Leadership Development and Interprofessional Nurse-Led Bedside Rounding Improves Nurse Leadership Self-Efficacy

Amy J. Costanzo, PhD, RN-BC, Denise K. Gormley, PhD, RN, Jessica Hill-Clark, MBA, MA, Jahmeel Israel, MS, Jane Goetz, MSN, RN, NEA-BC, Katherine Staubach, MSN, MEd, RN, CPPS, Tracy J. Pritchard, PhD, and Myrna Little, DNP, MEd, RN

Nurses with high self-efficacy are more engaged in interprofessional collaboration. The Bedside Nurse Leadership Development program, along with bedside nurses leading the interprofessional team during rounds, had a positive impact on several Task-Specific Self-Esteem Scale leadership questions over time.

AIM

The purpose of this project was to examine the effects of both the Bedside Nurse Leadership Development program and participation in nurse-led interprofessional bedside rounds on nurse leadership self-efficacy over time.

BACKGROUND

The Triple Aim, proposed by the Institute for Healthcare Improvement,[1] recommended 3 objectives to improve the quality of healthcare. These objectives are to 1) improve healthcare quality and patient satisfaction; 2) improve population health; and 3) reduce the per person cost of healthcare. Improving the work life of health care providers was added as the fourth aim, creating the Quadruple Aim.[2]

The resolution to the problem of fragmented error-prone healthcare was proposed to be interprofessional education and collaboration.[3,4] Care integration, also known as coordination of care, was suggested to improve patient care by including patients and families, and health care providers who are involved in patient care.[5]

The World Health Organization defined the collaborative practice-ready worker as "someone who has learned how to work in an interprofessional team and is competent to do so."[4] The Institute of Medicine recommended nurses lead in changing and improving health care and working in interprofessional teams.[6] Nurses at the bedside are in an ideal position to positively impact these aims and recommendations by using their skills and knowledge at the point of care to influence interprofessional collaborative practice.[7,8]

Despite the opportunity to lead, Stein's seminal work revealed that nurses' indirect communication with physicians and other members of the health care team impeded collaboration.[9] Daiski[10] found that nurses remained silent in interprofessional teams due to lack of self-confidence and a need to placate the team. In another study, nurses were generally expected to follow physician's orders and focus on patient care.[11]

Historically, teaching rounds have followed the medical model that involves physicians for the purpose of educating medical students and residents.[12,13] Nurses typically attended teaching rounds to gain information or answer questions, but did not actively participate in the process.[14,15]

In a study of interprofessional interactions in a Canadian general internal medicine ward, physicians were observed to ignore questions from other health care professionals and delay interprofessional rounds for intraprofessional activities.[16] Observation of other health professionals revealed a lack of participation in care planning during rounds.[16]

In today's complex health care environment, it is imperative that health care professionals work together as a team and collaborate to ensure quality patient outcomes. Nurses are in a unique role to lead these collaborative teams because they spend more time with patients than other health care professionals. Nurses influence patient care whether from informal or formal leadership positions.[17] This project examined bedside nurses' leadership self-efficacy after leadership development program participation and leading interprofessional bedside rounds.

METHODS

Setting

The setting for this longitudinal project was a large urban academic level 1 trauma center in the Midwestern

Table 1. Categorical Age by Survey Time Point

Age Category	Pre	3 Months	6 Months	1 Year	Total
≤30 years	17 54.8%	8 42.1%	8 44.4%	11 44%	44
>30 years	14 45.2%	11 57.9%	10 55.6%	14 56%	49
Total	31	19	18	25	93

Pre, pre-implementation.

Table 2. Education by Survey Time Point

Education Category	Pre	3 Months	6 Months	1 Year	Total
ADN	11 35.5%	7 35%	6 31.6%	9 34.6%	33
BSN	16 51.6%	11 55%	11 57.9%	16 61.5%	54
MSN	4 12.9%	2 10%	2 10.5%	1 3.8%	9
Total	31	20	19	26	96

Pre , pre-implementation.

United States. The 605-bed hospital is part of an academic health center that includes a college of nursing, college of pharmacy, college of medicine, and college of allied health sciences. The nurses at the hospital participate in a collective bargaining unit. The project was conducted on a 24-bed surgical unit.

