ABSTRACTS

Advanced Trauma Life Support
Dilek Kitapcioglu, MD
Acibadem University, Turkey

The learning objectives of this workshop:
* Assessment
* Prehospital care
* Transport
* Handover to ER
* Treatment at ER

For a patient and with multiple traumas by using CAE Caesar simulator.

Target population of this workshop is:
* Rapid response teams
* Medical staff working at the emergency departments.

The aim of this workshop is emphasizing the importance of multidisciplinary approach and crisis resource management.

Briefing and Orientation (10 Min)
Simulation session (20 min)
Debriefing (30 min)

Implementing Simulation-Based Training in Obstetrics
Diogo Ayres-de-Campos
University of Porto, Portugal

Simulation based training is a promising strategy to improve maternal and perinatal outcomes, but different aspects have reached different levels of educational maturity. There is reasonably strong evidence to support simulation based training for obstetric emergencies, whereas the area of obstetric ultrasound is in a much more embryonic phase. Simulation-based training can also be important for isolated training of knowledge and technical skills during the initial stages of contact with the speciality. This workshop will focus on the theoretical and practical aspects needed to implement simulation-based courses to:

1. Improve basic level knowledge and technical skills in obstetric maneuvers such as vaginal examination during labour, management of normal second stage of labour, episiotomy and surgical repair, operative vaginal deliveries, management of vaginal breech delivery, anal sphincter repair, external cephalic version, and obstetric ultrasound.
2. Improve multiprofessional team performance in obstetric emergencies: umbilical cord prolapse, shoulder dystocia, eclampsia, maternal cardio-respiratory arrest, retention of the aftercoming head in vaginal breech birth, and major obstetric haemorrhage; with an emphasis on technical skills, communication and teamwork competencies.

Limitless Trial and Error on the Best Patient
Umit Aksoy Ozcan
Acibadem University Turkey

Hands on mini-course with CAE VIMEDIX Ultrasound Simulator for Abdominal Applications

The aim of this course is to become familiar with the major anatomic landmarks in the abdomen by using abdominal ultrasound simulator and to be able to recognise the most common abdominal pathologies detectable by abdominal ultrasound.

Proposed number of participants; 10 for 1 simulator

Robotic Surgery Simulation Workshop
Pelin Erkasap & Burak Argun
Acibadem University, Turkey

Giving the participants the opportunity to practice on Robotic Surgery System simulator, in order to give a basic knowledge about the advantages of robotic surgery and the opportunity to improve their proficiency with the robotic surgery surgeon console controls with the help of the robotic surgery skills simulator.

Simulation in all forms is an important part of the learning experience for surgical technology. By providing a controlled re-creation of critical steps in instrument control, simulation allows surgeons to practice their skills in a non-clinical environment. Other major benefits of robotic surgery simulation include the ability to:
* Increase familiarity with the Robotic Surgery System
* Simulation ensures trainees get as much technical exposure as possible.
* Measure progress
* Warm-up before surgery

Each exercise covers at least one of the following skill categories:
Camera and Clutching
Fourth Arm Integration
System Settings
Needle Control and Driving
Energy and Dissection

Serious Games Based Medical Training
Mehmet Ozkan, Momentum, Turkey; Emin Aksoy, Dilek Kitapcioglu, Feray Guven Acibadem University, Turkey

Use of interactive, serious games based applications for vocational training is rapidly increasing in many sectors. With increased processing power, devices (PCs and mobile tablets) can provide more realistic, life-like experience to users.

In a project supported by TUBITAK (The Scientific and Technological Research Council of Turkey) we are developing a 3D simulation environment for vocational training of medical personnel (doctors, nurses, technicians, students) for various medical processes. The system consists of multi-platform end user applications (Web for PC and Mac computers, iPad and Android tablets) and a SCORM/Tin Can (Experience API - xAPI) compliant Learning Management System.

With these serious game applications, the trainee is presented with different roles in a 3D realistic environment and is first given a step by step interactive training for proper medical processes to be followed. After completing the training, the trainee is presented with different cases and challenges to try out his/her knowledge. All interactions within the simulation (serious game) is measured and tracked using the SCORM/Tin Can API and can be evaluated and reported.

The serious game based medical training system can be used as an effective preparatory stage to prepare the trainees before training on hands-on simulators.

Simulation in Motion: Designing and Operating a Mobile Programme
Jon Allen & Amy Malheim
University of North Dakota, U.S.A.

Overview:
Most simulation programs are instituted, managed and operated completely independently. Budget, personnel, and competitive and administrative constraints may hinder success. Region-wide programs can offer standardized curricula, shared resources, economies of scale, marketing advantages and may achieve greater administrative success. This Workshop explores how one program has had tremendous success in building a statewide education model using mobile medical simulation.

Learning Objectives:
As a result of this session, the learner will be able to:
1. Identify key stakeholder positions (financial, administrative, content/subject expertise, educational) in your system that will facilitate the development of a successful vision for a region-wide mobile simulation system.
2. Develop an outline for a business plan that can lead to implementation of the region-wide mobile simulation system (used to guide interactions with key administration and finance personnel).
3. Identify “roadblocks” to success of the mobile simulation program and apply strategies to overcome them and continue the development of the program.

Design: The workshop will open with a description of a successful region-wide mobile simulation program including the vision, the planning process, business plan, implementation and two years in service. Interactive discussion will follow allowing participants to explore vision, business plans and roadblocks.

Caesar: Why You Need to be Trained Under the Conditions You Treat!
Pierre Prokop
Manipal Melaka Medical College, Melaka, Malaysia

Unfortunately war always brought improvement to medical practice. The last decade of military engagement brought major improvements in the way how trauma patients are treated on the battlefield.
From the introduction of the TCCC Guidelines, Tourniquets up to more advanced possibilities of hemorrhage control, just to point out a few. That made it possible to rescue casualties with horrific injuries sustained, which before never could have made it alive to surgery and finally survived.

