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Improving Workflow Efficiency in a Medical Clinic Utilizing a Competency Evaluation Tool with Skills Checklist

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Improving Workflow Efficiency in a Medical Clinic Utilizing a Competency Evaluation Tool with Skills Checklist

A DNP Project Submitted to the
Graduate Faculty
of Jacksonville State University
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Nursing Practice

By

Jillian Johnson

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Abstract

Background: Checklists are commonly used in many healthcare settings to validate one's competency in a skill or task. Competency is essential to help reduce human errors and prevent patient harm, improving patient outcomes while carrying out evidence-based care.

Purpose: The purpose of this DNP project was to improve patient care, patient care outcomes, and workflow efficiency in a charitable clinic by identifying strengths and opportunities for growth among the staff and volunteers through a competency evaluation tool utilizing a skills checklist.

Methods: This quality improvement project included implementing a competency evaluation tool with a skills checklist for staff and volunteers in a charitable clinic.

Results: Significant findings included an increased understanding of the workflow, job responsibilities, and skills required in the patient care area. The project findings also demonstrated increased knowledge and confidence in performing the skills needed.

Conclusion: A competency evaluation tool and skills checklist can be used to validate one's knowledge and the ability to perform specific skills while improving workflow processes. However, much research remains needed to further these findings and contribute to the current evidence.

Keywords: competencies, evaluation tools, competency evaluations, skills checklist, competency checklist, volunteer competency

Dedication

To my family, I would not be here today without your love and constant support, to my wonderful husband, Seth, who constantly encouraged me to follow my dreams during some of the most challenging times. I am truly thankful for you, to my beautiful mother and her unconditional love, who taught me to work hard for what I aspire to achieve. To my father, though you never saw the finished product, you were with me every step of the way.

Acknowledgments

I want to express my sincere gratitude to Dr. Lori McGrath and my faculty chair, Dr. Jolie Wildinger, for their constant support, guidance, and patience throughout this project and manuscript. I want to also offer a special thank you to Teresa Price and Nanette Mudiam for their unwavering support and encouragement during project implementation. I am genuinely grateful for the opportunities you both provided me.

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Improving Workflow Efficiency in a Medical Clinic Utilizing a Competency Evaluation Tool with Skills Checklist

The nature of healthcare delivery is ever-changing, and healthcare organizations must be competent in meeting the complex and diverse needs when providing care for patients. The Oxford English Dictionary defined competency as "the ability to do something successfully or effectively" (Lexico, n.d.). Most healthcare settings must validate their employees' competencies by providing opportunities for employees to demonstrate their skills, knowledge, and behaviors in the clinical setting. Checklists are commonly used to evaluate the technical abilities of competence by documenting the employee's ability to complete the steps in the correct sequence for processes, procedures, and skills (HealthStream, 2021). Using a checklist could determine one's proficiency in a skill before performing that skill on actual patients, in turn, delivering high-quality care to patients.

Free and charitable clinics provide free medical care to the uninsured and indigent population and rely heavily on volunteers for everyday operations. In addition to staff members, volunteers must be competent in providing care for patients. However, their skill sets may differ, and they may not have received the necessary training to perform the task assigned to them effectively. It is essential to measure the volunteers' knowledge levels and skill sets using competency skills checklists to ensure adequate patient care. Benefits of using a competency evaluation tool with a skills checklist are reductions in the likelihood of human errors; improved compliance with rules and regulations; and elimination of unnecessary redundancies that restrain the delivery of timely, efficient care and keep patients on sensible and effective treatment plans (Ross, 2018). This project was selected to bridge the gap in service, improve workflow efficiency, and increase adherence to carrying out evidence-based

competencies of the staff and volunteers in a rural medical clinic to promote improved patient care.

Background

According to the United States Census Bureau (2021), in 2020, 28 million Americans were without health insurance. Free and charitable clinics provide medical care for the uninsured and disadvantaged populations. Charitable clinics rely heavily on volunteers to provide free or significantly discounted medical services. The educational and professional backgrounds of volunteers vary. Due to the nature of charitable clinics, volunteers need to help in many different areas making it essential to measure their competencies and knowledge levels.

Competent healthcare professionals can improve the health and well-being of patients by providing high-quality healthcare within the communities they serve. According to Fukada (2018), competencies include the core abilities required to fulfill one's role. In most settings, healthcare professionals must demonstrate competency in performing skills. A skills checklist can facilitate and evaluate the competencies of volunteers and staff and improve patient outcomes by ensuring that all patients receive evidence-based practices and high-quality care.

Needs Analysis

The site chosen for this project is a faith-based, charitable community medical clinic located in rural east-central Alabama. The charitable clinic has severed the local community's medically uninsured and indigent residents for over thirty years. Their focus has been to offer primary care medical services to those without access, connect patients to needed resources, provide social services such as patient education and help navigate the healthcare system for those in the community with health disparities. The clinic is well-known within the community, and many surrounding outpatient drug and alcohol treatment programs use their services for the healthcare needs of their residents. According to an annual clinic report from 2021, the clinic

served 1,459 patients, had 3,915 patient encounters, performed 406 in-house procedures, and provided 5,871 prescriptions directly to patients. The clinic contracts with the local university allowing nursing students a clinical rotation site for their Community Health course. The lead clinician is a preceptor for nurse practitioner and physician assistant students. There is a contract with the local community hospital for discounted lab, imaging, and limited surgeries and procedures. Funding and revenue sources come from the local affiliated church as well as federal and local grants. Donated medical supplies, medications, and medical and non-medical volunteers are necessary for everyday operations.