Sample

Institutional review board approval was obtained from the university prior to informed consent, initiation of the leadership development program, and data collection. The initial convenience sample consisted of 33 nurses before implementation of Bedside Nurse Leadership Development. Nursing work experience ranged from less than 1 year to 41 years. Fifty-seven percent of the nurses had a baccalaureate degree, 32% had an associate degree, 3.6% had a master's degree, and 7% chose not to disclose. Nurse participants (N = 33) self-identified ethnicity: African American/Black = 3; Caucasian = 24; Native Hawaiian = 1; and 5 "would rather not answer." Ages ranged from 23 to 60 years, with a mean age of 35.8 years. Of the 33 participants, 4 were male and 29 were female. All full-time and part-time registered nurses (RNs) working on the surgical unit were invited to participate in the project. Agency, float, and travel RNs were excluded from the project due to temporary employment status. Consent to participate was provided prior to the start of the project.

Intervention

Prior to the implementation of nurse-led interprofessional bedside rounds, staff nurses on the clinical unit participated in the Bedside Nurse Leadership Development educational intervention. This action-oriented program included questioning conventional thinking about nurse interaction with other health professions, especially around the concept of "just a nurse."[7] A values activity, intended to inspire patient advocacy, encouraged reflection on the reasons why participants chose nursing as their profession. Concepts of practicing nursing to advance healing and avoid suffering with examples of avoidable patient suffering were provided, followed by discussion and examples from participants.

Another aspect of the leadership program was the introduction of a standardized communication tool developed by nursing leadership with an explanation of its purpose in nurse-led interprofessional bedside rounds. The tool was intended to standardize the interprofessional bedside rounding process and provide consistent expectations on the part of all participants as to the order and purpose of the rounds. As an active

Table 3. Task-Specific Leadership Self-Efficacy Mean Scores Over Time

Questions	**Time Point**	**N**	**Mean**	**SD**
Q1. I know more than most health care professionals about what it takes to be a good leader.	Pre	33	3.15	0.870
	3 months	20	3.50	1.000
	6 months	19	3.42	1.017
	12 months	28	3.61	0.685
Q2. I know what it takes to make a group accomplish a task.	Pre	33	3.73	0.876
	3 months	20	4.00	0.858
	6 months	20	3.65	1.137
	12 months	28	4.00	0.544
Q3. In general, I'm not very good at leading a group of my peers.	Pre	32	2.16	0.723
	3 months	20	2.40	0.883
	6 months	20	2.00	0.725
	12 months	28	2.00	0.667
Q4. I am confident of my ability to influence a group I lead.	Pre	32	3.78	0.975
	3 months	30	3.90	0.788
	6 months	20	3.90	0.912
	12 months	28	3.71	0.897
Q5. I have no idea what it takes to keep a group running smoothly.	Pre	33	2.09	0.678
	3 months	20	1.90	0.718
	6 months	20	1.85	0.745
	12 months	28	2.11	0.737
Q6. I know how to encourage good group performance.	Pre	32	3.97	0.538
	3 months	20	4.00	0.562
	6 months	20	4.00	0.858
	12 months	28	4.07	0.539
Q7. I am able to allow most group members to contribute to the task when leading a group.	Pre	33	3.91	0.805
	3 months	20	4.00	0.459
	6 months	20	4.20	0.616
	12 months	28	4.25	0.518
Q8. Overall, I doubt that I could lead a group successfully.	Pre	33	2.06	0.747
	3 months	20	1.90	0.718
	6 months	20	1.85	0.671
	12 months	28	1.89	0.567

Pre, pre-implementation; SD, standard deviation.

learning strategy, ideas were solicited from the nurse participants for what should be included in the tool for the patient population on their unit.

A discussion of the purpose of the interprofessional rounds was also included in the program. Nurse-led interprofessional bedside rounds were defined and described as a pertinent review of the last 24 hours of patient care and any potential concerns that needed to be addressed. A role modeling activity used case scenarios to present typical patient situations, as well as potential rounding situations with health professions colleagues. For example, the role-plays included professionals arriving to rounds late, or taking extended time reporting on the patient during rounds. Participants discussed potential solutions to these and other anticipated challenges during interprofessional rounds. The role-play activity provided practice and opportunity to anticipate the experience of nurse-led interprofessional bedside rounds. Time for questions and feedback was helpful to the project team to understand perceived barriers prior to implementation.

