Original Research Article

Program Evaluation: Charge Nurse Training Program

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Abstract

A program evaluation is a systematic method for collecting, analyzing, and using information to answer questions about projects, policies and programs, particularly about their effectiveness and efficiency. The goal is to improve programs. A program evaluation is a part of all training programs. A Charge Nurse Training Program was conducted in the NICU of Security Forces Hospital as it was evident that the charge nurse role needed to be supported better with clear expectations and a standardized professional development training. The sample for the study was forty-two registered nurses who underwent the adapted evidence-based ADDIE model training program. The simple random sampling technique was used to select the sample. Only registered nurse 1's were included in the study and exclusion criteria were those registered nurse 1's who had less than one year of experience in NICU. Structured teaching modules and practical sections were conducted for all the sample. Data was collected using a pre-test followed by a post-test of each module to assess the knowledge level of the samples, a Likert scale to assess the confidence level, an observation (practice) checklist to assess the skills level and a final evaluation through surveys to evaluate the effectiveness of the program. The program evaluation showed that, the adapted ADDIE model of a Charge Nurse Training Program was effective and that it boosted staff confidence, created a healthy working environment and increased the knowledge, skills of the nursing staff in order for them to perform their core responsibilities.

Keywords: Program Evaluation, Charge Nurse, ADDIE model, Likert scale, Neonatal Intensive Care Unit (NICU), Structured Teaching Module.

INTRODUCTION

Charge nurses (CN's) are registered nurses who are responsible for the operation of the nursing unit over a specific time period. The CN must have a strong foundation of clinical knowledge and skills on which to base judgments and make decisions, organizing abilities to direct nursing tasks and operations, and interpersonal skills to facilitate communication and the work of others (Kramer & Davies, 2021). The literature suggests that Leadership Development Programs are beneficial (Aqtash *et al.,* 2022). Kramer and Davies conducted a review of nine studies and concluded that formal orientation and ongoing leadership support is required for CNs to be successful (Kramer, M., & amp; Davies, C. C. 2021).

Program Evaluation Goal

To provide an opportunity to develop competent and confident charge nurses.

Program Evaluation Team

Our team consisted of six members.

Table 1: Roles and Responsibilities of the Evaluation Team Members

Individual	Title or Role	Responsibilities
Program Director	Lead Evaluator	• Oversight of all evaluation activities to ensure the evaluation is conducted as planned • Coordinate meetings for the team
Program Coordinator	Data Analysis	• Analyze quantitative data • Coordinate the analysis of qualitative data • Ensure implementation of findings

Citation: Yamen A. Hamed, Ali M. Al Yasien, Shini Cherian, Deirdre Hawkins, Mary Van Eck, Manal Al Essa (2023). Program Evaluation: Charge Nurse Training Program. *Saudi J Nurs Health Care, 6*(9): 288-296.

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Individual	Title or Role	Responsibilities
Program Co-Coordinator	Stakeholder/ Advisor	• Provide support and guidance and dissemination of results
Nursing Saudization Coordinator Clinical Nurse Specialist (CNS)	Data Collection	• Gather and review data
Assistant Director of Nursing (ADON)- Nursing Education and Training Division	Nursing Education Department Liaison	• Co-ordinate data collection with the members

Framework for Program Evaluation

The Centers for Disease Control and Prevention (CDC) developed a framework that encompasses 6 steps in a Program Evaluation as seen in Figure 1.
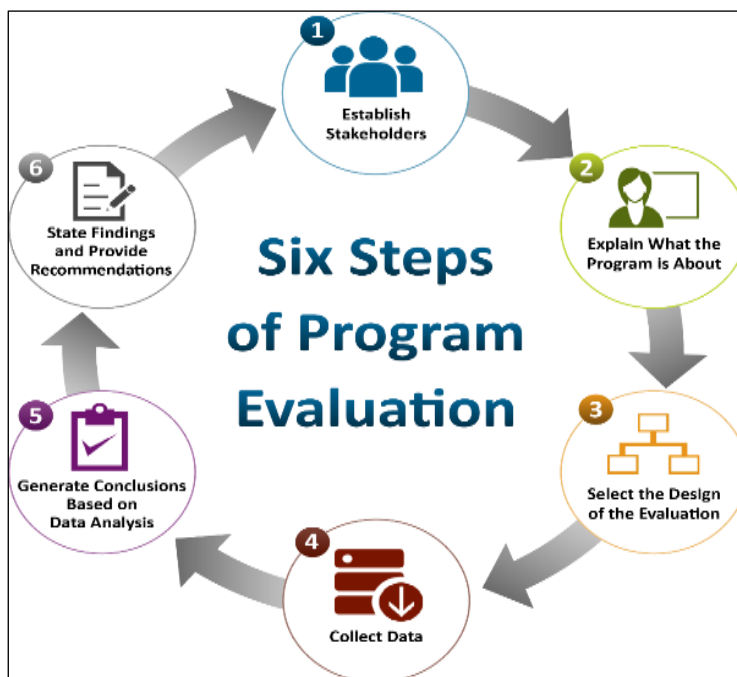

