Improve Hypertensive Patients’ Compliance Postgraduation from the Virtual Care Team Program

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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
Beyster Institute of Nursing

DOCTOR OF NURSING PRACTICE PORTFOLIO

by

Marcie S. Santillan

A portfolio presented to the

FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the requirements for the degree

DOCTOR OF NURSING PRACTICE

May 11, 2023

Faculty Advisor: Razel Bacuetes Milo PhD, DNP, MSN, FNP-C, RN
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Acknowledgments

I would like to express my gratitude to Dr. Razel Milo, my faculty advisor and mentor throughout this program. Our shared passion for serving the medically underserved population made it easy to start a professional relationship. Your guidance, expertise and reassurances made this project and overall program a triumph and achievable.

I wish to thank my family for their endless, unconditional support and love. My daughters have always provided me with hands on experience in patient care. They encouraged me to be strong, independent, empathetic, successful and more importantly to be myself throughout this process. My parents, and brother for their support, and always providing and encouraging self-care time. My mother for allowing me to see a how an innovative, independent, assertive, out of the box thinker, as well as being a voice for medically underserved person’s voice even without a medical background other than administratively. Another thank you to my younger brother, and sister in law for allowing and encouraging me to be my quirky self during my downtime. Thank you for continuing to push me to be greater. I love you all.

A very special thank you to my grandparents who are no longer with us but provided a foundation that hard work was is nothing to be ashamed of or shy away from, especially if it’s your passion and can also provide for your family. My grandparents are the inspiration behind working in a community health clinic.
Opening Statement

Purpose in Pursuing the DNP

I became a Registered Nurse when I was 23 years old, and even had my third daughter during the program. My nursing career started in the Nursery Intensive Care Unit (NICU) at one of two hospitals in the Imperial Valley. After the birth of my fourth daughter, I switched from nursery to home health. The switch allowed me to change from working nights and weekends, to Monday through Friday and on-call monthly rotation. I worked in home health for over 13 years and gained so much experience and knowledge regarding care at home and collaboration with primary care providers, specialist, different disciplines, and other medical agencies. During this time, I was raising my daughters who also had various health issues that required multiple visits to a children’s hospital specialist throughout their childhood that ranged from Gastroenterology, Orthopedic, Endocrine, mental health and Orthopedic/Oncology specialty. The knowledge, and medication management of the treating providers were phenomenal, but expectations of lifestyle changes and the response from the providers when their outcomes were not met was very sad.

The reaction from providers when goals are not met or are not met per their time was a disservice to patients and not just my daughters. Judgement, criticism, and scolding were given during visits, instead of taking a little time to find out if there were other issues hindering stabilization or even to acknowledging even small progress from the patient. This type of care was inspiring me to go back to school and earn advanced degrees so health care could be delivered from a more holistic perspective.
I didn’t have the advantage of pursing advanced degree(s) until after my marriage ended. I didn’t realize until towards the end of my marriage how one sided and unsafe it was for myself and especially not a stable environment for my daughters to exposed to or witnessing. I completed by BSN after I started divorce proceedings and without my ex-spouse’s knowledge. Once the divorce was final, I was given the opportunity to apply to the University of San Diego’s Nurse Practitioner’s program. When I met with the Associate Dean of Advanced Practices Program, I was explained of not only the Master’s Program but of the Doctor of Nursing Practice. Once introduce to the program I did not hesitate to apply, and was over joyed with my acceptance. Jokingly, there have been so many times that I have questioned myself for applying for the DNP program but have not once regretted it.
Documentation of Mastery of DNP Program Outcomes
Improving Hypertensive Patients’ Compliance After Graduating from the Virtual Care Team Program

Marcie S. Santillan
Razel Bacuetes Milo
University of San Diego
Improving Hypertensive Patients’ Compliance After Graduating from the Virtual Care Team Program

According to the American Heart Association, 1 in 3 U.S. adults has high blood pressure or hypertension, treatment of which is estimated at $51.3 billion a year (Kirkland et al., 2018). Uncontrolled hypertension is a high-risk factor for cardiovascular disease at 46%. With the recent COVID-19 pandemic, chronic conditions such as hypertension were a lower priority as frontline personnel were battling this new infection. At the start of the pandemic, the people at high risk of critical impact from COVID were immunosuppressed, at an advanced age, and had chronic care conditions. During this time, medical facilities, including primary care clinics, had to manage patients without putting them at risk for complications of COVID. One strategy primary care providers improvised for continuing to provide chronic care management was implementing telemedicine. This technique was previously practiced after patients were hospitalized to prevent hospital readmission.