SWOT Analysis

A Strengths, Weakness, Opportunities, and Threats (SWOT) analysis was completed to identify the medical clinic's current strengths, weaknesses, opportunities, and threats. The SWOT analysis tool can help understand and identify issues before developing a project plan (Bonnel & Smith, 2018). Internal strengths include the overwhelming support from the executive director and lead clinician, the excellent communication between staff and their willingness to help one another, the existing relationships and resources within the community, the collaboration with the local hospital and medical providers, as well as the connection with the local university that provides opportunities and experiences for students with their patient population. Additionally, the clinic is a member of the National Association of Free and Charitable Clinics (NAFC), strengthening its internal and external status. This membership allows the medical clinic to utilize current job descriptions, volunteer information, budgeting and financial policies, state association resources, and many other organizational resources from the NAFC library.

The weaknesses identified were the limited number of volunteers. Further weaknesses are no current competency evaluations for staff and volunteers or up-to-date job descriptions. Also, the community's needs outweigh the capacity to serve with limited specialist available to provide care for patients at discounted rates. External threats included losing funding through grants or donors and the loss of volunteers. A significant threat would be the loss of community support as the local hospital provides labs, imaging, procedures, and various diagnostic tests at a discounted rate to the medical clinic patients. Opportunities can include increasing the staff and volunteer's awareness and adherence to carrying out evidence-based competencies using a skills checklist, improving the workflow efficiency, improving patient care, and improving the growth of the staff and volunteers. The project can also provide opportunities to implement future Doctor of Nursing Practice (DNP) projects at the medical clinic.

Problem Statement

This project aimed to improve patient care, outcomes, and workflow efficiency in a charitable clinic by identifying strengths and opportunities for growth among the staff and volunteers through a competency evaluation tool utilizing a skills checklist. A meeting occurred between the project planner, the executive director, and the lead clinician of a charitable community-based rural medical clinic in east-central Alabama. During this meeting, the executive director and the lead clinician identified an evident need to identify knowledge competencies in volunteers who triage patients in the clinic. Observations of varying skill set knowledge deficits caused frequent interruptions in the workflow among the volunteers by the project planner and lead clinician, leading to the discussion with the executive director. An additional goal of the executive director and lead clinician was to improve the workflow efficiency in the clinic.

A population, intervention, comparison, and outcome question (PICO) is a mnemonic used to help facilitate and answer clinical questions in evidence-based nursing. For this project, the PICO question is: Among staff and volunteers at a rural medical clinic (P), does using a competency-based evaluation tool with skills checklist (I), compared to current practice (C), improve workflow efficiency (O)?

Aims and Objectives

The overarching aims of this project were to:

1. Improve the patient care and patient care outcomes at a rural charitable medical clinic by creating and implementing a competency evaluation tool with skills checklist.
    a. Improve the workflow of staff and volunteers while providing quality care for patients in a rural, charitable medical clinic.
    b. Improve staff and volunteer satisfaction scores post-implementation.
2. Increase staff and volunteer awareness and adherence to carrying out evidence-based competencies and skills checklist when caring for patients in a rural medical clinic.
    a. To improve staff and volunteer awareness and adherence regarding the delivery and effectiveness of the skills checklist.
    b. To improve the confidence of staff and volunteers in performing required skills and their knowledge of when to notify the medical provider of abnormal results.

Review of Literature

The project planner used the PICO question as a guide when conducting a review of literature search using the search terms *competencies, evaluation tools, competency evaluations, skills checklist, competency checklist, and volunteer competency* in the following databases: CINAHL, PubMed, Cochrane, and PsycINFO. Google Scholar and Google search engines were also utilized in the search. Findings included an abundance of literature regarding nursing competencies in education and acute care settings and the use of checklists for specific algorithms. However, there is very little recent information on how competency evaluation tools and skills checklists are used in volunteer healthcare or primary care settings. Adding the search terms *evaluation tools and volunteer competency* narrowed the search to six articles and studies. Out of the six, only four were relevant to the project.

Many factors contribute to the underuse of competency evaluations and skills checklists. Checklists are commonly used in many areas to help standardize work processes. Studies have shown how they can improve patient outcomes by ensuring patients receive high-quality, evidence-based care. A review of the subsequent studies shows that using a competency evaluation with a skills checklist can measure an individual's clinical competencies and performance progression and improve the quality-of-care patients receive. They are also valuable tools for orientation and training and provide a structured foundation to help standardize educational programs.

Volunteer Experiences at a Free Clinic in the United States: A Qualitative Study

A qualitative study evaluated volunteers' experiences at a community free clinic. A total of 28 participants were divided into five focus groups where participants were allowed to express their opinions about the clinic freely. These sessions were audio-recorded and transcribed,

ensuring validity and reliability. During the focused group sessions, the participants discussed why they volunteered, the orientation and training they had received, their own positive and negative experiences at the clinic, and any suggestions they wanted to provide. Several participants stated they did not feel they received adequate training and often felt unprepared. A recommendation for the clinic was to have more volunteer training programs to include a skills checklist. Volunteers expressed that they gained educational and professional experiences while caring for the underserved population. For volunteers to maximize the assistance they can bring to free clinics, it is necessary to develop effective training programs (Gorski et al., 2017). Further research is needed at free clinics that utilize volunteers to improve the quality of care provided to underserved populations.

