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PERCEPTION'S OF FUTURE PHYSICIANS ABOUT HOMOPHOBIA

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Background Lesbian, gay, bisexual, transgender and intersex (LGBTI) persons represent an underserved-population susceptible to health-care inequalities. Homosexuality is now accepted as a normal variant of human-sexuality, but homophobia among health-care professionals is not well documented. Establishment of trustful doctor-patient relationships is impossible in the presence of homophobia. Therefore in this study, it is aimed to determine whether homophobia existed and how it is effected in a sample of the first and last year medical students (FLYMS), future doctors.

Methods In this descriptive study data is collected with a questionnaire on socio demographics, Hudson and Ricketts Scale (HRHS), some experiences with LGBTI individuals from FLYMS in a university via their internet groups.

Results Out of 802 students, 28,9% participated (56,0% last year). Average age is $22,0 \pm 0,9$ and $24,0 \pm 1,0$, and share of the female students is 47,8% first year and 50,4% last year respectively. 52,8% of the students read a book, 62,7% watched a movie, and 53,6% educated on LGBTI before the survey. Frequency of a LGBTI member in the family is 3,3%, and 43,3% (repeated cases) among friends. 3 student declared their sexual identity as LGBTI. Average score of HRHS is $81,06 \pm 30,6$ (comparatively high-indicating homophobia). There is no difference between classes in terms of HRHS score medians. Female students' scores is high ($p < 0.001$) than males, 45,9% declared LGBTI patient will not affect their service provision, 36,4% are not sure how to communicate with LGBTI persons. When a student have t interpersonal contact with LGBTI friends, watched movie and read a book about LGBTI persons and untied to traditions, HRHS score decreases ($p < 0.001$) ie, these are associated with positive attitudes.

Conclusions Medical students' homophobia if left unchallenged, will hinder care provided to LGBTI patients. Physician homophobia may disallow a health doctor-patient relationship and may cause a decrease in patient's ability to disclose sensitive issues. Students should be trained on to respect and conscious about LGBTI person's health rights, and equity to health service access. Activities of student groups on sexual orientation and sexual identity should be supported.

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PATIENT SAFETY: LAST YEAR MEDICAL STUDENTS' KNOWLEDGE ABOUT INFECTION CONTROL IN A UNIVERSITY HOSPITAL-2014, TURKEY

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Background Health-care-associated infections/hospital-acquired-infection-HAI affects patients in a hospital or other health-care facility, and is not present or incubating at the time of admission. These infections are commonly transmitted when health care providers become complacent and do not practice correct hygiene

regularly. Moreover, some medical procedures bypass the body's natural protective barriers. Since medical staff moves from patient to patient, the staff themselves serves as a means for spreading pathogens. Essentially, the staff acts as vectors. In the United States, it is estimated roughly 1.7 million HAIs, cause or contribute to 99,000 deaths, in Europe, the category of Gram-negative infections are estimated to account for two-thirds of the 25,000 deaths each year. In this study it is aimed to investigate last year medical students' (LYMSs) basic knowledge on contamination, basic rules and merits of prevention on HAIs.

Methods A questionnaire was administered to LYMSs containing questions on their sociodemographics and some questions about HIA (knowledge, practice and prevention of contamination). Of the LYMSs, 70% participated in this descriptive study.

Results Of the respondents, 65,8% were male, 55,9% experienced work accident, 59,6% had knowledge about HIA from various sources. Average score of knowledge questions was 17.4 (min 5, max 25). No association was found between the score and gender, formal training on HIA. Significant relation was found between knowledge score and hospital infection control program awareness (Mann Whitney U, $p = 0.001$), work accident history (Mann Whitney U, $p = 0.029$).

Conclusions Changes in undergraduate medical training mean that students have direct patient contact from an early stage of their training. These results raised concerns about medical students' knowledge about infection control. In spite of the vigorous efforts of the Hospital Infection Control Committee since 1984 in this hospital, HIA is moderately frequent. The study is shared with the Faculty. Therefore faculty should consider the need for a more structured model for the teaching and assessment of infection control for medical-students.

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DESIGN RESEARCH TOWARDS RESILIENT CYBER-PHYSICAL EHEALT SYSTEMS

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Background eHealt systems are cyber-physical systems (CPS) making safety-critical decisions based on information from other systems not known during development. To achieve the trust of users, measures of safety have to be taken into consideration in accordance with the "privacy by design" approach. This requires secure storage of information and guaranteeing safe exchange of data preventing unauthorised access, loss of data and cyber-attacks.

Methods In this design research, a proof-of-concept for eHealth CPS is built utilising 1) general principles of information security, 2) principles of building of cyber trust and 3) Hevner & Chatterjee's theory of complex software-intensive system.