At this time, it was also revealed that medically underserved patients, especially those without insurance, suffered the worst. Per Abrahamowicz et al., 2023, blood pressure (BP) control rates in the USA have worsened over the last decade, with significantly lower rates of control among people from racial and ethnic minority groups, with non-Hispanic (NH) Black persons having 10% lower control rates compared to NH White counterparts. Many factors contribute to BP control, including key social determinants of health (SDoH), such as health literacy, socioeconomic status, access to healthcare, low awareness rates and dietary habits. (P. 1), Abrahamowicz’s article also compared hypertensive patients born in the United States and those not born in the United States. A higher percentage of U.S. born patients had their blood
pressure under control compared to their non-U.S. born counterparts, reasons for which included language and cultural barriers.

**Project Background**

This Southern California clinic is a Federally Qualified Health Care (FQHC). This clinic is one of only eighty-one FQHCs here in the area providing health care to patients with little to no insurance. FQHCs also provide specialty services to their patients. According to Healthcare.gov (n.d.), [FQHCs are] federally funded nonprofit health centers or clinics that serve medically underserved areas and populations. Federally qualified health centers provide primary care services regardless of your ability to pay. Services are provided on a sliding scale fee based on your ability to pay (para. 1).

The clinic incorporated this technique in their most uncontrolled hypertensive patients. This FQHC or community clinic has 17 sites throughout two counties, with 100 full-time equivalents (FTE) providers and serving 78,000 patients. During the pandemic, the Virtual Care Team (VCT) began its program in early 2021. Administration and providers also realized their medically underserved patients, especially those with chronic conditions, had decreased clinic visits, and their chronic conditions were no longer stable. The VCT program was created to assist their most vulnerable patients with chronic and uncontrolled hypertension, diabetes mellitus, and nicotine use disorder. According to the NHC (2022), “Compared with usual care, the VCT provides enhanced patient communication and care coordination; more frequent appointments for medication titration; longer appointments for time-intensive services; standardized care with greater adherence to best practice guidelines; and improved access to affordable medication” (para. 5). The majority of patients in the VCT program were non-English speaking; Spanish was the dominant language with a few other languages spoken, including Arabic and Tagalog. The
VCT comprised providers and medical assistants who are bilingual in Spanish and English; a language line was used for the other non-English speaking patients. Telehealth visits allowed the clinic to include patients who do not live close to the clinic and might not have reliable transportation. A template was created in the electronic health record where information is tracked. Reports can be pulled by the clinic’s information technology (IT) department. According to the clinic (2002), “After one year, the team has had 2200 patient visits, enrolled 631 patients, and graduated 193” (para. 8).

**Project Purpose**

This evidence-based practice (EBP) project applied VCT practice among recent hypertensive (HTN) VCT graduates who stopped making chronic care visits or maintaining a healthy BP. The process included conducting telephone calls to patients regarding their chronic care management. While under the care of the VCT program, the patients were closely monitored for a year through biweekly phone calls (using scripted interviewing techniques) during telehealth visits and protocol-based treatments using national guidelines created by the clinic’s internal Continuous Quality Improvement (CQI) committee. The goals for graduates of the VCT program included a blood pressure of systolic blood pressure (SBP) < 140 or diastolic blood pressure (DBP) < 90, medication, and lifestyle management. Six months after hypertensive patients graduated from the VCT program, the IT department pulled a report to evaluate current statistics on HTN patients, including last visit, blood pressure, laboratory results, and lifestyle change continuance.

**Translation of Evidence/ Literature Review**

The report indicated graduates were at 84% compliance at the end of the VCT program, leaving 16% of graduates out of compliance with follow-up visits with their primary care
provider (PCP), in-clinic blood pressure recording, and home blood pressure monitoring readings, medication management, or lifestyle changes. The report also revealed that 100 of the 193 graduates had a blood pressure reading above 140/90 and had not had a visit with their PCP in over six months.