Integrating a skills checklist into the COINN neonatal nurse competencies

Recent studies have shown that the education and training provided in nursing and midwifery programs are not providing the knowledge and skill sets needed to care for neonates, leading to higher mortality rates. A study performed in Rwanda, Africa, examined 47 neonatal care units for staffing, education, and equipment availability. This study revealed that 76% of nurses and midwives reported inadequate training during orientation. Researchers at the Council of International Neonatal Nurses, Inc. (COINN) found these same challenges in other countries. In response to the study findings, the educational committee at COINN created and implemented a nursing competency framework for countries with limited resources (Jones et al., 2019). The competency framework was published and mapped the competencies to the skills required by the World Health Organization's (WHO) levels of care. It was then determined that a skills performance evaluation of the nurse/midwife was needed. Skills checklists from the United States, United Kingdom, and Australia were obtained, reviewed, and appraised. Each skill was

analyzed, and a performance checklist based on competencies was created. The competency and skills checklist must undergo pilot testing to refine and validate before implementation (Jones et al., 2019). Utilization of the competency evaluation and skills checklist will measure the nurse and midwife's performance and progression and provide a structured foundation for institutional standardized nursing and midwifery educational programs.

Measuring clinical competencies in facilitating group-based rehabilitation interventions: development of a new competency checklist

Before this study, no tool was used to measure the clinical competencies in group facilitation used during patient rehabilitation. A case study used the Delphi method to survey fifteen experts to create a group facilitation competency checklist for clinical, training, and research settings. Participants used a 5-point Likert-type scale to rate 17 items for importance and appropriateness. An item that did not score a four or five was removed or revised. The instrument's reliability was found to be moderate, depending on rigor. Limitations of the study included the checklist was developed for only one specific type of group, possibly influencing the items on the list. Further research is needed to include other group interventions and with other disciplines. In conclusion, there is now a competency checklist to measure the clinical competencies of group facilitators during training and interventions (Wong et al., 2017).

A Competency-Based Orientation (CBO) Protocol Enhances Competency Among Newly Hired Perianesthesia Nurses

The quality improvement project's purpose was to develop, implement, and evaluate a competency-based orientation (CBO) protocol for forty-six new nurses in a perianesthesia unit (Fong et al., 2021). Participants underwent a two-day orientation for new hires regarding infection control, hospital administration, policy, and procedures. Each participant was paired

with a senior perianesthesia nurse for two weeks of orientation on the unit. Afterward, participants provided feedback regarding the orientation process. A committee of five senior nurses developed nursing care workflows for surgical procedures specific to their unit's needs. The project leader reviewed the workflows and developed competency checklists for them. Each competency was reviewed, and members made recommendations to the project team. Once approval was given the implementation began. Nursing preceptors utilized the competency tool during the participants' orientation to the unit, lasting about three weeks. The participants were provided with and completed a survey pre-and post-implementation. The limitations identified were the short implementation time, and no patient outcomes were collected. The project revealed improvement in the participant's competencies in all surgical areas within the unit, and the department continues to utilize the CBO protocol for new nursing hires.

Theoretical Framework

Changes in healthcare are inevitable. When implementing a quality improvement initiative, some type of change is necessary. The success of change depends on how well people understand and prepare for the process. Resistance to change is common, especially in individuals who have not had the opportunity to ask questions or express concerns about the change. When implementing a change in current practice, it is essential to communicate the necessity of the change and how it will benefit those impacted. Through communication and transparency, people feel more confident and comfortable with needed changes.

Going into any change blindly can lead to unnecessary anxiety and resistance. Kurt Lewin noted to be the first change theorist, developed the first model of the change process, including three steps; unfreezing, changing, and refreezing (Zaccagnini & White, 2017).

Preparations can be made before implementing changes when using Lewin's change process. The first stage is unfreezing, which involves letting go of old ways/habits (Zaccagnini & White, 2017). Motivating the need for change is essential during the first stage. Volunteers want to contribute to the cause they believe in and are motivated by a desire for change which can make this step smoother. Next, implementing the change does not occur overnight and will involve time and clear, effective communication. Once people have embraced the new changes, refreezing the new process occurs. Providing the resources and tools needed to perform a job adequately will lead to a successful transition. The new method can become the standard for new hires and volunteers within the organization.

Methodology

This quality improvement initiative is planned to improve patient care, patient care outcomes, and workflow efficiency while increasing staff and volunteer awareness and adherence to an evidence-based competency evaluation tool with a skills checklist in a rural medical clinic. The Plan, Do, Study, Act (PDSA) method was used for this project (see Appendix A). The PDSA method is used in healthcare to make small changes that are evaluated quickly, changed or corrected, and then reevaluated (Zaccagnini & White, 2017).

The planning phase of this project began with a needs assessment and a meeting with the Principal Investigator (PI), lead clinician, and executive director of the clinic. A search of the current literature was started and continued throughout the planning process. The meeting results identified a gap in service with the clinic’s need to improve workflow efficiency and increase adherence to the evidence-based competencies of their volunteers and staff. The PI completed Jacksonville State University (JSU) required modules from the Collaborative Institutional

Training Innovation (see Appendix B). The proposed project was then submitted to the JSU's Institutional Review Board (IRB) for approval (see Appendix C).

In the Do phase, the PI individually met face-to-face with volunteers providing information regarding the project, allowing for questions and concerns, feedback, and obtaining informed consent. A meeting was held with the PI, lead clinician, and a senior staff member to discuss the creation of the skills checklist. As members of the NAFC, the clinic has access to all resources listed on the member site. These resources included a skills checklist template, which was used as a guide to create the skills checklist explicitly designed for the clinic (see Appendix D). The participants were asked to complete a pre-implementation survey (see Appendix E). The questions were designed to address the aims and objections of the project and were validated with IRB approval. Participants then completed a post-implementation survey once the implementation was completed (see Appendix F).

The Study phase included the data analysis and outcomes of the project. The Act phase included the implications and sustainability for practice. These will be discussed in detail later under the results and conclusion of the project.

