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A Medication Template for Patients with Chronic Medical Conditions to Promote

Medication Adherence

By

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PROJECT APPROVAL

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Project Defended On September 19, 2018

Abstract

In primary care setting, patients with chronic illnesses are prescribed and treated with multiple medications. Almost 50% of them do not take their medications as prescribed and this non-adherence causes poor health outcomes and is associated with additional \$100 to \$300 billion of avoidable health care costs in the US. Main risk factors for this are: low health literacy, lack of self-confidence in understanding purpose, intent, numeracy, dosing schedules, and memory impairment. Educating patients by writing description of medication, its purpose, side effects and additional information in a medication template can overcome the identified issues and improve medication adherence.

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CHAPTER I

One of the important reasons behind unsuccessful management of chronic illnesses in primary care setting is the lack of adherence to the medications and the treatment plan. Approximately 50% of patients do not take medications as prescribed, which is associated with poorer outcomes, relapse, increased mortality, and hospital admissions (O'Malley, 2013). This negatively puts burden on the increasing health care cost. Between \$100 and \$300 billion of avoidable health care costs have been attributed to non adherence in the US annually, representing 3% to 10% of total US health care cost (Mcguire & Aurel, 2014). Various researches done across the North America has shown consistent result of 40 to 60 % of non adherence to medications and treatment plan. The reason behind it is multi factorial due to which multiple interventions will need to be studied and implemented to improve this non adherence rate. The World Health Organization (2003) stated that increasing medication adherence might have a far greater impact on the health of the population than any improvement in specific medical treatments (p. 21).

Most patients with chronic medical conditions are on poly pharmacy which can lead to confusion in patients regarding the purpose of each medication, its side effect, direction on how it should be taken, when it should be stopped, etc. Most prescribers educate their patients verbally but majority of them are not able to retain the complex details of everything that has been taught by their prescribers over few minutes. This leads to the patients alternating their treatment plan without experts' advice and hence the outcome can be suboptimal or may even have negative effect resulting in complications due to poorly managed chronic conditions. If prescriber writes easy to understand

information related to the medications in a fillable template, it will be helpful in providing important educational information to the patients which can be reviewed at home as needed. This can have a dramatic improvement in the adherence.

Statement of Purpose

The purpose of this project was to develop a Medication Template for patients with chronic medical conditions in the primary care setting to promote adherence to medications which can play an important role in improving health outcomes and reducing health care costs.

Theoretical Framework

Jean Watson's (2011) *Caring Science Theory* was utilized as the theoretical framework for the development of this project. A brief overview of the theory was presented as well as a discussion regarding how the theory was utilized to guide the development of the project. In addition, Watson's (2011) theoretical definitions for nursing's four metaparadigm concepts (nursing, health, person, and environment) as well as the Project Author's operational definition for nursing's four metaparadigm concepts were presented.

Caring Science Theory

All of human caring is related to intersubjective human responses to health-illness-healing conditions; a knowledge of health-illness, environmental-personal relations, meaning the nurse caring process; and self-knowledge, which is knowledge of one's power and ways of being in relation to both strengths and limitations (Watson, 2011, p. 38). Human caring science provides the philosophical-ethical-epistemic-

ontological disciplinary foundation to sustain nursing and its covenant with society/humankind (p. 87). Human caring is honored as a moral ideal of nursing with a conscious intentionality and compassionate concern for preservation of humanity, dignity, preservation of integrity, and wholeness of self/other on one's inner and outer life journey. The values of these has expanded in the evolved theory of 10 caritas processes, acknowledging the practice of heart-centered loving kindness, compassion, and equanimity; creative solution-seeking through embracing all ways of knowing for human caring practices and caring modalities (p. 88).

Watson's Caring Science Theory fits this project as her primary carative factors form philosophical foundation of the theory. Carative factors such as the development of a helping-trusting relationship, the systematic use of the scientific problem-solving method for decision making and the promotion of interpersonal teaching-learning (Watson, 2011) was the core of this project to develop a medication template that health care professional can use to fill out information regarding medications for adult patients suffering from chronic medical conditions in community setting that will help to improve medication adherence and improve health outcomes and reduce health care cost.

