



# Nursing Graduate Perceptions of Clinical Simulation Experiences



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# Disclosure Slide

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- ▶ Cynthia L Cummings & Linda K Connelly
- ▶ University of North Florida
- ▶ There is no Conflict of Interest with this presentation.
- ▶ We received no sponsorship or commercial support for any of this content.
- ▶ Learner Objectives:
  - ▶ At the completion of this presentation, the learner will be able to:
    - ▶ Describe the results of the Clinical Simulation Survey
    - ▶ Discuss the incorporation of Simulation activities and learning opportunities into a nursing curriculum



# Purpose

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- ▶ The purpose of this study was to ascertain what clinical experiences and preparation did new nursing graduates deem as most important for clinical preparation in the workplace.



# Background

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- ▶ The study was previously given to local hospital nurse educators in the Spring of 2013.
- ▶ We wanted to discover what areas may the graduates say are more important, especially their perception of preparation for the workplace.

Cummings, C. (2013) Nursing educator perception of student readiness, *Nurse Leader*, 11 (6): 54-58.

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# Literature

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- ▶ 70% of new nurses express difficulty with prioritizing and organizing care activities. (Marshburn, Engelke, & Swanson, 2009)
- ▶ Nursing graduates report they are not prepared for beginning practice, stating that the work environment is not satisfying, noting job demands, patient load, inadequate orientation and breakdown with academic and institutional environments as a great source of concern!  
(Oermann, Poole-Dawkins, Alvarez, Foster & O'Sullivan, 2010; Unruh & Zhang, 2014; Unruh & Nooney, 2011)

- ▶ Oermann, M, Poole-Dawkins, K., Alvarez, M, Foster, B., O'Sullivan, R. (2010). Managers' perspectives of new graduates of accelerated nursing programs: How do they compare with other graduates? *The Journal of Continuing Education in Nursing*, 41 (9), 394-400.
  - ▶ Unruh, L. & Zhang, N. (2014). The hospital work environment and job satisfaction of newly licensed registered nurses. *Nursing Economics*, 32 (6), 295-305.
  - ▶ Unruh, L. & Nooney, J. (2011). Newly licensed registered nurses' perceptions of job difficulties, demands and control: Individual and organizational predictors. *Journal of Nursing Management*, 19, 572-584.
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# Methodology

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- ▶ Nursing graduates from 2011-2014 were emailed using a secure survey system.
- ▶ Respondents voluntarily participated in the survey and an IRB from the University was obtained.
- ▶ The graduates had all participated in some form of simulation during their time in the nursing program.
- ▶ 73 graduates responded and the results were analyzed for measures of central tendency.



# Survey

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- ▶ 5 key questions
- ▶ 1. Please rank the following scenarios for clinical importance from 1-11, with 1 being the most important.
  - ▶ Code blue
  - ▶ Insulin administration
  - ▶ Post op patient with a PCA pump
  - ▶ COPD patient with nebulizer treatment and oxygen therapy
  - ▶ Patient with a DVT and on heparin therapy
  - ▶ Thoractomy patient with a chest tube
  - ▶ Asthmatic patient with respiratory disease
  - ▶ AMI patient with chest pain and in need of NTG
  - ▶ CHF patient with multiple medications and discharge teaching
  - ▶ Colostomy patient with need for equipment change and teaching
  - ▶ Patient with sepsis and in need of antibiotics



# Survey

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- ▶ 2. Are there any other scenario examples you feel would be helpful?
- ▶ 3. Which of the following skills do you believe have the greatest chance for error and should be covered in simulation?
  - ▶ Insulin administration
  - ▶ Heparin administration
  - ▶ Antibiotic administration
  - ▶ Narcotic administration
  - ▶ Patient fall prevention
  - ▶ Technique for foley insertion
  - ▶ Technique for IV catheter insertion
  - ▶ Technique for sterile dressings, such as central lines
  - ▶ Technique for trach care and suctioning





