

2014

# Diminishing Incontinence in Long-Term Care using Electronic Health Records

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# Walden University

College of Health Sciences

This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,  
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Walden University

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Abstract

Diminishing Incontinence in Long-Term Care using Electronic Health Record

by

Catherine C. Rodgers

MS, Walden University, 2011

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2014

## Abstract

Urinary incontinence affects up to 70% of residents living in a long-term care facility and can affect their quality of life. Specifically, urinary incontinence has a direct impact on older adults in regards to self-esteem, pressure ulcer development, falls, urinary tract infections, and psychosocial wellbeing. The goal of this quality improvement pilot project was to determine if an electronic health record (EHR) assessment tool could help older adults remain continent longer and assist in maintaining an independent lifestyle. Orem's self-care deficit theory and social cognitive theory were used to determine how the electronic health record incontinence template could be used to monitor residents for incontinence and affect the incidence of incontinence. Out of 25 residents, 13 met the requirements for inclusion in the pilot study. Quantitative data were collected and documented in the EHR for 4 weeks and compared to the immediate 4 week period post-implementation of the EHR template. Descriptive analyses of pre- and post-implementation EHR assessments showed there were no EHR assessments completed pre-implementation and 2 residents out of 13 had EHR assessments completed post-implementation. The available data suggested that the EHR template, if edited, could be effective for tracking incontinence. The template needed to address bladder incontinence only rather than bowel and bladder. Feedback from nursing staff indicated that a future study should be conducted over a longer period than 4 weeks to see if results would remain consistent. Nurses working in the long term care environment would benefit from reading this project. This study contributes to social change as evidenced by the residents who remained continent longer by having individual toileting plans partially developed by the template; therefore, they remained a viable part of the community.

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## Dedication

This project is dedicated to my grandmother, who helped mold me into the person I am today. She is also the inspiration behind this project, as she struggled with incontinence during her aging process.

## Acknowledgments

I would like to thank my husband and children, for without their support I would not have been able to even attempt completing my degree. Thank you for being my inspiration to continue when times were tough!

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## Section 1: Nature of the Project

### **Introduction**

Urinary incontinence (UI) affects approximately 25% to 45% of the general population (Ehlman et al., 2012) and 45% to 70% of residents living in long-term care (LTC; Dugger, 2010). UI is the inability of one to hold his or her urine until he or she can get to the bathroom (Green, 2012). As part of the quality of life of the individual or resident, this is indeed a very significant problem that needs to be addressed. UI can affect residents in the LTC setting in that they may not think they have control of when and where they can use the bathroom. The long-term goal of this quality improvement pilot project is to help residents find a continence program that will work for their needs and help them remain continent using templates available in the electronic health record (EHR).

The resident may feel as though he or she is a burden on the staff if he or she asks to use the bathroom and may not ring the call bell. This in turn can lead to incontinence. When residents are incontinent, it becomes an even bigger challenge for the caregivers as they then have to change them instead of just assisting them to the bathroom. This can be much more challenging and time consuming for the resident as well as the caregivers.

### **Problem Statement**

The main problem addressed in this quality improvement pilot project was incontinence in the LTC setting. The research question was as follows: Will having a bladder continence program using an EHR template to assess residents monthly and as needed help residents remain continent longer? This project helped meet the needs of

residents in LTC and also helped meet the requirements of the LTC organization where this study took place, which had received a citation from the state for not having a current continence program in place for the residents. An *as-needed assessment*, done in the EHR, was conducted as needed to see if there were changes noted in a resident's condition. These changes could include urinating more frequently, being incontinent more than usual, or having foul-smelling urine. The goal of this pilot QI project was to have less incontinence in a 24-hour timeframe than prior to the project. Success was measured by residents having one less incontinent change in a 24-hour timeframe than they did prior to the project.

### **Definition of Terms**

Incontinence can be defined in a number of different ways. For the purposes of this project, incontinence was defined as a resident's inability to recognize the urge to use the bathroom or residents' inability to make it to the bathroom on time (Green, 2012) once they felt the urgency to urinate, which was tracked by the ringing of their call bell. The definition of a resident for the purposes of the project was anyone who lived in an LTC facility and considered it their home.

### **Significance of Project**

#### **Context**

UI can lead to multiple problems in the elderly population. There can be a direct impact on residents in regards to self-esteem, pressure ulcer development, falls, and urinary tract infections (UTIs) just to name a few. Researchers described how incontinence can increase the development of pressure ulcers in residents (Temkin-

Greener, Cai, Zheng, Zhao, & Mukamel, 2012). Dugger (2010) described how incontinence can lead to falls, UTIs, and disruption of sleep. All of these can have devastating effects on the elderly. These issues are important to know and understand due to some of the Center for Medicare and Medicaid Services requirements for payment, which restrict the payment for pressure ulcer treatments (Temkin-Greener, Cai, Zheng, Zhao, & Mukamel 2012). Thus, there is more than one reason to look at continence programs to meet resident needs.

Incontinence can affect more than just the physical elements of a resident's body. Vinsnes, Harkless, and Nyronning (2007) discussed how incontinence can affect one's psychosocial and physiological health. Green (2012) also discussed how some residents may feel anxiety and thus may not want to participate in activities due to their incontinence. This in turn can lead the resident to become isolated from others and potentially develop other health issues.

Another issue that residents face is how the team reacts to and treats residents with incontinence issues. Ehlman et al. (2012) discussed how certificated nursing assistants are front-line managers of incontinence and that their beliefs and attitudes about incontinence differ from those who are licensed, such as licensed practical nurses or registered nurses. This can most definitely affect how a resident is treated and can impact the resident both emotionally and physically. The CNA may see the resident as not wanting to go to the bathroom whereas the LPN or RN may realize that something medically may be causing the increased incontinence.

### **Implications for Social Change**

When developing a project, one should consider how the project could affect social change. This project can affect the social well-being of the residents in the LTC setting. When a resident is feeling anxious about if he or she is incontinent, he or she may not be willing to go out and be social with his or her friends and family. This then in turn can affect a resident's well-being. So, having a toileting schedule that is partially developed by use of the EHR template and the staff should allow the resident to remain more independent. If a resident feels he or she has control, then he or she will be willing to go out and remain socially active with others his or her age. This will then allow those elderly people to remain a viable part of the community, and they will not feel isolated due to their incontinence.

### **Project Objectives**

When developing any plan the writer must have goals and objectives in mind that he or she would like to accomplish. The reason for the development of this pilot program was to help residents in the LTC setting have less incontinence in a 24-hour timeframe than they did prior to the pilot project. The research question addressed whether having a bladder continence program that used an EHR template to assess residents monthly and as needed would help residents remain continent longer. One long-term outcome was to determine if remaining continent longer had an effect on the residents' mood. Another long-term outcome was to determine if having a tailored toileting program for each resident helped the resident remain continent longer. Although most LTC settings have set times for taking residents to the bathroom, such as after meals and at bedtime, this

may not always be appropriate for all residents' needs. Therefore, the main goal of the QI pilot project was to have less incontinence in a 24-hour time frame than they did prior to the project.

