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**ABOUT NURSING EDUCATION AND
CLINICAL SETTINGS
A collection of abstracts**

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FOREWORD

Nursing education has developed rapidly during last decade in universities of applied sciences in Finland. Patient safety requirements in nursing have changed the educational needs and curriculum. Need for international cooperation in education and clinical context has shaped the nursing educators' work in multiple ways.

Nursing educators' work in Saimaa University of Applied Sciences includes various possibilities to work in international settings. Teaching exchange, mentoring exchange students and participating in international work groups are fruitfull and rewarding experiences for nursing educators. Work in Saimaa University of Applied Sciences provides also possibility to nursing educators to present their work in multiple different international conferences and seminars. In this publication, there is presented five of these conference or seminar presentations made by nursing educators from Saimaa University of Applied sciences. Presentations have been held during years 2014-2015.

ASEPTIC TECHNIQUE IN CHILDBIRTH AND ON THE POSTNATAL WARD

Tuula Iivarinen, MNSc, Midwife, Lecturer, Saimaa University of Applied Sciences

Reducing the risks of childbirth is a constant goal in the world of obstetrics. Serious infections such as puerperal sepsis were a common cause of maternal mortality prior to the use of aseptic techniques and the development of antibiotic therapies. The use of aseptic techniques continues to be a key factor in the safe care of mothers and newborns.

In Finland and in other western countries, 5-10 percent of mothers become ill with puerperal sepsis. After childbirth, for the next 6-8 weeks, common infections include urinary tract infections, mastitis, and wound infection. Also serious, sometimes life-threatening infections occur, such as sepsis. Many factors are known to contribute to the incidence of infections related to childbirth, and the most common risk factor in the western world remains Caesarian Sections as opposed to normal vaginal deliveries. In any C-section, the risk of wound infection is 7.4 to 9.8 times greater than non-surgical deliveries. Prophylactic use of antibiotics is indicated in many cases. In Finland during 2012, 16.3 percent of 59 038 (slightly over fifty-nine thousand) births were C-sections. The World Health Organization recommends a percentage of only 10-15 percent as a goal. Infections related to childbirth slow down recovery, cause suffering for the new mother, prolong hospital stays, and increase health care costs.

It has also become clear that the general health and weight of the mother should be given attention as metabolic disorders and obesity have had an effect on an increase in the incidence of postnatal wound infections (BMI over 35 kg/m²; 2.5 times the risk).

Research has revealed the most common situations where mistakes in aseptic technique occur. The most important factors in preventing infection include good handwashing on the part of the staff and family members/visitors, not rushing

through procedures, correct placement of patients on the ward, and adequate space and environmental cleanliness.

"Aseptic Techniques during Childbirth and on the Maternity Ward", for presentation in St. Petersburg on March 26th, 2014.

References

Anttila, V-J., Hellsten, S., Rantala, A., Routamaa, M., Syrjälä; H. & Vuento, R (toim). 2010. Hoitoon liittyvien infektioiden torjunta. Suomen Kuntaliitto. Porvoo.

Huovinen, M. & Sileekangas, S. 2010. Synnyttäjän ja vastasyntyneen aseptisesti turvallinen hoitopolku kun äidillä on MRSA, hepatiitti C -virus tai HIV. Opinnäyte-työ. Tampereen ammattikorkeakoulu. osoitteessa

http://theseus17-kk.lib.helsinki.fi/bitstream/handle/10024/23887/Huovinen_Mira_Sileekangas_Suvi.pdf?sequ=1 (hakupäivä 9.2.2014).

Paananen, U., Pietiläinen. S., Raussi - Lehto, E., Väyrynen,P. & Äimälä, A-M. (toim.). 2006. Kätilötyö. Edita. Tampere.

Terveyden ja Hyvinvoinnin laitos. 2014. Tilastot. Perinataalitilasto – synnyttäjät, synnytykset ja vastasyntyneet 2012. Liitetaulukko 1: Synnyttäjät ja synnytykset 1987, 1992, 1995, 2000, 2002, 2004, 2006 – 2012. http://www.thl.fi/fi_FI/web/fi/tilastot/aiheittain/seliterveys/synnytykset/perinataalitilasto (Accessed on 9 Sept 2014)

Tynkkynen A-M. 2012. Synnytyksiin liittyvät infektiot: Esiintyvyys ja riskitekijät. Puerperal infections: prevalence and risk factors. Itä-Suomen yliopisto. Lääketieteen koulutusohjelma. Kuopio. Osoitteessa: http://epublications.uef.fi/pub/urn_nbn_fi_uef-20130051/urn_nbn_fi_uef-20130051.pdf (Accessed on 9 Sept 2014).

