rogers Change Theory, and Peplau's Theory of Interpersonal Relations were applied to the process will be vital to the written paper.

Oral presentation to key stakeholders

After the final written dissemination is completed, a presentation of the process and data will be completed through a PowerPoint oral presentation. This presentation will be to the faculty of Purdue University Global and to the clinic where the clinical process was implemented. Presenting the information with a PowerPoint and in person to local

neurobehavioral clinics who partner with the general pediatrics clinic will disseminate the information to members of the community.

Scholarship

Scholarship is a vital component of DNP prepared nurse clinical processes. The plan is to publish this article through the National Association of Pediatric Nurse Practitioners (NAPNAP) and then potentially through the American Association of Nurse Practitioners (AANP) in the hopes that others will apply the process to their clinics and improve their outcomes. As there are many local private and hospital-based clinics in the community, presenting the process to local providers for potential adoption is a planned aspect of scholarship. If a clinical process is effective, it should be shared with as many providers and clinics as possible.

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Appendix A

Template for documentation of ADHD medication management calls.

Create patient telephone call and label “ADHD medication refill”

Attempts to reach patient:

Last visit:

Next visit:

Pharmacy:

Medication name: { { lisdexamfetamine(Vyvanse)|| methylphenidate
(Concerta)|| methylphenidate (Ritalin ER)||methylphenidate(Ritalin LA)methylphenidate
hydrochloride (Journay)||amphetamine sulfate (Evekeo)|| methylphenidate
(Quillivant)||methylphenidate (Quillichew)|| dextroamphetamine/amphetamine
(Adderall ER)|| dextroamphetamine/amphetamine, (Adderall XR)|| dexmethylphenidate
(Focalin XR)|| Other: } }

Dose: { {mg||ml} }

Frequency:

Time of dosing:

Appetite:

Weight:

Concerns: { {no||yes:} }

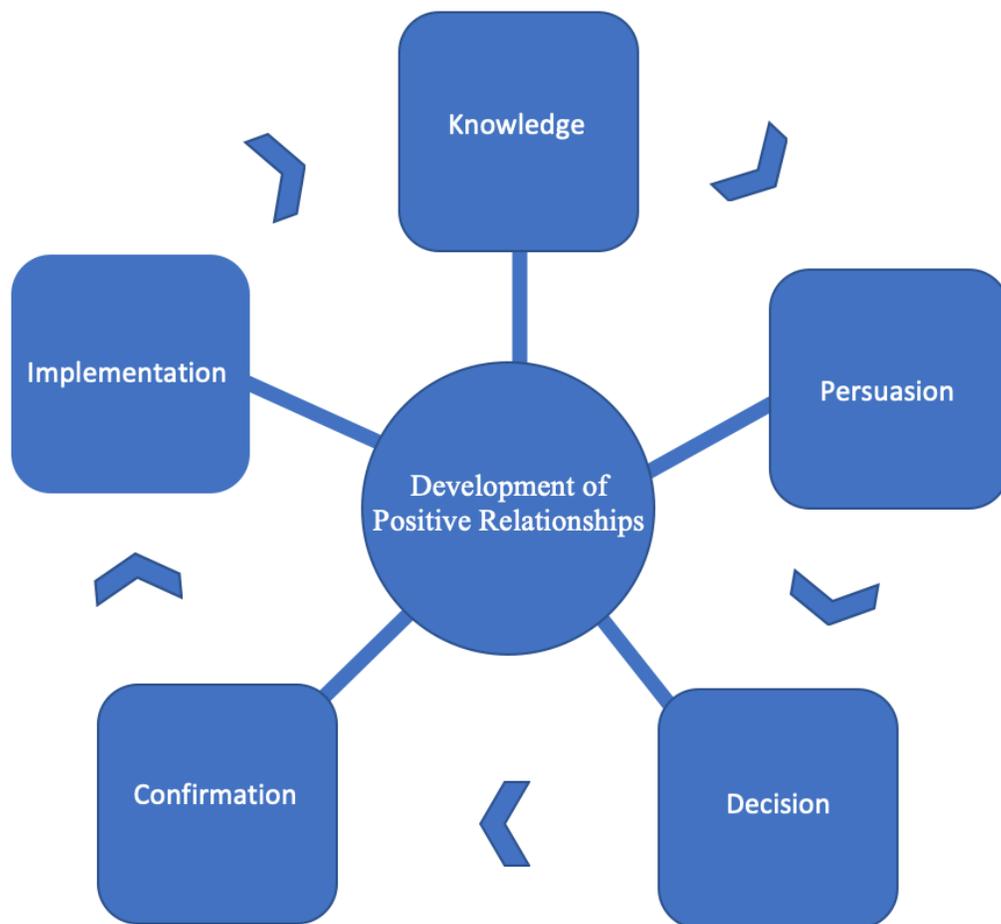
If yes, push Vanderbilts through application and forward message to provider