Studies have shown that having an incontinence protocol in place can reduce the number of incontinence products used and reduce the amount of times a resident is incontinent in a 24-hour period (Frantz, Xakellis, Harvey, & Lewis, 2003; Rodriguez, Sackley, & Badger, 2007). This then can hopefully have a positive effect on the residents' state of mind and physical state (Green, 2012). If a resident is continent, it will reduce his or her risk for developing pressure ulcers or other physiological effects on their body (Green, 2012; Thompson, 2004).

The short-term objective of this pilot study was to audit the residents' charts for EHR template documentation of bladder habits and determining if the EHR documentation was current. I also looked at the EHR to see if staff had used the EHR as-needed template to track residents' bladder habits for the described timeframe on the assessment tool. Also, making sure the incontinence template was used would show that the issue of incontinence was being addressed to meet state requirements.

The main objective was to see if using the EHR template and the as-needed template assisted in decreasing incontinent episodes. I did staff education on the EHR assessment tool and the as-needed assessments. If staff had questions after the education, I answered them individually. Staff were already responsible for completing the EHR template, so the education provided was specific to the as-needed assessments and when it should be completed.

## Approach

The most useful way to introduce evidence-based practice (EBP) was to use an EBP model to help guide and demonstrate the reasoning for the change. The model chosen for this project was the one by Rosswurm and Larrabee (1999). It helped to show the reasoning behind the change in a simple yet practical way.

First, I would need to evaluate the need for change (Rosswurm & Larrabee, 1999). The need for change in my organization was because most of our residents have issues with incontinence. Noting that currently there was no standard practice for continence management, I determined the problem was that there was no standardized program to address incontinence needs of the residents. Staff members were not consistently using the EHR bladder assessment tool to assess bladder practices on a monthly or as-needed basis.

Second, according to Rosswurm and Larrabee (1999) I would need to link the problem to the intended interventions and selected outcomes. For this project, the intervention was conducting monthly incontinence assessments in the EHR, along with as-needed assessments, thereby determining resident incontinence episodes. A toileting plan was then set up for each resident in order to meet his or her personal toileting needs. The intended outcome was for residents to be able to remain continent longer.

Third, I needed to synthesize for the best evidence (Rosswurm & Larrabee, 1999). This meant that I needed to go to the literature to identify the best practices and then determine what was possible and doable at the facility under study. In cooperation with



management of the facility, I determined that a continence program tailored to each resident was doable.

The risk to the residents was very minimal as they were not harmed in any way with the implementation of an individualized continence program. It was financially feasible as it did not require the hiring of more staff. The facility currently employed enough staff to make the project feasible, and there was adequate staff scheduled per shift to achieve the change.

Fourth, I needed to design the practice change (Rosswurm & Larrabee, 1999). The change was going to be doing a monthly and as-needed assessment on residents for incontinence. The resources involved included nursing time to document as well as the CNAs' time to toilet residents at specific times as deemed by the assessment and resident needs.

I either trained or retrained the nurses on how to fill out the bladder continence form in the EHR. The CNAs were instructed on the individual residents' toileting program, such as specific times as requested by the resident via the EHR assessment tool. The CNAs were also trained on the definition of incontinence as related to this project. Having the CNAs understand the definition of incontinence allowed them to understand not only the project scope but also the benefit to the resident.

Fifth was to implement and then evaluate the change (Rosswurm & Larrabee, 1999). This was when the study was implemented to see if it did actually work for the facility. I provided education to the nursing staff on the need for the assessments. The CNAs were then educated on the reasoning behind the study and the part they played in

it. Their input was also crucial when setting up the individual residents' toileting schedule.

Sixth was the integration and maintenance phase (Rosswurm & Larrabee, 1999). This was when I recommended to management to either continue with the monthly and as-needed assessments or implement changes. It was also when staff were shown the results and hopefully realized that maintaining resident continence helped with the residents' self-esteem and skin care.

Using the Rosswurm and Larrabee (1999) model for EBP allowed for the introduction of the proposed change and provided the explanation of why the change was necessary. Following the six steps allowed for a more comprehensive explanation so that others could understand the intended change. The model helped to define the project in a way that the stakeholders would understand the goals of the project.

Using the Rosswurm and Larrabee (1999) model for change provided explanation for why the project on incontinence was needed. Engaging the stakeholders in the process and explaining to them the reasoning behind the change allowed for more buy-in from staff. Then, implementing the proposed change allowed all to see how the project was of benefit to all involved. Finally, evaluation of the change showed if the project was a success or if it required changes to meet the needs of the residents.

### **Conclusion**

Knowing what one wants to accomplish and how to achieve it is necessary for any project. For this project, I needed to know the problem, have objectives, and plan ways to achieve the objectives. Furthermore, I needed to be able to achieve the objectives and be

able to state why the objectives were important. This allowed the project to come to be assessed and then completed.

### **Summary**

Identifying the problem, UI, and determining how to address the problem was the beginning of the project. Looking at UI in the LTC setting was necessary because residents often felt staff “expected” them to be incontinent in the LTC setting. Knowing how incontinence can affect the residents in LTC, such as their physical and emotional health, helped to explain to the stakeholders how the project was useful to all involved. This then allowed for all involved to understand the importance of the project to help residents remain continent as long as possible to help improve their quality of life.

## Section 2: Review of Literature and Theoretical and Conceptual Framework

### **Literature Review**

When completing a project one must make sure they conduct a literature review to see what has already been done on the topic. One will want to search for specific literature that relates to the topic they are going to address. Finding specific literature allows for expansion on what has already been done and allows the researcher to not have to repeat unnecessary steps. For the current study, a literature search was performed using CINAHL and MEDLINE simultaneous search database. The keywords used for the search were *electronic health record, nursing home, incontinence, and long term care*.

### **Specific Literature**

When doing the literature review for this project, there was not any specific literature found on EHR documentation in relation to incontinence. There was literature on incontinence and its effects on residents. Therefore, I reviewed the existing literature on the effects incontinence can have on the residents and incorporated the documentation of incontinence in the EHR.

The general literature search did not provide any specific literature on incontinence and the use in the EHR. There was only one article found in relation to incontinence and the EHR. In this article, Fung (2006) discussed template usage in the EHR. The study was intended to help physicians better assess patients who may present with UI.

The study was conducted in a large veterans' affairs medical center. Results indicated that the templates could be used as a guide (Fung, 2006). Fung (2006) also

discussed how efforts should be increased to show the usefulness and ease of using templates in an EHR. Therefore, an EHR can have a functional place to allow the tracking of how often a resident is incontinent in a specified timeframe and to allow for potential interventions to be implemented based on the data.

