

Abstracts Poster Session «Scenarios»

Simulation Trainings in Nursing -an effective training method in the geriatric setting?

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Background:

Studies have shown that simulation-based training in a clinical setting contributes to the reduction of treatment errors and patient safety. Simulation-training show positive effects especially with regard to knowledge growth and the behavior of the participants.

However, this form of education training is commonly not used in the geriatric setting so far and the benefits are only proven insufficiently. Therefore, the Geriatric Health Centers of the City of Graz (GGZ) carried out simulation-trainings on two topics in 2018 for their nursing staff:

- ▶ Simulation-training (1) Hygienic aspects in placing urinary catheters
- ▶ Simulation-training (2) Consultation of fall prevention for residents in nursing home

As part of the training sessions, practical simulation-training sessions with mannequins or standardized patients were held in addition to theoretical basics.

Methods:

Three simulation-trainings took place between 01 / 2018 and 05 / 2018. In total 25 people were trained. The knowledge level, the feeling of security in action and the compliance of standardized work steps were evaluated and compared with each other before and two months after the simulations. As a method, questionnaire and standardized audits with checklists were used. Furthermore, predefined key figures of the years 2017 and 2018 were compared.

Results:

The results in the simulation-training (1) show that 75% of the participants rated the training as a contribution to an increase in safety. They now feel safer when handling a bladder-indwelling catheter. The evaluation of the knowledge tests shows a small to medium improvement (5.7% -25%) compared to the first measuring time.

In simulation-training (2) an increase in knowledge was particularly noticeable with regard to practical topics such as fall factors and prevention or practical aids. Little to no knowledge gain could be achieved concerning aspects of theoretical basics such as definitions or laws.

Discussion and Conclusion:

The participants enjoyed this form of education training. Due to the positive experience with simulation training, the method will still be used in the GGZ. The recommendation rate ranges from 8,75 to 9,4 on a scale 1-10 [1 means "not at all likely"; 10 means "extremely likely"].

The simulation-training can lead to an increase in knowledge, an increase in the sense of security and an improvement in the quality of care. In order to demonstrate the benefits of simulation-training in geriatrics, an evaluation with a larger number of participants over a longer period is recommended.

Towards respite services for informal caregivers using simulation

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Background:

Currently, care for the frail elderly people is provided mainly on an informal basis by relatives. In Austria about 80% of older people, who are in need of care, still live at home and be tended by their own families or mobile services.

Care dependency burdens not only patients but also their informal caregivers. Caregiver burden is a multidimensional reaction to a number of factors associated with providing daily assistance to elderly and dependent people, including physical, psychological, emotional, and social stressors. Therefore, arrangements must be made to provide respite for family carers.

Simulation training is a validated and powerful experiential learning tool traditionally incorporated in health professional educational curricula but has not been commonly used in the hands-on training of informal caregivers.

Project description:

In January 2017 the Geriatric Health Care Centers of the City of Graz decided to develop a respite service for informal carers. From January 2017 until March 2018 a project team of about 12 people build up extensive structures for a simulation training center in Styria. In April 2018, the Albert Schweitzer Training Center, which includes a seminar room, a flat intended for simulations for informal caregivers and a patient room built for the staff of the Geriatric Health Care Centers was opened.

From April until December 2018 twenty simulation-based trainings for informal caregivers took place. The main goal was to improve caregiving competence, reduce stress coping, and promote mental well-being in a safe learning environment. The trainings were either Manikin-based simulation train-ings or Standardized Patient simulation trainings.

The simulation-based-trainings referred to caregiving competence, stress coping, and mental well-being. The impact on these factors will be evaluated in a prospective randomized controlled trial with 100 participants.

Expected outcome:

Expected results of the simulation trainings at the Albert Schweitzer Training Center will be a reduction of caregiver burden, especially depression and role overload as well as an increase of caregiving competence and knowledge.