If no, prepare three refills of medication

Appendix B

Schematic: Peplau's Theory of Interpersonal Relations and Rogers Diffusion of Innovation

Theory



Appendix C

Education Agenda

- I. Welcome
- II. Introductions
- III. Discuss DNP project, expectations and time commitment.
 - a. Purpose of project
 - i. Current data
 - ii. Areas for improvement
 - b. Expectations
 - i. Log
 - ii. Template use
 - iii. Title of patient case
 - iv. Open feedback
 - c. Time
 - i. Six months minimum
 - ii. Average length of telephone calls
- IV. Informed consent
 - a. Read through informed consent
- V. Implementation
 - a. Start date
 - b. Staff feedback on template
- VI. Questions and Answers
- VII. Conclusion
 - a. Gratitude for participation

Appendix D

Summative Evaluation

This evaluation will be completed at the close of the project. If a question does not apply to you, please place NA in the additional comments section

1. I believe the ADHD medication refill protocol is beneficial for the patient.

Strongly Agree	Agree	Disagree	Strongly Disagree	Additional Comments
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

2. I would like to adopt the ADHD medication refill protocol into practice

Strongly Agree	Agree	Disagree	Strongly Disagree	Additional Comments
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

3. I found the ADHD Template easy to complete.

Strongly Agree	Agree	Disagree	Strongly Disagree	Additional Comments
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

4. I believe the ADHD Template helped me to ensure all basic education was delivered to the patient.

Strongly Agree	Agree	Disagree	Strongly Disagree	Additional Comments
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

5. I would like to adopt the ADHD template into practice.

Strongly Agree	Agree	Disagree	Strongly Disagree	Additional Comments
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Part 2

Please provide any additional comments that you believe would increase the effectiveness of the Utilization of telephone medication management for patients with attention deficit hyperactivity disorder (ADHD) within a general pediatrics clinic and template.



Appendix E

Informed Consent

Purdue University Global
Consent for Participation

“Implementation of telemedicine medication management protocol to improve medication management for children with attention deficit hyperactivity disorder (ADHD) children in a general pediatrics clinic”

You are being asked to participate in a quality improvement project about implementation of a telemedicine protocol for ADHD medication refills.

The purpose of the project is to proactively manage medication refills for patients diagnosed with attention deficit hyperactivity disorder within the primary care pediatrics clinic. Participants will be asked to utilize a template within the electronic health record, track the amount of calls to and from the office regarding medication refills, and provide feedback periodically and fill out a short five-minute survey at the end of the project. There are no risks associated with this project. Participants may drop out at any time without fear of reprisal. This project should last approximately six months.

You are being asked to be a participant in a quality improvement project about implementation of a telephone medication management process for patients with Attention Deficit Hyperactivity Disorder conducted by DNP student Bryana Hinck at Purdue University Global. You have been asked to participate in the project because as clinical staff at Thrive Pediatrics you make telephone calls on a daily basis and may be eligible to participate. We ask that you read this form and ask any questions you may have before agreeing to be in the project.