GOOD HAND HYGIENE IN HEALTH CARE PROVISION

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It is possible to prevent about 20-30% of nosocomial infections (1,2). The primary keys to prevention are the establishment of an infection registry and education in infection prevention and control along with the most effective methods to use on the wards (3). Common preventive methods to be used on any ward include the use of good hand hygiene, protective equipment, of these, good hand hygiene is the single most important procedure in controlling the spread of infection on the ward and protecting the patient from nosocomial infection during the hospital stay. This abstract deals with hand hygiene. The costs of proper hand hygiene are less than 1% of the costs related to the treatment of nosocomial infections (5,6).

Good hand hygiene begins with washing hands with soap and water (15 to 30 s) only when they are contaminated with secretions or are visibly dirty. At all other times, the use of a hand disinfectant is preferred. Hand disinfectants remove the microbes picked up from the patient and the surrounding area during patient contact. Staff, patients, and guests must use the alcohol based hand disinfectant made of denatured alcohol 70% and glycerol 2-3 % by weight (4). The hand disinfectant should be massaged into all parts of the hands for 30 seconds. Important areas for rubbing include the ends of the fingers, the palms, the thumbs, and between the fingers. In other words, the disinfectant dries through massage into the skin. Based on the evidence in professional literature, and on my own experience, the more hand disinfectant used, the better the hands stay in condition. This is due to the glycerol and other skin conditioners found in the disinfectants (3). Hands should be disinfected both before and after patient contact, before and after use of protective gloves, when dealing with invasive catheters, and before medication care (4).

Most of the hand microbes are found under and around the fingernails. Nails should be kept short and free of polish. Artificial fingernails, rings, and wrist-watches should not be present in patient care as they prevent proper hand hygiene (4,7)

During the care of patients infected with Clostridium Difficile, Norovirus, or similar pathogens, hands should be washed with soap and water and then disinfected.

GOOD HAND HYGIENE IS THE RESPONSIBILITY OF ALL.

References:

- 1 Harbarth S, Sax H, Gastmeier P. The preventable proportion of nosocomial infections: an overview of published reports. *J Hosp Infect* 2003; 54:258-66.
- 2 Honkanen, J-P, Sairaala-infektiot on harvoin hoitovirhe. *Suomen Lääkärilehti* 15/2013 vsk 68, 1077-1078.
- 3 Rintala Esa, Marianne Routamaa. Hyvä käsihygienia sairaalassa – suositus vai velvollisuus? *Suomen Lääkärilehti* 15/2013 vsk 68; 1120-1121a.
- 4 Hoitoon liittyvien infektioiden torjunta. Kuntaliitto. 2010. Porvoo.
5. Pittet D, Sax H, Hugonnet S, Harbarth S, Cost implications of successful hand hygiene promotion. *Infect Control Hosp Epidemiol* 2004;25:264-6.
- 6 Hautemaniere A et.al., Factors determining poor practice in alcoholic gel hand rub technique in hospital workers. *Journal of Infection and Public Health*. 2010 (3); 25-34.
- 7 White J, Jewelry and Artificial Fingernails in the Health Care Environment: Infection Risk or Urban Legend? *Clinical Microbiology Newsletter*, 2013, vol.35, No.8; 61-67.

ENHANCING PATIENT SAFETY IN THE HEALTH CARE: PATIENT SAFETY SKILLS

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The aim of presentation is to describe skills and tools to enhance patient safety and to describe methods for prevention of patient safety incidents. It is vital to pay attention to patient safety. For example, according to World Health Organization (WHO), in developed countries as many as one in 10 patients is harmed while receiving hospital care, and in some developing countries the risk of health care –associated infection is as much as 20 times higher than in developed countries. Health care should learn from industries with a perceived higher risk such as aviation and nuclear power plants. They have a much better safety record than health care. There is a one in one million chance of a traveller being harmed while in an aircraft while there is a one in 300 chance of a patient being harmed during health care (WHO).

Promotion of patient safety is a part of quality and risk management. Patient safety incidents are possible even when the health care staffs are skilled and committed to the work. (Finnish Patient Safety Strategy 2009 – 2013.) Usually the problem is not with technical skills of the staffs. They are able to give correct clinical care. Often the biggest challenges involve non-technical skills such as communication, teamwork, situational awareness and so on. It is important to remember that non-technical skills should not be considered in isolation from other aspects of competence. Successful task performance depends on the effective integration of both technical and non-technical skills for any situation. (University of Aberdeen: Anaesthetists`Non-Technical Skills)

Tools and skills to enhance patient safety

Crew Resource Management. Practices and communication routines to help all the available resources (knowledge and labour), are used effectively to ensure

the safety. The ANTS System is one very good framework for observing and rating non-technical skills. The ANTS System includes the following parts: Task Management, Team Working, Situation Awareness and Decision Making.