Setting and Population

This project occurred in a faith-based, charitable community medical clinic located in rural east-central Alabama. For over thirty years, the clinic has offered limited medical services and resources to its community's medically uninsured and indigent population. The clinic sees patients with various medical diagnoses operating three days per week from 8 am-4 pm. In 2021, the clinic had over 3,900 patient encounters. The population of interest was volunteers and staff that provide direct care to patients utilizing the clinic. Due to the small size of the clinic, the sample size was a total of five volunteers and staff.

Inclusion/Exclusion Criteria for Participants

Inclusion criteria:

- Volunteers and staff who work directly in patient care areas
- Operational hours (Wednesday – Friday 8 am to 5 pm CST)
- Male and female staff and volunteers over the age of eighteen
- Various levels of education and experience

Exclusion criteria:

- Staff and volunteers not working directly in patient care settings
- Healthcare Providers: Physician Assistants and Nurse practitioners

Consent

Consent was obtained from all participants before project implementation (see Appendix G).

Design

The quality improvement project used a quasi-experimental design approach to explore whether the independent variable, the competency evaluation with a skills checklist, would impact the efficiency of the workflow, the dependent variable. Data was collected using a convenience sampling of volunteers and staff working in the clinic's patient care area. Quantitative data was collected using a Likert-style rating from pre-and post-implementation surveys evaluating the effectiveness of the change intervention.

The skills checklist was given to each participant to provide a self-assessment to determine if they had experience and felt competent performing each skill listed. Before implementation, the lead clinician and senior staff member decided the PI was competent in the skills listed on the checklist. Thus, allowing the PI to validate participants' competency in skills.

The PI then evaluated each participant's performance on the checklist as they performed or demonstrated each skill. The tasks on the list included:

- Essential skills needed for the clinic's triage area
- Laboratory tests
- Treatments/procedures
- Specific tasks for assisting the medical provider

The PI referred to the user's manual for each lab test if the participant required additional education to complete the skill. If needed, the PI used demonstration techniques for the required skills in assisting the medical provider and obtaining vital signs. Once the participant demonstrated competency in the task, the PI then checked them off using the checklist as a tool.

Risks and Benefits

There was minimal risk of harm or acquired costs to the participants during this project. No punishments were given to those who did not wish to participate, and all efforts were made to keep the participants' personal information and questionnaires confidential. The benefits to the volunteers and staff included improving the workflow in the patient care area, increased competencies, and improved patient care outcomes. Benefits to the medical clinic included knowing current volunteers and staff skills and adherence to evidence-based competencies. The clinic will also benefit by utilizing the skills checklist for new volunteers and employees and annual competency assessments.

Timeline

The timeline of the project occurred over four semesters. In the Summer of 2021, telephonic meetings occurred with the preceptor and the clinic's medical provider to identify the clinical problem. An initial review of the literature, evidence and data began. The initial PICO

question and a draft problem statement were developed, and a search for clinical guidelines and policies related to the problem also occurred during this semester.

The PICO question was finalized Fall 2021, completing the Collaborative Institutional Training Initiative (CITI) and selecting the theoretical methodology. Telephonic meetings with the preceptor continued along with communication with university faculty regarding project implementation ideas and literature review. The project was presented and approved by the DNP Project Proposal Evaluation Review Committee and Institutional Review Board.

The project's implementation, data collection, and statistical analysis occurred during Spring 2022. The final submission of the manuscript and project dissemination took place in the Summer of 2022.

Budget and Resources

The cost of the project was minimal and covered by the PI.

Table 1

PROJECT EXPENSE	**PROJECTED COST**	**ACTUAL COST**
Salaries, wages *(Admin support, practitioners, statistics, or writing consultation)*	$200	Statistics- donated
Start-up costs *(copies, charts, displays)*	$100	$20.00
Capital costs *(hardware, equipment)*	n/a	n/a
Operational costs *(heat/electricity)*	n/a	n/a
Other: electronic survey	$100	$0
Total Project Expenses	**$400.00**	**$20.00**

Evaluation Plan

During the Study phase, included in the PDSA method discussed earlier, the quantitative data was collected.

Statistic Considerations

Quantitative data was collected from pre-and post-implementation surveys using a Likert-style scale. The pre-implementation survey evaluated each participant's self-perception of workflow, job descriptions, skills required, and confidence in their abilities (see Appendix D). Post-implementation surveys reassessed their perceptions (see Appendix E). Descriptive statistics were calculated using Microsoft Excel software to perform and determine an average of improvement with each participant and the group overall. Availability of participants led to convenience sampling allowing for quicker evaluation of the intervention used in the project.

Data Maintenance and Security

The data management for this project included collecting, protecting, organizing, and storing data to be analyzed. Data integrity was maintained throughout the collection process, ensuring clean, high-quality data at evaluation. Each participant was assigned a letter (A-E) to identify the surveys for comparison, and only the PI had access to this knowledge. The pre-and post-implementation surveys remained anonymous and kept in a locked file cabinet in a locked office that was only accessible to the PI. A password-protected device secured all electronic data.

Results

The results of the quantitative date collected will be discussed further in the sections below.

Results of Pre-Implementation Survey Responses

Pre-implementation data collection included surveys from two staff members and three volunteers for a total of five participants (n=5). The survey used a Likert-style scale rating from 1-5 Strongly Disagree to Strongly Agree. All seven questions were answered, except one participant left number four blank. The participant's average response was between Disagree and Neither Agree nor Disagree for understanding the workflow and their confidence in their ability to perform the skills needed in the patient care area. The average response regarding their perception of the efficiency of the current workflow, understanding of their responsibilities and skills required, and confidence in notifying the medical director of abnormal test results were between Neither Agree nor Disagree and Agree. The average was between Agree and Strongly Agree for their confidence in their ability to notify the medical provider of abnormal vital signs.