Figure 1: Six Steps of Program Evaluation (The Center for Organizational Excellence, Inc)

ESTABLISH STAKEHOLDERS

At the monthly CN program staff meeting, the evaluation of the CN Program was discussed. The following stakeholders were identified, along with their interests and perspectives and how each stakeholder should be involved in the process. After the meeting, Nursing Education and Training Division was also contacted to give perspective on how the patients and the unit nurses should be engaged in the program. The following table summarizes the plan for stakeholder engagement.

Table 2: Stakeholder Assessment and Engagement Plan

Stakeholder Categories	Interests/Perspectives	Role in the Evaluation	How to Engage
Persons Involved in Program Operations			
• Head Nurse (HN), Assistant Head Nurse (AHN) and Acting Assistant Director of Nursing (A/ADON)- Maternity and Child Health (MCH) section	• Fear that the program may have a negative impact and potential job loss • May see the program evaluation as a personal judgment	• Defining program and context • Identifying data sources • Collecting data • Interpreting findings • Disseminating and implementing findings	• Direct roles in conducting evaluation • Meetings
Persons Served or Affected by the Program			
• Patients from the Unit	• May fear or reject clinic/health system • Want better services	• Providing customer perspective • Interpreting findings	• Survey
• The Unit (Department) in general	• May be suspicious of the program	• Providing unit context	• Inform of findings

Stakeholder Categories	Interests/Perspectives	Role in the Evaluation	How to Engage
• Other service programs in the area (employers, hospitals)	• May or may not be dealing with similar challenges	• Disseminating findings to community audiences	• Inform of findings
Intended Users of Evaluation Findings			
• Program Coordinator	• To show effectiveness • Use findings to enhance the program	• Defining information needed from the evaluation • Developing and implementing recommendations	• Direct role in conducting evaluation
• Program Co-Coordinator • Clinical staff	• Know if the program is effective: best use of county funds • Provide effective role as a Charge Nurse	• Providing administrative/ funding context • Interpreting findings • Interpreting findings • Modifying practice (if needed)	• Direct role to conduct the meeting • Meeting
• Nursing Education and Training Division and Department Planning Board	• Improve training sections	• Disseminating findings	• Inform of findings

EXPLAIN WHAT THE PROGRAM IS ABOUT
Need

Role transition from clinical nurse to charge nurse can be challenging. Charge nurses lead our units; focusing on their development through leadership training that emphasizes communication, mentoring, and coaching skills will result in charge nurses who have the authority to ensure assignments are based on patients' needs, delegate tasks successfully, supervise care, and provide assistance to those with less experience. We describe how a formalized charge nurse training program can benefit the health care system by improving patient satisfaction and nurse retention. The charge nurse role is critical to patient safety and positive patient outcomes.

Context

The charge nurse role is one of the most important roles in the organization but receives limited time for training or orientation (Delamater & Hall, 2018; Spiva, et al, 2020). Charge Nurses frequently become leaders without any type of formal leadership education. This is problematic as research has shown that a lack of nursing leadership is directly related to suboptimal patient care and the behavior of staff nurses is directly linked to the leadership skills of the Charge Nurses (Whitby, 2018). A study by (Hassmiller & Wakefield, 2022) found that charge nurses who participated in simulation training better understood the intricacies of their position and were more adequately prepared to address stressful and emergent situations.

Target Population

The target study population was registered nurses 1's (RN1's), excluding staff who have less than one year of experience as a registered nurse (RN1). The simple random sampling technique was used to select the forty-two registered nurse sample, who underwent the adapted evidence-based ADDIE model training process.