This Session give you an inside on the usage of CAESAR as trauma-simulator for military personal, treating casualties from the point of injury up to evacuation towards the next higher echelon of care.
You will be given a short introduction into the unique situation and...
ABSTRACTS

Bridging the Science and Art of Simulation Education

conditions military personal have to provide care under. Starting from this inside, medical simulation will be put into a different perspective and how it need to be adjusted to the specific needs of the trainees in this challenging environment. With the focus on mental preparedness and stress inoculation the aim of Simulation in this context is not only to enhance performance it can be the first step to cope with the situations experienced

Clinical Skills & Simulation Center (CSSC): Is it assisting in teaching clinical skills to the medical students in Faculty of Medicine (FOM) at King Abdulaziz University

Sumaiah Abdulwahab
King Abdulaziz University, Saudi Arabia

The Clinical Skills & Simulation Center (CSSC): Is it assisting in teaching clinical skills to the medical students in Faculty of Medicine (FOM) at King Abdulaziz University (KAU) - Jeddah?

Introduction:
The CSSC is very well equipped. It consists of 40 rooms equipped with over 1,000 task models and manikins as well as other virtual and high technology facilities to aid simulation of procedural practices and clinical skills training.

Methods:
The Faculty of Medicine had secured development of Curriculum by optimizing the use of the CSSC, so it became part of the formal curriculum schedule. After analyzing the data collected of all the medical students who had visited the Clinical Center since it was reopened in King Abdul Aziz University hospital in the fourth floor in 2007 until 2012, and from the CSSC annual reports showed total contact hours (CH) were over 1,100,000 (CH is time spent multiplied by number of utilized visitors) and based on the overall clerkship evaluation questionnaires distributed 2012, Ninety three to ninety six percent of the students agreed that the CSSC is very well equipped and helps them to be exposed to clinical cases that they miss during their clinical rotations. The CSSC is also used by students for further peer to peer training and self directed learning (SDL).

Results:
The FOM needs to develop a system program for monitoring and evaluating the quality of curriculum achievement, which ensures the implementation of the intended learning outcomes (ILOs).

Conclusion:
The CSSC must develop set of quality national and regional standards which will enhancing the educational process through benchmarking other centers of all FOM in KSA and in the Gulf region to define deficiencies and optimizing the integration between formal curricular and extracurricular learning activities.

Difficult Airway Management (Adult)

Dilek Kitapcioglu, MD
Acibadem University, Turkey

Case scenario: Difficult airway management during Caesarean section

Learning objectives:
- Management of “can ventilate/can’t intubate patient”
- Anaesthesia induction in pregnant patient with full stomach

Target population: Anaesthesiology residents and nurses

Briefing and orientation (10 min.)
Scenario session (20 min.)
Debriefing (30 min.)


Gabor Orosz
Semmelweis University, Hungary

Early forays into team training started in the 1950s and 1960s, predominantly in the military. Most of the drive behind this type of training resulted from the review of accidents and failures. In the 1990s, the philosophy behind team training was based largely on the concept of a “shared mental model.” Regarding medical education a scenario-based simulation practice model has seemed to be a proper solution also from the mid 1990s. Scenario-based simulation practices have gained increasing popularity over the last two decades. The modern concept of effective implementation of any protocol is based on implementing both “technical skills” and so called “non-technical skills” (situational awareness, appropriate decision making, communication, team work, etc.) perfectly. Practices where participants can improve technical and non-technical
skills together is a challenging part of the trainers’ work. Teaching adequate communication as well can improve teamwork. To work effectively together, the whole team have to possess appropriate knowledge, skills and attitudes. During these situational-simulation practices highly skilled instructors are using high-fidelity manikins and give proper feedback-feedforward: it can be an adequate way to achieve the desired learning objectives. Although - like other methods - this type of education have advantages and disadvantages, our experiences with this educational method are excellent.

Infant Resuscitation
Nihan Uygur Kurkcu & Feray Guven
Acibadem University, Turkey

The aim of this workshop is emphasizing the importance of multidisciplinary approach and crisis resource management.

The learning objectives of this workshop:
- Assessment of cardiopulmonary arrest
- Resuscitation of infant in ER

Target population of this workshop is:
- Rapid response teams
- Medical staff working at the emergency departments
- Pediatricians

Briefing and Orientation (10 Min)
Simulation session (20 min)
Debriefing (30 min)

Simulation Training for Military Medical Services – Tailored on the Mission?
Christoph Büttner
MCI, Germany

Simulation as a training-model has been use by the military for many years. Especially pilots and flight-crews are used to train their missions in simulation-centers.

Motivated by the increasing number of challenging out of area missions Military Medical Services had to improve their education and training in the medical and in the combat field.

Highly sophisticated simulation-systems are arising; smart cooperations between different countries and between Military and Industry are developed.

As the military is very often confronted with combat casualties and diseases you normally don’t see at home, simulation-systems for the Military Medical Service have to accomplish some special requirements. They have to be tailored to the mission Special demands and ideas to fulfill them will be discussed in this lecture

Translating Surgical Skills Training to Clinical Practice in Hungary
Boros Mihaly
University of Szeged, Hungary

In modern medicine “best practice” is taken as sign of professional excellence. This notion should also be valid to surgical training as the reputation of a master is judged not only by the quality of operations, but by the performance of apprentices. Undergraduate and postgraduate practical trainings are crucial parts of this process as the sharing of experience to improve knowledge is one of the most important components of medical progress. Nevertheless, the possibilities of medical students to entry into practice competency are rather limited, worldwide. This lecture is intended to give a realistic analysis on the Hungarian situation, partly based on data collected from questionnaires of the Institute of Surgical Research of the University of Szeged, summarizing some of the frequent challenges and problems, and trying to convince the audience that a multilevel approach is really necessary for successful advances, where graduate and postgraduate skills courses and simulation strategies are in complementary relation to one another. Medical schools should run basic and specialized undergraduate procedural training programs, such as basic surgical technique courses, microsurgery or minimally invasive surgery classes, with expertise in simulation methodologies. Besides, there should be organized schemes to transmit this knowledge to the postgraduate level, with further well-defined simulation possibilities to acquire the essential practical skills for specific surgical disciplines, leading to “best practice”, where perfect knowledge of procedural steps and manual dexterity will underlie the flawless operation.