Caring Science Theory and Nursing's Metaparadigm

Although Watson (2011) did not outwardly and explicitly define nursing's four metaparadigm concepts (nursing, person, health, and environment) in her Caring Science Theory, she described them as follows. Nursing is defined by Watson (2011) as a person who holds a caring-loving consciousness and intentionality toward self and other that is manifest in specific responses, behaviors, and informed actions. Nursing generally

consists of knowledge, thought, values, philosophy, commitment, and action, with some degree of passion (p. 65). Nursing, for the purpose of this project, is operationally defined as a holistic clinical approach in enhancing health of individuals by promoting health, educating and providing person centered care. Watson (2011) described health as a subjective experience: it can refer to unity and harmony with body-mind-spirit which is also associated with the degree of congruence between the self as perceived and the self as experienced (p. 60). Health is operationally defined for the purpose of this project as wellness of individual which provides optimum functionality to perform day to day activities while minimizing physical, mental and social problems. Human being is described as a personhood is tied to notions that one's soul possesses a body that is not confined by objective time and space and the individual spirit of a person or of collective humanity may continue to exist throughout time, keeping alive a higher sense of humankind (Watson, 2011, p. 57). Human being is operationally defined for the purpose of this project as individuals with complex health care needs whose goal is to live healthy life while minimizing complication. Finally, environment is described as a society where caring attitude is not transmitted from generation to generation by genes but transmitted by the culture of the profession as a unique way of coping with its environment (Watson, 2011). Environment is operationally defined for the purpose of this project as genuine caring and trusting relationship between the health provider and the patients which helps in improving medication adherence and compliance through proper education and counseling.

Literature Review Synopsis

Review of literature suggests that lack of continuity of care, patient information materials written at too high literacy level, lack of knowledge on adherence, and the medication cost are few of the many reasons that contribute to non adherence. For many geriatric patients, side-effects and forgetfulness are the main barriers to low medication adherence. Patients with lower literacy, lack of self-confidence in understanding purpose, intent, numeracy, and dosing schedules can result in non-adherence. Improving medication adherence could be one of the most effective and efficient ways of improving health outcomes as studies suggest that full adherence to medication had a lower rate of all-cause hospitalisation. However in order to increase the medication adherence, it is important to evaluating each patient for medication adherence, tailoring the plan of care according to patient and system specific barriers.

Significance and Justification

Findings from the literature review revealed that approximately 50% of patients do not take medications as prescribed, which is associated with poorer outcomes, relapse, increased mortality, and hospital admissions (O'Malley, 2013). The reason behind this non adherence is the lack of continuity of care, patient information materials written at too high literacy level, lack of knowledge on adherence, and the medication cost are few of the many reasons that contribute to non adherence (Ismail, Selim, & Elkhatab, 2017). Project Author created medication template which will be helpful for the patients with chronic medical conditions in primary care setting. This template can be used by health care providers to write details of all medications such as use, side effects, dosage, how to

take it, when to stop it, etc. The significance of this template will be that patients will have better understanding regarding their medications due to improved communication between them and health care providers which will have dramatic improvement in the compliance and adherence to the treatment.

Project Objectives

The objectives of this project were to:

1. Conduct an extensive review of the literature exploring medication adherence and the ways to improve it using the following keywords both singularly and in multiple combinations: Medication, Adherence, Health Outcome, Improvement, Health Care Cost, Nursing. Databases searched with the exception of the classical works, was limited to the years 2013 to 2018, will include AMED, Alt Health Watch, CINAHL Plus with Full Text, and EBSCO Host;
2. Develop a medication template; and
3. Have a panel of five content experts with extensive knowledge and expertise in treating patients with chronic illnesses in community, evaluate and critique the project for clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance.

