Nursing program
– Oral
Session 4
Educational issues

NP O-1

European cardiovascular nurses and allied professions’ practical skills in cardiopulmonary resuscitation

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Purpose: The purpose of this study was to test practical skills of cardiopulmonary resuscitation (CPR) in European cardiovascular nurses and allied professions.

Methods: Eighty-six delegates at the Spring Meeting on Cardiovascular Nursing in Malmö, Sweden, in 2008, were recruited for this study. Laerdal Resusci Anne SkillReporter manikins connected to a computer with the Laerdal PC SkillReporting System were used. The participants were told to perform CPR according to the "new"guidelines from 2005; 30:2 for three minutes.

Results: 88% of the tested participants were nurses and 79% were female. Mean age were 42 years (range 19–63 years). They came from 14 different European countries, though one third was from Sweden. About two thirds had trained CPR within the last year. Seven per cent had no previous CPR training. According to practical skills the average inflations per minute were five (SD+1.5), average inflation volume 992 ml (SD+423) and average flow rate 857 ml/second (SD+401). According assessment of chest compressions the average compression rate was 121 (SD+22.5), average compression per minute 79.5 (SD+14.4), average compression depth 43.8 mm (SD+9.4) and average compression duty cycle 43.8% (SD+5.7). Hand position "too low"was the most common committed error.

Conclusion: The practical skill in CPR among the tested delegates was rather satisfying regarding chest compressions. However, there were wide ranges as shown by large standard deviations. Regarding ventilations, too large volumes together with flow rates as high as those performed by many of these delegates may easily lead to gastric inflation during clinical CPR.

NP O-2

Education in cardiopulmonary resuscitation in Sweden and its clinical consequences

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Aim: To describe the use of cardiopulmonary resuscitation (CPR) training programmes in Sweden in a 25 years perspective and relate it to out of hospital cardiac arrest (OHCA) who receives bystander CPR.

Methods: In this retrospective study based on register data, 1983–2007, the number of rescuers and instructors educated in different CPR training programmes in Sweden are described as well as the increase in bystander CPR in OHCA over time in a national perspective.

Information was gathered from the Swedish CPR training and the Swedish Cardiac Arrest Register (SCAR).

Results: The CPR education in Sweden functions according to a cascade principle (instructor trainers who train instructors who then train rescuers in CPR). Since 1989, 5000 instructors trainers have taught more than 50.000 instructors who have taught nearly 2 millions of Sweden’s 9 millions inhabitants adult CPR. In addition since 1989, 51.000 new rescuers in advanced life support (ALS) and since 1996, 41.000 new rescuers in AED defibrillation.

As a consequence of this CPR training there has been an increase in bystander CPR attempts performed by non health care providers has increased from 66% to 77% during the same period.

Conclusion: By using a cascade principle for CPR education nearly 2 million rescuers have been educated in Sweden between 1989 and 2007. This has resulted in a marked increase in bystander CPR attempts.

NP O-3

Cognitive recovery after sudden cardiac arrest: a wake-up call for survivors and health care providers

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social activities and quality of life. It also affects the patients’ ability to benefit from hospital-based education programs and hence the participation in their own recovery process. Nurses play an important role in detection and assessment of cognitive function through the recovery process.

**Aim**: The literature on nursing care after sudden cardiac arrest that focuses on cognitive impairment and recovery is analyzed and synthesized with the purpose of describing the spectrum of cognitive impairment and identifying screening tools to guide detection and assessment. In addition appropriate evidenced-based nursing interventions to facilitate cognitive recovery in survivors after sudden cardiac arrest described in the literature will be analyzed.

**Method**: An integrative review was conducted. The databases searched were PubMed, Scopus and CINAHL. Terms search were ‘sudden cardiac arrest’, ‘cognitive recovery’ and ‘assessment/interventions’.

**Results**: Research on measuring instruments and interventions to assess and facilitate cognitive recovery after sudden cardiac arrest are scarce. The Mini-Mental State Examination is frequently used in clinical practice, although it is not sensitive to mild cognitive impairment. No nursing interventions have been found that focus on cognitive recovery.

**Conclusion**: For health care providers to systematically detect and assess cognitive recovery appropriate screening tools must be identified. Further research and development on nursing interventions to facilitate cognitive recovery in survivors after sudden cardiac arrest described in the literature will be analyzed.

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**NP O-5**

**Patient education in a representative sample of patients having elective cardiac surgery in Iceland**

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**Aim**: The aim of this study was to describe the perceived education and satisfaction with that education among patients undergoing elective cardiac surgery (CABG +/- AVR or AVR) at the Landspitali University Hospital in Iceland.