Use of Simulation in Advanced Nursing Education
Ayse Akalin & Gul Pinar
Yildirim Beyazit University, Turkey

Simulation is rebirth of a teaching technique in nursing education. Simulation training provides environments similar to the clinical applications and prepares the students to the clinic, and it increases the proficiency of the student in the clinical platform. Using simulation in the education of nurses has been quite widespread abroad during the recent years, however it is not common
in Turkey yet. Literature highlights the increasing challenges nurse educators face in preparing student nurses for the real world of nursing. Evidence-based research show that using simulation in the education help students to understand the key features of nursing and learn to deliver skilled, integrated and compassionate care to their patients. Simulation training is proved to have lots of benefits in the professional education of nurses. And also, the most importantly of thus is ensuring efficient allocation of resources, reducing of number readmission in the hospital, preventing prolongation of hospitalization, providing cost reduction, and elimination of preventable adverse medical events in health care system. Ensuring of safety patient, protection of rights patients and efforts to increase of qualifications of nursing students at the clinic mandatory have made increasingly common of simulation in education.

**Why do I Need a Simulator for Ultrasound Teaching, After All These Years?**

Umit Aksoy Ozcan & Mehmet Emin Aksoy
Acibadem University, Turkey

Mini course on how to integrate simulation in everyday teaching practice

The aim of this course is to recognise the abdominal ultrasound simulation applications. The participants will be encouraged to comprehend how to integrate abdominal ultrasound simulation to the teaching practice, and to differentiate the benefits/shortcomings of simulation applications.

Proposed number of participants; 10 for 1 simulator

**Assessing the Impact of Tactical Medic Course for Individual Soldiers and Frontline Commanders on Operations in the Jordan Royal Medical Services**

Rateb Abu Zeid
Royal Medical Services, Jordan

Assessing the impact of Tactical Medic Course for individual soldiers and frontline Commanders on operations in the Jordan Royal Medical Services

Background:
Jordan Royal Medical Services (JRMS) is integral to Jordan’s national healthcare capability, providing comprehensive medical services to a third of the Kingdom’s population and 22% of the Kingdom’s hospital bed capacity.

Objective:
To assess the impact of the tactical medic course for individual soldiers and frontline commanders on operations at JRMS.

Methods:
A quasi-experimental, control group design was used. t-test was used to compare difference between convenience sample. The level of significance was set at P<0.05. The changes between pre-test and post-test scores were examined for the 40 soldiers and frontline commanders. Lectures about tactical medic contents included basic tactical medic, thoracic trauma, needle thoracentesis, extremity trauma, tourniquets, head trauma, abdominal trauma, trauma assessment, buddy caries, respiratory system, principles of combative, search and control techniques were presented at NEMSEC.

Results:
The participants obtained an average score of 11.5±0.5 on the pre-test, and 17.6±2.1 on the posttest. The scores of the course participants were higher than were those of the non-participants.

Conclusions and Recommendations:
The positive impact of the course was confirmed. The tactical medic course increases immediate short term knowledge of the tactical medic for all individual soldiers and frontline commanders on operations.

**Debriefing: A Practical Approach**

Amanda Wilford
CAE Healthcare Academy, UK

Debriefing can be seen as both an art and science. Within healthcare education, there are many approaches to debriefing and there is no ‘one tool fits all’. This interactive workshop will use video clips to explore some of the principle tenets of debriefing and focus on structured, semi structured and free flowing debriefs. Reference will be made to some of the common model used world wide. Time will be given to practice some common techniques to assist with effective debriefing for example the use of silence.
Erasing Boundaries Between Specialities In Performing Resuscitation Scenarios

Oana Tudorache; V Georgescu; E A Popa; H Sabau; S M Armean
University of Medicine and Pharmacy, Romania

Introduction
Interest for simulation to prepare healthcare providers for accurate interventions in cardiac arrest events rises. As three medical specialties are highly presumed to face IHCA events, evaluation of awareness is required.

Materials and Methods:
Using advanced medical simulators, the Romanian Resuscitation Council instructor team prepared 61 residents in ALS courses; the attendees, 23 cardiologists, 20 emergency doctors and 18 anesthetists were questioned a questionnaire.

Results:
95% of subjects were members of resuscitation teams (3 exceptions from the cardiologists).
The leadership of a resuscitation team underlined a notable difference: only one from the cardiologists led a resuscitation team, compared to emergency and anesthetists, where 84% of them declared the leadership of such a team before.
Regarding previous trainings, regular mannequins seem accessible for over 90% of emergency and anesthetists compared with 50% of the cardiologists.
Medical simulators are not so available for residents; the emergency and anesthetists were previously privileged to practice (over 50%), compared to the cardiologists (21%).
All participants, except one, found simulation useful and needed.

Discussions:
Participants considered simulators useful and pleasant. Confidence to lead a resuscitation scenario increased. The simulation-based cardiac arrest teaching should be implemented in early stages of residential and student curricula.

Prehospital Team Trauma Course

Z Sofuoglu; A Özcevikel; Z Benli, Emergency Ambulance Physicians Association, Turkey
H Agah; O Ok; E Araz; V Ergun; E Vatansever; S Oksuz; I Akbulut; K Artuc; T Sofuoglu, Izmir Ambulance Service, Turkey

Objective:
To develop a scenario based trauma module for pre-hospital setting in order to improve both nontechnical skills and technical skills in a holistic approach.

Background:
Attending to postgraduate certification programs are obligatory for the health professionals who work in pre-hospital emergency medical services in Turkey. After realizing that theoretical lessons and skill stations without scenarios were ineffective, the need to a new approach to the courses was apparent.

Method:
Pre-hospital instructors had a workshop, found out trauma skills that are necessary in pre-hospital settings. 8 topics (Airway management, shock, head, thorax, extremity, pediatric, spinal and abdominal trauma) selected and all the skills placed in them. Totally 32 scenarios developed. Task allocation is developed for pre-hospital teams, including task and responsibilities of team leader and team members. Training videos and cards, skill guides produced for the participants. Totally 3 presentations teamwork, ethics, legal aspects of trauma prepared. Practice assessment checklist prepared for the last test. Enhanced mass causality scene management drill included to the course program.

Results:
4 days Pre-hospital Team Trauma Course applied 4 times to Paramedics and Emergency Medical Technicians from Izmir Ambulance Services. Opening ceremony followed by teamwork presentation and demonstration. Participants divided into 6 groups, each group consist of 4 people and 2 instructors. 32 scenarios applied in 3 days. Last day deserved for practice test and drill.