Objectives

At the end of this program the RN1 should be able to;
- Demonstrate required knowledge in roles and responsibilities of the charge nurse.
- Develop competence in preparing the rotation list of Admission and Patient Flow.
- Develop skills in updating census.
- Demonstrate skills in applying decision-making.
- Develop skills in effective communication and the chain of command.
- Develop skills in team building and conflict resolution.
- Demonstrate skills in staff engagement.
- Apply documentation according to hospital policy and procedure.

Stage of Development

The program is relatively new; in operation for less than a year.

Resources/Inputs

Nursing Education and Training Division were key contributors to the CN program.

Activities

Structured teaching modules and practical sections were conducted for all the samples. Data was collected using a one to one interview for a pre-test, a post-test of each module to assess the knowledge level of the samples, an observation checklist to assess the skills, a Likert scale to assess the confidence level and a final evaluation through surveys to evaluate the effectiveness of the Charge Nurse Development Program.

Outputs

The program showed that, the new ADDIE model of Charge Nurse Training Program was effective and that it boosted staff confidence, created a healthy working environment and increased the skills and

knowledge of the staff to perform their core responsibilities.

Outcomes

When role transitions occur, the nurse is no longer an expert, but needs to be viewed as a novice. This comprehensive charge nurse program helped to support novice charge nurses (Saju *et al.,* 2019). Developing this program helped to involve the competencies needed for this role. The educational program needed to consider the specific learning needs of a professional adult learner.

The program helped to develop the leadership skills needed to manage and lead in nursing. This is in line with the research which states that "properly preparing nurses to lead on a unit level will hopefully blossom into improved patient care and nursing on a macro level (Duncan, Rodney, & Thorne, 2014). Findings from this study suggest that formally addressing learning needs as nurses transition from a clinical role to a leadership role can improve individuals' knowledge, confidence and skills in their ability to perform necessary tasks.

Table 3: Project Description of the CN Program

Resources	Activities		Outputs	Outcomes		
	Initial	Performance Measurement		Short-term	Mid-term	Long-term
Program Coordinator Clinical Staff Nursing Education and Training Division and Department Planning Board	Assess the background knowledge of the staff	• Staff Interview	• To plan for further training needs		Increase utilization of CN program in all departments of the hospital	To provide an opportunity to develop competent and confident nurses in performing charge nurse duties. Regular follow-up
	Demonstrate required knowledge in roles and responsibilities of charge nurse	• Assignments • Exam	• To improve knowledge, skills and confidence • To improve the quality of care.	Safe nursing care		
	Develop competence in preparing the rotation list of Admission and Patient Flow	• Documentation Audit • Exam	• Safe newborn care is essential to work in Neonatal Intensive Care Unit (NICU) • To provide an opportunity to each staff for participating in the care of the new born.	Improve the quality of care.		
	Develop skills in updating census list.	• Documentation Audit • Hands-on Practices	• Determine what is preferred versus what is required, identifying what knowledge, skills, and abilities registered nurse need to meet their new roles and responsibilities	Improve skills in managerial activities		
	Demonstrate skills in applying decision making.	• Budget and Pay Back Record • Direct Observation	• To assess knowledge level of RN1 about Budget and Pay Back. • Help to improve the computer skills in applying Budget and Pay Back. • Training on electronic capturing of nursing hours.	Improve skills in managerial activities		
	Develop skills in effective communication and the chain of command.	• Verbal/written feedback from colleagues and higher administration • Direct Observation • Handover	-To assess the skills in communication -To train the RN1 regarding the Nursing Supervisor report on unit activities. -To create an awareness about the chain of command.	Helps the staff to improve their communic-ation skills.		

Resources	Activities		Outputs	Outcomes		
	Initial	Performance Measurement		Short-term	Mid-term	Long-term
	Develop skills in team building and conflict resolution.	• Verbal/written feedback from colleagues and higher administration • Direct Observation	• To encourage the staff to follow open communication • To encourage the staff nurses to include group activities like regular staff meeting, team nursing patient care delivery system • To train them about various conflict resolution methods	Improves work ethics.		
	Demonstrate skills in staff engagement.	• In-service • Post test • Attendance of Charge nurse course	• To identify the educational needs • To encourage the staff to attend the charge nurse course • Plan training activities	Improve skills in leadership activities		
	Apply documentation according to hospital policy and procedure.	• Verbal/written feedback from colleagues. • Handover • Documentation	• To plan nursing care • To find out the discrepancies.	Improve the quality of care.		