“In an analysis of 2013 data from over 120,000 participants in the Behavioral Risk Factor Surveillance System, antihypertensive medication adherence was significantly lower among those who were underinsured (OR 0.83, 95% CI 0.76–0.89) or uninsured (0.39, 0.35–0.43) compared with adequately insured individuals” (Abrahamowicz et al., 2023, p. 19). The article went on to discuss the social and ethnic disparities to consider what hinders and what can help with controlling blood pressure among the minority community. Since the clinic is an FQHC, patients are seen regardless of insurance. Since the VCT team does most of their visits via telehealth, the patients and the patients are not charged for telehealth visits. When prescribing medication, the clinic’s pharmacy offers low-cost medications. “Despite improvements in hypertension diagnosis, treatment, and control in recent decades, only 54.4% of those with hypertension have their BP controlled” (Kirkland et al., 2018, p. 6). The VCT group has an 86% BP control rate of their current patients and has effectively treated them using evidence-based guidelines.

**Evidence-Based” Model and Framework**

This project used the Iowa Model, seen in Figure 1, which allowed clinicians to identify room for growth and improve practice and healthcare. The VCT team already had a similar philosophy by having collaborative meetings with their clinical pharmacist and behavioral health consultant to discuss the progress of the VCT program and, ultimately, patient outcomes. The phone call survey included the VCT scripted questionnaire for BP monitoring and guidance from
an article published by the American Heart Association on hypertension management and the use of telemedicine (see Appendix B), (Omboni et al., 2020).

**Figure 1**

The Iowa Model of Evidence-Based Practice to Promote Quality Care

![Iowa Model of Evidence-Based Practice to Promote Quality Care](image)

(Brown, 2014, Figure 1)

**Figure 2**

TEAM Intervention---- (Drake, et al, 2021 Figure 1)
Implementation Plan

Having become acquainted with the VCT program through mutual patients after two clinical rotations with NHC before the project, I had an opportunity to assist the team with a developing issue with their new program. The project was presented to the stakeholder and discussed the opportunity of conducting an evidenced-based protocol project and assisting the VCT program by increasing their percentage of patient compliance after graduation. The Institutional Review Board approval was received before starting the project. From September to December 2022, chart audits were conducted and gathered data from 100 graduates flagged by the continuous quality improvement (CQI) and information technology (IT) department report and conducted telephone surveys with patients the clinic had not seen in over six months or had not recorded blood pressure in their EHR. The summarized findings were presented with recommendations for improvement from January to February 2023.

Evaluation of Outcomes
Data revealed that 10 of the 100 patients met the outreach criteria. These 10 patients were contacted, but only five were available to follow through with the interventions assembled. The telehealth visits identified two patients being seen three days a week for dialysis. Still, they did not realize they needed to continue with medications and lifestyle changes with the VCT provider or to visit their PCP because their nephrologist was overseeing them. One patient ceased their management because the frequent telehealth visits had stopped and the patient forgot to continue them. The fourth patient believed that since they completed the program, their HTN was cured, so they reverted to their previous lifestyle and discontinued their medication. The fifth person did not have insurance or the funds to pay for the clinic visit or the medications. All five graduates who completed the survey had re-established care with their PCP and continued to follow through with controlling their blood pressure.

**Data Analysis**

Ninety graduates were flagged in the report as having high blood pressure after graduating from the VCT. The VCT graduate report was updated three times during the audit process of the project timeline. The chart audit of 100 electronic patient records revealed a few issues affecting the recorded data and flagged as elevated BPs. Twenty-two out of 90 graduates had elevated BPs (SBP >140 or DBP >90) on the last visit after completing the VCT program. From the twenty-two one patient had recently resumed VCT care after BP had increased, two patients were either no-shows or cancelations, two patients had stopped but restarted taking their medications, one patient switched clinics, two patients were being managed by their nephrologist at their dialysis center, 11 patients had urgent visits with either specialty providers (e.g., dentist, podiatrist) or the clinic’s urgent care (for low back pain, COVID, periapical abscess, etc.), three patients were recent VCT graduates marked as complete even though their second to last blood
pressure reading was elevated, and two patients were still in the VCT program. Figure 3 shows the outcome of the VCT program by comparing the patient’s BP at the program’s first visit versus the last.