Conclusion:
According to the feedbacks 98 % of the participants found the course better than the other courses. Participants said that teamwork make pre-hospital chaotic stressful settings easier to work. Success rates found higher in practice tests.
The Importance of Simulation on the Nursing Speciality at the University of Pécs
Noémi Fullér
University of Pécs, Hungary

Background:
Nursing science and nursing practice itself is a highly practical field of health sciences, accordingly it is essential that newly graduated nurses possess high quality manual skills besides theoretical knowledge. Some ethical and legal policies as well have to be considered during the education of nursing students in order to guarantee secure patient care. Due to all these it is important that nursing students learn practical skills with the support of the moulages before they start clinical practice to integrate the learnt skills into the caring process.

Results:
In our institution (only for nursing students) we offer more than 15 subjects at the skill labs in more than 340 hours with 9 lecturers. More than 50 moulages are applied in our skill labs to demonstrate basic and advanced nursing skills for our students. In the frame of the foundational nursing subjects we prefer moulages which demonstrate separated body parts and suitable for certain duties to improve the manual skills while in the part of the advanced nursing subjects we prefer interactive simulators and compound models to improve the complex problem-solving skills of our students.

Conclusion:
The importance of the simulation is proven in the course of the nursing education. With the use of the moulages the self-confidence of our students can be improved, safe patient care can be guaranteed and the integration of nursing skills into the complex caring process can be facilitated. These advantages appear only if the simulations and the use of the moulages are led by highly qualified professionals, accordingly it is crucial to have continuous educational programmes regarding the complex simulation and situations, usage of the models and the proper didactical methods is indispensable.

The Simulation Based Training Experience of New RNs in Caring of a Patient with Chest Pain at Private Hospital, Bangkok, Thailand
Kannika Klinhorm; Suthida Teeranut; Kamolwan Intra; Kamonsak Reungjarearnrun
Bumrungrad, Personnel Development Centre, Thailand

PURPOSE:
The purpose of this study was to describe the experience of new registered nurses in the simulation based training.

METHODS:
A qualitative research design, based on the content analysis approach, was used to collect and analyze the experience of 17 new registered nurses who had the simulation based training in caring patient with chest pain. The data were collected by means of in-depth interview of volunteering new registered nurses.

RESULT:
The experience of new registered nurses in the simulation based training could be summarized as follows: a) simulation based training meant almost real-life situation, b) critical thinking was the main benefit from this type of learning, and c) first time experience could be nervous, anxious and stressful.

CONCLUSION:
Result of this study provides a better understanding of first time experience, of new registered nurses, with simulation based training in private hospital. This information could be useful for instructors to find out the way to conduct the most effective simulation based training.

Evaluation of students’ clinical competence after simulation courses
Eszter Borjan
Semmelweis University, Hungary

We started to integrate simulation into the curriculum in 2008 when we received our first METI Emergency Care Simulator. The curriculum integration has been a five-year long process we have not finished yet. In 2010 we started to use the METI Simulation Effectiveness Tool in order to evaluate the effectiveness of our
simulation practice. Results show that our simulation courses are effective but we have realized that we need a more objective assessment tool for the better evaluation of clinical simulation. The purpose of this presentation is to illustrate our practice in evaluation of students’ clinical competence.

NOTES: A paradigm shift in endoscopic surgery or a concept going out of vogue?
Fritz Gauper
CAE Healthcare, Germany

NOTES (Natural Orifice Transluminal Endoscopic Surgery) was ‘invented’ almost a decade ago and expected to induce a major paradigm shift in abdominal surgery via transgastric, transvaginal, transanal/transcolonic, or transvesical routes, resulting in multiple benefits for the patients. Has the hype carried on or is a fashion going out of style? This presentation will describe expectations, technical issues and attempts for their resolution, and build a bridge from the early days to the status quo in 2014.

Prolonged Field Care Training using High Fidelity Simulators
Burkhard Milde
Dres. Milde & Schnorr, Germany

Under disaster conditions it may take up to days to evacuate seriously injured patients from the point of injury. Non medical professional first responders may be the only ones providing life saving care. Training the care providers has gained quality using high fidelity patientsimulators. Modern wireless robust simulators contribute to a realistic training in a difficult environment. Concepts and techniques of prolonged field care are introduced.

Student-Run Nursing Scenarios on Acute Deterioration in Physical or Mental Health
Sharon Elliot
University of West London, UK

Nurses working is all fields need to be able to recognise and respond respond to acute deterioration. This requires skilled assessment and clinical judgement underpinned by a sound knowledge base. These skills and knowledge can ensure that timely and appropriate help is sought and care managed to optimise patient safety and the chances of recovery. An innovative module was created at the University of West London for BSc nursing students in the final year of their course. The overall aim of this module is to enable students to develop the skills and knowledge described above and simultaneously enhancing the essential characteristics of a graduate nurse.

The module ran for the first time in February to May this year. This presentation will outline the process of the development and underlying pedagogy of the module as well as reporting on the delivery, evaluation and on-going development of this innovative approach. This will be of interest to educators and anyone involved in simulation, wishing to explore different ways of providing high quality learning experiences through simulation.

The presentation will conclude with a question and answer session including discussion and debate.

The Integration of Simulation Into a Robotic Program, the Pitfalls and the Advantages.
Henrik Zecha
European Robotic Institute, Germany

While robotic surgery has emerged as a new technology over the last 15 years in several disciplines like urology, gynecology and general surgery, we are confronted with new challenges, particularly in terms of learning how to teach and train our surgeons. To response these challenges, we established - beside the traditional tedious teacher-up-front style - direct instruction robotic courses with dry lab and virtual simulation accompanied by dual consoles- training.

In contrast to open surgery with only limited educational opportunities, we now use multiple teaching materials and methods, especially for teaching of novices or for improving the existing knowledge and skills of experts.

As such we always consider the general principles of education, first of all aimed at motivating and demonstration to secure the long-term success of learning.

Next to the real training in a wetlab or the operating room (OR), virtual reality (VR) simulation is one elementary educational element. This very important method with different procedural tasks has the potential to bridge the gap between basic skills training outside the operating room and performance of complex surgical tasks in the OR. Moreover, the procedural training using VR simulators has been found to improve clinical performance. Therefore even experienced surgeons use simulation before or between their real surgeries as an additional warm up. Nevertheless, there is still a large number of simulated procedural tasks that have not been validated. Future research should focus on the optimal use of procedural simulators in the most effective training setups combined with other methods and tools and further investigate the benefits of procedural VR simulation to improve clinical outcomes.
Session E

Evaluation of the Use of Low-High Fidelity Manikins in Nursing Simulation
Vesile Unver; Tulay Basak; Jacqueline Moss; Penni Watts; Vanessa Gaioso
Gulhane Military Medical Academy, Turkey

Aim
This study explore differences between beginner and expert nursing students’ outcomes related to the use of low-fidelity and high-fidelity manikins in nursing simulation.