Although there was minimal specific literature on incontinence and EHR, there has been some promise with the development of new EHR systems. Most EHRs do have the potential for adding forms or templates. Health care professionals then should be able to suggest additions to existing forms in the EHR database being used at their facilities. Making additions or “tweaking” the forms already in place can allow for better data collection of how UI is affecting the residents’ way of life.

### **General Literature**

A literature review was performed using the CINAHL and MEDLINE databases. The keywords used were *electronic health record, nursing home, incontinence, and long term care*. Not all keywords were used at the same time. There was an extensive amount of literature on incontinence. A portion of the articles most relevant to the project was selected for review. For the best credibility, articles were chosen from peer-reviewed journals.

There was a plethora of literature available on UI ranging from the different types of UI, such as stress, overflow, mixed, urge, and functional incontinence (Khandelwal & Kistler, 2013) to the effects incontinence can have on the resident’s mental and physical state (Green, 2012). This can include but is not limited to an increased risk for pressure

ulcer development, increased depression, and increased feelings of isolation (Green, 2012; Thompson, 2004).

UI can also affect the psychosocial and physiological well-being of LTC residents. The physiological aspect can be that the resident may have a UTI or may have sores from being incontinent or even from a particular medication that a resident might be taking (Green, 2012). Usually physiological reasons for UI can be addressed and managed efficiently. On the other hand, it can be harder to deal with the psychosocial aspects of incontinence as they can range from isolation, shame, embarrassment, loss of self-confidence, depression, or feelings of inferiority (MacDonald & Butler, 2007). MacDonald and Butler (2007) discussed how incontinence can impose incredible personal hardships. The hardships can range from not being physically able to get oneself to the bathroom to staff not answering call bells in a timely fashion, resulting in the resident not being able to hold his or her urine. This in turn can affect a resident's self-esteem, as he or she may feel ashamed that he or she was not able to hold his or her urine.

There was also literature available on different types of programs developed in LTC settings related to incontinence education. Vinsnes et al. (2007) looked at doing unit-based education as a quality improvement initiative to see if they could reduce UI on the unit. Staff education was done along with the use of a bladder scanner to assist with measuring incontinence. Ehlman et al. (2012) also discussed technology and how the use of a bladder scanner did help reduce incontinence. Authors of these two articles both looked at the use of education as a way to improve UI in the elderly population.

Rahman, Schnelle, Applebaum, Lindabury, and Simmons (2012) discussed how a distance learning program was used to see if it would help staff learn how to deal with incontinence. The authors discussed how a distance coaching course was used to improve nursing home care and how best-practice guidelines such as those used at conferences and web-based webinars were not always effective (Rahman et al., 2012). They used individual coaching over a specified period; this showed to have better results for improving incontinence care in the elderly population.

Frantz et al. (2003) discussed how one LTC facility did not have any protocol in place for incontinence care. The facility did not have any systematic strategies for incontinence management; they were only doing what was needed for the minimum data set (MDS) in order to receive payment from Medicare (Frantz et al., 2003). The authors found that there was not much documentation related to incontinence and how it was managed in the facility. An incontinence protocol was developed using EBP and education was given to staff. The education was done via staff education sessions. The study showed that there was a decrease in incontinence after the protocol was implemented. The article did not indicate how many incontinent episodes residents were having prior to implementation. After implementation, residents who needed no more than two changes in 24 hours were considered “dry” (Frantz et al., 2003). The authors felt needing to be changed only twice in a 24-hour period was sufficient to be considered improvement.

For the current research, I also conducted a search using the key words *electronic health record* and *long term care (LTC)* to see what literature was available. There were

some articles addressing the use of EHR and LTC. The articles focused on results and how the EHR can help with data collection. Rantz et al. (2010) discussed that, to help residents continue to function independently, problems need to be identified early and timely interventions designed. The use of the EHR allowed for a better overall view of a resident's health status as it can be shown in a chart or graph form in the EHR, whereas in a paper chart one would have to search and locate the needed information (Rantz et al., 2010).

Li and Korniewicz (2013) discussed the effectiveness of EHRs to document pressure ulcers. The conclusion they came to was that staff needed better education on the templates available in the EHR to better document pressure ulcers. Li and Korniewicz did a descriptive study design through which they reviewed the documentation retrospectively from both the EHR and the written medical record. They discussed how staff was not properly educated on how to fill out the templates. The conclusion they made was that even with EHR templates, education was needed to promote proper documentation.

In conclusion, while there is documentation to show EHRs can improve resident outcomes, there is still a need to make sure templates are thorough enough to meet the needs of both the residents and facility. Assessing EHR templates and making necessary changes will allow for better documentation of residents' needs and wants, potentially allowing for more individualized care for the residents and meeting of their care needs.

A literature review was conducted for incontinence, EHR, and combinations of each. While there was literature to support incontinence programs and some literature to



support using EHRs for documentation; there were not any articles addressing the two together. Hence, even though there was literature on both incontinence and EHRs, there was a lack of how the two could work together for the benefit of the residents at the facility under study.

### **Theoretical Self-Care Framework**

Orem's (2006) self-care deficit nursing theory was chosen for guidance with the stated problem. Orem stated that nursing needs to have a concern for an individual's need to self-care and how they have the capabilities to meet those needs. According to Isenberg (2006) the theory enabled individuals to exercise their self-care abilities to the extent that they can for themselves. Which then empowered the resident to maintain some health restoration and health maintenance in their own care needs (Isenberg), allowing the resident to feel that they do have some control over their own care and the environment in which they are living. This can be important for individuals as they age in place.

Allowing the resident to maintain their independence is an important aspect to care. Having a "say" in when they use the bathroom allows him or her to participate in their care needs and gives him or her a sense of freedom. When a resident feels in control, her or she are more willing to do things for themselves, thus giving them a sense of independence.

Residents learn a cultural standard first, next according to his or her beliefs and learned practices (Isenberg, 2006). This can mean that once a resident enters an LTC facility they "learn" that incontinence is acceptable. Then her or she may not want to ring

the call bell to use the bathroom. So the learned behavior is acceptance of incontinence and may need to be changed as the goal is to try and prevent incontinence for as long as possible.

When doing any type of program/project it is good practice to have a theory to follow so as to make sure that the answer I was looking for could be found. According to Kettner, Moroney, and Martin (2008) one needs to have a “road map” when doing research or they may not be able to find the answer. The model chosen to use for this project was the social cognitive theory (Hodges & Videto, 2011). The reason I chose it was it uses behaviors and addresses how they can be changed. Hodges and Videto discussed how the theory helps to create programs that affect people, the environment, and their behaviors. If residents have a sense of personal investment her or she are more willing to change behaviors when faced with obstacles (Hodges & Videto). Thus if a resident feels they are included in the change and can see the benefit he or she will be more willing to adapt to the change. He or she will think that their behavior change is both beneficial and worthwhile to his or her own health (Hodges & Videto). The residents will see and feel that engaging in his or her own decisions gives them some control over his or her environment.