Your participation in this project is voluntary. Your decision whether or not to participate will not affect your current or future relations with Purdue University Global or Thrive Pediatrics. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

The purpose of this project is:

Improve the process of medication refills for patients diagnosed with Attention Deficit Hyperactivity Disorder (ADHD).

If you agree to be in this project, you will be asked to do the following things:

- Utilize the template within the EHR, track the number of callbacks regarding medication refills, be available for feedback periodically, and completed a post project survey.

Approximately 2 physicians and 10 RN's and MA's may be involved in this quality improvement project at Purdue University Global.

The project involves no risk/discomforts and/or inconveniences to the participants. The benefits of participating in the project include

- Improved process for medication refills, identification of patients needing appointments, and a proactive management of patients with attention deficit hyperactivity disorder.
- Benefits of this project to the community is a better process for patients and decreased stress on clinical staff. This project can be applied to other aspects of care and diagnoses such as anxiety and depression, along with other mental health disorders. This project will allow Thrive Pediatrics to be on the forefront of population proactive health.

The only people who will know that you are a project participant are members of the project team. No information about you, or provided by you during the project, will be disclosed to others without your written permission. When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity.

Any information that is obtained in connection with this project and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Results of the project will be kept on a flash drive with an encrypted password known only to the project manager. The flash drive will be kept in a locked cabinet accessed only by the project manager.

→ No personal patient or staff information will be saved.

→ Surveys and feedback will be anonymous and not contain personal information of the staff member involved.

There is no monetary reimbursement for participation in the project.

You can choose whether to be in this project or not. If you volunteer to be in this project, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer and still remain in the project.

The person implementing this project is Bryana Hinck. You may ask any questions you have now. If you have questions later, you may contact the project manager at: (208) 819-3582.

If you feel you have not been treated according to the descriptions in this form, or you have any questions about your rights as a project participant, you may contact the Institutional Review Board (IRB) at Purdue University Global through the following representative:

Dr. Susan Pettine, *IRB Chair*

Email: spettine@purdueglobal.edu

Remember: Your participation in this project is voluntary. Your decision whether or not to participate will not affect your current or future relations with Purdue University Global or

Thrive Pediatrics. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

You will be given a copy of this form for your information and to keep for your records.

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this project. I have been given a copy of this form.

Signature

Date

Printed Name

Signature of DNP Student

Date (must be same as subject's)

Appendix F

CITI Training Certificate



Completion Date 20-Jun-2020
Expiration Date 20-Jun-2022
Record ID 37127845

This is to certify that:

Bryana Hinck

Has completed the following CITI Program course:

Human Research (Curriculum Group)
Group 2.SOCIAL (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Purdue University Global

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).



Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w19892c61-67e4-4acf-bcc0-2036927bf393-37127845



Completion Date 20-Jun-2020
Expiration Date N/A
Record ID 37127846

This is to certify that:

Bryana Hinck

Has completed the following CITI Program course:

Social and Behavioral Responsible Conduct of Research (Curriculum Group)
Social and Behavioral Responsible Conduct of Research (Course Learner Group)
1 - RCR (Stage)

Under requirements set by:

Purdue University Global

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).



Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w9b609194-47f8-43e7-9a6b-02c2c9d029d5-37127846

Appendix G

Signed Site Letter



4740 N. Penngrove Way, Suite 210 Meridian, ID 83646

O: 208-514-0203

F: 877-818-2019

Hello,

My name is Jesse Arnoldson and I am the Practice Administrator here at Thrive Pediatrics in Meridian, ID. I am writing to approve the DNP project for *Telephone Medication Managed for Children with ADHD* to be implemented in our clinic by Bryana Hinck, FNP of the DNP program at Purdue Global.