Methodology
The study was designed and carried out as a quasi-experimental investigation. This study was conducted in the University of Alabama at Birmingham Learning Research Center Clinical Simulation Laboratory between March and June 2014. First and fourth semester the Bachelor of Science in Nursing students and the Accelerated Master’s Entry to Nursing Pathway students participated in this study. After debriefing section, the participants were asked to complete two questionnaires:
1) Students’ Satisfaction and Self-Confidence Scale
2) Simulation Design Scale.

The institutional review board of at UAB approved this study. SON granted application permission. Results and Conclusion: The scores of the students in regard to the simulations with the high fidelity manikins were found to be higher in contrast to those in regard to the simulations with the low fidelity manikins. More specifically, their scores in the scales of the “student satisfaction”, “self-confidence in learning” and “simulation design scale” are higher when the simulations with the high fidelity manikins are used. In addition, the same was also found both in beginner group and in advanced group.

Routine Investigation Skills Training with Simulated Patients
Pinar Topsever; S Parkan; M Sahiner
Acibadem University, Turkey

The terms ‘simulated’ and ‘standardised’ patient (SP) describes a person trained to portray a patient in a clinical scenario for educational and assessment purposes. The SP may also provide feedback to students, trainees and clinicians on their performance. SPs have the potential to be the highest fidelity ‘simulator’, are well established in most undergraduate medical programmes training and assessment of case specific performance (e.g. communication skills, physical assessment), can be repeated and reproduced (reflection, feedback), pose no harm to patients nor an obstacle for clinical patient care. This workshop aims at discussing the value of training with SPs for gaining competence in routine investigation (history taking and general physical examination) for undergraduate medical education.

Simulation in Nursing Education in Turkey: Where we are in the Studies Conducted
Yasemin Altinbas; Yasemin Uslu; Meryem Yavuz; Fatma Eti Aslan
Ege University, Turkey

Aim
This study was planned with the aim of providing concrete data to researchers and analyzing Turkish studies related to the simulation in nursing education.

Design
Systematic literature review.

Materials and Methods
Researches related to the using simulation in nursing education, published in the nursing journals in the last decade (2004-August 2014), the full text of Turkish and accessible online were investigated using key words of ‘simulation’, ‘nursing education’ and ‘computer aided education’. Articles defined according to the inclusion and exclusion criteria by researchers were included in the evaluation. All articles were explained by analyzing in terms of working methods and findings.
Findings
In this systematic literature review, we found six researches were published between 2004-2014; three of them are reviews, one of them is randomized controlled trial, one of them is qualitative research and the other research is descriptive study.

Conclusion
Researches have showed that using simulation in nursing education increase quality of education. But we have a few researches about simulation in Turkey, because of the simulation in nursing education is a new approach. In terms of we suggest to perform randomised controlled trials evaluate effect of the simulation for increasing quality of nursing education.
P1
A Simulation Education Example: Hygiene Applications
E Yilmaz, U Karabacak, H Yalin, G Sahin
Acibadem University, Turkey

Aim
Simulation education, is very important for transferring theoretical knowledge to application. In this study, it is aimed to convey experiences occurred in “Hygiene Applications”, which is discussed in the “Fundamentals of Nursing” course.

Method
Hygiene applications, involve self-care practices directed to maintain individual’s health. After forming the learning objectives related with the subject, plan was developed with the faculty members who would play a role in the simulation. Groups of 12 student were formed, and it is decided that each group would stay in the station for 40 minutes. Students apart from this application studied with task trainers with the guidance of one lecturer. Using drawing lots method, it is ensured that each student performs body care practice, and completes the application through considering the reactions of patients with role-playing.

Conclusion
According to the self-evaluations, it was seen that students understood the importance of body bath, which was seen as an ordinary and unpleasant practice during theoretic lecture, after they saw its influence on the patient during the simulation.

P2
After the First Experience with Virtual I.V. Educator’s Feedback
Hayat Yalin; U Karabacak; E Yilmaz; F Eti Aslan
Acibadem University, Turkey

Aim
The Virtual I.V.® is a comprehensive and fully interactive self-directed learning system that is also a simulator for training intravenous catheterization. The study was performed with the aim of taking feedback from the nursing educators in our university, after their first application with the system.

Method
When nursing educators (N=9) which all of them had many years clinical experience, performed their first practice with Virtual I.V.® their feedback were taken by using semi-structured questionnaire and statements were grouped according to the themes.

Results and Conclusion
After analysis, it was seen that most of the statements about the system were positive and many of them were in three themes as application, equipment and evaluation. While application theme consists of expressions about safe and repeat practices, the expressions in the evaluation theme were about the objectivity of evaluation and clarity of seeing the mistakes. Negative feedback were grouped mainly under two themes as difficulty in practice because it is not fair and disappointment because of fail. As a result of their first testing the system, nurse educators had troubles with the system and performed maximum 80 points over 100 while doing this application very well at real.

P3
Feedback of Newly Graduated Nurses After Medical Simulation Based Orientation Training Programme
B Şengöz, Z Belhan, K Yilmaz, Ş Serbest, S Koç, D Kitapçıoğlu, F Güven, M E Aksoy
Acibadem Hospital Group, Turkey

Background
Orientation programs for new graduates and continuing education for nurses are essential tools to help practitioners improve their knowledge, skills and expertise so that quality patient care is provided and errors are minimized.

Aim
Aim is to determine the feedbacks of new graduate nurses after one month for medical simulation sessions on orientation training program.

Material and Method
In this study by using phenomenological searching methodology 20 nurses feedbacks of orientation training program after one month of course were evaluated. 10 of them were junior and 10 of them were senior nurses. Assessments are analysed by recorded individual interviews.

Results
Participants reported that simulation sessions improved their both
knowledge and self confidence. Senior nurses informed that simulation program enhanced trainees communication skills and awareness. Anxiety and fear of orientation has decreased. Basic skills and teamwork and critical thinking competencies are developed.

Conclusion
With the help of simulation sessions trainees can evaluate themselves and improve their performances. Self confidence of the trainees is also improved by simulation based education that facilitate the adaptation of new graduates to new clinical environment.