**Method**: This study used a descriptive, prospective correlational panel design. Data were collected with a questionnaire, at the hospital and at home six weeks later. Questions addressed patient education, symptoms, support and satisfaction with education, care and support as well as anxiety and depression that were measured with the Hospital Anxiety and Depression Scale. 111 patients who had surgery from January 15 until July 15, 2007, were invited to participate and 66 accepted.

**Findings**: The data analysis is not yet completed. The findings will describe the patients’ anxiety, symptoms, pain, perceived education and support and the correlation between those variables.

**Conclusion**: The preliminary findings indicate that the nursing care of cardiac surgery patients could be improved by identifying patients who are anxious per-operatively and provide them with individualised patient education at the hospital. Introducing post discharge follow-up is likely to increase patient satisfaction and recovery at home.
Session 7
Living with heart disease

NP O-6

Health-related quality of life in women with coronary artery disease
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Background: Women with coronary artery disease (CAD) have reported worse health-related quality of life (HRQOL) than men. Objectives: The purpose of this study was to explore HRQOL in women with CAD undergoing coronary angiography. Specifically, the effects of age and depressive symptoms on HRQOL were examined.

Method: Data were obtained from the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease (APPROACH) database. A total of 1034 women underwent coronary angiography between February, 2004 and January, 2005. Questionnaires measuring HRQOL and depressive symptoms were mailed within 1 week of index cardiac catheterization.

Results: There were 437 women (42.3%) who responded to the questionnaires. After adjusting HRQOL scores for sociodemographic and clinical variables, depressive symptoms were the strongest predictor of HRQOL; increased age was associated with worse physical functioning and positive disease perception; higher BMI with anginal stability; revascularization with anginal stability and physical functioning and positive disease perception; higher BMI predictor of HRQOL; increased age was associated with worse symptoms and function (p<0.001); Sense of coherence contributed to quality of life: (1) physical domain: co-morbidities (p<0.001), previous myocardial infarction (p=0.013), ejection fraction (p=0.011), length of hospital stay (p=0.005) symptoms and function (p<0.001); (2) psychological domain: previous myocardial infarction (p=0.031) and symptoms and function (p<0.001); and (3) environmental domain: education (p=0.033) and symptoms and function (p=0.003).

Conclusion: Sense of coherence was an important determinant of quality of life domains in female MI survivors. Other factors, like self-reported symptoms and function were identified. These specific factors could guide clinicians in making treatment decisions that optimize the quality of life of their patients. Further research is needed to elucidate additional determinants of quality of life.

NP O-7

Determinants of quality of life in older female acute myocardial infarction survivors
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Background: Survival rates of coronary artery disease (CAD) are increasing, and therefore a growing number of persons are living longer. The majority of older persons are women. Hence, it is of particular interest to identify which characteristics are related to impairments or improvements in the quality of these extended life years in female myocardial infarction (MI) survivors. Method: A postal survey was conducted in 145 women, aged 62–80 years, three months to five years after MI. Self-reported socio-demographic and clinical data and hospital medical records data were collected. The sense of coherence scale (SOC-29) and the World Health Organization Quality of Life Instrument Abbreviated (WHOQOL-BREF) were used.

Results: We found a significant difference in quality of life between weak, moderate and strong sense of coherence groups (p<0.001). Sense of coherence contributed to the level of all quality of life domains (p<0.001). Several clinical characteristics contributed to quality of life: (1) physical domain: co-morbidities (p<0.001), previous myocardial infarction (p=0.013), ejection fraction (p=0.011), length of hospital stay (p=0.005) symptoms and function (p<0.001); (2) psychological domain: previous myocardial infarction (p=0.031) and symptoms and function (p<0.001); and (3) environmental domain: education (p=0.033) and symptoms and function (p=0.003).