ADDIE model for training

Figure 2: ADDIE MODEL (Cherian *et al.*, 2023)
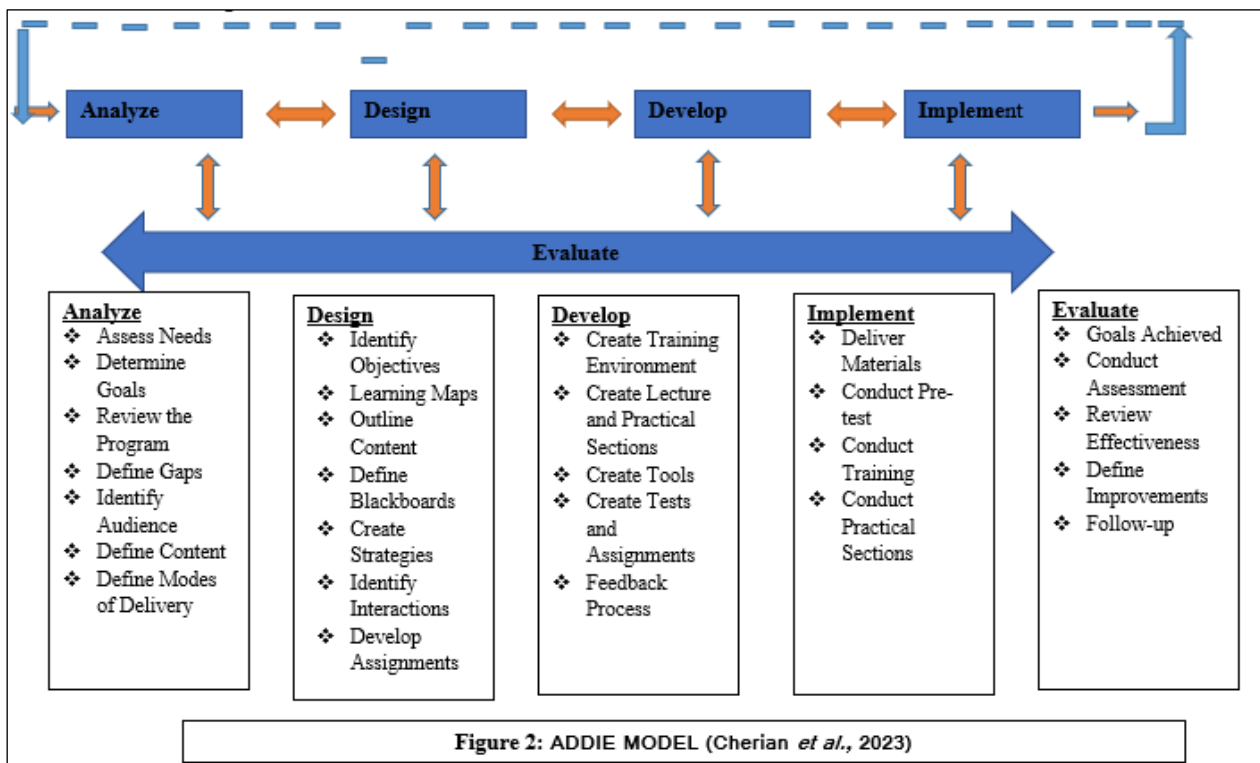
SELECT THE DESIGN OF THE EVALUATION
Stakeholder Needs
From the beginning, four groups of people were identified as the core users of the evaluation findings. They will be using the findings in different ways and for different purposes. The table below summarizes the stakeholder's needs for evaluation.

Table 4: Stakeholders Needs for Evaluation

Users	Need/Want to Know	Uses
Nursing Administrators	• Whether the program is working or not	• Determine whether the program should be funded to continue or expand its services
Program Director	• How to enhance or refine the program	• Implement change to increase effectiveness of the program
Clinical Staff	• Clinical Outcomes	• Adjust clinical practice if needed
Nursing Education and Training Division	• Training sections, outcomes, data collection and follow up	• Advocacy to the staff

Evaluation Questions

Although the evaluation team generated many possible questions in a brainstorming session, the evaluation team prioritized the following as representing the most important aspects of the program that could be examined at this time.

To determine if the program has been implemented as planned:
❖ Have the appropriate staff been selected and followed the criteria for selection?
❖ Have the staff (all CN program employees) been trained appropriately (in CN knowledge, skill and confidence)?