Figure 1

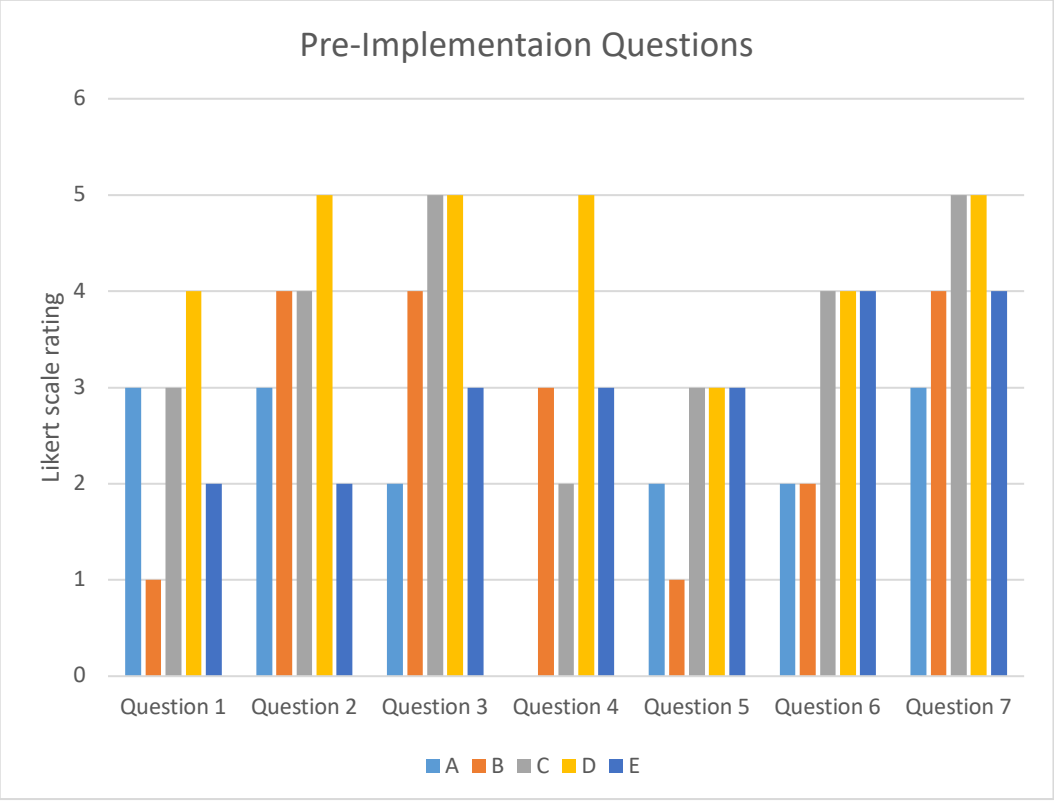


Figure 2

Pre - Implementation							
	Participants:						
Questions:	A	B	C	D	E	Average	Std Dev
1. Understanding of the workflow	3	1	3	4	2	2.6	1.0
2. Efficiency of current workflow	3	4	4	5	2	3.6	1.0
3. Understanding of responsibilities	2	4	5	5	3	3.8	1.2
4. Understanding of the skills required	NR	3	2	5	3	3.3	1.1
5. Confidence in performing skills	2	1	3	3	3	2.4	0.8
6. Confidence in notifying provider of abnormal test results	2	2	4	4	4	3.2	1.0
7. Confidence in notifying provider of abnormal vital signs	3	4	5	5	4	4.2	0.7
Average	2.5	2.7	3.7	4.4	3.0	3.3	1.0
Median						3.3	
Standard Deviation						0.6	
95% confidence interval						0.5	
95% Confidence Mean Range						2.8 – 3.8	

Results of Post-Implementation Survey Responses

Post-implementation data collection began after each participant's skills were evaluated and validated as competent. The participants then completed the post-intervention survey to reassess their perceptions and determine if the competency evaluation tool with skills checklist contributed to improved understanding of workflow, job descriptions, skills required, and confidence in their abilities. Again, the survey used a Likert-style scale rating from 1-5 Strongly

Disagree to Strongly Agree. All nine questions were answered, except one participant left number nine blank.