Social cognitive theory ties into Orem’s self-care deficit theory (1985) in that both discussed learned practices. Orem’s theory discussed learned practices (Isenberg, 2006) and how they can develop into behaviors. The social cognitive theory discussed behaviors and how they can be changed. By integrating the two theories, I could look at

helping residents care for themselves by learning a “new” behavior in relation to his or her incontinence care.

### **Summary**

After both a general and specific literature search, I found that there is more literature in general on incontinence than there is on incontinence and EHRs. There seems to be a lack of data to support the use of Electronic templates for managing incontinence in the LTC setting. This could be a result of the EHR still being fairly new in the LTC settings. With the use of theories and frameworks, it is a good probability that templates in the EHRs can be developed to meet the needs of both the regulatory bodies and the residents.

### Section 3: Methodology

#### **Project Design/Methods**

The quality improvement incontinence program that was implemented affected the residents of the LTC facility under study and their behaviors towards incontinence. The goal of the project was that residents would remain continent longer due to the EHR assessment tool and the plan developed by the staff. The assessment included questions such as “Is the resident incontinent?” and, if so, “How many times in the past 24 hours?” as well as assessing if the resident asked to use the bathroom. These questions along with staff input allowed for an individualized toileting program. The individual toileting plan would then allow for a behavior change in both the residents and the staff. Allowing residents to have a say in his or her care needs along with documentation demonstrated why the change was needed. It also allowed the resident to care for their own needs in a way that was acceptable to them.

Data were collected from all shifts and documented in the EHR (Appendix A) to allow for a more comprehensive approach to an individualized toileting plan. The data were collected for 1 month. The data were also collected from the period prior to the as-needed assessment in the EHR implantation for a comparison post as-needed assessment. The nursing staff members were educated on the project and were informed of the project goals and what their role would be. I asked the staff if they encouraged residents to ring their call bells if they felt the urge to void. The nurses were asked if they were familiar with the template in the EHR for the documentation of bladder habits, as the template

could assist the nurse with developing an individualized toileting program for each resident.

The nurses were asked if they were aware of the template in the EHR. If the nurses were not aware, I educated them as to where to find the template in the EHR and how to complete it. The nurses were also educated on how to fill out the as-needed assessment. The as-needed assessment used the same EHR template that was filled in during admission, so no additional templates were needed. They were instructed as to when a possible as-needed assessment may need to be completed, such as if there were an increase in incontinent episodes or an increase in confusion. The education was completed prior to project implementation after Walden Institutional Review Board (IRB) approval was obtained.

Because the CNAs provided care to the LTC residents, it was important for them to receive training on the use of the EHR form. This included the signs/symptoms of incontinence they should report to a nurse. Then the nurse would determine if an as-needed assessment should be completed. The CNAs were encouraged to document a resident's preference for toileting so that all staff were aware.

A chart audit was also completed, by my mentor, to make sure that each resident had a bladder assessment completed in the EHR using the available template, which is a requirement for all residents upon admission to the facility. There was also education completed for nursing staff as to when as-needed assessments should be completed. The as-needed assessment included all the same questions as the admission assessment, so no

addition form was required, just education on when to complete an as-needed assessment. Once all education had been completed and the project approved, it was implemented.

I also looked at the EHR template to see if it needed to be modified. The template was looked at pre- and postimplementation. The review of the template preimplementation did not indicate that the template needed changes. It was determined postimplementation that the template did need to be modified, in that it combined assessments for both bowel and bladder. It was determined that there should be one assessment to look at bladder and one for bowel. The template was assessed to determine if it presents questions such as “Does the resident have specific times they would like to use the bathroom?” and/or “Do they have specific needs for using the bathroom?” If these areas were not addressed on the template, then the template may need to be reviewed and revised to help residents meet their own care needs. These suggestions were then given to the director of nursing and nursing home administrator for them to decide if they wanted changes made to the EHR template.

### **Participants**

For this project, the participants were the staff who underwent staff education, with the ultimate goal of assisting the elderly residents to remain continent longer. The charts that were looked at were from residents who were on the skilled/intermediate unit. This means the residents considered the LTC facility their home. Since the unit only had 25 beds, the whole unit was considered for the project. Out of the 25 residents, 13 were included in the project as they were alert, oriented, and able to answer *yes/no* questions.

The problem of UI was examined using a normative need. Kettner, Moroney, and Martin (2008) defined a normative need as falling below the standard. The standard for this project was not having an incontinence protocol per state requirements. This is precisely what happened at the facility where I currently work. The facility fell below the standard set by the state in regards to having an incontinence program for the LTC residents. Therefore, using the normative need allowed me, as the researcher, to attempt to determine how the LTC fell behind on this standard set by the state.

The EHR was looked at for documentation using the template available for determining continence needs. The EHR was used because this is what the regulatory agencies use to audit the LTC facility. Looking at the EHR and the documentation completed allowed for review of what education the team needed in order to be comfortable with using the template available for continence needs. This also would give the team a starting point in determining what type of continence program to start for the residents.

### **Data Collection**

Data collection could not begin for the project until after IRB approval had been received. After approval, data collection began with a chart audit. There were 25 residents on the unit. Thirteen residents were used for the project as they were alert, oriented, and able to answer *yes/no* questions. These charts were audited to assure that they had an admission bladder assessment completed, which was part of the admission process. Then the charts were reviewed to determine if there had been any as-needed assessments completed.

The next step was to meet with the staff to educate them on the EHR assessment tool and the as-needed assessments. Of the 25 residents on the unit, 13 were alert and oriented. Therefore, these 13 residents were included in the data collection. Of the other 12 residents, 11 were excluded because they had a dementia diagnosis and could not verbalize their need to void or answer *yes/no* questions. One was excluded as this resident did not speak English.

Data were also collected from the nurses and CNAs. The nurses were educated on the incontinence templates and asked if they had been using it. Depending on the answers of the team, I educated them on what their roles were for the quality improvement project. The team was also asked if they were aware of any resident's diagnosis that could affect incontinence, such as neurogenic bladder or if they were on a diuretic.

The staff on each shift were asked to participate and asked for their input. They were asked if they felt the EHR template was helping in the development of individualized toileting programs or if they had other suggestions on how to develop the individual toileting programs. The staff members were asked if they saw any changes in the residents and, if so, were educated to do an as-needed assessments on the resident. I continually assessed the EHR for documentation and made adjustments to the program as it went along, such as whether there was a need for more education on how to fill out the template and if staff needed reminders to ask residents for their input on a toileting program. As the program designer, I also needed to monitor in case adjustments needed to be made in the program, such as whether a resident was discharged, passed away, or became ineligible for some other reason.



### **Protection of Human Subjects**

To protect resident identity, charts were assigned a random number between one and thirteen. This way when the data were reported, the identity of the residents was further protected so that the data were not easily traced back to a particular resident. This also helped to ensure that the residents were kept from being identified by the study results.

A cover sheet (Appendix D) was used to help further protect the identity of residents. The cover sheet was filled out by my mentor, the nursing home administrator. In this way I did not know which resident's chart the information came from, allowing for more protection of the residents.