Figure 3
VCT BPs initial visit vs last visit

Cost-Benefit Analysis

According to Kirkland et al. (2018), “The 2003–2014 pooled data include a total sample of 224,920 adults, of whom 36.9% had hypertension. Unadjusted mean annual medical the expenditure attributable to patients with hypertension was $9,089” (para. 2). The cost for 50 patients a year would thus be $454,450 ($9,089 per patient x 50 patients = $454,450). The benefit breakdown includes ($30,183.50/50 = $603.67 per patient) program cost ($45,145 - $3018.35) / $3018.35 x 100 % = 1395.7%. The return on investment on just the five patients surveyed is 1395.7%. The VCT team included one full-time equivalent provider, two medical assistants, and one registered nurse. Team members had their own office space with workstations (computers with EHR access, telephones, etc.), shared with a second team called Project Dulce, explicitly designated for diabetes management. Based on the EBP project literature review, a
survey worksheet was developed (see Appendix A), performed chart audits, conducted outreach to qualifying patients, summarized findings, and provided recommendations for improvement.

Implications for Practice

Recommendations include implementing notifications sent by the EHR to VCT graduates, reminding them of care gaps including, but not limited to immunizations, annual wellness exams, and health care screenings for appropriate age groups. Notifications should be sent quarterly or bi-annually. The program should continue using evidence-based protocols for VCT patients even after graduation. Reports should be more specific as to which patients qualify for outreach. The VCT needs to review the last two blood pressure readings prior to graduating the patient and extend the visits another couple of weeks until the patient has 2 or more consecutive weeks of stable blood pressure readings. Another suggestion was to meet with the other units regarding rechecking elevated blood pressure and communicating the elevated reading with either the PCP or VCT if involved.

Discussion

During the pandemic, and especially at its beginning, primary care offices dramatically decreased in visits due to the prioritization of COVID patients and patients refraining from receiving primary care due to not wanting to be exposed to the virus. The reduction in chronic care visits led to a decreased patient health care outcomes and loss of revenue. Universally, healthcare communities had to come up with a solution for continuing to manage chronic care conditions without exposing them COVID. Telehealth was already in place but usually used in rural areas or areas where a specialty provider was not available in the clinic. The clinic devised a VCT program to assist their most vulnerable patients with chronic uncontrolled conditions such as HTN, DM, or nicotine use disorder. The new VCT program has been around for over 15
months and even with an 84% blood pressure stabilization at graduation, the medical director wanted to improve their patients’ overall health.

**Conclusion**

Chart audits demonstrated increased in blood pressure control and compliance in hypertension management for VCT graduates. Reminders should be sent to patients quarterly or bi-annually after program completion to assist patients in remaining compliant. Increased visits with education, medication management, and protocols conducted by the VCT team can reduce or prevent emergency visits or hospitalizations due to uncontrolled HTN and lower the risk for long-term complications. The return on investment for just five patients is 1,395.7%.
References


January 2022).

https://doi.org/10.1161/hypertensionaha.120.15873
Concluding Essay:

Reflections on Growth in Advanced Practice Nursing Role

These three and half years have been such a roller coaster, which have challenged me in every way possible. So many times I had missed family or special events, or my exam or school work were not up to par when I didn’t spend enough time studying so I could be with family. I also the loss of a few family members, and a close friend during the program. The loss taught me to continue and finish my life-long goal and when I’m a practicing Family Nurse Practitioner to honor them with my work.

When I started the program it was in-person and by the second or third week of my second semester we were on zoom due to the pandemic. Luckily my clinical hours were not affected by the pandemic and I was able to conduct in-person visits. There were times during clinicals I was able learn and conduct how to do telemedicine using either phone or facetime visits. I look forward to become a Family Nurse Practitioner and be able to provide advanced practice nursing to the medically underserved.
# Appendix A

## Survey Worksheet

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<th>Pt Age</th>
<th>Ethnicity</th>
<th>Sex</th>
<th>Language</th>
<th>Last Clinic Visit</th>
<th>telehealth Visit</th>
<th>Last recorded bP</th>
<th>Outreach</th>
<th>F/U Visit Schedule</th>
<th>Med compliance</th>
<th>Home Monitoring</th>
<th>Diet compliance</th>
<th>Exercise</th>
<th>CMP</th>
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Appendix B

IRB Approval

Oct 5, 2022 10:56:18 AM PDT

Marcie Santillan
Hahn School of Nursing & Health Science

Re: Exempt - Initial - IRB-2023-24, Improve patients’ compliance post-graduation from the Virtual Care Team (VCT) Program

Dear Marcie Santillan:

The Institutional Review Board has rendered the decision below for IRB-2023-24, Improve patients’ compliance post-graduation from the Virtual Care Team (VCT) Program.

Decision: Exempt

Selected Category: Category 4.