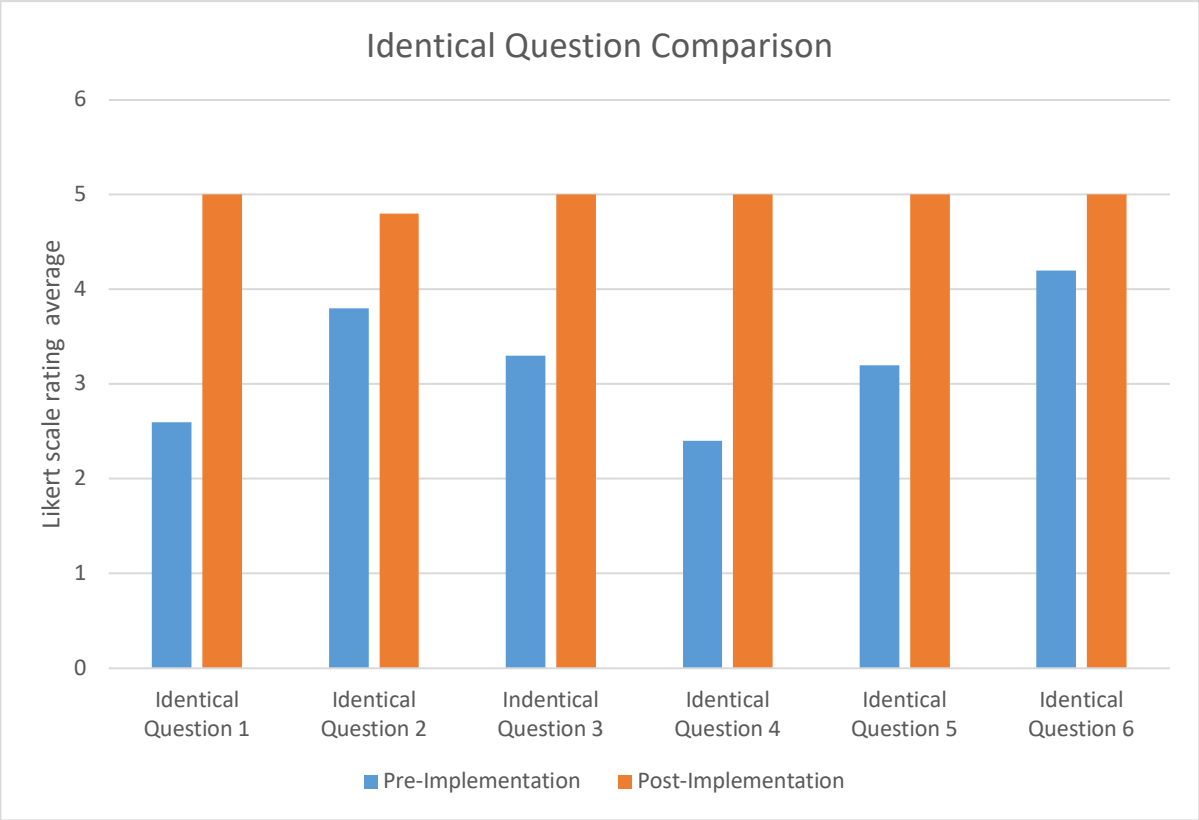
Figure 3

Post - implementation							
	Participants:						
Questions:	A	B	C	D	E	Average	Std Dev
1. Understanding of the workflow	5	5	5	5	5	5.0	0.0
2. Improved workflow following implementation	5	5	5	5	5	5.0	0.0
3. Understanding of responsibilities	5	5	5	5	4	4.8	0.4
4. Understanding of the skills required	5	5	5	5	5	5.0	0.0
5. Confidence in performing skills	5	5	5	5	5	5.0	0.0
6. Better prepared to perform skills	5	5	5	5	5	5.0	0.0
7. Confidence in notifying provider of abnormal test results	5	5	5	5	5	5.0	0.0
8. Confidence in notifying provider of abnormal vital signs	5	5	5	5	5	5.0	0.0
9. Tool will benefit new staff and volunteers	5	5	5	NR	5	5.0	0.0
Average	5.0	5.0	5.0	5.0	4.9	5.0	0.0
Median						5.0	
Standard Deviation						0.06	
95% Confidence Interval						0.06	
95% Confidence Mean Range						4.9 – 5.0	

Six of the same self-assessment questions were in the pre-and post-implementation surveys. These results indicated increased workflow knowledge, understanding of job

responsibilities, and skills required in the patient care area. There was also an indication of increased confidence in participants in performing skills and their ability to notify the medical provider of abnormal vital signs and test results.

Figure 4



Discussion

Due to time restraints, this project did not include patient care and outcomes data. However, this project's significant findings included the participants' increased understanding of the workflow, job responsibilities, and skills required in the patient care area after implementing a competency tool with a skills checklist. Each participant followed the checklist, which validated their competencies in the skills necessary for the patient care area. The project findings also demonstrated increased participants' confidence in performing the required skills and knowledge to notify the medical provider of abnormal tests and vital signs. The participants all

felt the competency evaluation tool with a skills checklist improved the workflow efficiency, better prepared them to perform the skills required, and thought the tool would benefit new staff and volunteers.

Implications for Clinical Practice

Competent staff and volunteers can improve patient outcomes by providing high-quality, evidence-based care to the patients they serve. Experiences with checklists in a volunteer or primary care setting are limited compared to educational and acute care settings. However, the findings of this project are consistent with the existing data that also demonstrated skills checklists could be used to measure one's clinical competencies and confidence progression, contribute to improved workflow efficiency, and are valuable tools for orientation and training purposes. The project findings also allow us to believe the checklist can be implemented in new hire orientation and training programs to promote self-confidence and knowledge.

Implications for Quality/Safety

Poorly designed care processes can lead to compromised patient safety and declining quality care. This quality improvement project improved the participants' confidence and comprehension of required skills and job responsibilities in a medical clinic. The participants also agreed that the checklist improved workflow efficiency in the patient care area of the clinic. The workflow in the charitable clinic is the process that contains a sequence of tasks to be completed to accomplish a goal. Checklists can be implemented in other medical clinics to improve care processes and increase patient safety and quality of care.

Limitations

The small number of staff and volunteers resulting in the small sample size posed the most significant limitation to this project. The clinic has continuously operated with a small staff

size, and the recent Covid-19 pandemic has directly affected the number of volunteers in the clinic. Another limitation was the limited timeframe of implementation. Due to time restraints, this project did not include patient care and outcomes data. Most participants had no prior experience working or volunteering in any charitable clinic. Lack of experience or knowledge may have skewed the results. Although some studies use a similar process to evaluate the effectiveness of implementations, the self-perception measures of the survey can also be identified as a limitation. The use of convenience sampling in this project could be identified as sampling bias as the sample was based on what participants were, at the time, available to the PI. However, this allowed for quicker implementation and more accessible data collection. Finally, the study was only conducted at one charitable clinic due to time restraints. Each medical clinic operates differently and has its own unique skill sets needed for the triage area. However, all free clinics provide services to underserved populations with limited resources, and the required skills of staff and volunteers may be similar.

Dissemination

The results of this DNP project have been presented via PowerPoint presentation during Jacksonville State University's Graduate Nursing Program's DNP Dissemination Conference. The DNP manuscript will be download through Jacksonville State University's Digital Commons repository.