To determine if the program is meeting its objectives:
❖ Course content was organized and well planned
❖ Course workload was appropriate
❖ Course organized to allow all students to participate fully
❖ Practical sections were adequate

Evaluation Design

In-depth information was needed as the program was big and the need to obtain information to improve the program was high. Therefore, the evaluation team decided to use different data collection tools. The team conducted one to one interviews (pre-test) with the selected staff. After that the team started to train the staff (Structured Training Program). After each module the staff had to attend the post test. Practice sections were conducted and an observation checklist was used to assess the skills to assess knowledge. A course evaluation was conducted after completion of the training. The decision was made to assess the data against the benchmarks that the program had set. Further, it was decided that the data collected for this evaluation would serve as a baseline for later evaluations and CN programs (Medero *et al.,* 2023).

Resource Consideration

Nursing Administration staff and Nursing Education and Training Division helped to collect and evaluate. Manpower consisted of one full-time CNS who was only able to devote a few hours a week to the evaluation. The other evaluation team members were able to devote only a limited amount of time to the evaluation. However, several of the evaluation team members worked together and most stakeholder groups met regularly. Thus, some evaluation work was done as part of existing routines. Pre and post-test records, training curriculum, practice checklist and clinical records are available as existing data sources. Additional data collection measuring patients' perceptions will be needed in the future to understand whether patients feel trust is built with their healthcare providers as a result of nurses' increased knowledge, confidence and skills.

Evaluation Standards

The evaluation team agreed that the evaluation data was useful, and feasible to collect. Propriety was addressed through a consent form and all data was kept confidential. While the group agreed that there may be some issues regarding record keeping or staff willingness to answer honestly, the accuracy of the strategy was judged to be acceptable.

DATA COLLECTION
Indicators

The evaluation team recognized that different tools were used for data collection and the following list of indicators show the team's decisions. Since several program objectives were vague, the evaluation team had to determine benchmarks that seemed reasonable, given the limited information available. Each member of the evaluation team informally talked with other stakeholders to ensure consensus.

Table 5: Indicators Versus Benchmarks

Indicators	Program Benchmarks
Have the appropriate staff been selected and followed the criteria for selection?	
• Number of staff selected for the CN training Program	• Forty-two staff were selected and met the inclusion and exclusion criteria. (RN1 with more than one year of experience in the unit)
Have the staff (all CN program employees) been trained appropriately (in CN knowledge, skill and confidence)?	
• Staff received appropriate/adequate training in CN	• All staff attended training program

Indicators	Program Benchmarks
• Staff received appropriate practical hours	• Training covered essential topics
Course content was organized and well planned	
• Nursing Education and Training Division organized lecture and practical sections. • Followed Clinical Standards • Training modules were made available in Telegram groups and in blackboards • Nursing Administration staff helped to arrange the schedule of the staff for practical sections	• Training sections arranged like different modules. Each module with pre-test and post-test and discussion sections were arranged. • Clinical Standards were met • Training modules included PowerPoint presentations, reading materials and videos • Staff knew how to access and use electronic datasheets
Course workload was appropriate	
• Attendance at CN program was maintained • The schedule was prepared in advance • Telegram group was created and used as instructional media • Conducted interview for pre-test • Conducted survey for post-test • Arranged two staff per shift for practical sections.	• 100% of participants participated in the CN program; no one missed the lecture or practical sections.
Course organized to allow all students to participate fully	
• Nursing Administration gave prior notification to the staff through email about the CN program • The agenda was scheduled prior to the program and emailed to the participants. • A Telegram group was created and used as instructional media • Conducted interview and online survey for pre-test and posttest respectively • Arranged two staff per shift for practical sections.	• Email notification was sent to all the staff • Participant's list and program agenda were prepared • Telegram group as instructional media. • Google survey forms.
Practical sections were adequate	
• Arranged two staff per shift for practical sections. • Adequate time was provided for hands-on practice • Received positive feedback • Continued supervision and follow-up was done	• Arranged duty schedule • Provided facilities for practice • Direct observation from Nursing Administration and Nursing Education and Training Division • Charge nurses documentation

Data Collection

The evaluation utilizes several methods of data collection in various ways: interview, survey, observation, and record review. Staff interviews were conducted to assess knowledge, skill and confidence towards CN program. Observation checklist was used to assess the skills and a Likert scale was used to assess the confidence level. Interviews and google surveys were administered to the staff to assess the pre and post-test knowledge. Lastly, a review of records, charts and training materials was conducted. Table 6 summarizes the data source and data collection methodology that was used to gather evidence for evaluation.