Findings:

Research Notes:

Internal Notes:
Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher.

The next deadline for submitting project proposals to the Provost’s Office for full review is N/A. You may submit a project proposal for expedited or exempt review at any time.

Sincerely,

Truc T. Ngo, PhD
IRB Administrator

Office of the Senior Vice President and Provost
Hughes Administration Center, Room 214
5998 Alcalá Park, San Diego, CA 92110-2492
Phone (619) 260-4553 • Fax (619) 260-2210 • www.sandiego.edu
Appendix C

Abstract

**Background:** Virtual Care Team (VCT) began their program approximately 15 months ago to assist their most vulnerable patients with chronic and uncontrolled conditions such as hypertension, diabetes mellitus, and nicotine use disorder. The program follows the patients for a year to help them manage their chronic conditions and comply with chronic management. When the Virtual Care Team followed up a few months after the graduation with some recent graduates, it was found that a small number of patients returned to their pre-Virtual Care Team habits.

**EBP Purpose:** The purpose of the project is to follow up on those Virtual Care Team graduates who have stopped their chronic care visits or even maintained healthy blood pressure. Conduct telephone calls to patients regarding their chronic care management.

**Implementation Plan:** Evidenced-based interventions include using the Evidence and Recommendations on the Use of Telemedicine for the Management of Arterial Hypertension from the American Heart Association as guidance, as well as the clinic’s questionnaire for blood pressure monitoring, and then finishing with a question as to why they stopped being compliant with their hypertension management.

**Evaluation of Outcomes:** One hundred recent Virtual Care Team graduate charts were evaluated. A total of ten graduates met the criteria for outreach. Out of the ten, five patients were surveyed regarding their chronic care management. During the surveys, the patients indicated they either did not continue with their lifestyle modifications or monitor their blood pressure because they didn’t have someone to call and remind them. They thought they were cured and reverted to their old habits. A couple of patients had no insurance or funds to pay for visits or their medications. Care was established with the five patients surveyed, and their blood pressure had remained within normal range or was reduced to normal limits after the phone call survey and reestablishing care.

**Keywords:** Virtual Care, Hypertension, Telemedicine, and Chronic Care
# Appendix D

## Poster

**Virtual Care Team Program to Improve Hypertensive Patient’s Compliance**

Marcie S. Santillan, BSN, RN, DNP/CPNP Student  
Faculty Advisor: Razel Bacuetes Milo PhD, DNP, MSN, FNP-C, RN

### Background
- The community clinic in Southern California has 17 sites, 100 FT providers and serves 78,000 patients
- Virtual Care Team (VCT) program began approximately 15 months ago to assist patients with chronic and uncontrolled conditions such as HTN, DM, and nicotine use
- Patients were closely monitored for a year

### Purpose
- The EBP project aims to continue care for recent VCT graduates who have stopped their chronic care visits or even maintained healthy BP

### Framework/EBP Model
- Iowa Model was used for this project to have clinicians identify room for growth and improve practice and healthcare.

### Evidence for Problem
- VCT program consisted of on-site and telehealth visits
- Telehealth visits allowed for patients outside of the county
- At the end of the VCT programs graduates were at an 84% compliance
- This leaves 16% of graduates out of compliance with either follow-up with their PCP, BP record, medication management, or lifestyle changes

### Project Plan Process
- July 2022 – August 2022
  - Meet with VCT MD Director for a potential project.
  - Research evidenced-based interventions to increase graduate HTN compliance percentage after completing the VCT program.
  - Letter of support from the clinic to conduct the EBP project.
  - IRB approval of the EBP project.
  - September 2022 – December 2022
  - Review the clinic’s QI reports creating a list of qualifying patients in need of outreach.
  - Implementation of EBP project data using evidenced-based intervention via telephone surveys on qualifying patients.
  - Data gathering for January 2023 to February 2023
  - Summarize findings and create recommendations for improvement

### Evaluation of Outcomes

<table>
<thead>
<tr>
<th>VCT BP controlled at initial visit vs Last visit</th>
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<tbody>
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<td>Initial BP Controlled</td>
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<tr>
<td>Yes</td>
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</table>

### Cost-Benefit Analysis
- (454,450/50 = 9089 per patient) benefit
- (30,183.5/50 = 603.67 per patient) program cost
- (45,145 - 3018.35) / 3018.35 x 100 % = 1395.7%
- ROI on the 5 patients is 1395.7%

### Evidence-Based Intervention/Benchmark
- Clinic questionnaire for BP monitoring
- Guidance from the American Heart Association on telemedicine and HTN

### Conclusions
- Evidence shows an increase in BP control for VCT graduates.
- More compliance with HTN management with VCT graduates.
- Patients require ongoing reminders after program completion.
- Reports to have more specificity of patients who qualify for outreach.
- Take into consideration the reason for the visit and the BP records.