Definition of Terms

The following concepts are defined both theoretically and operationally for the purpose of this project:

Adherence

Theoretical Definition: Adherence is an ongoing process that measures whether or not the patient received dispensing or refills as prescribed during a defined observation period (Raebel et al., 2013, p. 4)

Operational Definition: Behaviour of an individual that includes taking medications regularly as prescribed and follows up regularly with the health care provider as advised.

Limitations

The Project Author recognized the following project limitations:

1. The implementation of the Medication Template is not within the context of this project;
2. The medication template is developed in the English language only and may benefit a more culturally diverse population if written in additional languages;

Project Development Plan

A detailed topical outline of the medication template to increase medication adherence was created based on the extensive review of evidence-based literature and the theoretical framework used to support and guide the development of the medication template. After permission was granted from the D'Youville College Institutional Review Board (Appendix A), five professionals with knowledge and expertise in the area of primary care were asked if they were interested in voluntarily participating as an expert content reviewer for the medication template. The content expert panel consisted of one family physician, two nurse practitioner, and two registered nurses. The Project Author were mailed a packet containing a Letter of Intent (Appendix B), a copy of the Content Expert Project Evaluation Tool created by the Project Author specifically for the project (Appendix C), a copy of the medication template (Appendix D), and a self-addressed stamped envelope. The Letter of Intent explained the project purpose and instructions for completing and returning the Content Expert Project Evaluation Tool to the Project

Author. The Content Expert Project Evaluation Tool contained six evaluative items with space for narrative comments and suggestions. Approximately 20 minutes was required to review the medication template and to complete the Content Expert Project Evaluation Tool. Content experts were provided a self-addressed envelope to return the Content Expert Project Evaluation Tool to the Project Author. A summary of the evaluation results including the findings of the six evaluative items in the content expert project evaluation tool was provided to the content expert reviewers by postal mail.

Plan for the Protection of Human Rights

Following approval from the D'Youville College Institutional Review Board (Appendix A), five professionals with knowledge and expertise in the field of primary care were personally approached and asked to voluntarily participate as a content expert in the review and evaluation of the medication template (Appendix D). Content experts were advised that participation or non-participation as an expert reviewer will have no effect on their employment status. The Project Author has a collegial, professional, and non-supervisory relationship with the content expert reviewers thereby protecting the participants from any risk of coercion. Content experts were guaranteed confidentiality because identifying characteristics were not collected on the Content Expert Project Evaluation Tool and because their names were not revealed anywhere in the project manuscript or in required project presentations. Only the Project Author knows the names of the content expert reviewers. Return of the completed content expert Project Evaluation Tool (Appendix C) indicated implied voluntary consent to participate as a content expert reviewer. Content experts were advised that they will not be able to withdraw from project participation once the project evaluation tool is returned to the

Project Author because the evaluation tool will be returned without identifying information. Returned Content Expert Project Evaluation Tools will be stored according to D'Youville College IRB protocol in a locked drawer located in the Project Author's home for a period of six years and then destroyed.

Plan for Project Evaluation

After obtaining Full Approval from the D'Youville College Institutional Review Board (Appendix A), the Project Author mailed a packet to each content expert reviewer containing one Letter of Intent (Appendix B), one copy of the Content Expert Project Evaluation Tool (Appendix C), one copy of the medication template (Appendix D), and one self-addressed stamped envelope. The Letter of Intent explained the project purpose and instructions for completing and returning the Content Expert Project Evaluation Tool to the Project Author.

The Content Expert Project Evaluation Tool consisted of six evaluative items scored on a four point Likert Scale that ranged from (1) Strongly Disagree, and. (2) Disagree, (3) Agree, and (4) Strongly Agree. Space was provided for narrative comments and suggestions following each evaluative item. Evaluative items asked reviewers to rate the medication template on clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance. Approximately 20 minutes was required to review the medication template and to complete the Content Expert Project Evaluation Tool. Content experts were given seven days to complete and return the Content Expert Project Evaluation Tool to the Project Author via postal mail using the self-addressed stamped

envelope included in the original packet. Content expert suggestions and comments were analyzed for common themes and presented narratively. A summary of the evaluation results including the findings of the six evaluative items in the content expert project evaluation tool were provided to the content expert reviewers by postal mail.

