

# Training Nurses for Charge Nurse Duties through Simulation

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# Charge Nurses' Duties and Responsibilities

- Managing, supervising and assisting the nursing staff of the unit during the shift
- Providing administrative support and patient care
- Caring for 4-8 patients



# Nursing Shift Scheduling in Israel

## The three - shift system:

- Morning shift: 7AM - 3PM
- Evening shift: 3PM - 11PM
- Night shift: 11PM - 7AM



# Charge Nurse: Managerial Requirements

- Staff members' management.
- On-going real- time decision making
- Communication skills.
- Multi-tasking
- Integration of knowledge and skills





# Charge Nurses' Educational Requirements

- RN (preferable with an academic degree)
- Advanced clinical nursing program in selected units:
  - Critical care nursing (CCN).
  - Emergency- care nursing (ER).
  - Operating room nursing (OR).
  - Midwifery.



# Novice Charge Nurse

- Stressful situation
- Anxiety and uncertainty
- Need for more appropriate training



# Simulation Training

- Well established in healthcare education
- Increasingly common in nursing education
- Training in a risk-free learning environment where errors can be permitted
- A method to teach clinical and critical thinking skills, communication and team interactions



*Cant & Cooper, 2010*



# Simulation Training

- Homogeneous experience
- Learning from mistakes
- Wide range of situations

- Time and resource investment
- High staff-to-learner ratio
- Cost benefits???





# The Role of the Preceptor

- The most important factor of effective simulation-based training.
- Adequate preparation to provide simulation
- Explaining, refereeing, coaching and discussing
- Interaction with the trainees during scenarios that facilitate critical thinking and decision-making, allowing them to learn from their mistakes



# The purpose of the study

- Examination of the effect of preparing the novice nurses to the charge nurse position through simulation
- Measuring the impact of simulation-based training on the decision making, performance, anxiety and satisfaction of novice charge nurses



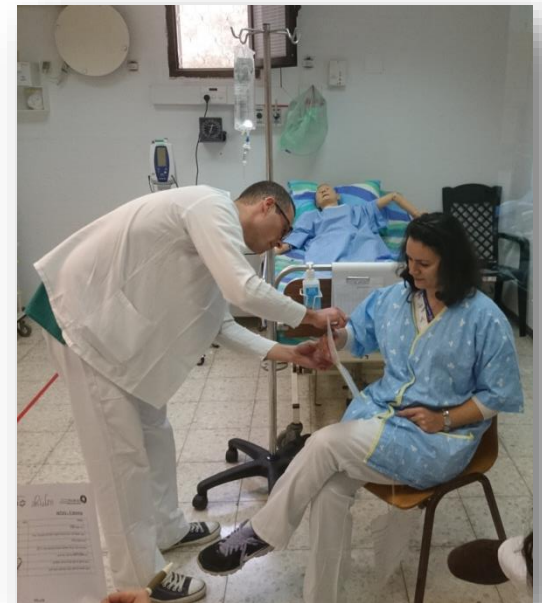
# Method

- Prospective and comparative study
- Convenience sample of 42 registered nurses, working in Carmel Medical Center, Haifa, Israel
- 22 nurses were trained to charge nurse position by moderate-fidelity simulation (simulation group)
- 20 nurses were prepared by lectures regarding charge nurse duties, hospital's rules and policies (control group)
- Informed consent of participants and approval of research committee were received



# Simulation-based Workshop

- Real world situations in a controllable format.
- Routine and unpredictable events.
- Use of knowledge and skills
- Fast decision making.
- Analysis and feedback after each scenario.





# Simulation-based Workshop

- 6 scenarios based on real situations
- Checklists that refer to each scenario
- Validation of the scenarios and checklists by nursing directors and clinical preceptors.
- 6 preceptors were prepared
- Operating the workshop:
  - Everyone participates in each scenario
  - Each scenario lasts 40 minutes: 20 minutes for running the scenario and 20 minutes for analysis and feedback.









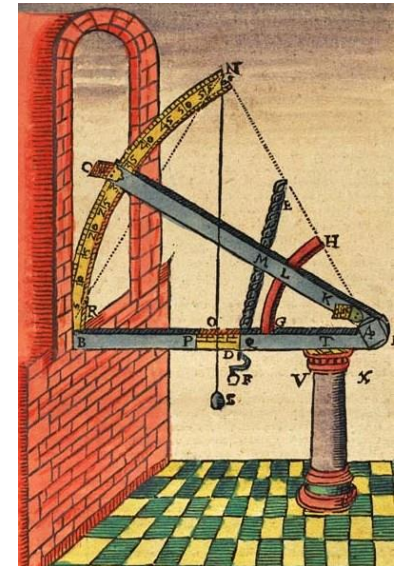
# The study population

		Simulation group	Control group	Significance
Gender	Male	5	4	$\chi^2 = .239$ (n.s.)
	Female	17	16	
Education	RN	2	1	$\chi^2 = .1.605$ (n.s.)
	RN + BA/MA	20	19	
Age		28.8	27.1	$t = 1.3$ (n.s.)
Years of experience		1.4	1.5	$t = -.185$ (n.s.)