### Implications for Clinical Practice
- Implement post notifications to VCT graduates reminding them of care gaps.
- Continued use of evidence-based protocols for VCT patients even after graduation.
- Reduces and or prevents emergency visits or hospitalizations due to uncontrolled HTN.
- Reduces risk for long-term complications.
Appendix E

WIN Conference Approval

Dear Marcie Santillan,

Congratulations! Your abstract, "Improve Hypertensive Patients’ Compliance Post-Graduation from the VCT Program," has been accepted for a POSTER presentation at the Western Institute of Nursing's 56th Annual Communicating Nursing Research Conference, which will be held at the Westin La Paloma Resort and Spa in Tucson, AZ from April 19-22, 2023. Please notify any additional authors on your abstract of this good news.

Your poster session is scheduled for Friday, April 21, 2023 from 1:00 PM - 5:00 PM.

Poster authors present their work interactively to conference participants with the aid of a visual display that summarizes research findings or project outcomes. Posters are displayed in a central location for four-hour blocks of time so participants can peruse the posters and speak with the authors. The WIN Program Committee has set aside one hour during each poster session in which the only scheduled activity is poster viewing. We ask that presenters stand by their posters during this hour, which will be listed in the conference program that will be posted on the website in January. **Poster boards are 8 feet long x 4 feet high.**

This acceptance of your abstract constitutes your participation as a presenter. **If you are unable to present and wish to withdraw your poster from the conference, please notify WIN at win@ohsu.edu by Monday, January 9.**

- Conference registration will open on the website shortly. All presenters must register for the conference. Register by February 19 and receive $50 off of registration.
- Hotel information and a link to reserving rooms at the Westin La Paloma is [HERE](#).

We look forward to an excellent conference and to your participation! If you have any questions, please contact [win@ohsu.edu](mailto:win@ohsu.edu).

Sincerely,

Cara Gallegos, PhD, RN
Chair, WIN Program Committee
Appendix F
Certification

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COMPLETION REPORT - PART 2 OF 2
COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- Name: Marcie Santillian (ID: 9471312)
- Institution Affiliation: University of San Diego (ID: 1852)
- Institution Email: msantillian@sandiego.edu
- Institution Unit: Nursing
- Curriculum Group: Human Subjects Research - Biomed
- Course Learner Group: Biomedical Research - Basic/Refresher
- Stage: Stage 1 - Basic Course
- Description: Choose this group to satisfy CITI training requirements for investigators and staff involved primarily in biomedical research with human subjects.

- Record ID: 39399656
- Report Date: 05-Nov-2020
- Current Score: 88

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES

<table>
<thead>
<tr>
<th>Module</th>
<th>Most Recent</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Institutional Review Board (IRB) Regulations and Review Process (ID: 2)</td>
<td>20-Oct-2020</td>
<td>5/5 (100%)</td>
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<tr>
<td>Informed Consent (ID: 3)</td>
<td>05-Nov-2020</td>
<td>4/5 (80%)</td>
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<tr>
<td>Belmont Report and Its Principles (ID: 1127)</td>
<td>17-Oct-2020</td>
<td>3/3 (100%)</td>
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<tr>
<td>Records-Based Research (ID: 5)</td>
<td>20-Oct-2020</td>
<td>3/3 (100%)</td>
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<tr>
<td>History and Ethics of Human Subjects Research (ID: 498)</td>
<td>18-Oct-2020</td>
<td>4/5 (80%)</td>
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<tr>
<td>Conflicts of Interest in Human Subjects Research (ID: 17464)</td>
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For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid independent learner.

