

## ORIGINAL RESEARCH

# Communication quality improvement in student nursing clinicals

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## Abstract

**Background:** Little previous research has examined attempts to improve the quality of communication among nursing clinical students, unit-based educators, and academic educators. The current study utilized focus groups and needs assessments to identify communication concerns of both academic and unit-based clinical educators in several inpatient settings.

**Methods:** Quality improvement interventions were developed based on concerns and needs identified by staff. The interventions included zone phones, concise student placement summaries, and unit communication boards. Comparisons of pre- and post- intervention surveys of unit staff and of academic faculty were conducted by *t*-tests.

**Results:** Statistical analyses indicated areas of significant communication improvements between academic faculty and both students and unit staff. Interventions did not show significant benefits for communication between unit staff and students.

**Conclusions:** Application of quality improvement techniques resulted in successful improvement of communications among nursing students, clinical site educators, and academic educators. The results underscore the need to further tailor and evaluate quality improvement efforts at the level of day-to-day patient care, and to address the inevitable diversity among hospital units via timely staff input on the most effective unit-level interventions.

## Key words

Improving clinical communication, Quality improvement, Nursing clinical students

## 1 Introduction

Poor communication among healthcare professionals is a major factor in sentinel events<sup>[1]</sup>, and nursing education must prepare students for ever more complex care coordinated among diverse team members<sup>[2]</sup>. Such complexity makes communication among clinical instructors, staff nurses, and unit leadership more difficult in busy clinical settings where it is essential for patient safety and effective education. Tanicala *et al.*<sup>[3]</sup> discussed how clinical instructors are “professionally, legally and ethically expected to anticipate safety risks for patients and prevent students from causing harm to patients in the clinical arena” (p. 155), and Taniyama *et al.*<sup>[4]</sup> noted communication gaps between clinical and academic educators that may contribute to greater task uncertainty for clinical staff. Mayor *et al.*<sup>[5]</sup> conducted extensive

interviews with nursing unit managers that found task uncertainty adversely affected nursing shift handovers. Therefore, better quality of communication between clinical instructors and staff nurses may reduce task uncertainty, maintain patient safety, and provide nursing education opportunities that best synthesize academic and clinical contributions.

The current quality improvement (QI)<sup>[6]</sup> project was developed by academic program directors of two different schools of nursing, a Midwestern bachelor of science in nursing (BSN) program and an associate degree nursing (ADN) program, in collaboration with nurse educators from units where student nurses had clinical placements. Unit-based clinical education takes place in groups of seven to nine nursing students with one academic clinical instructor in the acute care hospital setting. The project examined communication concerns of both academic and unit-based clinical educators in the inpatient setting and initiated quality improvement efforts. Focus groups<sup>[7]</sup> and surveys, pre-intervention and post-intervention, were implemented to define problems, develop means of improvement, and evaluate the degree of improvements after interventions.

## 2 Methods

### 2.1 Aim of the project and sampling

The project had three specific aims. The aims were to identify areas of communication difficulty; to implement timely, cost-effective interventions to improve communication between unit staff and clinical instructors/students; and finally, to improve staff and instructor satisfaction with communication. Inclusion criterion was nursing staff status (registered nurses, licensed practical nurses, and clinical technicians) on units where students from the two nursing programs had clinical placements.

### 2.2 Needs identification

Institutional review board (IRB) approval was obtained from the two schools of nursing and from the healthcare system where the clinical units and educators were located. A focus group comprised of two academic program directors and four unit-based nurse educators met on four occasions and identified distinct sets of communication difficulties for unit staff and for clinical academic faculty. The group was informed in advance of the general topic of concern, and an academic faculty member served as facilitator. Discussion content and specific concerns were summarized at the end of each group meeting. The facilitator provided a draft of emerging consensus, and the group continued its meetings until participants concluded that the key issues had been defined clearly and practical well-defined interventions had been proposed. Unit-based nurse educators indicated their staff had five areas of inadequate information: (a) when student nurses were to be on the unit, (b) which patients the students were assigned, (c) what skills the students were able to perform, (d) how to locate the instructor in a timely fashion, and (e) how to locate the student nurse in a timely fashion. Academic program directors reported that clinical academic faculty had four areas of concern: (a) locating the staff nurse assigned to a student's patient, (b) being available to students needing supervision, (c) finding the clinical lead, and (d) communicating with the unit educator in a timely fashion.

### 2.3 Assessments

Likert-type scales for these two sets of concerns were developed in order to measure academic faculty's and unit staff's satisfaction with communication pre- and post-interventions, using the actual words from the focus group's definitions of key issues. Nine scales were developed, five pertaining to unit staff and four pertaining to academic faculty. Responses ranged from Seldom (1) satisfied to Always (5) satisfied. For these nine items, a mean response greater than 4 was considered an "acceptable" level of communication.