### **Data Analysis**

While interpreting the data I had to keep the goals of the program in mind (Hodges & Videto, 2011). Keeping the goals in mind allowed me to determine if the results were what I had expected, which was that having a bladder continence program where residents were assessed monthly and as needed would help them to have less incontinence in a 24-hour period than they did prior to the project. The data were collected for 1 month after the start date of the project, and I compared what was happening at the end of the month to what had been happening prior to the start of the project. A comparison of the two allowed me to see if there were any changes in data from the start to end. The data could then appear in different forms such as graphs, charts, or even pictures (Hodges & Videto, 2011). This allows for different ways to disseminate the results of the program. A graph was used for the purposes of this study (see Appendix

B). The 13 charts were examined for the presence of an EHR bladder assessment or paper assessment and reviewed for the number of completed as-needed assessments. Each assessment was reviewed for changes pre and post implementation. There were no changes in the data for EHR and paper assessments, but there were as-needed assessments completed post implementation.

The results were shown using a graph, in a mean style, in which 13 of the 25 residents were included in the study. A mean number of those included were then divided into those who had an initial assessment done and whether it was on paper or in the EHR. Then it was shown if any as-needed assessments were completed on residents and the percentage of residents who did have one. There was also a graph (Appendix C) to show the mean post implementation to show if incontinence episodes had decreased.

The chart analysis was the first part of the project completed. After all the charts had been audited for the bladder assessment tool, the results were tallied. I looked at how many charts had admission assessments, which are required, and how many had as-needed assessments completed. The results of the chart audit were shared with the director of nursing and the nursing home administrator. After the program had been implemented, another chart audit was completed to determine if staff had done any as-needed assessments.

Analysis of the chart audit began approximately 1 month after the audit had been started. The review determined whether or not the use of the EHR template had helped the resident remain continent by the use of the as-needed assessment. The team was asked if they felt the program was working for the residents and staff were also asked if

the residents were ringing his or her call bell to use the bathroom. The team stated that two of the residents were ringing his or her call bell to use the bathroom. The team also stated that for the as-needed assessment to be effective, the information needed to be revised, such as not asking about bowel habits, and be more specific for bladder habits. To determine if the use of the toileting program was effective, residents would have one less documented incontinent episode than prior to the implementation of the individualized toileting schedules. The reason for deciding on one less incontinent episodes was that in most of the literature reviewed one seemed to be an acceptable number to show a reduction in incontinence had occurred (Frantz, et. al., 2003, Rodriguez, Sackly, & Badger, 2007).

After data analysis had begun, I was able to see if the program needed to be adjusted. The project must be found to be feasible for all aspects of the program to be considered a viable project to continue and be beneficial to both the residents and the organization. The project showed that the EHR template could be effective for tracking incontinence if some changes were made to the template. The template needed to be adjusted to just focus on bladder and not both bowel and bladder. It was also determined that further education was needed for staff to understand what an as-needed assessment is and when it should be used.

### **Project Evaluation Plan**

According to the video *Design and evaluation of programs and projects* (Laureate Education, Inc., 2011) I needed to understand what I want to measure, thus allowing me to see if the program was meeting the set objectives. To evaluate the program I needed to

chose a theory or model to determine if the project was meeting the set objectives. Currently, some residents are incontinent as much as 10 times in a 24 hour period. One study showed that incontinent residents who were prompted to void had a reduction in incontinence from 3 to 4 episodes to 1 episode a day (Rahman et. al., 2012). So for this project, I determined that having 1 less incontinent episode would be considered as being on target. A type of evaluation that I would use was summative evaluation. The goal of this quality improvement project was to have less incontinence in a 24 hour timeframe than they did prior to the project, having 1 less episode of incontinence was looked at as being on target. According to Hodges and Videto (2011) summative evaluation, was a broad term that was used to determine whether or not the program worked and met the set objectives. I would then go on to conduct an evaluation using the other actions described by Hodges and Videto (2011). This included engaging the stakeholders, describing the program, conceptualizing the evaluation, designing the evaluation, collecting evaluation data, analyzing and reporting the data, making changes, and evaluating again. These steps were necessary to ensure the project was meeting the set objectives and help keep the project on track.

As many projects can be ongoing and not always completed at the same time, so was this project. The stakeholders included the nursing staff, the CNAs, and the management team. The program was a quality improvement pilot program to assess the effectiveness of using a tailored toileting program and the as-needed EHR template assessment to see if it helped with resident continence needs. The program was described as a quality improvement project that conducted a chart audit for the incontinence tool

assessments, both the initial and the as-needed, and evaluated the assessment for completeness. Collecting the data was from the charts, whether they were “paper” or computer (EHR). Then analysis of the data obtained from the charts was done to determine if there were changes needed such as education or reeducation of staff. If as-needed assessments were not being done, it will need to be determined if it was due to lack of knowledge or other reasons, such as the tailored toileting program was effective in decreasing incontinence episodes.

A timeline can help me to stay on track with the project. Creating a time line for specific tasks helps to keep the project on task (Hodges & Videto, 2011). Kettner, Moroney, and Martin (2008) described performance measurement as an ongoing process of the program to make sure that it was still meeting the objectives. The first step was to engage the stakeholders, which I had already completed. The next step was to determine who will conduct a program evaluation. The evaluators for this project were myself and my mentor. Next I determined the design of the evaluation I would use. The instruments used were an individualized toileting program, the EHR template, and how to fill it out, were piloted and tested. The team was educated on the template and the as-needed template and how to properly fill them out. The team was also educated on each resident in the project, and their individual toileting schedule that was developed by the team. Next data collection was completed; this was done in the weeks after IRB approval was obtained. I then analyzed and reported the data in a way that was meaningful to those who would be reading it. Using a graph chart to show how many times the incontinence template was used prior to the implementation of the project and then again after

implementation (see Appendix B). A graph was also used to show how many incontinent episodes were documented prior to implementation of the toileting program and then again after 1 month to see if there was any change (see Appendix C). Next based on the data available I would need to make any changes to the program that may have been required to allow it to continue. Lastly, I would be able to evaluate the program again as it was ongoing.

### **Summary**

Knowing what I wanted to achieve and how I wanted to achieve it was necessary for any project. Using a template that was already in place was a beginning step. Next engaging all the stakeholders was relevant. Collecting and analyzing the data was a necessary step to see if a change had occurred during the project. Then I needed to look at all the data and the analysis that was collected to see if the project was successful or not. Depending on what the study showed the project may need to be “tweaked” to be more effective or it may need to be changed totally to meet the needs of both the facility and the residents.

## Section 4: Findings, Discussion, and Implications

### Summary of Findings

#### Preimplementation

After all the data were collected, then came the analysis of the data to see if the project was successful or not. The data were collected on the cover sheet (Appendix D) by my mentor. Thirteen residents were still included in the data, as none was discharged or otherwise unable to be audited. I found that two of the residents did not have an initial bladder assessment completed in the EHR. It was unclear as to why there was not an initial assessment completed on these two residents. Staff were aware of residents' diagnosis and why they were admitted to the LTC facility.