Verify at: [www.citiprogram.org/verify?Vf14364658-2a81-43a6-91e3-6dd830b88f39399656](http://www.citiprogram.org/verify?Vf14364658-2a81-43a6-91e3-6dd830b88f39399656)

Collaborative Institutional Training Initiative (CITI Program)
Email: support@citiprogram.org
Phone: 888-529-5929
Web: [www.citiprogram.org](http://www.citiprogram.org)
<table>
<thead>
<tr>
<th>DNP Essential I: Scientific Underpinnings for Practice</th>
<th>USD DNP Program Objectives</th>
<th>Exemplars</th>
</tr>
</thead>
</table>
| NONPF: Scientific Foundation Competencies            | 2. Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice. | Fall 2019  
• Promoted the Health Promotion model to guide PICO question in Evidence-Based Synthesis and Care Compliance paper. (DNPC611)  
Fall 2022  
• Engcompassed guidance from the American Heart Association article “Evidence and Recommendations on the Use of Telemedicine for the Management of Arterial Hypertension” as part of Evidenced Based Practice project.(DNPC630) |

The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences including human biology, genomics, science of therapeutics, psychosocial sciences, as well as the science of complex organizational structures. In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences.

<table>
<thead>
<tr>
<th>DNP Essential II: Organizational &amp; System Leadership for Quality Improvement &amp; Systems Thinking</th>
<th>USD DNP Program Objectives</th>
<th>Exemplars</th>
</tr>
</thead>
</table>
| NONPF: Leadership Competencies/Health Delivery System Competencies                         | 5. Design, implement, and evaluate ethical health care delivery systems and information systems that meet societal needs and ensure accountability for quality outcomes. | Fall 2019  
• Applied the IOWA Model to guide EBP project to improve APAP/CPAP use for people who suffer from OSA. (DNPC611)  
Fall 2020  
• Evaluated data of research articles to determine appropriate evidence-based intervention to improve quality care. (DNPC625)  
Spring 2021  
• Analyzed CDSDP and identified areas of improvement utilizing the strategic planning process as outlined in “Strategic Planning” by Ebener & Smith, (2014). (DNPC 626) |

Advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. Nurses should be prepared with sophisticated expertise in assessing organizations, identifying system’s
issues, and facilitating organization-wide changes in practice delivery. This also requires political skills, systems thinking, and the business and financial acumen needed for the analysis of practice quality and costs.

<table>
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<tr>
<th>Summer 2021</th>
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<tbody>
<tr>
<td>• Developed a Business Plan to include CDSDP’s urgent care center as a permanent clinical rotation site for universities that offer advanced degree for providers. (DNPC 653)</td>
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<tr>
<th>Summer 2022</th>
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<tr>
<td>• Assessed data of research articles to determine pertinent evidence-based interventions to improve management of uncontrolled HTN for patients previously enrolled in a program that incorporated frequent telehealth visits. (DNPC630)</td>
</tr>
<tr>
<td>• Applied the IOWA Model to guide EBP project to blood pressures of graduates from the Virtual Care Team program at a community clinic. (DNPC630)</td>
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<tr>
<th>Spring 2023</th>
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<tr>
<td>• Final manuscript researched the organizational and system leaderships to review project findings and recommendations for other findings that did not meet criteria for phone survey. (DNPC 630)</td>
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DNP Essential III: Clinical Scholarship & Analytical Methods for Evidence-Based Practice

NONPF: Quality Competencies/Practice Inquiry Competencies

Scholarship and research are the hallmarks of doctoral education. Although basic research is viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge. These paradigms recognize: (1) the scholarship of discovery and integration “reflects the investigative and synthesizing traditions of academic life”; (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) the scholar applies knowledge to solve a problem via the scholarship of application that involves the translation of research into practice and dissemination and integration of new knowledge.

4. Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.

Fall 2020
- Applied the IOWA Model to guide EBP project to improve APAP/CPAP use for people who suffer from OSA. (DNPC611)
- Researched, evaluated and disseminated evidence-based research in advanced pathophysiology regarding weekly systems of focus. (APNC520)

Spring 2020
- Reviewed and summarized evidence-based research in Complementary and Alternative Medicine Presentation: Ginkgo Biloba (APNC523)

Summer 2021

DNP Essential IV: Information Systems/Technology & Patient Care Technology for Improvement & Transformation of Health Care

NONPF: Technology & Information Literacy Competencies

DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and health care systems, and provide leadership within health care systems and/or academic settings. Knowledge and skills related

7. Incorporate ethical, regulatory, and legal guidelines in the delivery of health care and the selection, use, and evaluation of information systems and patient care technology.