Table 6: Data Collection Plan

Indicators	Data Source	Data Collection Method
Number of staff for the CN program	• Academic portal • Personnel records • Attendance Sheet	• Observe presence of staff • Review records if staff not present → Program Coordinators
Nursing Education and Training Division conducted training in CN program, interviewing and data collection Competency Assessment	• Training Attendance Records • Curriculum • Competency Assessment Sheet • Pre and Post-Test Answer Sheets	• Review records of training sessions and attendance, materials presented → Program coordinators

Indicators	Data Source	Data Collection Method
Needs Assessment Survey Clinical Standards	• Clinic Records, Interviews with Staff • Charge Nurses Documents • Staff Knowledge, Skills and Behaviors • Staff Perception • CN Duty Schedule and Documents	• Review records, notes in file, ask staff to identify the training needs → Program coordinators • Chart review → Unit Representatives • Exams → Staff • Program Evaluation/Observations → All Team Members • Survey forms • Review records, notes in file, ask staff to identify the training needs and make discussion sessions to clarify any doubts → Program Coordinators and Nursing Education and Training Division
Training Sections to improve Knowledge and Hands-on Practical Sections		
Staff Perception about the CN Program		
Regular Follow-Up		

Plan Timeline

Table 8: Illustrative Timeline for Evaluation Activities

Evaluation Activities	Timing of Activities for Feb.2 – Apr. 2022		
	Feb	Mar	April
Evaluation planning	+	+	+
Data collection	+	+	+
Analysis/interpretation		+	+
Report/dissemination			+

GENERATE CONCLUSIONS BASED ON DATA ANALYSIS
Analysis
Both quantitative and qualitative methods were used to analyze the data. Simple counts of frequency were used for quantitative data analysis. Qualitative methods such as content analysis were used to review training curriculum, pre and post-test results, observation (practice) checklist, Likert Scale and charge nurse records and surveys.

Table 9: Analysis Plan

Data Analysis Technique	Responsible Person
Quantitative – frequency/counts	Program Coordinators
Qualitative – content analysis	Nursing Education and Training Division(NED) and staff

Interpretation
Stakeholders including the Nursing Administrator, Program Director, Program Coordinators and Nursing Education and Training Division team were included in a scheduled meeting to interpret the findings. The data from the evaluation was compared to the established program benchmarks. Stakeholders and those involved in program operations were given an opportunity to justify the findings and make recommendations accordingly.

GS AND PROVIDE RECOMMENDATIONS
Dissemination
Evaluation findings were disseminated via various channels. Presentations were given at the program staff meeting. A short report was drafted and submitted to Nursing Administration. Nursing research was also conducted on this program and the program was selected by SIGMA International Nursing Congress as a presentation and it was presented in February 2023.

Table 10: Dissemination Plan

Yes ✓	Dissemination Medium	Responsible Person
	Presentations at staff meeting	Program Coordinators
	Report and briefing to Nursing Administration	Nursing Education and Training Division
	Research Project	Program Director, Program Coordinators and NED Team
	SIGMA International Nursing conference Presentation	Program Director, Program Coordinators and NED Team

Use

The Program Director, Program Coordinators and staff used the findings to refine program strategies for the CN Program. The findings helped guide the program to focus on areas that are the most crucial for effective service delivery. Nursing Education and Training Division will use the findings to determine the future improvement for the program. Finally, findings from this evaluation will be used for future evaluations.

CONCLUSION

Proper training is vital to the success of the nurse and unit. When trained, job satisfaction increases. Satisfied staff equates to decreased turnover rates. Beyond job satisfaction for the nurse, a comprehensive training program includes improved job performance, and improved ability to cope with stress (IEO Evaluation Report, 2020). The effect of charge nurse training trickles beyond the nurse's role into the unit and organization as whole. Program strengths were that CNs with varying years of experience found value in the content and reported that they applied what they learned. Manager satisfaction and comfort increased with proper charge nurse orientation. Findings from this study also suggest that formally addressing learning needs as nurses' transition from a clinical role to a leadership role can improve individuals' knowledge, confidence and skills in their ability to perform necessary tasks, which in turn improves patient care.

Author Contributions

All authors contributed substantially to the conception and design of this work as well as helping to draft and revise the manuscript. All authors approved the final version to be published and are accountable for all aspects of this work.

Conflict of Interest Statement
None declared.

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