Sustainability

This quality improvement initiative remains in use at the charitable clinic. The skills checklist is being used as part of the orientation process for new staff and volunteers. The clinic plans to use the checklist to validate competencies annually. Using the skills checklist, the clinic

also plans to require skills competency validation of all future nursing instructors, nurse practitioner students, and physician assistant students.

Future DNP students can implement this project in larger medical clinics or private practices to further evaluate the benefits of utilizing a skills checklist during the orientation process. Future projects could also include comparing two facilities and allowing participants a broader range of knowledge and experience validation.

Plans for Future Scholarship

This study adds to the evidence that medical checklists have the potential to become powerful tools for evaluating competencies and standardizing work processes. Further research is needed to develop, implement, and assess the success of checklists in primary care medical clinics. Further DNP projects can examine how a competency evaluation tool with skills checklists can be utilized in more extensive primary care and walk-in clinics. Projects could also attempt implementation in specialty areas such as acute and long-term care settings.

Conclusion

A skills checklist can determine an employee or volunteer's knowledge and ability to perform specific skills and improve workflow processes. This project sought to determine the effectiveness of a competency evaluation tool with a skills checklist on workflow efficiency in a charitable clinic. A checklist focused on the medical clinic's specific skills needed for the patient care area. The project included a small number of five participants. These participants' competencies were validated using the checklist, and they completed a pre-and post-implementation survey. Findings included an increase of confidence in the participants when performing required skills and in their knowledge of when to notify the medical provider of

abnormal results. There was also an increased understanding of their job responsibilities, skills, and workflow in the patient care area.

The effects of competency evaluation tools and skills checklists on patient care outcomes in primary care clinics remains unexplored, as evidenced by the lack of current literature available. The PI realizes that further research on this project improvement initiative is needed. A larger sample size with a broader range of clinical experience is necessary to determine a statistically significant. A comparison of data in other facilities with similar skills is also recommended for future research.

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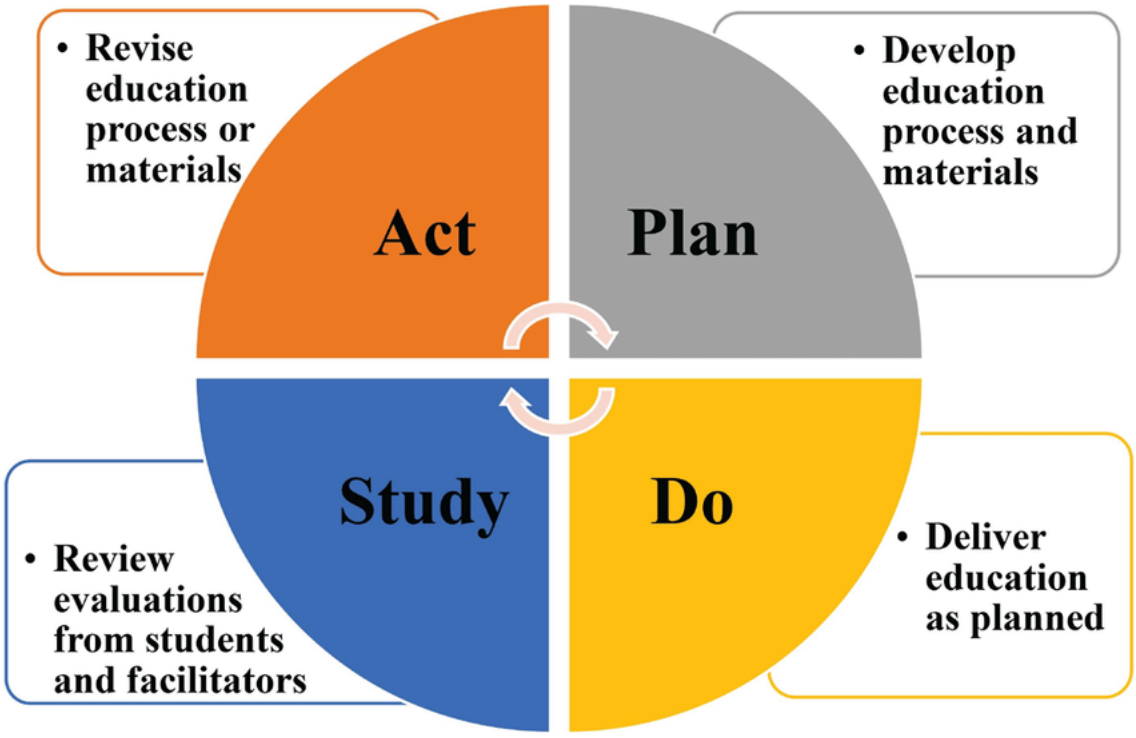
Appendix A

Plan Do Study Act Model



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Appendix B

CITI Training Completion

CITI PROGRAM

Completion Date 17-Sep-2021
Expiration Date 16-Sep-2024
Record ID 44829260

This is to certify that:

Jillian Johnson

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

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

Under requirements set by:

Jacksonville State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w3095a07c-5299-4736-919d-3ce8872d680f-44829260

Appendix C

IRB approval

JSU | INSTITUTIONAL REVIEW BOARD
JACKSONVILLE STATE UNIVERSITY

Institutional Review Board for the Protection of Human Subjects in Research
203 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

December 9, 2021

Jillian Johnson
Jacksonville State University
Jacksonville, AL 36265

Dear Jillian:

Your protocol for the project titled "Improving Workflow Efficiency in a Medical Clinic Utilizing a Competency Evaluation Tool with Skills Checklist" 120920201-02 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB). If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.
Best wishes for a successful research project.