P4
Nursing students’ experience concerning standardized patients who speak foreign language in the framework of rational drug use.

Vesile Unver
Gulhane Military Medical Academy, Turkey

Aim
The aim of this study is to analyse the experience of nursing students who dealt with standard patients who speak a foreign language in the course of "rational drug use".

Methods
This study employs both quantitative and qualitative research techniques and was carried out in a nursing higher school in Ankara, Turkey, from September 2012 to January 2013. The participants were 104 volunteer nursing students. However, in the qualitative part of the study interviews were made with twelve nursing students who were randomly selected.

Conclusion and suggestions
The practice of standardized patients provided the nursing students with the opportunity in their practical training to deal with those patients who speak a foreign language. This practice reveals the significance of the cultural differences and having a command of foreign language as well as the patient safety. Because knowing a foreign language makes it possible for nurses to communicate with patients. In addition, nursing education should be designed to take into consideration the cultural differences and to improve cultural sensitivity of nursing students to provide the patients with a high-quality health-care. This study also contributed to the improvement of the nursing students’ cultural sensitivity.

P5
Our One Year Experience With C.A.S.E.

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Aim
The main aim of “Fundamentals of Nursing” course is to ensure winning and developing cognitive, affective and psychomotor skills of the students for their activities. Achievement to this aim is possible specially by preparing students for the transition to clinical practice with the essential skills which are many in our simulation center CASE (Center of Advanced Simulation Education) that is a simulation training center programed for multidisciplinary using. So last year we changed our course curriculum. Aim of this study is to show the differences of curriculum.

Method
The new curriculum content was compared with old and differences were given.

Results and Conclusion
The course duration was 14 weeks; four hours for theoretical issues and 12 for applications per week. The duration of just theoretical issues (28 hours) didn’t change. But hours of clinical practice and simulation were changed. Total hours of clinical practice was 104 in old curriculum and 40 in new. Before CASE, our university has only task trainers. Now many applications can be performed in CASE, so total hours of simulation were arised from 56 to 110. As a result it’s determined that CASE is a appropriate environment for task training of first year nursing students.

P6
Simulation Application in Advanced Life Support Education

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Introduction and Aim
This study is done to evaluate the effect of simulation application in advanced life support education.

Material and Method
The research is descriptive and done between January and February 2014. The research was done with 87 graduate students of Acibadem
University, Nursing Department. Students were divided to 8 groups of 10-12 people, and every group was allocated with 3 hours for education and application.

Findings
The average age of the nurses participated in this study is 34 (min: 22, max: 46), and 44 of the nurses (%50.5) participated in this study have never applied advanced life support before, and 43 of the nurses (%49.5) have applied advanced life support at least one time during their life. Before the simulation application, average pre-test score of the group was found to be 82.1, and, after the simulation application, post-test score was found to be 88.3. Result and Conclusion: Using scenario-computer based simulation education in the process of student nurses’ preparation to clinical setting is quite new. It is offered that studies related to the effectiveness scenario-computer based simulation need to be done.

P7
Simulation Application in Fundamentals of Nursing Course: One-Year Experience
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Aim
The aim of this study is to share, Fundamentals of Nursing Course, one-year experience related to the education method of simulation.

Method
With the aim of the course, a program, which involves the applications that would be simulated, was formed through reviewing the curriculum. In this 14-week program, the responsible lecturer, before every course, made preparations about necessary equipment and conditions in simulation center. Video presentations related to the skill application and demonstrations by the lecturer were done. Small groups were formed and every student did the application.

Findings and Conclusion
It was observed that the controlled environment in the simulation laboratory was more effective on students’ communication and adoption of safety measures than our prior experiences were. The anxiety derived from the learning environment was again observed in students; however, it is thought that this anxiety was lower and incentive for learning, compared to the clinical environment. We couldn’t use clinical scenarios, rather determining patient needs, data collection for problem solving, planning, implementation, and evaluation were used. As a result, future studies based on developing the simulation application, education in students, examination of skill development, satisfaction, anxiety levels, and self-confidence are planned.

P8
Sudden Cardiac Death and Nursing Education: The Students’ Perception of the Role of Simulation.
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Fatima College of Health Sciences, UAE

Background:
Simulation is a teaching method largely used to facilitate learning of BlsD (Basic Life Support) techniques. This study investigates real life experiences of undergraduate nursing students related to sudden cardiac death including events occurring during their practicum. The study explores students’ perception of the value simulation as a teaching method to respond to sudden cardiac death. Furthermore it explores the potential of two methods of teaching BlsD techniques in order to facilitate retention of knowledge and limit resource consumption.

Methods:
A sample (N=33) of nursing students was randomly selected for this prospective observational study.

Results:
99 questionnaires were collected, 55 related Low-Fidelity and 54 related to Moderate-Fidelity simulation teaching. Early evaluation demonstrated an increase of knowledge in each group. Post-test 2 showed that there are no significant differences between the two groups in terms of knowledge retention.

Conclusions:
Despite the limit of small sample size, the study showed that the two teaching methods are equally effective in acquisition and retention of information on BlsD techniques. However, the low-fidelity method was more efficient and less resource intensive.

P9
The Evaluation of Child Health: A Sample of Simulation Education Plan
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In this study, the issues of knowing “child”, which constitutes the base of pediatric nursing, and “the evaluation of child health” will be
discussed and a sample of simulation education program related to the subject will be shared. This education program is composed of six stages:
1. Teaching of the theoretical course and watching video
2. Demonstration of the application in task trainer
3. Pre-testing
4. Forming four stations in the simulation application (story-taking, physical measuring and measurement of vital signs, head to toe system medical examination, and recording of data)
5. Evaluation through control lists
6. Doing an experience analysis session in groups just after the application

After three months from this application, students will be asked to apply “evaluation of child health” holistically in a single station with a scenario, and evaluation will be done accordingly to the checklist developed.

At the end of this education, it is aimed that students will learn evaluating child health, determining problems, and critical decision-making in every area children exist. This is just a sample of the education plan, and it is argued that simulation education modules, which integrate knowledge and application in undergraduate nursing education, should become widespread.

P10
Evaluating ACLS Competence of Nurses working in the Acibadem Hospitals
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Aim
The aim of this survey was to compare the competency of nurses having no ACLS experience versus the experienced ones.