Summary

Chapter I presented the project introduction, statement of purpose, an overview of the theoretical framework guiding project development, an initial review of the literature focusing on improving medication adherence, the project significance and justification, project objectives, definition of terms, project limitations, the project development plan, the protection of human subjects, the plan for project evaluation, and a chapter summary. Chapter II will provide an extensive review of the literature focusing on improvement of medication adherence and a chapter summary. Chapter III will discuss the intended project setting and population, the content expert participants, data collection methods, project tools, the protection of human rights, and a chapter summary. Chapter IV will discuss the evaluation of the project, implications for future advanced nursing practice, recommendations for future projects and research, and a chapter summary.

CHAPTER II

REVIEW OF THE LITERATURE

A review of nursing and health related literature was conducted to explore medication compliance and adherence issues and its impact using the following keywords both singularly and in multiple combinations: Medication, Adherence, Health Outcome, Improvement, Health Care Cost, Nursing. Databases search includes AMED, Alt Health Watch, CINAHL Plus with Full Text, and EBSCO. With the exception of classical works, the search is limited to the years 2013 to 2018 to ensure that current evidence-based literature was reviewed and summarized for the purpose of this project. A summary of the review of the literature is presented.

Reason for Non Compliance to Medications

According to Ismail, Selim, & Elkhashab (2017), lack of continuity of care, patient information materials written at too high literacy level, lack of knowledge on adherence, and the medication cost are few of the many reasons that contribute to non adherence. Khan, Shah, & Hameed (2014) considers side-effects and forgetfulness as the main barriers to low medication adherence. According to Zullig & Bosworth (2017), beliefs about medication, and low health literacy can impact the ability to use medication optimally. According to Martin, Kripalani, & Durapau Jr (2012), lack of self-confidence in understanding purpose, intent, numeracy, and dosing schedules can result in non-adherence, as well as medication error.

Effect of Non Adherence to medication

Mcguire & Aurel (2014) have argued that between \$100 and \$300 billion of avoidable health care costs have been attributed to nonadherence in the US annually, representing 3% to 10% of total US health care cost. Result of the Study conducted by Wu et al. (2014) concluded, that Participants with heart failure condition and with full medication adherence had a lower rate of all-cause hospitalisation and death (0.71 events/year) compared with those with any nonadherence (0.86 events/year).

Effect of improved adherence to Medication

Ferdinand et al. (2017) concluded in their study that improving medication adherence could be one of the most effective and efficient ways of improving health outcomes, especially for cardiometabolic disease, the leading cause of mortality in the United States. Good adherence was associated with a lower risk of a new microvascular or macrovascular diabetes complication (Simpson, Lin & Eurich, 2016). Study conducted by Martin, Kripalani, & Durapau Jr (2012) concluded, that using education tools such as PictureRx illustrated pill cards facilitated understanding of instruction, resulting in improved adherence and self-efficacy.

Methods to improve adherence

In order to improve adherence, Wheeler, Roberts & Neiheisel (2014) suggests evaluating each patient for medication adherence, tailoring the plan of care according to patient and system specific barriers. Study conducted by Smith, Davidson, & Tanabe (2017), demonstrated that using literacy appropriate heart failure education materials in an outpatient cardiology, safety net health system significantly improves ($p^{1/4} < 0.001$) reported self-efficacy of medication adherence. The use of intra-personal skills, improved

communication, and tactful interventions are fundamental in overcoming the challenges associated with multiple medication co-administrations and providers caring for patients must use innovative and creative interventions, such as medication reconciliation and medication review which allows for the creation of all inclusive medication sheets with frames and schedules, including symbolic drawings produced in collaboration with the patient to improve medication adherence (Briones, Merrill, & Salman, 2015). Study conducted by Diggins (2014), concluded that FNP can implement drug therapy counseling in conjunction with a multidisciplinary team to improve disease outcomes with increased understanding of drug regimens. Qualitative study conducted by Bartlett, J. &, Welch (2017) concludes that in developing better relationships with patients, healthcare providers should elucidate patients' experiences with managing their medications and help devise interventions that will support adherence and address patients' concerns about taking medications