# Survey

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- ▶ 4. Do you feel that graduate nurses are prepared in the following areas? Please rate them 1-5, with 1 being very prepared to 5 being not prepared.
  - ▶ Documentation
  - ▶ EKG interpretation
  - ▶ Organization of care
  - ▶ Medication administration
  - ▶ IV therapy
  - ▶ Communication skills
  - ▶ SBAR technique
  - ▶ Emergency situations
  - ▶ Delegation
  - ▶ Family interactions
  - ▶ Skills and procedures



# Survey

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- ▶ 5. What equipment do you feel is most important for nursing students to have experience using? Please rate them from 1-5, with 1 being most important to 5 not important.
  - ▶ IV pump
  - ▶ PCA and epidural
  - ▶ Tube feeding pump
  - ▶ Oxygen equipment
  - ▶ IV therapy equipment
  - ▶ Suction equipment
  - ▶ Ostomy equipment
  - ▶ Wound care supplies
  - ▶ Chest tubes
  - ▶ Telemetry
  - ▶ Patient lifts



# Results

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- ▶ Demographics- What year did you graduate from nursing school?

Answer		Response	%	
1	2011		9	12%
2	2012		19	25%
3	2013		24	32%
4	2014		23	31%
	Total		75	100



# Results

## ▶ Question I- Rank the Scenarios for Clinical Importance

Statistic	code blue "resuscitation"	insulin administration	post op patient with a PCA pump	COPD patient with nebulizer treatment and oxygen therapy	patient with a DVT and on heparin therapy	thoracotomy patient with a chest tube	asthmatic patient with respiratory disease	AMI patient with chest pain and in need of NTG	CHF patient with multiple medications and discharge teaching	colostomy patient with need for equipment change and teaching	patient with sepsis and in need of antibiotics
Min Value	1	1	1	2	1	2	1	1	1	1	1
Max Value	8	11	11	11	11	11	11	11	11	11	11
Mean	1.40 (1)	6.25 (7)	7.21 (8)	7.22 (9)	5.38 (4)	5.92 (5)	6.00 (6)	4.01 (2)	8.26 (10)	9.37 (11)	4.99 (3)
Variance	1.71	8.22	6.19	4.78	4.71	6.19	6.42	7.29	7.53	4.90	6.93
Standard Deviation	1.31	2.87	2.49	2.19	2.17	2.49	2.53	2.70	2.74	2.21	2.63
Total Responses	73	73	73	73	73	73	73	73	73	73	73

**Top 5 scenarios-** Code Blue, Chest Pain patient, Septic patient, patient on heparin, Thoracotomy patient with a chest tube. (variance between the rankings)

# Results

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- ▶ **Question 2-** Are there any other scenario examples that would be helpful for simulation?
  - ▶ Psychiatric / Disgruntled patient - restraint application; Narcan administration
  - ▶ Controlling blood pressure parameters in stroke patients
  - ▶ Patient with hypoglycemia and long acting insulins; patient experiencing CVA symptoms; patients with seizures; Inserting nasogastric tubes; patient in shock needing IV fluids and vasopressors;
  - ▶ Post-op patient in need of blood transfusion, CAD removal and care, Post-op patient with JP drain- care, removal, education
  - ▶ Hip surgery patients and learning to move them properly, recognize signs of dehydration/sepsis, wound care, post-op teaching. Dementia/Alzheimer's patients: dealing with their meds, sundowners, swallowing difficulties, and fall precautions. Also: droplet contagion precaution and family teaching about contagion
  - ▶ Patient Satisfaction scenario
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# Results

- ▶ Question 3- Which of the following skills do you believe has the greatest chance for error and should be covered in simulation?

Statistic	insulin administration	heparin administration	antibiotic administration	narcotic administration	patient fall prevention	technique for foley insertion	technique for IV catheter insertion	technique for sterile dressing, such as central line	technique for trach care and suctioning
Min Value	1	1	2	1	1	1	1	1	1
Max Value	8	8	9	9	9	9	9	9	9
Mean	3.36 (1)	3.79 (2)	6.20 (8)	4.64 (4)	6.87 (9)	5.47 (7)	5.21 (5)	4.51 (3)	4.94 (5)
Variance	4.58	5.68	4.63	5.48	7.19	6.54	5.16	5.38	6.34
Standard Deviation	2.14	2.38	2.15	2.34	2.68	2.56	2.27	2.32	2.52
Total Responses	70	70	70	70	70	70	70	70	70