Instrument

Bedside nurse leadership self-efficacy was measured using a modified version of the Task-Specific Leadership Self-Esteem Scale.[18] The modification changed statement 1 from "I know a lot more than most students about what it takes to be a good leader" to "I know a lot more than most health care professionals about what it takes to be a good leader." The study team also added 4 demographic questions related to age, educational level, ethnicity, and work experience. The tool is an 8-item Likert-type scale that measures a leader's self-efficacy in his or her leadership ability. The answers are on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). Scores can range from 8 to 40. Cronbach's alpha for internal consistency was 0.85.

Procedure

Bedside nurses on a 24-bed surgical unit participated in the longitudinal project that examined the nurse's perceptions of leadership self-efficacy over time. Nurses completed a modified version of the Task-Specific Leadership Self-Esteem Scale[18] prior to participation in the Bedside Nurse Leadership Development program, and again at 3, 6, and 12 months of nurse-led interprofessional bedside rounds.

RESULTS

Demographic Data

Age: Nursing staff who participated in Bedside Nurse Leadership Development and interprofessional bedside rounds and completed the Task-Specific Self-Esteem Scale ranged in age from 26 to 60 years. The median age at pre-Bedside Nurse Leadership Development was 30 years; at 3 months post-rounds was 33 years; at 6 months was 32 years; and 12 months was 34 years. Ages ranged from 23 to 61 years. Categorical age by survey time point is ≤30 years and >30 years, which was used for statistical analysis. See Table 1 for Categorical Age by Survey Time-Point.

Education: The educational level of the bedside nurses ranged from associate degree in nursing (ADN) to baccalaureate degree in nursing (BSN) to master of science degree in nursing (MSN). Table 2 shows the degree level of nurse participants at pre-Bedside Nurse Leadership Development, 3 months, 6 months, and 12 months post–nurse-led interprofessional bedside rounds.

Ethnicity: The following ethnicities were represented in the sample: African American/Black, Caucasian, Asian, Pacific Islander, and Native Hawaiian. Although multiple ethnicities participated, there were no significant findings related to ethnicity at any time period of the study.

Work Experience: Nurse work experience ranged in years from 1 to 41. The median years of work experience at pre-Bedside Nurse Leadership Development was 5 years; at 3 months post-rounds, the mean was 6 years; at 6 months, the mean was 4 years; and at 12 months post-interprofessional rounds, the mean was 5 years of work experience. Categorical years of work experience by survey time point was ≤5 years and >5 years as used for statistical analysis.

Longitudinal Survey Findings

The Jonckheere-Terpstra test (JT.test) was used to analyze the longitudinal survey data from the Task-Specific Self-Esteem Scale. The JT.test is a rank-based, nonparametric test used to establish whether there is a statistically significant trend between variables and ordered differences among classes. All assumptions for the JT.test were met.

Analysis indicated significant findings ($p \leq 0.05$) for 2 of the individual questions over time in the Task-Specific Self-Esteem Scale. Question 1, "I know a lot more than most health professionals about what it takes to be a good leader," demonstrated statistically significant change over time ($Z = 1.6964$, $p \leq 0.045$). Question 7, "I am able to allow most group members to contribute to the task when leading a group," also showed statistically significant change over time ($Z = 2.0097$, $p \leq 0.022$). Bedside nurses exhibited improved perceptions of leadership self-efficacy over time for these 2 questions.

There were also statistically significant findings for question 3 and question 8 based on age differences. Question 3 was "In general, I'm not very good at leading a group of my peers" ($Z = -2.4181$, $p \leq 0.016$). Question 8 was "Overall, I doubt that I could lead a group successfully" ($Z = -1.9983$, $p \leq 0.046$). Bedside nurses over the age of 30 years disagreed or strongly disagreed with these 2 statements, whereas younger nurses at 30 years of age and younger were more likely to agree or strongly agree. One question, question 2, showed a statistically significant change related to bedside nurses' years of work experience ($Z = -2.6957$, $p \leq 0.0070$. Question 2 was "I know what it takes to make a group accomplish a task." Nurses with over 5 years of experience were more likely to agree with Question 2.

Modeling total score on the Task-Specific Self-Esteem Scale was completed with age, ethnicity, educational level, and years of experience. The only statistically significant finding was by categorical age ($F = 6.07$, $df = 91$, $p \leq 0.0156$). Bedside nurses over 30 years of age had higher total scores over time on the Task-Specific Self-Esteem Scale than nurses 30 years and younger.

The mean scores for each question of the Task-Specific Self Esteem Scale[18] showed an increase in leadership self-efficacy from the pre-leadership development program through each of the time periods of the project. All mean scores improved at the end of 12 months. Table 3 demonstrates mean scores for each question at pre-implementation, 3 months, 6 months,

and 12 months post-implementation. Question 3, question 5, and question 8 are negatively worded and reverse scored.