Summary

Chapter II presented a review of nursing and health related literature exploring reason behind non adherence to medication and its effect on patients with chronic medical conditions in community setting. Chapter III will discuss the intended project setting and population, the content expert participants, data collection methods, project tools, the protection of human rights, and a chapter summary. Chapter IV will discuss the evaluation of the project, implications for future advanced nursing practice, recommendations for future projects and research, and a chapter summary.

CHAPTER III

PROJECT DEVELOPMENT PLAN

Project Setting and Population

The intended project setting was primary care setting. The intended project population was patients with chronic medical conditions.

Content Expert Participants

Following approval from D'Youville College's Institutional Review Board (IRB) (Appendix A), 5 content experts with knowledge and expertise in primary care provider of people with chronic medical conditions were contacted by the project author and asked to voluntarily participate in the review of the project for clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance. The first content expert was a Primary Care Nurse Practitioner with more than four years experience in the field of primary care setting. The second content expert was an Emergency Medicine Nurse Practitioner with over 15 years of experience in treating patients in the emergency department. The third content expert was a family medicine physician who has been providing primary care for over 20 years. The fourth content expert was a registered nurse with a master's degree and training in diabetes management who provides diabetes education to patients in primary care setting for over 10 years. The fifth content expert was a registered nurse who works in a community setting for the past 5 years to assist patients who are rehabilitating from hospital to home due to severe limitations associated with chronic medical conditions.

Data Collection Methods

The medication template was developed based on an extensive review of the literature and on feedback from 5 content experts with knowledge and expertise in treatment and patient education regarding chronic medical conditions and to promote their health. Upon receipt of Full Approval from D'Youville College's Institutional Review Board (IRB) (Appendix A), the 5 content experts were contacted by the Project Author and asked to voluntarily participate in the review and evaluation of the medication template. All 5 content experts agreed to participate. A manila envelope containing a recruitment Letter of Interest (Appendix B), one copy of the Content Expert Project Evaluation Tool (Appendix C), one copy of the medication template (Appendix D), and a stamped self-addressed envelope with instructions on how and when to return the evaluation tool to the Project Author was provided. Content experts were asked to review and evaluate the medication template for clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance. The content experts were instructed not to place any identifying marks on the evaluation tool. Return of the evaluation tool signified implied consent to participate as content experts. Content experts returned the evaluation tool to the Project Author using a self-addressed stamped envelope.

Project Tools

The purpose of this project was to develop a Medication Template (Appendix D). The development of a Medication Template for patients with chronic medical conditions to promote medication adherence was guided by Watson's Caring Science Theory. The Medication Template (Appendix D) consisted of important information about the

medication, use of the medication, identifiers, common side effects which were developed based on findings obtained from the review of current evidenced based literature. A Content Expert Evaluation Tool (Appendix C) was developed by the Project Author specifically for the purpose of having 5 content experts with knowledge and expertise in treating patients with chronic medical conditions, to evaluate the Medication Template on clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance. The content experts were asked to rate the six evaluative items using the following four point Likert Scale: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4). The content experts were instructed to circle one response for each item indicating their appraisal for that particular item. Space was made available immediately following each evaluative item to provide the content experts with opportunity to comment or make further suggestions if needed. Data from the Content Expert Evaluation Tool were collated, analyzed, and presented in narrative format. Content expert written comments and suggestions were analyzed for common themes and presented in narrative format.