Methods
Each consisted of 20 nurses. First group had prior ACLS experience the second group had no experience of ACLS. Cardiac arrest simulation sessions were organized at Acibadem University CASE(Center of Advanced Simulation Education) and sessions were recorded. Two groups were evaluated by using a checklist based on 2010 ERC(European Resuscitation Council)ACLS guideline.

Results
In the experienced group the correct performance rate was 60%. During debriefing, the participants detected 50% their errors by self and peer assessment. The correct performance rate of the non-experienced group was 40% and the rate of error detection by self and peer assessment during debriefing was 100%.

Under the stress conditions, experienced group showed poor performance during defibrillation and airway management. There was a statistically significant difference in terms of ACLS competency between experienced and non-experienced group (p<0.001)

Conclusion
It can be concluded, that both groups need further ACLS simulation trainings, whereas the experienced group needs to change their attitude for ACLS cases and the non-experienced group needs to improve and develop their competencies for ACLS.

P11
Evaluation of Communication Skills of Postgraduate Nurses with Simulated Postoperative Patients During Invasive Interventions
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Aim
To assess the communication skills of nurses with postoperative patients during invasive procedures.

Methods
Data were obtained at CASE(Center of Advanced Simulation Education)Acibadem University during orientation training program. 198 out of 390 nurses were newly employed and the remaining 192 of these nurses had at least one year professional experience. In groups of two, nurses were expected to initiate a relationship with patient and their relatives during urinary catheterization. Each session lasted 10 minutes. Participants were evaluated by using a checklist based on communication skills.

Results
74 % of nurses introduced themselves to the patient and relatives. Junior nurses were more successful for self-introduction and informing the patient about the procedure (p< 0,001). However, senior nurses were more successful in empathizing (%71) and convincing (%74) the patient and their relatives compared to junior nurses. On the other hand, both groups did not ask for verbal approval before initiating the urinary catheter swap (88 % fail) and did not let the patient and their relatives to ask questions (91% fail). Both groups failed to create appropriate communication criteria (93% fail)

Conclusion
Continuing simulation based training programs for nurses should be
systematically organized not only for basic technical skills improvement but also for communication skills.

**P12**

**Integrating Simulation into Postgraduate Nursing Education Programmes**

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**Background**  
Simulation-based nursing education courses are highly influential on determining critical thinking, decision making ability and also psychomotor skill performance.

**Aim**  
The aim of this study is sharing the first simulation based training experiences of post graduate nurses.

**Material and Method**  
Integration of post graduate nurses education program to medical simulation sessions were organized by Acibadem Hospital Group Nurses Education Department and CASE (Center of Advanced Simulation and Education) Education Coordination Department. Between 17.03-29.08.2014 four groups including 686 participants were trained. Orientation program included 245 trainees, Patient Evaluation/Basic Skills Improvement Program included 229 trainees, Advanced Life Support Course Program included 200 trainees and Neonatal Intensive Care Program included 12 trainees.

**Results**  
As standardized program contents, specified learning objectives and defined checklists already existed, the integration period of simulation into postgraduate nursing education program was easily managed. Difficulties encountered during this period were the lack of medical simulation instructors and scheduling of the sessions due to the large amount of participants.

**Conclusion**  
Despite the difficulties, integration program was well organized and it has been concluded that to increase the number of simulation trainings of post graduate nurses as part of their postgraduate education program.

**P13**

**Integration of Simulation to Internal Surgery Nursing Education: A Model Example**

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**Introduction**  
Internal surgery nursing is based on caring of adult individuals, and it is a profession continuing from adolescence to the end of life, and it underlies the nursing practices. The aim of this study is to draw attention to the integration method of computer-based simulation application that supports the development of professional knowledge and skills of students and classical method.

**Body**  
Considering that adult diseases are inseparable parts of internal surgery and caring processes, the courses are restructured by using classical method and simulation. In this sense, one faculty member from both fields worked together in order to diagnose system diseases and caring practice. Nursing educators considered two basic points. First, doing weekly planning within a common framework, second, doing the integration of simulation strategies, which support nursing students’ professional knowledge and skills, to weekly curriculum. For instance, in teaching of cardiovascular system diseases, internal and surgical treatment and care aspects were weekly and separately discussed, and simulation application was done.

**Conclusion**  
It is argued that strengthening of theoretical and clinical content and structure of nursing education may increase the quality in nursing education due to the simulation applications certain repeatable features that facilitate knowledge, skills and critical thinking.

**P14**

**Introducing In-Situ Simulation to the Clinical Environment**

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**Background:**  
In-situ hospital simulation is a popular method of experiential learning as it provides realism and promotes multi-disciplinary team interaction. It offers the advantage of training efficiency and provides an opportunity to review at frequent intervals the skills related to high-risk or infrequent events. It allows exposure to possible unexpected system or equipment failings without patient safety being
compromised. This study will review the practical aspects of in-situ simulation with the aim of improving patient safety.

Methods:
Planned ‘unannounced’ in-situ simulations were arranged with the consultant on-call. A high- or low-fidelity manikin was used. Once the simulation was completed, all members of the team were debriefed.

Results:
The in-situ simulations were well received by staff as they improved confidence and encouraged further learning and development. Many unforeseen issues or system failures were highlighted and subsequently addressed. Repeat in-situ simulations were undertaken to ensure the problems were resolved.

Conclusions:
In-situ simulation is a popular method of multi-disciplinary learning which provides realism and encourages team working in a stressful and complex environment. It allows the shortcomings of a system to be exposed and any issues or learning points to be addressed immediately thereby improving patient safety and care. Systematically organized not only for basic technical skills improvement but also for communication skills.

P15
Knowledge and skills improvement in medical students after simulation-based training at the SUMPh “Nicolae Testemitanu”, Republic of Moldova
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Aim
To evaluate if after the simulation-based training in emergency adult care medical students achieve a higher level of knowledge and practical skills, in order to identify strategies that will improve medical education in the Republic of Moldova.

Methods
A pre-test and post-test descriptive model has been used to evaluate the level of knowledge and practical skills of SUMPh “Nicolae Testemitanu” students in academic year 2013–2014 who attended one-day simulation training in emergency adult care. All students completed a baseline pre-course knowledge test. Knowledge and clinical skills were assessed immediately after the training. Printed questionnaires were administered during the final assessment to obtain feedback.

