



# Enhancing patient safety and professional communication: Integration of TeamSTEPPS in the BSN Curriculum

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## Background

Communication failures are associated with the majority of medical errors often resulting in negative outcomes for patients. In order to prepare graduate professional nurses for practice, the traditional method of teaching communication skills was enhanced with TeamSTEPPS® strategies and tools. A descriptive study was employed to determine the following:

1. If using TeamSTEPPS® enhances nursing student competency in professional communication and teamwork skills.
2. If the curricular integration plan utilized is an effective teaching/learning strategies for TeamSTEPPS® concepts and skills.

## TeamSTEPPS

TeamSTEPPS® (Strategies and Tools to Enhance Performance and Patient Safety) is an evidenced-based teaching strategy designed to improve patient outcomes through enhanced teamwork and collaboration among healthcare providers.

## Methods

**Sample:** A total of five cohorts of students will be enrolled in the study. Cohort 1, 3 & 4 are traditional age and cohorts 2 and 5 are 2<sup>nd</sup> degree accelerated option (AO) students. The study is at **midpoint** with 3 cohorts enrolled. Students graduating in August 2016 will be the first to complete the revised curriculum.

**Intervention:** TeamSTEPPS® concepts and tools were mapped into the existing curriculum dividing the content across semesters in the classroom, laboratory, and clinical settings\*.

**Tools: Attitudes/Values:** TeamSTEPPS® Teamwork Attitudes Questionnaire (T-TAQ) (Cr α =0.7 to 0.83); Interprofessional Socialization & Valuing Scale (ISVS) (Cr α =0.79 to 0.89)

**Knowledge:** TeamSTEPPS® Cumulative Exam & Unit exam questions. **Skill:** Clinical instructor, preceptor, lab, & simulation evaluation tools.

## Results

TTAQ Results (cohorts 1,2, &3) n=169		
Variable	Mean (SD)	ANOVA* F (Sig.)
Total Score	4.45 (.32)	5.5 (.005**)
Team Structure	4.33 (.41)	2.2 (.104)
Leadership	4.65 (.37)	.97 (.381)
Situation Monitoring	4.47 (.42)	4.9 (.008**)
Mutual Support	4.37 (.47)	7.0 (.001**)
Communication	4.43 (.39)	6.7 (.001**)

ISVS Result (cohorts 1 & 2), n=104		
Variable	Mean (SD)	ANOVA* F (Sig.)
Total Score	5.8 (.61)	.625 (.431)
Self-perceived ability	6.07 (.62)	0.25 (.615)
Value teamwork	5.63 (.75)	1.3 (.253)
Comfort in teamwork	5.86 (.62)	1.2 (.275)

\*ANOVA (one-way)

\*\*Significant difference between cohorts

Exam Performance		
Variable	Frequencies (%)	
	Incorrect	Correct
Level 1 (4 items)	15.38	84.62
Level 2 (4 items)	11.40	88.60

Skill Performance			
Clinical Evaluation	Frequencies (%)		
	NI	ME	EE
Level 1 (n=169)	0	97	3
Level 2 (n=104)	0	98	2

## Discussion

### T-TAQ pre-test results suggest:

- New nursing students have positive attitudes towards teamwork.
- Cohort 2 (AO students) scored significantly higher in total score, SM, MS, and C subgroups. This may be related to age and increased work experience.

### Analysis of the ISVS revealed:

- Overall positive valuing of collaborative interprofessional care with no significant difference in scores between cohorts.

### Exam results suggests:

- Students demonstrate acceptable level of comprehension of early TeamSTEPPS® concepts.
- 11% of Level 1 students incorrectly answered an SBAR application item and 15% of Level 2 students confused the concepts of Huddle and Brief on test items.

### Clinical skill performance suggests:

- All students achieved a satisfactory rating with a few (n=5) exceeding expectations.
- Frequent instructor comments included: “she does a great job reporting patient needs and abnormal findings to faculty and RN using SBAR”; “Uses check back when receiving report from the nurse”; and “Developing a well-structured handoff using IPASstheBATON.”

### Our analysis to date suggests:

- 1) Students have positive attitudes towards teamwork and value collaborative interprofessional care.
- 2) The strategy for curriculum integration has been effective as evidenced by positive student attitudes/values, knowledge level and skill performance.

## References & Curriculum Integration Table\*

\*Detailed handout available