# Research Instruments

1. Participants' satisfaction and their rating of usefulness of the simulation-based training:
  - Questionnaires designed by the researchers and validated by expert judgement
  - 6 items, scored by Likert scale from 1 to 5



## Research Instruments (cont.)

2. Checklist of charge nurses' tasks – designed by the researchers and validated by expert judgement
  - Being informed about the status of all complicated patients
  - Staff assignments
  - Preparedness to patient admission
  - Calling appropriate services (shift supervisor, pharmacist-on-duty, maintenance staff, CPR staff)
  - Accurate report to shift supervisor regarding the ward status

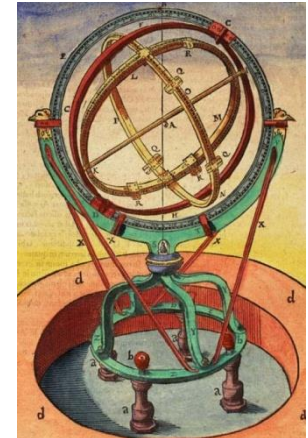
Each task is scored by Likert scale from 1 to 5

The total score was calculated



## Research Instruments (cont.)

3. Script concordance test evaluating charge nurses' decision-making
  - The test was designed by the researchers and validated by expert judgement
  - The test consists of 6 items describing common situations that require fast decision making



# Script Concordance Test

- Method of assessment for clinical data interpretation
  - Examines steps used in clinical reasoning
  - Case-based assessment
  - “Real Life” scenarios allow uncertainty
  - Same scenario for each learner
  - Objective scoring instead of subjective judgment of skilled observers





# SCT Test

Brief description  
of problem/ situation

- New information:
- Change in patient conditions
  - Laboratory result

Clinical scenario		
If you were thinking of...	And then you find...	This hypothesis becomes...
Nursing Hypothesis	New information	-2 -1 0 +1 +2

Relevant hypothesis/  
intervention

- 2 = rejected/ contraindicated
- 1 = less relevant/not very useful
- 0 = neither less nor more useful
- +1 = useful
- +2 = necessary

Learner must  
make a  
decision



# Example Question

You're the charge nurse during night shift. At 4 AM noise was heard from room N 14. When you've entered the room, you've found the patient A.B. laying on the floor next to his bed. A.B. is confused (He has an Alzheimer's disease) and unable to explain what happened. You've reported to the physician and his response was: « If the patient is OK I'll see him at 6 AM »

If you think of...	And then you find...	The intervention will become...
Calling the physician to see the patient right now	Patient vital signs are within the normal range. No visible injury.	-2 -1 <b>0</b> +1 +2

- 2 = rejected/ contraindicated
- 1 = less relevant/not very useful
- 0 = neither less nor more useful
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# Example Question

You're the charge nurse during evening shift. In addition to being charge nurse, you're caring for 8 complicated patients. Your staff is experienced nurse 49 y.o. and novice nurse 27 y.o. who is pregnant (12 th week). You've got a message from ER about admission of patient suspected to measles within the next 30 minutes

If you think of...	And then you find...	This decision will become...
Asking the experienced nurse to take care of the patient suspected to measles	The experienced nurse refuses to take care of the patient. She doesn't remember whether she had measles in the past. The novice nurse is sure she hadn't measles.	-2   -1   0   +1 <b>+2</b>

- 2 = rejected/ contraindicated
- 1 = less relevant/not very useful
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# Scoring of SCT

**Do the clinical decisions chosen by the learner have concord with those of the “Reference Panel” ?**

- A group of experienced nursing professionals/ clinical preceptors (at least 10)
- Each question score depends on the number of Reference Panel answers

*Example: Scoring by 15 experts*

0 : 8 members	1 : 7 members	All other answers
$8/8 = 1$ point	$7/8 = 0.88$ point	$0/15 = 0$ point





# Procedure

- Measurement of participants' perception of the training usefulness:
  - Immediately after the training
  - 6 months after commencing charge nurse duty performance
- Measurement of charge nurses decision-making
  - 6 months after commencing charge nurse duty performance



## Procedure (cont.)

- Observations of novice charge nurses' performance of their duties:
  - By 3 trained observers
  - During 3<sup>rd</sup> to 4<sup>th</sup> month of performing charge nurse duties
  - Scoring by the checklists

# Results



# Participants' rating immediately after training

## t-test, n=42

	Group	Mean	Stand. Dev.	t	Sig
Meeting the Expectations	Simulation	4.63	0.49	3.78	P<.01
	Control	4.05	0.51		
Decision - making	Simulation	4.50	0.51	2.6	p<.05
	6 months	4.08	0.60		
Communication skills	Simulation	4.68	0.47	7.43	P<.01
	Control	3.55	0.51		
Anxiety reduction	Simulation	4.18	0.69	2.45	n.s.
	Control	3.89	0.45		