#### Postimplementation

Upon looking to see if staff completed any as-needed assessments, I noted that one as-needed assessment was completed. This was a surprisingly low number because staff were educated on when an as-needed assessment should have been completed. It was unclear if this was due to lack of education or due to the need to possibly change the template. It was noted that the template available for the nurses to document on covered both bowel and bladder. This could potentially be an issue as to why as-needed assessments were not being completed, as this project was just looking at bladder and staff were not sure how to fill out the template.

#### Summary

Feedback received from the staff revealed that the template could be helpful to determine incontinence needs of residents if it were revised to be more specific to bladder

assessment. Staff also stated that more education on how to complete the template might have been beneficial so that they knew what they should have been specifically assessing.

It was determined that for the as-needed template to be more useful, changes would need to be made to make it more understandable to the staff and the questions needed to be more specific to bladder assessment. The suggested changes were taken to the director of nursing and nursing home administrator, who had the authority to make changes to templates in the EHR. They would be the ones to determine if the suggested changes were cost effective in assisting with the care of the residents.

From using the cover sheet (appendix D), it was also noted that four out of the 13 residents did have a UTI in the past 12 months. None of these four residents had as-needed assessments completed. Three of the UTIs were contracted prior to the implementation of the education for the assessments. It could not be determined as to why the fourth resident did not have an as-needed assessment completed.

As a result of this project, staff became aware of UI among these residents after the education. This was evident as residents were being checked more consistently and often for his or her need to use the bathroom. An example of this was staff not waiting for residents to ring; staff would go in and ask him or her if they needed to use the bathroom.

### **Findings in Regards to Literature**

The literature contained very little evidence in regards to using EHR templates to help with resident care. Fung (2006) discussed a physician who used an EHR template to track UI, which had shown promise that an EHR could also be used in LTC to help track



UI in residents and assess for changes. There is a need to develop literature on UI in the LTC setting to see what can be done to help residents stay continent as long as possible.

### **Implications for Practice**

Results of this pilot project did show it to be beneficial. The results showed the EHR could assist residents to remain continent for longer periods. However, more data need to be collected to see if this trend would continue.

### **Policy**

For policy to be changed there would need to be more evidence to show that the as-needed template was effective for decreasing the amount of incontinence residents had. Then the policy could be looked at to determine if the nurses would need to do as-needed assessments on residents. It would not benefit the facility to implement a policy for doing the as-needed assessments on residents without further evidence showing that the as-needed assessments were effective in decreasing incontinence episodes.

### **Practice**

This pilot project did have a positive impact on the residents as they did have less incontinence. An EHR can assist nurses in regards to assessing residents and determining incontinence needs. However, more data are needed to see if the trend would continue.

### **Research**

More research is needed to determine if using templates in an EHR system will enhance resident care. There has been research that showed how an EHR can assist with pressure ulcer documentation, but there was not much on incontinence. For it to be determined if an EHR template can be successful for helping residents in LTC with

incontinence, more research will need to be done and longer trial periods may be needed to determine if it will help decrease the amount of incontinence a resident has.

### **Social Change**

In LTC, there is a need for a change in how staff members deal with residents' incontinence. Having a tool available such as a template in the EHR is one way to address this because it would allow for more complete assessment and effective intervention to prevent UI. A limitation of this project was the short time frame dedicated to evaluating its effectiveness. The project would need to be conducted over a longer period to determine if it had a positive impact on the residents and how it affected their UI. However, even over the relatively short period, there was a noted improvement in the nursing staff's approach to the residents' UI plan.

### **Project Strengths**

The strength of this project was that it made the nursing staff more aware of the residents' incontinence needs. Another noted strength was the finding that the EHR is potentially a good tool that will help track incontinence in residents.

### **Project Limitations**

One limitation for this project was the small number of participants available for the project. Another limitation was the relatively short time frame in which the project was conducted. One month may not have been long enough to determine if more as-needed assessments could have been completed. Lastly, not doing staff education as a whole may have impacted the outcome. Staff education was done one-on-one, and the staff may not have felt comfortable asking questions when they were by themselves or

may not have thought of questions that others had asked so not everyone got the same answers to their questions.

### **Summary and Conclusion**

The project showed that more research is needed in regards to EHR and templates. The templates that are available in EHR systems have potential to help track trends for residents in LTC. The issue is whether it will be cost effective to make changes to these templates to make them appropriate for use in LTC and tracking issues such as incontinence. There may also be a need for more education on the templates available in an EHR so that nursing staff are aware of what is available and how to use what is available to them.

To determine if the project has any benefits for those in LTC, it would need to be done with a larger sample and for a longer period, as this was a pilot project. It would also be a benefit if changes could be made to the as-needed assessment template prior to another trial. Because the as-needed template that was trialed for this program assessed both bowel and bladder at once, this may have been one reason it was not used as much, as staff was not sure how to fill it out. It was determined that more education would also be needed before another trial was completed.

### **Analysis of Self**

When doing any type of research or projects one should try and analyze themselves before, during, and after the project. In this way I could see what areas I have strengths and weaknesses in. I then can see where I may need to focus my attention in order to get the best experience out of the project.

**Scholar**

I have developed as a scholar in that I am no longer afraid to use evidence-based literature to make changes in practice. When I first started this program I did not like to look things up or learn about EBP. During the course of this program I have become more comfortable going to the literature and looking up what the best EBP is for caring for residents. I am no longer afraid of the word "research" and I help others to realize that research on EBP is what helps to us to stay current and give our residents the best care available.

**Practitioner**

When I used to think of a practitioner I would think of a CRNP (Certified Registered Nurse Practitioner). What I have come to realize is that this is not always the case. A practitioner can be and is anyone who works in a particular area and is qualified to work in that area. I have become a practitioner in nursing, without becoming a CRNP, in that I have knowledge in regards to nursing and the needs of the residents for which I care. Thus I have grown in my ability to see what the needs of the residents I care for and I am finding ways to help those residents to the best of my ability.

**Project Developer**

Project development is not an easy task. I have learned this first hand. I thought that it would be much easier to implement a project than it was. I learned that what I have in my mind as to what I want to accomplish is not always so easy to write down and then implement. I have also been able to develop some projects for work. I have started some teams to help with resident care and finds that it can be a challenge to find the "right"

individuals to be a team. Then once the team was developed I had to keep the team on track to accomplish the goals that we had set. These can be challenging to a new developer of teams. I have found that my mentor has been a huge support in helping me to get the teams going and keeping them on track.