The Protection of Human Rights

Following approval from the D'Youville College IRB (Appendix A), 5 experts with knowledge and expertise in treatment and patient education regarding chronic medical conditions were approached and personally asked to participate as a content expert reviewer for a Medication Template developed for the purpose of this project. The Project Author had a collegial, professional, and non-supervisory relationship with the content expert reviewers thereby protecting the participants from any risk of coercion.

The content expert participants were advised that participation or non-participation as a content expert reviewer would have no effect on their employment or evaluative status. The participants were guaranteed confidentiality as identifying characteristics would not be displayed on the Content Expert Evaluation Tool (Appendix C) and all data would be reported in aggregate form. Return of the completed Content Expert Evaluation Tool would indicate implied consent to participate as a content expert. All 5 content experts were advised that their participation was completely voluntary and that they would not be able to withdraw from project participation once the completed Content Expert Evaluation Tool was returned to the Project Author as there would be no way to identify them. Returned Content Expert Evaluation Forms will be kept in a locked file cabinet drawer located in the Project Author's home for a period of six years and then destroyed as per IRB protocol.

Summary

Chapter III discussed the intended project setting and population, a detailed description of the content expert participants, data collection methods, project tools, the protection of human rights, and a chapter summary. Chapter IV will discuss the evaluation of the project, implications for future practice, and recommendations for future projects and research.

CHAPTER IV

PROJECT EVALUATION, IMPLICATIONS, AND FUTURE

RECOMMENDATIONS

Chapter IV will discuss the evaluation of the project, implications for future practice, and recommendations for future projects and research.

Project Evaluation

After permission was obtained the D'Youville College's Institutional Review Board (IRB) (Appendix A), 5 content experts with knowledge in treatment and patient education regarding chronic medical conditions were approached in person and asked to voluntarily review and evaluate the Medication Template using a Content Expert Evaluation Tool developed by the Project Author. The Content Expert Evaluation Tool included six items asking content experts to evaluate the Medication Template on clarity, readability, applicability, quality, organization, and evidenced-based clinical relevance. The content experts were asked to rate the six evaluative items using the following four point Likert Scale: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4). Space was made available immediately following each item to provide the content experts with opportunity to comment or make further suggestions if needed. Following is a discussion of the results of the content expert evaluation.

The first question on the Content Expert Evaluation Tool asked the content experts if they felt that the information presented on the Medication Template were clear and comprehensible. All five content experts (100%) strongly agreed that the questions were clear and comprehensible.

Question two on the Content Expert Evaluation Tool asked the content experts if they felt that the information included on the Medication Template were presented at an appropriate level of reading for patients with chronic medical conditions. All five content experts (100%) strongly agreed that the questions were presented at an appropriate level of reading for the intended population.

Question three on the Content Expert Evaluation Tool asked the content experts if they felt that the information presented in the Medication Template is relevant and fits the project purpose. Four out of five content experts (80%) strongly agreed and one out of five content experts (20%) agreed that the information presented in the Medication Template is relevant and fits the project purpose.

Question four on the Content Expert Evaluation Tool asked the content experts if they felt that the Medication Template is well designed and professionally presented. All five content experts (100%) strongly agreed that the medication template was well designed and professionally presented.

Question five on the Content Expert Evaluation Tool asked the content experts if they felt that the information on the Medication Template is logical in order and well organized. Four content experts (80%) strongly agreed and one content expert (20%) agreed that the information on the Medication Template is logical in order and well organized.

Questions six on the Content Expert Evaluation Tool asked the content experts if they felt that the Medication Template addresses a current and clinically relevant problem in nursing and patient care practice and utilizes current clinical evidence. All five content

experts (100%) strongly agreed that the Medication Template addresses a current and clinically relevant problem in nursing and patient care practice and utilizes current clinical evidence.