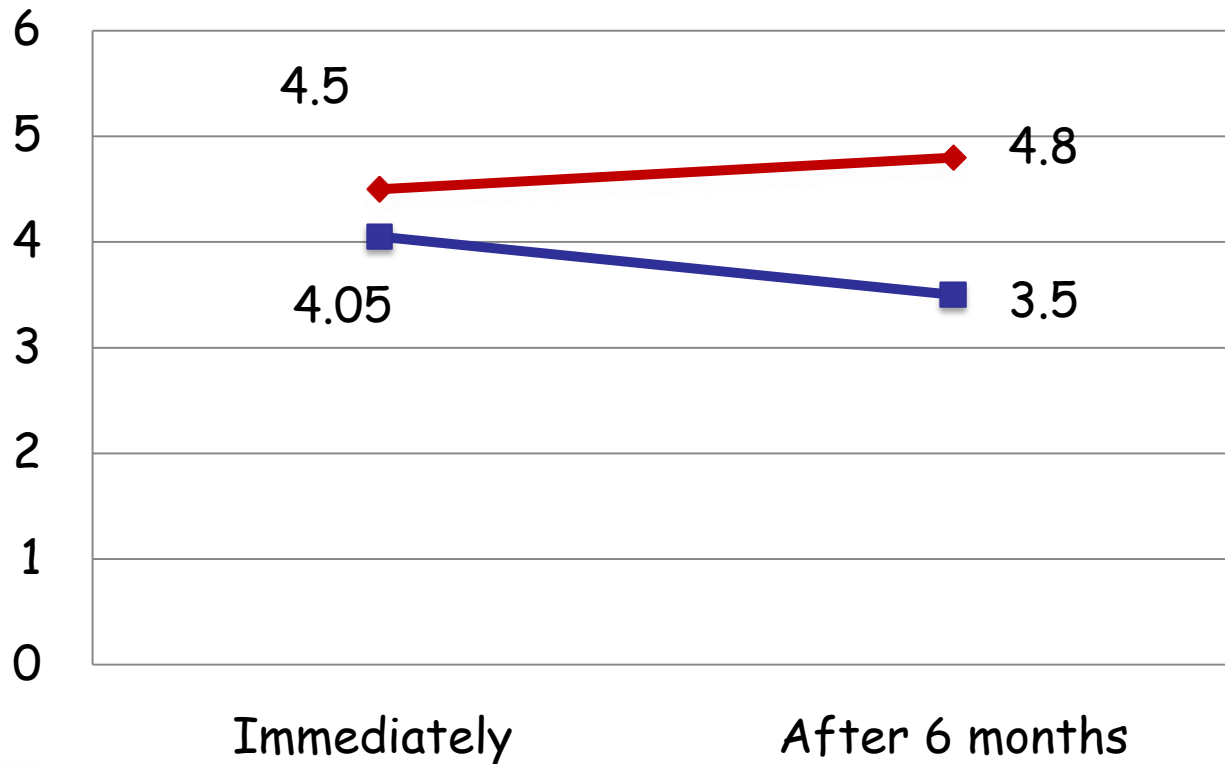
# Participants' rating 6 months after training

## t-test, n=42

	Group	Mean	Stand. Dev.	t	Sig
Meeting the Expectations	Simulation	4.9	0.29	12.45	p<.001
	Control	3.15	0.58		
Decision - making	Simulation	4.81	0.38	8.42	p<.001
	6 months	3.51	0.61		
Communication skills	Simulation	4.63	0.47	8.48	P<.001
	Control	3.35	0.51		
Anxiety reduction	Simulation	4.15	0.59	4.18	n.s.
	Control	3.94	0.67		

# Participants' rating : Decision Making Skills Training

◆ Simulation group    ■ Control group



# Decision-making score

t-test, n=42

	Method of teaching	Mean	SD	t	Sig.
Script Concordance Test Score	Simulation group	5.7	.65	2.72	p < .05
	Control group	4.9	1.2		

# Observation score

t-test, n=42

	Method of teaching	Mean	SD	t	Sig.
Charge Nurses Activities Check List Score	Simulation group	18.9	3.06	2.05	p < .05
	Control group	17.2	2.2		



# Conclusions

- Simulation in nursing staff development is an effective training strategy to assess and strengthen the skills and competence in nursing practice.
- Simulation techniques may efficiently prepare novice nurses to the charge nurse tasks.
- Simulation training may improve the quality of performance



## Limitations of the study

- Small sample
- A non-random sample
- The tools validated by expert judgement only
- Higher frequency of charge nurse duties performance by the simulation group members (possible due to better performance level)



# Further Research to be Conducted:

Developing a more detailed check list describing charge nurse duties

Quality of shift managers' performance as a function of their preparation, based on more frequent observation by shift and off-shift supervisors



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THANK YOU