Challenges:

During establishing the training courses at Albert Schweitzer Training Center the project team faced many challenges:

- ▶ Defining the contents of the different trainings
- ▶ Lack of knowledge in simulation
- ▶ Deciding which kind of simulation trainings are going to be held
- ▶ No budget for actors of SPs
- ▶ Promoting the simulation trainings
- ▶ Troubles with equipment, e.g. simulator during the trainings
- ▶ Providing time and personnel resources for the project despite daily

Routines and tasks:

- ▶ Secure funding of the Albert Schweitzer Training Center

Discussion:

Initial results show that the participants benefit from the simulations, since they can apply at home what they have learned in the trainings. The recommendation rate shows approximately 90%.

Further research on health economic evaluation is essential to show positive effects of this kind of respite service for informal caregivers and the inpatient sector.

Multiple-Patient-Simulation in Nursing Education

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Background:

Newly graduated nurses face many challenges as they transition into clinical practice. They have to care for multiple patients simultaneously and be flexible for rapid changes in their condition. As qualified nurses, they must also show leadership skills, e.g. delegating nursing students and health care assistants. These factors can be overwhelming for many young nurses and some suffer from “transition shock”. Simulation provides a safe environment to practice clinical situations, but usually simulation focus on only one patient. Multiple-Patient-Simulations (MPS) could be an ideal way to prepare nursing students for caring for many patients.

Project description:

In the first session, eight students went through a three-hour simulation caring for four patients simultaneously with different tasks (washing the patient, administering medication, care for a dying patient, attending multidisciplinary rounds etc.). The patients were portrayed by High-Fidelity Simulators (HFS) as well as Standardized Patients (SP).

The main objectives were to determine how students perceive a MPS and how a MPS can help nursing students to transition into clinical practice.

Outcome/ expected outcome:

Students perceived the simulation as positive and very realistic. Students felt more self-assured to prioritize in caring for multiple patients after the simulation.

Challenges:

Implementing a three-hour simulation into the curriculum is challenging for a large number of students. It requires several instructors to observe and control the HFS. There are also many SPs, material and props necessary to make the simulation realistic.

Discussion:

Further simulations are necessary to determine the positive effects of doing a MPS especially the impact on student’s abilities while transitioning into clinical practice.

Interteam Perinat - Interprofessional scenario training in obstetrics for undergraduates

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Background:

In the delivery room, many professions such as obstetricians, neonatologists, anesthesiologists, pediatric intensive care nurses and midwives need to form a well-functioning team. To prepare medical students in their last year of education together with midwifery students for this complex task, two scenarios were designed to sensitize students for their roles in the delivery room.

Project Description:

Two obstetrical emergency scenarios were conceived, one involving shoulder dystocia (scenario 1), the other postpartum bleeding (scenario 2). 6 students (3 medical students, 3 students from midwifery school) volunteered for 2 consecutive training sessions of 3h each. Hybrid simulation was integrated in both scenarios (simulated patient with a strap-on Mamma Nathalie® Simulator, Laerdal, Norway). Prior to the scenario, the participants were instructed in Crisis Resource Management and feedback rules, and divided into active and feedback-giving participants. Roles were switched in the consecutive scenario. Four cohorts were involved in both sessions in 2018. Evaluation forms were distributed after each session and analyzed.

Outcome:

Evaluations showed that all participants perceived the interprofessional courses as valuable for their education. All wished for more possibilities to perform interprofessional scenario training in their health professions education. The learning objectives receiving and giving structured feedback as well as practicing team communication under stress were regarded as especially valuable.

Challenges:

High preparation time and personell intensity make it difficult for trainers to find feasible strategies to make scenario trainings accessible for large target audiences. The limited time slots available for students involved in different health professions curricula make the conception of interprofessional trainings challenging.