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NP O-8

Diabetes and type D personality predict chronic anxiety in cardioverter-defibrillator patients: a multi-center study
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Little is known about the prevalence of chronic anxiety in patients with an implantable cardioverter defibrillator (ICD). In a multi-center study, we examined 1) the prevalence of patients with chronic anxiety, and 2) the predictors of chronic anxiety at 12 months. ICD patients (N=222; 81.1% males; mean ±SD age=60.8 ±10.4 years) recruited from three hospitals, who were anxious at the time of implantation, comprised the sample for the current study. Patients completed the Type D Scale at baseline and the State Trait Anxiety Inventory (state measure) at baseline and 12 months. A cut-off ≥40 on the STA1 was used to indicate...
probable levels of clinical anxiety. At 12 months, 51.8% (115/222) patients were still anxious. Diabetes (OR:4.57; 95% CI:1.65-12.66; p=.003) and Type D personality (OR:2.81; 95% CI:1.48-5.36; p=.002) were independent predictors of 12-month anxiety, adjusting for demographic and clinical variables including ICD therapy during follow-up. The prevalence of anxiety at 12 months in the 118 patients with no risk factors was 39.8%, whereas the prevalence was 65.4% in the 104 patients with either diabetes or Type D (p<.001). More than 50% of ICD patients anxious at the time of implantation were still anxious at 12 months, indicating a high level of chronicity. Diabetes and Type D personality were independent predictors of chronic anxiety. ICD patients anxious at the time of implantation should be closely monitored and offered adjunctive psychosocial intervention if symptoms do not remit spontaneously in order to prevent adverse health outcomes.

**Method:** Patients were invited between 6 and 10 months after hospitalization for CAD for assessing their beliefs about the necessity of medication for controlling their illness and their concerns about the potential adverse consequences of taking it. The Beliefs about Medicines Questionnaire (BMQ-specific) and Medication Adherence Report Scale (MARS_5) was used to assess beliefs and adherence, respectively. One open ended question regarding possible discomfort with their medication was added.

**Findings:** The study population consisted of 238 patients, mean age 66 ± 9 years (min.30,9; max.84,7), 25% female. Sixteen percent had suffered stable CAD and 84% unstable CAD. The majority of patients (90%) had strong beliefs in the necessity of the medication for maintaining health. However, 20% reported strong concerns about the potential negative effects of medication. The difference between positive and negative statements was positive which means that the advantages with the medication outweighed the disadvantages. One third reported discomfort with medication. Beliefs about the necessity of medicines were associated with high adherence (p<0.05). Concerns about medicines were not associated with low adherence.

**Conclusion:** The findings indicate that patients with CAD have strong beliefs in the necessity of the medication and that adherence to medication is high.

NP O-9

Beliefs about prescribed medicines associated to treatment in patients with cardiovascular disease

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**Background:** Patients with cardiovascular disease (CAD) are treated with a number of medicines to prevent recurrence. How medicines are used could be related to personnel beliefs about medication and experiences of taking it.

**Purpose:** To assess beliefs about prescribed medicines and to assess relations between beliefs and self-reported adherence among patients with CAD.

NP O-10

Heart failure management programs in Finland

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The aim of this study was to identify heart failure management programs in Finland and assess how patient education and follow up worked out. The research was carried out in 2007. There are 59 specialized health care hospitals in Finland. 76% of those had systematic guidance and follow up programs for cardiac patients and had a cardiac nurse or a heart failure (HF) nurse. A few hospitals (15%) had 2–3 cardiac or HF nurses. The questionnaire was developed for this survey. It included Questionnaire about Heart Failure Programs in Europe developed by UNITE-study group of the Working Group on Cardiovascular Nursing. The questionnaire also included some open questions. The questionnaire was posted to heart failure nurses and cardiac nurses. There were 8 HF nurses, 24 specialist cardiac nurses and 18 cardiac nurses in Finland during the year 2007. They were all Registered nurses (RN) and only one had Masters’ degree. 64% of the nurses had 6–25 years of working experience with cardiac patients. Only few (13%) worked fulltime with heart failure patients.

17% of the hospitals had a systematic hospital-based HF management program. 19% have begun to develop HF management programs. Most HF management programs were based on European guidelines and they were developed by the
hospitals. Some of the hospitals gave systematic patient education and the HF nurse or cardiac nurse had an important role in this. HF management program, systematic patient education and follow up system included in 79% of the hospitals a multidiscipline team, in 41% of the hospitals they included rehabilitation and/or telephone follow up, in 38% of the hospitals they included co-operation with primary care and in 44% of the hospitals they included nurses’ clinics. 99% of the hospitals gave verbal patient education and group education was given in 51% of the hospitals. Computer- or video -based education was given in 8% of the hospitals. All patients got personal education. Heart failure patients’ systematic follow up was not achieved according to the guidelines and follow up appointments by nurses were not used regularly. 15% of the cardiologist, 28% of the specialized doctors and 23% of other doctors had follow up appointments for their heart failure patients. Rests of the follow up meetings were organized in primary care. At least 10 hospitals are developing heart failure management programs. Number of heart failure clinics and heart failure nurses are increasing all the time.