Unit Staff Rating Scales:

- 1) I know when clinical students will be on the unit.

- 2) I know what patients the clinical students are assigned.
- 3) I know what skills the students are able to perform.
- 4) I feel satisfied with the time it takes to locate the clinical instructor.
- 5) I feel satisfied with the time it takes to locate the clinical students.

#### Academic Faculty Rating Scales:

- 1) I feel satisfied with the time it takes to locate the staff nurse assigned to the patient.
- 2) I feel satisfied with the time it takes for my students to locate me.
- 3) I feel satisfied with the time it takes to access the clinical lead for patient assignments or issues.
- 4) I feel satisfied with the time it takes to access the educator.

## 2.4 Interventions

The focus group identified specific interventions to improve communication, which included: (a) addition of hospital-furnished zone phones, identical to those already used by unit staff, for use by clinical academic faculty; (b) development of concise descriptions for each student's educational levels, skills, learning goals, and assignments that were consistent for both schools' students; and (c) implementation of standardized communication boards on each unit to display those concise descriptions. Interventions were implemented in all units where nursing students rotated. Interventions took place during two academic semesters after the initial survey, and post-intervention surveys were distributed during final weeks of the second semester.

## 2.5 Pre-intervention and post-intervention surveys

Unit educators emailed surveys to nursing staff of 10 distinct medical-surgical and obstetrics units where nursing students were placed. The email instructed nursing staff to print out the survey, complete it, and put it without identifying data in collection boxes on the units. Survey completion was not required and there was no penalty for nonparticipation. Surveys contained the five Likert scales, and also requested respondents' assigned unit, job classification, and shift worked. Respondents' surveys were anonymous and individuals' response data were confidential. Unit-based nurse educators forwarded the completed anonymous surveys to the academic faculty facilitator. A total of 95 staff completed surveys, either initially or post-intervention. Respondents were 79% RN, 4% LPN, and 17% clinical technicians (19% omitted this item), with no significant difference in proportions between initial and post-intervention samples [Chi-squared = 2.2 (df=2);  $p = .33$ ]. The response rate among unit staff was uncertain due to widespread email distribution that would have included some staff who would not have met inclusion criteria. The anonymous nature of the survey precluded matching unit staffs' pre- and post-responses, thus initial and post-intervention samples could have been quite different as far as the identities of those who completed the surveys.

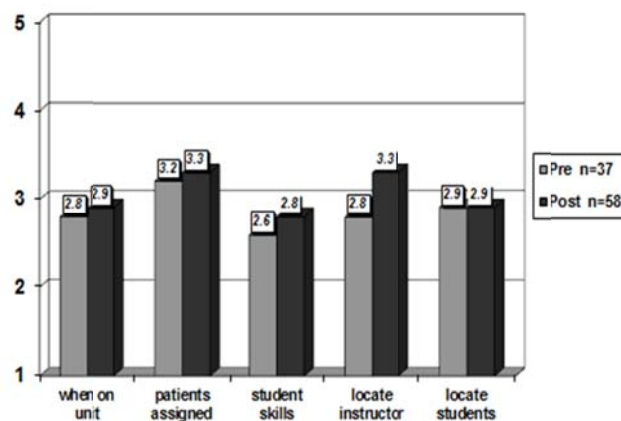
Clinical academic faculty were emailed initial surveys, also anonymous and confidential, and were provided with drop boxes for paper survey return. Their surveys included the four Likert scales, as well as requesting academic affiliation and clinical unit where the faculty member supervised nursing students. Distribution and collection of initial and post-intervention survey forms were identical. All clinical academic faculty completed initial and post-intervention surveys. The anonymous nature of the surveys precluded matched pre- and post-comparisons among clinical academic faculty.

## 3 Results

The initial survey was completed by 37 unit staff and 10 clinical academic faculty. The initial item means confirmed focus group observations about degree and nature of communication concerns. The initial unit staff means for the five communication items, ranging from 2.6 to 3.2, were all below the acceptable mean ratings. Initial staff survey differences

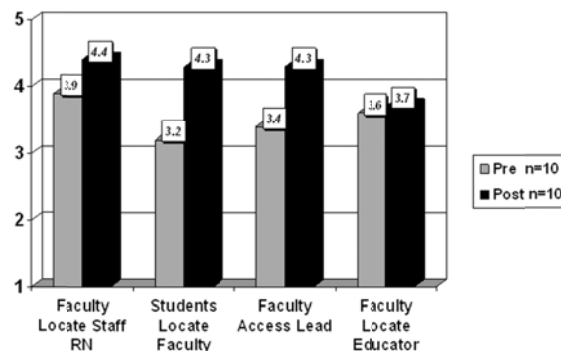
among item means did not reach significance [ $F(4, 44 \text{ df}) = 2.05; p = .09$ ]. There was a significant trend toward greater comfort knowing patient assignments than knowing the skills students were able to perform [paired  $t = 3.01 (36 \text{ df}), p < .01$ ]. Clinical academic faculty appeared to be more satisfied with communication than were unit staff, with their initial survey means ranging from 3.2 to 3.9, none in the acceptable range and no significant differences among them ( $p > .15$ ). The individual item means were not directly comparable between the unit staff and the clinical academic faculty due to different content and wording.