Sincerely,

Lynn Garner
Associate Human Protections Administrator, Institutional Review Board

Appendix D

Competency Evaluation Tool with Skills Checklist

Self-Assessment				Competency Skill Review	Proficiency Required	Evaluation Method	Competency Validation Indicated by Preceptor Initial and Date
Do you have experience with this skill		Are you competent performing this skill					
Yes	No	Yes	No				
				Triage Area			
				Patient verification (name, DOB, allergies)			
				History and chief complaint			
				Maintains the safety of the patient			
				Handwashing (soap and water or hand sanitizer)			
				Height and weight			
				Blood pressure (manual) Reports SBP >140 and <90 Reports DBP >90			
				Blood pressure (machine) Reports SBP >140 and <90 Reports DBP >90			
				Pulse (manual) Reports <60 and >100			
				Respirations Reports >30			
				Temperature Reports >100.4			
				Oxygenation Reports <90%			
				Labs			
				Finger stick- glucose Reports >300			

				HbA1C			
				Urine dip			
				Urine pregnancy			
				Hgb			
				WBC			
				INR			
				Rapid Strep			
				Flu			
				Mono			
				cholesterol			
				COVID-19			
				Occult blood			
				Treatment/procedures			
				EKG			
				Breathing treatments (nebulizer)			
				Suture/Staple removal			
				Basic wound care and dressings			
				IM and SQ injections			
				Assisting Providers (Setting up equipment needed in the room)			
				Pap Smears			
				Abscess drainage			
				Suture/Staple insertion			
				Biopsies (skin)			
				Wound cultures			
				Joint injections			

Appendix E

Pre-Implementation Survey

For each question below, circle the response that best characterizes how you feel about the statement, where: 1= Strongly Disagree, 2= Disagree, 3= Neither Agree Nor Disagree, 4= Agree, and 5= Strongly Agree.

1. I have a clear understanding of the workflow in the patient care area	1	2	3	4	5
2. I feel the current workflow in the patient care area is efficient	1	2	3	4	5
3. I have a clear understanding of my job responsibilities	1	2	3	4	5
3. I have a clear understanding of what skills are needed in the patient care area	1	2	3	4	5
5. I am confident in my ability to perform the skills in the patient care area	1	2	3	4	5
6. I am confident in my ability to notify the medical provider regarding abnormal test results	1	2	3	4	5
7. I am confident in my ability to notify the medical provider regarding abnormal vital signs	1	2	3	4	5

Appendix F

Post-Implementation Survey

For each question below, circle the response that best characterizes how you feel about the statement, where: 1= Strongly Disagree, 2= Disagree, 3= Neither Agree Nor Disagree, 4= Agree, and 5= Strongly Agree.

1. I have a clear understanding of the workflow in the patient care area	1	2	3	4	5
2. I feel the competency evaluation tool with skills checklist improved the efficiency of the workflow in the patient care area	1	2	3	4	5
3. I have a clear understanding of my job responsibilities	1	2	3	4	5
4. I have a clear understanding of what skills are needed in the patient care area	1	2	3	4	5
5. I am confident in my ability to perform the skills in the patient care area	1	2	3	4	5
6. I feel the skills checklist better prepared me to perform the skills in the patient care area	1	2	3	4	5
7. I am confident in my ability to notify the medical provider regarding abnormal test results	1	2	3	4	5
8. I am confident in my ability to notify the medical provider regarding abnormal vital signs	1	2	3	4	5
9. I feel the use of the competency evaluation tool with skills checklist will benefit new staff and volunteers in the patient care area	1	2	3	4	5

Appendix G

Participant Consent Form

TITLE OF STUDY: Improving Workflow Efficiency in a Medical Clinic Utilizing a Competency Evaluation Tool with Skills Checklist

Principal Investigator: Jillian Johnson MSN, CRNP-FNP

This consent form is part of an informed consent process for a DNP student project, and it will provide information that will help you decide whether you wish to volunteer for this project. This consent will help you understand what the study is about and what will happen during the project.

Feel free to ask any questions you may have during the project. After all your questions have been answered and you do not wish to participate, you are not required to do so.
You are not giving up any of your legal rights by volunteering for this project.

Why is this project being done?
This project aims to address the effectiveness of using a competency tool with a skills checklist in a rural medical clinic in Anniston, AL to improve efficiency in the workflow. It is essential to measure the knowledge level and effectiveness of the staff and volunteers in a rural medical clinic. Without understanding the team's core competencies, they can significantly impact patient care, outcomes, and the efficiency of the workflow in the clinic.

What will you be asked to do if you take part in this research project?

The PI will provide questionaries to each participant about the clinic's current practice and workflow efficiency. The participants' skills competencies will be evaluated using a skills checklist to determine if additional education needs to be provided. After the participant is competent in all skills on the checklist, they will receive a post-implementation questionnaire gauging the project's effectiveness, overall satisfaction, and willingness to continue utilizing the checklist.

What are the risks or discomforts you might experience if you take part in this project?
There is no expected harm to participants during the study. There will be no punishment for those who do not wish to participate. There is no cost to any participant during the project.

How will information about you be kept private or confidential?
All efforts will be made to keep your personal information in your record confidential, but total confidentiality cannot be guaranteed. All questionnaires will be anonymous.

What will happen if you do not wish to participate in the project or if you later decide not to stay in the project?

Participation in this project is voluntary. If you decide to stop participating, you may do so at any time; there is no penalty for leaving.
Please notify the PI if you choose to leave.

Who can you call if you have any questions?
If you have any questions about taking part in this project, you can call or email the principal investigator:

Jillian Johnson, MSN, RN

Jjohnson73@stu.jsu.edu

(256) 423-339-4520