### **Future Professional Development**

I need to always be looking forward to what I want to accomplish next. For me one professional development I would like to accomplish is to become a Registered Nurse Assessment Coordinator, Certified. I have already taken the classes to become certified, I just need to sit and finish the exams. Another area for development that I have planned is with informatics. I would like to become more familiar with informatics and maybe take a certificate course in it. This is the next big thing that has already started with the introduction of all the different EHRs. I would like to become more efficient in the use of EHRs to assist residents in all levels of care. I will also present this project to my sister facilities who my facility is a part of. I will continue to seek ways to improve the health of others.

## Section 5: Scholarly Product

### **Project Summary and Evaluation Report**

Once any project is completed, a summary should be written up to share with others. The summary should provide what the project was about and what the major findings were. For this project, the main summary is that more research is needed to determine if the EHR template can be an effective tool to help manage incontinence of resident in LTC. The incorporation of the EHR has opened up many opportunities for practitioners to see trends in health issues easier for residents than if using the "paper" chart. The EHR is usually set up with programs that will allow one to see a graph of some information, such as vital signs. Then the practitioner can see if a trend is developing. With the use of as-needed assessments to determine if a resident is becoming more incontinent, it could possibly be determined if the incontinence is coming from a reversible cause or just from the act of aging and losing control of bodily functions.

This project did show that a larger sample would be needed to determine the effectiveness of EHR templates. It was also determined that changes were needed to the existing template to make it clearer what was being looked at and not combining both bowel and bladder. As they are two different body systems and should not be looked at together. The project also showed that more education is needed in order for staff to understand what as-needed assessments are and when they should be utilized. So there is still promise that EHRs can help track trends and help prevent incontinence, more research is needed.

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## Appendix A: Sample EHR Form

Bladder Control

- Continent or has indwelling catheter
- Continent at least 3 times a day
- Continent 1-2 times a day
- Never Continent

Bowel ControlCan Walk to BR or transfer to toilet. Can manage clothes, wipe, urinal

- Alone with reasonable speed
- Alone but slow
- Needs assist from 1 person
- Dependent or needs assist from 2 persons or more

Mental Status

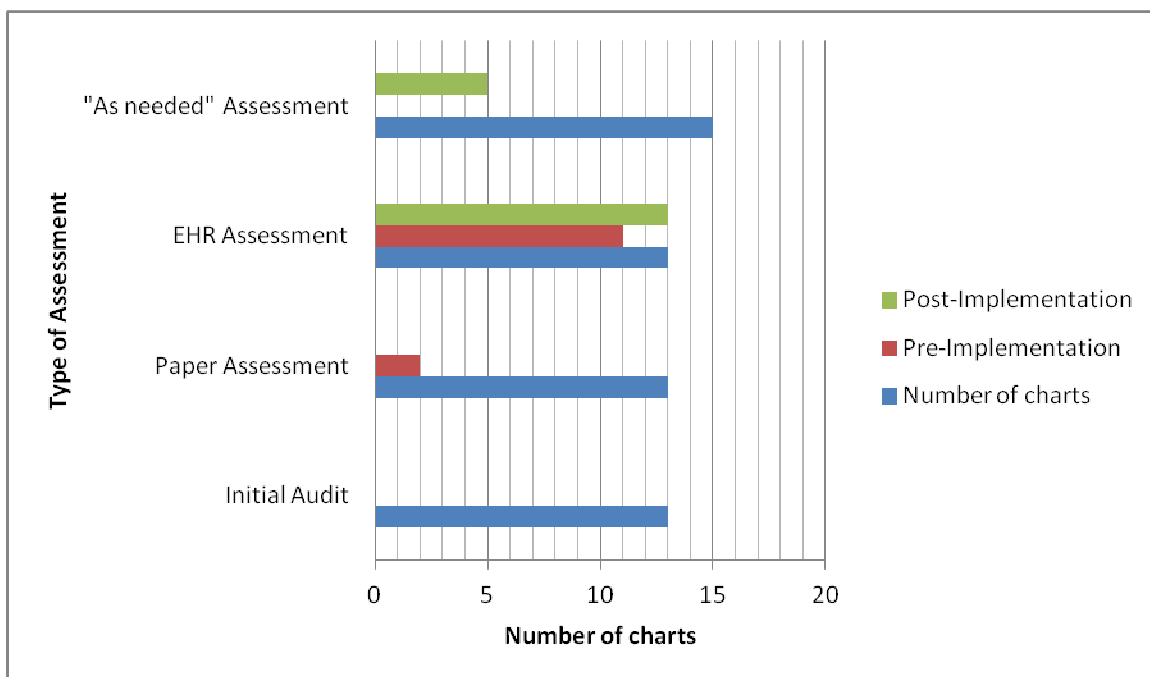
- Alert & Oriented
- Forgetful but can follow prompts
- Confused, needs verbal and physical prompts and assistance
- Very confused, combative, refuses to cooperate, depressed

Mentally aware of toileting needs

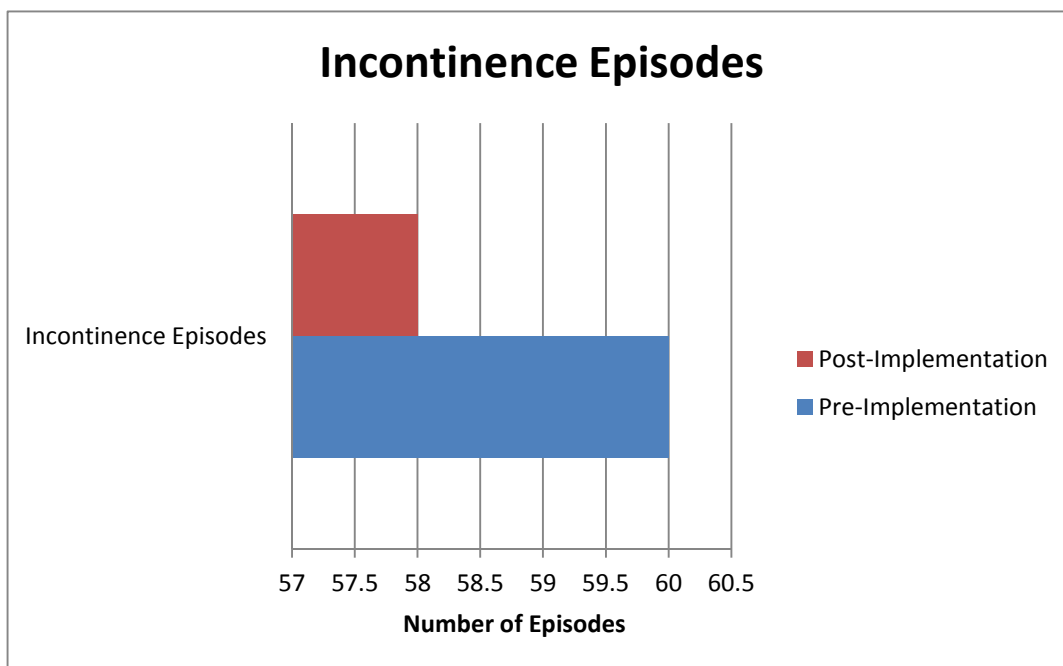
- Yes, always
- Usually
- Sometimes
- Never