DISCUSSION

The Bedside Nurse Leadership Development program for bedside nurses, along with active leadership in the interprofessional team during bedside rounds, had a positive impact on several Task-Specific Self-Esteem Scale leadership questions over time. In particular, perceptions of personal knowledge of team leadership and inclusion of team member contribution to nurse-led interprofessional bedside rounds improved over time. A possible explanation for higher scores on the Task-Specific Self-Esteem Scale by nurses over 30 years of age could be life experience in addition to more experience as a nurse. Although data were not collected on experience as a charge nurse on the unit, it is possible that charge nurse leadership influenced interprofessional rounds leadership perception.

Mean scores from pre-implementation to 1 year post-implementation improved for every question on the Task-Specific Self-Esteem Scale. Observation of nurse-led interprofessional bedside rounding behaviors is congruent with the improvement of the scale scores over time. As with any new skill, nurses were tentative in their interprofessional rounding at the beginning of leading rounds, and improved in their presentation of patient information with coaching and practice.

A limitation of this project is that it was conducted in 1 hospital with a small subset of the overall hospital nurse employees. However, this project could be seen as a pilot study for larger change and replicated to larger populations.

CONCLUSIONS

Communication issues remain a key contributor to patient harm.[19] The Bedside Nurse Leadership Development program is believed to improve the development of nurse leadership self-efficacy. The program is critical to increasing nurse leadership self-efficacy to communicate and advocate for the needs of the patients with the care team.

The purpose of this project was to engage nurses in interprofessional communication through development of their leader self-efficacy and skills. The Bedside Nurse Leadership Development program and the nurse-led interprofessional bedside rounding has impacted bedside nurse participation in interprofessional collaborative practice. Future programs or research are needed to understand the impact of nurse leader self-efficacy in other clinical settings.

Implications for Nursing Management

The importance of nurse leadership at the bedside in ensuring high quality and safe patient care has been demonstrated.[20] Bedside nursing leadership at the frontlines of care can impact clinical practice, the work environment, job satisfaction, and retention of nurses.[20-24] Bedside nurses have the ability to identify work inefficiencies, communicate care issues to other health care professionals, and lead initiatives to correct problems related to clinical management of the patient.[21,25]

Providing programs to increase nurse self-efficacy in leadership along with implementation of interprofessional rounds can increase nurse engagement in communication. Change requires investment in coaching and facilitation to create a culture of interprofessional communication and collaboration that is sustained over time. Each profession should not only understand their own role but also other professional roles to increase understanding and communication within the interprofessional team.

References

1. Institute for Healthcare Improvement (IHI). Triple aim. Available at: http://www.ihi.org/Engage/Initiatives/TripleAim/Pages/default.aspx. Accessed March 9, 2018.
2. Sikka R, Morath JM, Leape L. The quadruple aim: care, health, cost and meaning in work. *BMJ Qual Saf*. 2015;24(10):608-610.
3. Institute of Medicine. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academies Press; 1999.
4. World Health Organization. *Framework for Action on Interprofessional Education & Collaborative Practice.* Geneva, Switzerland: WHO; 2010.
5. Lucian Leape Institute. *Order From Chaos: Accelerating Care Integration.* Boston, MA: National Patient Safety Foundation; 2012.
6. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: National Academies Press; 2011.
7. Costanzo AJ. Just a nurse, or a bedside leader? *Am J Nurs.* 2017;117(3):11.
8. Kliger J, Lacey SR, Olney A, Cox KS, O'Neil E. Nurse-driven programs to improve patient outcomes: transforming care at the bedside, integrated nurse leadership program, and the clinical scene investigator academy. *J Nurs Adm.* 2010;40(3):109-114.
9. Stein L. The doctor-nurse game. *Arch Gen Psychiatry*. 1967;16(10):699-703.
10. Daiski I. Changing nurses' dis-empowering relationship patterns. *J Adv Nurs.* 2004;48(1):43-50.
11. Casonova J, Day K, Dorpat D, Hendricks B, Theis L, Wiesman S. Nurse-physician work relations and role expectations. *J Nurs Adm*. 2007;37(2):68-70.
12. Bharwani AM, Harris C, Southwick FS. Perspective: a business school view of medical interprofessional rounds: transforming rounding groups into rounding teams. *Acad Med.* 2012;87(12):1768-1771.
13. Liu W, Manias E, Gerdtz M. Medication communication during ward rounds on medical wards: power relations and spatial practices. *Health*. 2013;17(2):113-134.
14. Brandt B. Interprofessional education and collaborative practice: welcome to the "new" forty-year-old field. *The Advisor (Journal of the National Association of Advisories for the Health Professions)*. 2015. Available at: https://nexusipe-resource-exchange.s3.amazonaws.com/IPECP%20-%20Welcome%20to%20the%20New%2040-Year-Old%20Field%20-%20Brandt;%20The%20Advisor.pdf. Accessed April 11, 2019.
15. Nedfors K, Borg C, Fagerstrom C. Communication with physicians in hospital rounds: an interview with nurses. *Nordic J Nurs Res*. 2015:36(3);122-127.