**Top 5 skills-** insulin administration, heparin administration, central line dressing technique, narcotic administration, trach care and suctioning technique (variance between the rankings)

# Results

- ▶ Question 4- Do you feel that graduate nurses are prepared in the following areas? Rank with 1- very prepared and 5- not prepared

Statistic	documentation	EKG interpretation	organization of care	medication administration	IV therapy	communication skills	SBAR technique	emergency situations	delegation	family interactions	skills and procedures
Min Value	1	1	1	1	1	1	1	1	1	1	1
Max Value	5	5	5	4	5	4	4	5	5	5	5
Mean	1.88 (4)	2.93 (11)	2.37 (9)	1.49 (1)	1.89 (5)	1.69 (3)	1.64 (2)	2.92 (10)	2.30 (8)	2.24 (7)	2.08 (6)
Variance	0.88	1.08	1.21	0.39	0.73	0.68	0.65	1.23	0.92	1.23	0.71
Standard Deviation	0.94	1.04	1.10	0.63	0.85	0.83	0.80	1.11	0.96	1.11	0.84
Total Responses	74	74	73	73	74	74	74	74	74	74	74

**Very prepared-** Medications, SBAR, communication & documentation

**Not very prepared-** IV therapy, skills, family interactions, delegation, organization, emergency situations and EKGs



# Results

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- ▶ Question 5- What equipment do you feel is most important for nursing students to have experience using? Please rank from most important to not important.

Statistic	IV pump	PCA and epidural pump	tube feeding pump	oxygen equipment	IV therapy equipment	suction equipment	ostomy equipment	wound care supplies	chest tubes	telemetry	patient lifts
Min Value	1	1	1	1	1	1	1	1	1	1	1
Max Value	4	4	4	5	4	3	4	4	5	3	4
Mean	1.42 (4)	2.22 (8)	2.03 (7)	1.41 (3)	1.36 (2)	1.43 (5)	2.42 (11)	2.26 (9)	1.81(6)	1.30 (1)	2.34 (10)
Variance	0.41	0.88	0.53	0.55	0.37	0.28	0.89	0.86	0.82	0.27	0.84
Standard Deviation	0.64	0.94	0.73	0.74	0.61	0.53	0.94	0.93	0.91	0.52	0.92
Total Responses	74	74	72	74	73	74	73	73	73	74	73

**Most Important-** Telemetry, IV equipment, Oxygen equipment, IV pump and suction equipment

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# Differences between the Educators and New Graduates

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## ▶ Question 1-

- ▶ Both ranked Code Blue as #1, however educators ranked insulin administration as #2 and chest pain patient as #3. New graduates ranked the septic patient as #3, while the educators listed them as # 10.

## ▶ Question 3-

- ▶ Both groups agreed on insulin and heparin administration as the greatest chance for errors. However, graduates selected central line dressing changes as #3 and educators selected narcotic administration. New graduates ranked IV catheter insertion as #6, while educators ranked this skill as #9.



# Differences between the Educators and New Graduates

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## ▶ Question 4-

- ▶ New graduates believed they were best at: medication administration, SBAR technique and communication. They viewed their major deficiencies as EKG interpretation, emergency situations and organization of care.
- ▶ Educators felt that new graduates were most lacking in delegation and management of care, while ranking them highest in medication administration and skills.
- ▶ New graduates ranked skill performance sixth, while educators felt that documentation was sixth. The graduates still noted hesitancy with skills and greater comfort with documentation and yet educators often noted that new graduates should come competent in basic skills and presented extensive classes on the documentation piece.



# Future

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- ▶ So, where do we go from here??
- ▶ Presenting the findings to faculty and educators
- ▶ Discussing the results with students
- ▶ Incorporating new simulation experiences. We have added the following simulations:
  - ▶ Group simulation on delegation and priority setting
  - ▶ Added code blue and emergency simulations on sedation, respiratory distress, patient with a chest tube, heparin drip and sepsis.
  - ▶ Added a perioperative and emergency situations elective
  - ▶ Continue to survey students as to their satisfaction and confidence development with simulation.