Results
Among students who attended the simulation training and re-evaluation, a significant improvement of knowledge from 46.16% to 62.61% correct answers (p<0.001) occurred, according to pre-test and post-test scores when compared using t-test. In total, 95.48% students demonstrated knowledge and skills improvement following one-day adult emergency care training.

Conclusions
A one-day simulation training in emergency adult care increased knowledge and skills among medical students of SUMPh “Nicolae Testemitanu”. Our study results support simulation and scenarios as a teaching tool in medical education, which bring both: theoretical knowledge and clinical experience.

P16
Level of knowledge and practical skills in obstetric and neonatal emergencies among medical students in the Republic of Moldova
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Objective
Assessing the level of knowledge and practical skills in obstetrics and neonatology emergencies of SUMPh “Nicolae Testemitanu” medical students, to argue the need to update the training methods in medical education.

Methods
A descriptive study of knowledge and skills of 218 final year medical undergraduates at the SUMPh “Nicolae Testemitanu” in academic year 2012–2013 has been performed. A survey had been completed by students to gather information about their perceived level of preparation. The results were analyzed and interpreted using simple descriptive statistics.

Results
Only 19.27% students said they were able to perform a gynecological pelvic exam and 32.11% felt able to detect and interpret foetal heart rate. None of the final year students felt ready to perform newborn resuscitation, independently assist a vaginal delivery, a shoulder dystocia or a vacuum delivery. No one felt prepared to perform a uterine curettage.

Conclusions
Existing training programs in Moldova do not provide specific acquisition of practical skills in the field of obstetrics, gynecology and neonatology by medical students. There is a strong need for an alternative
form of learning that can be provided by training through simulation, in order to increase the quality of medical education.

**P17**

**Should Simulation Based Medical Training be integrated into final year medical student curriculum in order to better prepare for Foundation Training?**

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**Aim**

Foundation Training Programme acts as a bridge from medical school to specialist training. The Royal College of Physicians refers to Foundation Training (FT) as “practical experience needed to work independently”, however many students feel under-prepared for this daunting step. High fidelity simulation may be a valuable tool in bridging this gap through exposure to clinical scenarios in a controlled environment.

**Methodology**

7 final year medical students participated in 2 week Simulation Training (ST) in which candidates portrayed the role of Foundation Doctor. Scenarios covered clinical pathologies including heart failure and pneumonia followed by a formal debrief. Data from focus groups and feedback forms before and after ST were analysed to determine candidate's concerns about FT and benefit of ST in addressing these.

**Summary of Results**

Pre-simulation: All students did not feel prepared for FT, particularly highlighted was a lack of practical exposure in making clinical decisions.

Post-simulation: All felt empowered to make clinical decisions through learning from practical experience with ST forming a link between theory and real life. All of the students felt ST would be useful in medical school training. This small study found ST to be an effective tool in helping medical students ease into FT.

**P18**

**Learning Through Simulation: Positive Experiences**

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Simulation has been ranked as an innovative and effective educational model among the changes in nursing education and modern health care. I had been following the studies in simulation practised in the West, especially in the U.S.A. Hence, I corresponded with the authorities in the simulation lab in Health Science Centre in University of Texas in Texas, U.S.A, to which I was accepted as an observer between January - June 2013. It is a detailed educational centre in Standard patient and home care education with two intense care, emergency, trauma, gynaecology and paediatrics. My own observations in UTHSCSA support the findings in literature which indicate the use of simulation labs in student education has increased the student success in communication, clinical skills, critical thinking, problem solving, decision making, interdisciplinary collaboration and self confidence. I prepared a Project about this subject and we bought a High Fidelity Simulator and started to set up our simulation lab. I will perform the application of my dissertation called “High fidelity simulator and the effects of standard patient use on nursing undergraduate students’ thorax and heart examination skills”. I will share my observations and experience in UTHSCSA in my poster presentation.

**P19**

**Efficiency of Mechanical CPR Device during Transportation of Cardiac Arrest Simulated Mannequin**

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High-quality chest compression and minimizing interruptions is important in the management of cardiac arrests. Manual CPR is tiring and the quality of chest compressions reduces within 1-2 min. The chest compressions quality may be affected during the transport process. Mechanical chest compression devices enable high-quality CPR to be sustained for long periods and during patient transport. These devices allow uninterrupted chest compression in the defibrillation phases. There is limited study that using these devices improves chest compression quality. The aim of this study is to determine quality of chest compression using a mechanical CPR device on the high-fidelity simulated manikin cardiac arrest during transport.

**Materials and Methods**

Descriptive study, chest compressions quality (compression rate, depth, hands on percentage) was detected. LUCAS (Lund University Cardiac Arrest System) used as mechanical CPR device and a high fidelity simulated manikin was used to simulate cardiac arrest patient.
Results
Total CPR performance time was 10:03 minutes. Time interval was divided into 3 periods. First interval was manual CPR performance (before mechanical CPR device application) [Time period=02:39 minutes Rate:115, Depth:40.5 and Hands on time= %62.25]. Second interval was application of the device; while mechanical CPR device was applied manual CPR continued [Time period=49 seconds, Rate:111, Depth:27 and Hands on time= %80]. Third interval resembles moving manikin from 3rd floor to ambulance from stairs by the ambulance crew [Time period=06:25 minutes, Rate:102.21, Depth:42.16 and Hands on time= %78.77]

Conclusions
Mechanical CPR device was associated with significant improvements in chest compression quality performance during transport. More training is necessary to improve performance in mechanical CPR application interval.

P20

Simulation Techniques in Healthcare Education in University of Debrecen Faculty of Health Nyiregyhaza in Hungary
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Due to rapid changes in knowledge and technology and life long learning (LLL), which should satisfy the health of higher education, and that is especially true in education teachers also. Simulation techniques are being used today in a variety of programs designed to enhance the skills of students.
The aim of this poster is to describe simulation techniques currently being used in healthcare education in University of Debrecen Faculty of Health Nyiregyhaza in Hungary, and identify future directions for the use of simulation in education.
The authors will describe simulated experiences, including role playing, standardized patients, partial task trainers, complex task trainers. Next, the use of simulation in nursing programs, paramedic programs, will be presented.
The authors will conclude that, the motivation and competencies for the educators are needed to create and use meaningful simulation learning experiences in healthcare education.

Key words: competency, continuing education, health professions education, low fidelity equipment, nursing.