Written comments and suggestions given by the content experts to strengthen the development of a Medication Template are summarized as follows with examples. One content expert reviewer commented that project brought awareness that possibly half of his patient pool may not be taking prescribed medications as per the instruction. Two content expert reviewers had a similar comment that giving written instruction regarding their prescribed medication can definitely improve medication adherence as most of their patient pool is elderly people and many are forgetful about their medications. One content expert commented that his practice usually involves patient of minorities who primarily speaks language other than English who may have difficulty in understand instruction written in English on such Medication Template and may need someone to translate it from them. One content reviewer commented that if such an easy to follow instruction is provided to the patients on a Medication Template, many medication errors can be prevented.

Implications for Future Practice

This project highlighted the need for a development of a standardised communication tool that can be utilized by health care providers, pharmacists and other allied health care professionals who can provide medication information to patients in a simple to follow written instruction which may reduce medication errors, and increase

adherence to the medications. This may also decrease burden on health care cost by preventing complications associated with non adherence.

Future Recommendations

The purpose and intention of this project was to address a current gap in nursing and health related knowledge for health care professionals to improve medication adherence among their patients who have chronic medication conditions by providing written information regarding medications on a standardised Medication Template. Future projects and research should focus on exploring and examining development of such product which can be standardised in primary care setting. Furthermore, future research and projects should focus on identifying various barriers that hinders the medication adherence. Finally, Jean Watson's (2011) Caring Science Theory fit well as a theoretical framework to support the development of the Medication Template and should be considered as a theoretical framework to support future projects and research related to patient care practice in this particular area of interest.

Summary

Chapter IV discussed the evaluation of the project, implications for future practice, and recommendations for future projects and research. Better communication between health providers and their patients can play a key role in improving health outcomes. Education regarding treatment plan and medication should be provided in an easy to understand language in a written standardized template as it will help to overcome many barriers to improve medication adherence.

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Appendix A

Institutional Review Board Full Approval
Letter

320 Porter Avenue
Buffalo, New York 14201-1084

TO: **Ninad Sanghani**

FROM: Dr. Julia Hall *JH/EB*
Institutional Review Board

DATE: September 26, 2018

SUBJECT: **IRB FULL APPROVAL**

I am pleased to inform you that your application to the D'Youville College Institutional Review Board entitled: *"A Medication Template for Patients With Chronic Medical Conditions to Promote Medication Adherence"* has been granted **FULL APPROVAL** with respect to the protection of human subjects. This means that you may now begin your research unless you must first apply to the IRB at the institution where you plan to conduct the research.

Please note that you are required to report back to this IRB for further review of your research should any of the following occur:

1. a major change in the method of data collection
2. unanticipated adverse effects on the human subjects
3. unanticipated difficulties in obtaining informed consent or maintaining confidentiality
4. the research has not been completed one year from the date of this letter

Congratulations and good luck on your research!

eb

cc: Director of Graduate Studies
Dr. Sharon Mang
file

Appendix B

Letter of Intent

Dear Content Expert,

Hello, my name is Ninad Sanghani. I am a graduate student completing a Master of Science in Family Nurse Practitioner degree at D'Youville College in Buffalo, New York. Currently, I am developing a medication template. I am submitting the template for your expert review and evaluation. Recommendations and critique of this work in progress will be taken into serious consideration during the final revisions of this work.

You are being asked to review and evaluate the medication template for clarity, readability, applicability, quality, organization, and evidence-based relevance. Your review of the brochure should take approximately 20 minutes of your time. The evaluation process is completely voluntary and your refusal to participate will involve no penalty or loss to you. Your responses will be kept confidential and will be available only to me. If you choose to participate, please return the evaluation tool within the next seven (7) days using the enclosed self-addressed stamped envelope. Consent to participate in the evaluation is implied upon the completion and return of the evaluation tool. Once you return the evaluation tool, there is no way to withdraw your responses, as there are no identifying markers included on the tool. Returned evaluation tools will be stored in a locked drawer in my home for a period of six years and then destroyed. There are no direct benefits to you as a content expert participant. A copy of the results including the findings of the six evaluative items in the content expert project evaluation tool will be mailed to you at the conclusion of this project.