Discussion:

Scenario team training sessions in the delivery room in undergraduate health professions education are highly valued by all participants. Understanding the own role in team training scenarios as well as slipping into roles of other health professions may ameliorate mutual understanding when working together in teams. Scenario training should not be restricted to postgraduate education, it may have a major impact on individual professional development in undergraduates.

Implementation of Family Systems Nursing and Palliative Care in High Fidelity Simulation: Development of Patient Family Crew Resource Management Criteria

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Background:

The high fidelity simulation is a realistic demonstration of a practice situation. It consists of the practical performance on the simulation doll and debriefing of the performance. Traditionally the high fidelity simulation was developed for the training of emergencies in acute care. The debriefing is often based on the Crisis Resource Management (CRM) Key Points, where the teamwork of the involved health professionals is emphasized.

At present there is rarely a focus on Family Systems Nursing and Palliative Care in high fidelity scenarios in nursing education. Therefore, an adaptation of simulation settings and debriefings are needed.

Project description:

The modules “Family Systems Nursing” and “Palliative Care” are integrated in the Bachelor of Nursing program at the Zurich University of Applied Sciences. The aim of these modules is to provide the students with competencies in Family Systems Nursing and to care for palliative patients in primary health care. For effective care, it is crucial to embed palliative care nursing activities in family systems nursing.

This in mind, we have designed a high fidelity simulation scenario, in which students develop skills to combine pathophysiological and psychosocial care in the context of an exacerbating palliative care situation. The practical performance on the simulation doll (patient) is enhanced by the presence of a family member (actress).

The debriefing sessions include a thorough student self-reflexion guided by the teachers, lecturer feedback as well as peer-feedback and are the cornerstones of the simulations sessions.

Specific instruments for the training and reflection process have been developed. Based on the well-established CRM Key Points “Patient Family Crew Resource Management (PF-CRM) Criteria” have been designed. These criteria emphasize not only the teamwork of the involved nursing students, but also their communication with the patient and the family member.

Outcome:

The experience of the authors shows that this learning approach is well accepted and appreciated by students and teachers.

Discussion:

These scenarios are ideal to further the transformative knowledge development and application through the advancement of skills and comprehensive clinical decision-making. The new instruments (e.g., PF-CRM Criteria) equip teachers to empower students to independently take control of their competence development process to best practice in Palliative Care. The PF-CRM Criteria can also be implemented in traditional high fidelity scenarios, where communication with patients and family members are as crucial as in Palliative Care.

Evaluation of an interprofessional procedure improvement in obstetrics: get the baby out fast

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At our local hospital with approx. 1100 deliveries/year, we recognized the importance to prevent asphyxiation of newborns by improving our decision-delivery time (D-D time) in the scenario of emergency C-sections.

Learning from relevant literature, an interprofessional simulation protocol was instituted including midwives, anaesthesiologists, obstetricians, operating room and neonatology/pediatric personnel, doctors as well as nurses from each specialty working together during routine cesarean sections.

A new telephone procedure/alarm system was installed to call simultaneously all necessary personnel at T-dn = decision time (T-dy = delivery time).

Simulations of the fast-track C-section protocol were conducted using a "simulated pregnant woman" (usually one of our doctors or midwives in-training) especially to test, and train for, fast transport from the delivery room (3rd floor) to the operating room (floor -1). The simulations were announced to the team involved no longer than a few hours beforehand on the day of the simulation, in order not to obstruct the usual busy operating suites which could be halted during an emergency C-section.

An evaluation form comprising a Likert-scale questionnaire was designed to monitor impressions of every team member after each simulation event, which has taken place 9 x (once per month) thus far, to pin down and abort obstacles, and demonstrate improvement after each simulation event.

At the time of the conference, evaluation data on 10-12 simulation events can be shown, step-by step commentaries from team members will be quoted which helped in optimization. An improvement of decision-delivery time can be demonstrated; and a few data on our reality emergency C sections can be used to validate the necessity and success of the implementation of the new protocol, using interprofessional pre-implementation simulations.