Condition of skin, genitals, perineum, and buttocksPredisposing DiagnosisMedications

## Appendix B: Chart Audits



## Appendix C: Incontinence Episodes



## Appendix D: Cover Sheet

Medical reason for admission \_\_\_\_\_

Diagnosis \_\_\_\_\_

\_\_\_\_\_

Past Medical History \_\_\_\_\_

Medications \_\_\_\_\_

\_\_\_\_\_

Orientation: i.e. Alert and oriented \_\_\_\_\_

Able to answer "yes" "no" questions \_\_\_\_\_

Primary Language \_\_\_\_\_

Bladder assessment completed in paper chart \_\_\_\_\_

Bladder assessment completed in EHR \_\_\_\_\_

"As needed" assessments completed \_\_\_\_\_

UTI in past 12 months \_\_\_\_\_

Medical condition impacting continence \_\_\_\_\_

Staff aware of resident's medical conditions \_\_\_\_\_

## Appendix E: IRB Approval

Received June 2, 2014

Dear Ms. Rodgers,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Using Electronic Health Record Assessment tool to Maintain Bladder Continence."

Your approval # is 06-02-14-0072810. You will need to reference this number in your doctoral study and in any future funding or publication submissions.

Your IRB approval expires on June 1, 2015. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Dear Ms. Rodgers,

This email is to serve as your notification that Walden University has approved BOTH your doctoral study proposal and your application to the Institutional Review Board. As such, you are approved by Walden University to conduct research.

Please contact the Office of Student Research Administration at [dnp@waldenu.edu](mailto:dnp@waldenu.edu) if you have any questions.

Congratulations!

Libby Munson

Academic Program Assistant, Office of Research Ethics and Compliance

Leilani Endicott

IRB Chair, Walden University

## Curriculum Vitae

**CATHERINE C. RODGERS RN, MSN****CAREER SUMMARY**

Nine (9) years experience as a Case Manager in the acute care and skilled care settings. Acute care experience in Medical, Surgical, and Oncology nursing for four (4) years. Three (3) years experience in Long Term Care nursing. Experience managing approximately 15-20 employees.

**Education**

Currently pursuing a DNP (Doctor of Nursing Practice) from Walden University, anticipated completion date November 2014.

Master of Science Degree in Nursing with Specialization in Education  
Walden University, Baltimore, MD 2010

Associate of Science in Nursing  
Gannon University, Erie, PA 1994

**Professional Experience****Shenango Presbyterian Senior Care****3/13-present**

25 bed Skilled Nursing home Unit

**Night Supervisor/RNAC**

Nurse Supervisor for night shift

Responsible for assigning sections to CNA staff, and overseeing LPN staff.

Updated physicians of changes in patient condition. Covered call-offs by organizing replacements. Completed chart review for end of the month orders.

Oversight of LPNAC entering information into MDS system. Submitting MDS's to state for payment.

**Family Hospice and Palliative Care****5/12-3/13**

Hospice/Home care agency

**Care Manager**

Daily visits to see patient in their home and do assessments. Call doctors with any symptoms and obtain orders. Coordinate care with the patient's physician and/or the hospital and with equipment companies to make sure all necessary equipment and supplies in their home.

**Highmark, Inc.****11/11- 5/12**

Insurance company

**Health Coach**

Calling patients post discharge to follow up on needs. Answer patient calls and answer any health related questions they may have. Cover Blue's on Call line for health related questions members may have.

**Gannon University****1/12-1/13**

University

**Adjunct Faculty**

Teaching Junior level BSN nursing students in a High Risk NCLEX class. The class is on-line based with face to face meeting five times in the semester. The students are one's who are at risk for not passing the NCLEX exam and the class is designed to help them prepare for licensure.

**UPMC Horizon, Greenville, PA****2/02- 11/11**

200 bed Acute Care Hospital

**Care Manager**

Responsible for concurrent chart review, obtaining authorizations, and coordination of care with patient's insurance company.

**Accomplishments**

- Decreased number of unbilled accounts by working report daily and calling insurances that were missed
- Decreased number of denials, by educating physicians on Interqual criteria
- Physician Educator for Electronic Health Record (EHR)
- "SuperUser" for our EHR for physician and nurses

**UPMC Horizon, Greenville, PA****11/98-2/02**

200 bed Acute Care Hospital

**Staff Nurse**

Responsible for direct patient care including dressing changes, passing medications, charting, and calling physicians with changes in patient condition. Administered Chemotherapy per orders.

**Accomplishments**

- Obtained Chemotherapy Certification through UPMC Cancer Centers.

**IHS of Erie at Bayside, Erie, PA****4/06-6/06**

140 Bed Skilled Nursing Facility. Ventilator patients, rehab patients, and long term care patients.

**Manager 62 Bed Unit**



Responsible for routine staffing and scheduling as well as organizing coverage for call-offs. Assigned CNA, LPN, and RN duties and sections. Rounded with physicians. Completed infection control monitors and other duties as assigned by DON.

### **Accomplishments**

- Implemented placement of hand sanitizers in patient rooms
- Achieved unit cohesion by using team work approach
- Assisted DON in decreasing fall rate through prevention activities

### **Grove Manor, Grove City, PA**

**9/05-6/06**

59 bed skilled Nursing unit. Short term and long term residents.

#### **Charge Nurse 59-bed unit.**

Filled position of facility Charge Nurse/Nurse Supervisor on weekends  
Responsible for assigning sections to CNA staff, and overseeing LPN staff.  
Rounded with physicians. Updated physicians of changes in patient condition.  
Covered call-offs by organizing replacements. Completed chart review for end of the month orders.

### **Professional Organizations**

American Case Management Association 2007-2011  
American Nurses Association 2010  
Pennsylvania State Nurses Association 2010  
Sigma Theta Tau International 2012  
American Association of Nurse Assessment Coordinators 2014

### **Licensure/Certifications**

RN Certificate Number: RN511536-L from State of Pennsylvania  
RN License Number: RN376990 from State of Ohio  
Certified BLS and First Aide Instructor by the AHA  
RAC-CT (Resident Assessment Coordinator-Certified)

### **Conferences**

Nursing Symposium 2008, Las Vegas, NV, Nursing 2008  
ACMA Western PA conference 2010, Cannonsburgh, PA  
Motivational Interviewing Techniques, Pittsburgh, PA 2011  
LEAP (Learn, Empower, Achieve, Produce) Wexford, PA 2013  
AANAC-RNAC training, New Wilmington, PA 2014  
ABAQIS Training, Washington, PA 2014

**Leadership Activities and Community Involvement**

- Girl Scout Leader
- Service Area Manager for school district's Girl Scout program
- Troop Coordinator/Treasure
- Girl Scout Fair Committee member
- Vacation Bible School Superintendent
- Sunday School Teacher
- Teaching Laypersons CPR/FA
- Little League Softball assistant