Thank you,

Jesse Arnoldson

Appendix I

Recruitment Email

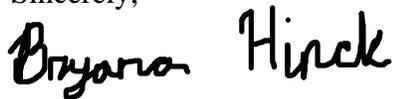
My name is Bryana Hinck, and I am a Doctor of Nursing Practice Student from Purdue University Global. I am writing to invite you to participate in my clinical improvement protocol about the implementation of a protocol regarding telemedicine management of attention deficit hyperactivity disorder medication refills. You're eligible to be in this study because you are part of the clinical staff at a general pediatrics clinic obtained your contact information from the clinical manager.

If you decide to participate in this study, you will be asked to utilize a template within the electronic health record, track the amount of calls to and from the office regarding medication refills, provide feedback periodically and fill out a short five-minute survey at the end of the project. There are no risks associated with this project. You may drop out at any time without fear of reprisal. This project should last approximately six months. This data collected will be used to improve population health of the ADHD population.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at (208) 819-3582 or bryanasmith1@student.purdueglobal.edu

Thank you very much.

Sincerely,

A handwritten signature in black ink that reads "Bryana Hinck". The signature is written in a cursive, slightly slanted style.

Bryana Hinck FNP-BC, MSN, BSN, RN
(208) 819-3582
bryanasmith1@student.purdueglobal.edu

Appendix J
IRB Approval

November 30, 2020

Institutional Review Board 550 West Van Buren Chicago, Illinois 60607

Expedited Review – Final Approval

Ms. Bryana Hinck
Purdue University Global bryanasmith1@student.purdueglobal.edu

Re: Protocol #20-74 – **“Implementation of a telemedicine medication management protocol to improve medication management for children with attention deficit hyperactivity disorder (ADHD) in a general pediatrics clinic.”**

Dear Ms. Hinck:

Your proposed project was reviewed by the Purdue University Global Institutional Review Board (IRB) for the protection of human subjects under an Expedited Category. It was determined that your project activity meets the expedited criteria as defined by the DHHS Regulations for the Protection of Human Subjects (45 CFR 46), and is in compliance with this institution’s Federal Wide Assurance 00010056.

Please notify the IRB immediately of any proposed changes that may affect the expedited status of your project. You should report any unanticipated problems involving risks to human subjects or others to the IRB.

If you have any questions or need additional information, please contact feel free to contact me at spettine@purdueglobal.edu. I wish you well with your project!

Sincerely,

Susan B. Pettine

Susan B. Pettine, Ph.D., CBM IRB Chair
Purdue University Global

cc: Dr. Elizabeth Copeland Dr. Amy Daly

Date **Printed Name** **Signature**

Dean/Designee:

 _Dr. Elizabeth Chapman_____Dr. Elizabeth
Chapman_____8/25/21_____

Printed Name **Signature** **Date**

Protocol

Purpose

The purpose of the protocol is to decrease the number of calls that come to the office daily regarding refills of medication for Attention Deficit Hyperactivity Disorder (ADHD) by proactively managing medication refills with the utilization of a template within the electronic healthcare record (EHR) and a master list of patients created within the EHR on a monthly basis. This protocol is to identify patients needing refills at both 3 and 6-month marks.

Process

1. Create master list in the EHR
 - a. Insert diagnosis code for ADHD (F90) into report creator in EHR
 - b. Save report as ADHD calls
 - c. Organize according to last visit/ birthdate
2. Perform chart reviews in EHR from master list
 - a. Evaluate last medication review date
 - b. Review medication list
 - c. If not due for call, highlight on master list and place date for call in spreadsheet
 - d. Ensure next visit is scheduled
3. Documentation
 - a. Create patient case
 - b. Insert ADHD template
 - c. Fill out template with known information
4. Make call
 - a. Ensure pharmacy
 - b. Medication dose and frequency
 - c. Side effects
 - d. Concerns
 - e. Prepare refills
 - f. Schedule appointment for medication review if necessary
 - g. Verify if pharmacy texts/calls caregiver when prescription is ready
5. After call competition
 - a. Route prepared medication and call to provider
 - b. Notify and close encounter once provider has signed off