16. Zwarenstein M, Rice K, Gotlib-Conn L, Kenaszchuk C, Reeves S. Disengaged: a qualitative study of communication and collaboration between physicians and other professional on general internal medicine wards. *BMC Health Serv Res.* 2013;13:494.
17. Murray M, Sundin D, Cope V. The nexus of nursing leadership and a culture of safer patient care. *J Clin Nurs.* 2018;27(5-6):1287-1293.
18. Murphy SE. *The Contribution of Leadership Experience and Self-Efficacy to Group Performance Under Evaluation Apprehension*. Ann Arbor, MI; University Microfilms International; 1992.
19. The Joint Commission. *Sentinel Event Alert: Inadequate Handoff Communication*. Oak Brook, IL: Joint Commission Resources; 2017;58:1-6.
20. Grindel C. Clinical leadership: a call to action. *Medsurg Nurs.* 2016;25(1):9-16.
21. Casey M, McNamara M, Fealy G, Geraghty R. Nurses' and midwives' clinical leadership development needs: a mixed methods study. *J Adv Nurs*. 2011;67(7):1502-1513.
22. Daly J, Jackson D, Mannix J, Davidson P, Hutchinson M. The importance of clinical leadership in the hospital setting. *J Healthc Leadersh*. 2014:2014(6):75-83.
23. Edmonstone J. Evaluating clinical leadership: a case study. *Leadersh Health Serv*. 2009;22(3):210-224.
24. Jonas S, McCay L, Keogh B. The importance of clinical leadership. In: Swanwick T, McKimm J, eds. *ABC of Clinical Leadership*. 1st ed. Oxford, UK: Blackwell Publishing; 2011:1-3.
25. Patrick A, Wong C, Finegan J, et al. Developing and testing a new measure of staff nurse clinical leadership: the clinical leadership survey. *J Nurs Manag*. 2011;19(4):449-460.
26. Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. *The. U.S. nursing workforce: Trends in supply and education*. October 2013. Available at: https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingworkforcetrendsoct2013.pdf. Accessed April 11, 2019.

Amy J. Costanzo, PhD, RN-BC, is Director of Nursing Administration at the Center for Professional Growth and Innovative Practice, University of Cincinnati Medical Center, in Cincinnati, Ohio. She can be reached at amy.costanzo@uchealth.com. Denise K. Gormley, PhD, RN, is Senior Associate Dean for Academic Affairs at the University of Cincinnati College of Nursing. Jessica Hill-Clark, MBA, MA, is Senior Grant & Contract Administrator, Cleveland Clinic. Jahmeel Israel, MS, is Project Manager at the University of Cincinnati College of Nursing. Jane Goetz, MSN, NEA-BC, is Director of Nursing, Inpatient Surgery at the University of Cincinnati Medical Center. Katherine Staubach, MSN, MEd, RN, CPPS, is Quality Improvement Consultant at the Cincinnati Children's Hospital Medical Center. Tracy J. Pritchard, PhD, is Director of Medical Education at the University of Cincinnati College of Medicine. Myrna Little, DNP, MEd, RN, is Clinical Instructor at the University of Cincinnati College of Nursing.

Note: We appreciate the interprofessional collaboration of all the clinical health care providers who participated in this project. This work was supported by the Health Resources and Services Administration (HRSA)[26] of the US Department of Health and Human Services (HHS) under grant number UD7HP28546 and Nurse Education, Practice, Quality and Retention–Interprofessional Collaborative Practice for $1.2 million. This information or content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the US Government.

1541-4612/2018/ $ See front matter

http://dx.doi.org/10.1016/j.mnl.2018.10.004