Fall 2020
- Obtained Biomedical Research Human Certification – Basic Course through CITI (DNPC625)

Spring 2020
- Interpret and compile healthcare data from supporting databases and create a graphic presentation of data outcomes utilizing Excel. (HCIN540)

Fall 2022
- Review and composed healthcare information from electronic health records to develop interventions to improve health outcomes for a specialized
to information systems/technology and patient care technology prepare the DNP graduates apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice along with the design, selection, and use of information systems/technology to evaluate programs of care, outcomes of care, and care systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and web-based learning or intervention tools to support and improve patient care.

**DNP Essential V: Health Care Policy for Advocacy in Health Care**

**NONPF: Policy Competencies**

Health care policy, whether created through governmental actions, institutional decision-making, or organizational standards, creates a framework that can facilitate or impede the delivery of health care services or the ability of the provider to engage in practice to address health care needs. Engagement in the process of policy development is central to creating a health care system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of DNP practice.

3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).

**Spring 2021**
- Revise policy on health care coverage for undocumented immigrants (H.R.3592) (DNPC648)

**Spring 2022**
- Develop evidenced-based intervention for asylum seeker’s shelter to encourage prenatal care amongst pregnant asylum seekers. (NPTC 604)

**Fall 2022**
- Created an evidenced based questionnaire for a community clinic to investigate decreased health outcomes in a specialized group whom previously met goals while under a program. (DNPC630)

**DNP Essential VI: Interprofessional Collaboration for Improving Patient & Population Health Outcomes**

**NONPF: Leadership Competencies**

Today’s complex, multi-tiered health

1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidenced-based group for a community clinic. (DNPC 630)

**Spring 2023**
- Suggestions for improvement were to incorporate the clinic’s EHR system to be able to notify patients of reminder’s for annual exams, immunizations, etc.
care environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in this environment, health care professionals must function as highly collaborative teams. DNPs have advanced preparation in the interprofessional dimension of health care that enable them to facilitate collaborative team functioning and overcome impediments to interprofessional practice. DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.

<table>
<thead>
<tr>
<th>DNP Essential VII: Clinical Prevention &amp; Population Health for Improving Nation’s Health</th>
<th>NONPF: Leadership Competencies</th>
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<tr>
<td>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</td>
<td>Consistent with national calls for action and with the longstanding focus on health promotion and disease prevention in nursing, the DNP graduate has a foundation in clinical prevention and population health. This foundation enables DNP graduates to analyze epidemiological, biostatistical, occupational, and environmental data in the development, implementation, and evaluation of clinical prevention and population.</td>
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**Spring 2023**
- Over 1080 clinical hours that provided the opportunity to provide care for patients that are medically underserved, where I was able to collaborate with physicians, nurse practitioners, physician assistant, psychiatrist, social work, and other specialties (NPTC 604,605, 608, 609)

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<tr>
<th>Fall 2020</th>
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<tr>
<td>Developed a secondary screening program for at risk women for Cervical cancer (DNPC625)</td>
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<tr>
<td>Reviewed past data of asylees to distinguish how many pregnant asylees were being evaluated at an asylum seeker’s center. Information to be used in a future poster board for similar centers in promotion of the Pregnancy registry to encouraging prenatal care for pregnant asylum seekers. (DNPC602)</td>
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<tr>
<th>Fall 2022</th>
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<tr>
<td>EBP project includes providing phone survey’s to patients who’s BP were not controlled. During interviews</td>
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used patients’ native language, and incorporated cultural aspects of lifestyle changes, and or barriers for continuance of chronic care.

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<thead>
<tr>
<th><strong>DNP Essential VIII: Advanced Nursing Practice</strong></th>
<th><strong>NONPF: Independent Practice/Ethics Competencies</strong></th>
<th><strong>Fall 2022</strong></th>
</tr>
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<tr>
<td><strong>The increased knowledge and sophistication of health care has resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing.</strong></td>
<td><strong>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.</strong></td>
<td><strong>• Applied evidenced based questions to uncontrolled HTN graduates from the Virtual Care Team who were previously controlled while under the programs. Questions were asked in their native language, patients with consent to release information had a family member listed the family member was also included in the phone call.</strong></td>
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<td><strong>• IRB approval required for final EBP project ensured ethical and legal parameters were identified and considered (DNPC 630)</strong></td>
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<td><strong>Spring 2023</strong></td>
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<td><strong>• Provided evidence based, culturally competent care to patients during clinical hours (NPTC 604, 605, 608, 609)</strong></td>
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