The post-intervention survey was completed by 58 unit staff and 10 clinical academic faculty. Improvement was seen in the means of all five unit staff survey items, though absolute changes were minimal ( $< .1$  on a 5 point scale) on three items and statistically non-significant ( $p > .05$ ) for all but one item (see Figure 1). Improvement in unit staff time to find the clinical academic faculty reached significance [initial mean = 2.8 (sd = 1.1), post-intervention mean = 3.3 (sd = 1.0); independent samples one-tailed  $t = 1.95; 93 \text{ df}; p < .05$ ]. All post-intervention unit staff item means remained below the acceptable level (all means  $< 4.0$ ).



**Figure 1.** Staff item means: pre and post, “Locate instructor” ratings significantly improved

Ten clinical academic faculty completed the post-intervention survey, and their post-intervention item means were all greater than initial survey means, though only one item showed statistically significant improvement (see Figure 2). Clinical academic faculty reported significant improvement in satisfaction with “the time it takes for my students to locate me” [initial mean = 3.2 (sd = .9), post-intervention mean = 4.3 (sd = .8); independent samples one-tailed  $t = 2.8; 18 \text{ df}; p < .01$ ]. Clinical academic faculty post-intervention item means improved from none in the acceptable range (all means  $< 4.0$ ) pre-intervention to three of four in the acceptable range post-intervention. “Time to find unit educator” was the only clinical academic faculty item in the unacceptable range post-intervention.



**Figure 2.** Faculty item means: pre and post. “Students locate faculty” ratings significantly improved

Unit staff post-intervention surveys included an option for open-ended suggestions for further improvement, and 28 (48%) of the surveys included such comments. Content of the comments fell into two major areas. There were 22 comments about concerns with students' clinical task initiation and completion or with lack of effective face-to-face communication with students at shift changes. Communicating details about patient assignments, student skill levels, and/or other aspects of student placements received 19 comments. Suggestions pertaining to student tasks and placement details were highly specific to individual units, with much variation in how best to communicate placement and student information (e.g., by email or not, content of student information to be posted, best location of communication boards) and much uncertainty about how best to delegate and monitor tasks with student nurses. The highly diverse comments suggested that communication changes at the level of patient-care require unit-specific decisions and participation in implementation. This potential gap may account for the lack of post-intervention unit staff changes in four of the five items administered.

## 4 Discussion and follow-up

Focus group discussion identified issues with communication in clinical settings, and initial ratings confirmed unit nursing staff concerns about such issues. Clinical academic faculty concerns mirrored those of staff. The initial interventions resulted in modest improvements in two areas of concern, with unit nursing staff noting improvements in the time to find clinical academic instructors, and in turn, clinical academic instructors reporting improvement in the time it took their students to find them. As a result of the project, both unit staff and clinical students could better access clinical academic instructors. However, even after the intervention, unit staff had concerns with access to nursing student schedules, skills, assignments, and location; and clinical academic faculty were still dissatisfied about accessibility of staff nurses, clinical leads, and unit educators. Communication gaps remained between clinical academic faculty and unit staff; and in turn, unit staff perceived a lack of access to details of nursing student placements. Although concise student summaries were prepared and posted on communication boards, each unit's choice of the placement of communication boards did not follow a systematic quality improvement process, and unit staff comments post-intervention indicated that the placement of communication boards was not always ideal. Therefore, a next improvement cycle might well convene focus groups of staff and unit-based nurse educators on each unit to explore difficulties in the use of communication boards<sup>[6]</sup>. Further quality improvement would need unit input on how to improve clinical academic faculty communication with unit-based nurse educators / unit staff, and additional focus group discussion among clinical academic faculty could better address communication gaps with unit leadership. Overall, these results point out the need to tailor, implement, and evaluate quality improvement efforts at the level of day-to-day patient care, and to address the inevitable diversity among hospital units with precision, timeliness, and staff participation in unit-level interventions. Limitations of the project involved the use of non-validated instruments due to the use of a focus group to define specific areas of most concern and to tailor recommended interventions accordingly. The anonymous nature of the research prevented matched pre- and post-analysis of participants' results. This may well have limited statistical power due to the potential for self-selection or unknown differences between those who responded pre-intervention versus those who responded post-intervention.

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