Learning from Errors. A safe organisation has clear procedures for reporting, monitoring and handling of patient safety incidents (Finnish Patient Safety Strategy 2009 – 2013). Patient safety incidents are reported and health care staff learns from them. Errors, near misses and adverse events should be dealt with in an open way and in an open atmosphere.

HaiPro is a web-based tool for reporting patient safety incidents. Reporting is easy-to-use which ensures that the users can learn from the information gathered about the safety event. It is anonymous and voluntary. This ensures confidential reporting and processing of the safety events. It does not seek to place blame. The HaiPro reporting procedure and tool was developed at VTT (Technical Research Centre of Finland) in cooperation with health care units and was funded by Ministry of Social Affairs and Health, National Agency for Medicines and VTT. Awanic Ltd is in charge of developing and maintaining the HaiPro system.(www.hapro.fi)

The Patient. Patients/ clients and their family members should be actively involved in improving patient safety. They shall be listened to, and be involved in the planning and implementation of care. It is also important to encourage them to tell the necessary background information (symptoms, concerns) and express concerns.

Technical tools and prevention. For example, the Identification bracelet is one way to confirm the identity of a patient. “Quiet zones” involve establishing a quiet area for preparing medications. A physical blocker can prevent an adverse event. Backup routines and double-checks should be a natural part of the work routine.

A Surgical Safety Checklist. Problems associated with surgery account for half of the avoidable adverse events that result in death or disability (WHO)

WHAT ARE THE FACTORS CONTRIBUTING TO SUPPORT NEEDS FOR FAMILY MEMBERS OF STROKE PATIENTS?

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Introduction: Stroke is the leading cause of death and disability around the world. In Finland, every year about 14 000 people suffer from stroke. Usually family members take care of survivors. The purpose of this study is to develop a substantive theory about emotional support for the family members of stroke survivors. The research question was: How do family members experience emotional support in an acute ward after the stroke diagnosis? In this abstract the factors contributing to support needs are part of the developing theory.

Methods: Open interviews were done with family members of stroke survivors. Sixteen female and two male subjects spoke freely about their experiences. The data was analyzed according to grounded theory –method.

Results: a) Going through a traumatic beginning: In this phase family members were in shock and lived in the moment. b) Falling into depression: Many became depressed and felt loss of control over life. c) Feeling negative emotions: Mistrust and anger were present. d) They were adrift: Feeling outside everything that was real. e) Coping: They saw the light at the end of the tunnel. f) The silent waiting for support: They wanted the nurse to approach. Clarifying conversations and honest information were needed.

Conclusion: Nurses must take into account the life situation of family members of stroke survivors, enabling them to better understand and support the family during this time of change and challenge.

NURSING STUDENT ASSESSMENTS OF RESEARCH UTILIZATION BY NURSING TEACHERS

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There is only a little knowledge about research utilization in nursing education and the knowledge is also partially contradictory. There is quite a lot of research utilization in nursing education, but it is mostly done by students during independent studies (Heikkilä 2005), but nursing students notice only rarely research utilization in the classroom (Mattila et al 2004).

The aim of this research was to describe research utilization by nursing teachers from the student point of view. The data were collected with a structured online questionnaire from 202 third year nursing students in 9 different bachelor's degree programmes from around Finland. The data were analysed with statistical methods. Variables formed the basis of the sum of variables in factor analysis including: the use of research-activating teaching, evidence-based education, interdisciplinary education and a traditional nursing education. Analysis was done by using non-parametric tests.

The results revealed that nursing teachers used mostly evidence-based teaching and traditional teaching and female students thought that there was more utilization of research-activating teaching than did male students. Students with previous healthcare studies estimated that teachers used more evidence-based and multidisciplinary teaching than students with no previous healthcare education.

The results might be applied to nursing education and nursing teacher development, and could be utilized in enhancing evidence-based education and practice.

References:

Heikkilä A. 2005. Ammattikorkeakoulusta valmistuvien hoitotyön opiskelijoiden tutkitun tiedon käyttö. *Annales universitatis Turkuensis*.

Mattila L-R et al 2004. Tutkimustiedon hyödyntäminen klinisessä hoitotyössä ja sen opiskelussa. *Tutkiva Hoitotyö* 2 (4), 30–35.