If you have any questions regarding my project or the evaluation process, please contact me via email at sanghn08@dyc.edu. Any specific questions may be directed to Dr. Sharon Mang, my Project Chair, at 715-829-8376, or via email at mangs@dyc.edu. Thank you for your assistance and participation as a content expert. I look forward to receiving your evaluation of my project.

Best Regards,

Ninad Sanghani

Appendix C

Content Expert Project Evaluation Tool

Instructions: The purpose of this tool is to provide you with a guideline for evaluating the clarity, readability, applicability, quality, organization, and relevance to current evidence-based practice of the proposed medication template. The purpose of the project is to create a grand rounds presentation about improving medication adherence in primary care setting using medication template. Using the four point Likert Scale, please circle one choice that best reflects your opinion. Space is provided after each of the six evaluative items for further feedback and direction regarding the medication template. To maintain your confidentiality, please do not make any identifying marks on the evaluation tool.

1. Clarity

The information presented in the Medication Template is clearly understood and easy to follow.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

2. Readability

The information in the Medication Template is presented at an appropriate and comprehensive level of reading for patients in primary care setting.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

3. Applicability

The information presented in the Medication Template is relevant and fits the project purpose.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

4. Quality

The Medication Template is well designed and professionally presented.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

5. Organization

The Medication Template is logical in order and well organized.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

6. Evidence-Based Clinical Relevance

Medication Template addresses a current and clinically relevant problem in nursing and patient care practice and utilizes current clinical evidence.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Comments and Suggestions:

Thank you for taking time to evaluate the medication template. Your feedback is deeply appreciated and will strengthen the development of the medication template.

Appendix D

Medication Template

<u>MEDICATION INFORMATION SHEET</u>	
Patient's Name: _____	Health Card Number: _____
Date of Birth: _____	Date: _____
Health Care Provider: _____	
1.	
MEDICATION	
DIRECTIONS	
REASON	
COMMON SIDE EFFECTS	
ADDITIONAL INSTRUCTIONS <small>*To be filled out by Physician</small>	
MEDICATION IDENTIFICATION <small>*To be filled out by Pharmacist</small>	
2.	
MEDICATION	
DIRECTIONS	
REASON	
COMMON SIDE EFFECTS	
ADDITIONAL INSTRUCTIONS <small>*To be filled out by Physician</small>	
MEDICATION IDENTIFICATION <small>*To be filled out by Pharmacist</small>	
Copyright © 2018 by Ninad Sanghani, FNP - Candidate	

MEDICATION INFORMATION SHEET

Patient's Name: John Doe Health Card Number: X123456 Date: 14 November 2018
 Date of Birth: 01 January 1950 Health Care Provider: Dr. ABC

1.

MEDICATION	Bisoprolol
DIRECTIONS	* Take 1 tablet (5 mg dose) once daily in the morning time. * Start taking Bisoprolol from 01 December 2018.
REASON	*Bisoprolol is used to treat high blood pressure (BP).
COMMON SIDE EFFECTS	* Headache, Fatigue, Dizziness, Sleep Problems * Call doctor's office if you develop shortness of breath, swelling, rapid weight gain, slow heart rate pounding heartbeats or fluttering in your chest, numbness, tingling or cold feeling in hands/legs, feeling of passing out, vision problems.
ADDITIONAL INSTRUCTIONS *To be filled out by Physician	* Avoid getting up too fast from a sitting or lying position, or you may feel dizzy. Get up slowly and steady yourself to prevent a fall. * Stopping Bisoprolol suddenly may make your condition worse or cause other serious heart problem. Consult with your Provider before stopping it. * Follow up with your provider every 3 months to check your heart rate and BP.
MEDICATION IDENTIFICATION *To be filled out by Pharmacist	Light pink color round tablet marked with numbers 5270 and 93

2.

MEDICATION	
DIRECTIONS	
REASON	
COMMON SIDE EFFECTS	
ADDITIONAL INSTRUCTIONS *To be filled out by Physician	
MEDICATION IDENTIFICATION *To be filled out by Pharmacist	