Results Resilient CPS consists of two sub-systems: the proper resilient system and the situational awareness system (main prerequisite towards cyber security). In a system of CPS, three networks are composed: hardware, software and social network. Trust should be systematically built up at all layers. The resilient hardware network is the basis on which the information sharing between different stakeholders could be created via software layers. However, the trust inside social networks quantifies the pieces of information that will be shared - and with whom.

Conclusions From citizens' point of view, eHealth is wholeness in which sectors of information security (availability/confidentiality/integrity) hold true. Present procedures emphasise confidentiality

at the expense of integrity and availability, and regulations/instructions are used as an excuse not to change even vital information. The mental-picture of cyber security should turn from “threat, crime, attack” to “trust”. Creating confidence in safe digital future is truly needed in the integration of the digital and physical world’s leading to a new digital revolution. The precondition for the exchange of information “trust” must be systematically built at every CPS’ level (platform, software, people).

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ASSESSMENT OF HOSPITAL QUALITY AND HEALTH CARE PROVIDERS PERFORMANCES DURING MNH CARE IN BANGLADESH

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Background Despite the progress towards the MDG 4 and 5, compared to the developed world maternal and newborn deaths are still high in Bangladesh and poor quality of maternal and newborn health care is often blamed for this high mortality. This study assessed two important components of quality of maternal and newborn health care namely, infrastructure and performance of health care providers of public hospitals in Bangladesh.

Methods Cross sectional survey was conducted to measure the quality of infrastructures and assess the clinical care performance of the health care providers related to maternal and newborn services in 14 district and sub-district level public hospitals of Thakurgaon and Jamalpur districts. Six components including human resource, physical infrastructure, infection prevention, equipments/logistics/supplies, essential drugs and recordkeeping were assessed under infrastructure. Maternal and newborn care services provided by the health care providers were evaluated during antenatal, postnatal, delivery and newborn care. The study was conducted from November to December 2011. The average of the sub-items of each item was calculated and then the mean average of the items were estimated.

Results The percentage of mean average scores of all items of infrastructure for district hospitals, maternal and child welfare centres and upazila health complexes were 57.1%, 52.7% and 45.9% respectively, which were below the cut-off point (60.0%). None of the health care providers of three types of government hospitals obtained 100% score in any areas namely antenatal care, post-natal care, delivery care and newborn care.

Conclusions Quality of infrastructure of health facilities, and clinical care performance of the health care providers during discharging maternal and newborn health services were found poor in district and sub-district level public hospitals of Bangladesh.

Trauma Care and Rehabilitation

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ASSOCIATION BETWEEN APACHE II SCORES, TRISS SCORES, AND THE OUTCOME OF CARE IN TRAUMA PATIENTS

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Background In recent years, several trauma scoring systems have been developed and validated for use in prediction of outcome. TRISS combines physiologic and anatomic components of injury with age to characterise the severity of injury. The APACHE II score consists of 12 physiologic variables, pre morbid health, and patient age. To investigate the association between APACHE II score, TRISS score and the outcome of care among trauma patients.

Methods The retrospective descriptive study was undertaken during 2012–2014. Medical records of 209 patients admitted to the Trauma ICU were reviewed for age, sex, admitting APACHE II and TRISS scores, length of ICU stay and outcome of care. Outcome of care referred to whether the patients died or survived at discharge. Multiple logistic regression was used to construct the prediction model.

Results Factors significantly and independently associated with the outcome of Trauma ICU care were APACHE II score, TRISS score, and length of ICU stay. For each point increased of APACHE II score, patient survival rate decreased 1.12 times (Adjusted odds ratio: AOR = 1.12, 95% CI = 1.04–1.22). However, when ICU length of stay increased 1 day survival rate increased 1.26 times (AOR = 1.26, 95% CI = 1.12–1.41). Similarly, when TRISS score increased 0.1 point, survival rate increased 5.42 times (AOR = 5.52–532.67).

Conclusions Less severe illness (lower APACHE II score), higher probability of survival (higher TRISS score) and longer ICU length of stay significantly predicted patient survival in the Trauma ICU.

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NUTRITIONAL STATUS OF CRITICALLY ILL PATIENTS AND THE OUTCOME OF CARE

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Background Malnutrition is one of the most common problems found in critically ill patients. It is often associated with increased mortality rate and other complications in an intensive care unit (ICU). Previous studies indicated that 40%–50% of critically ill patients are malnourished and an average of 5 kilogram body weight is lost when they are discharged.

Methods This prospective study was conducted to survey the nutritional status of critically ill patients in the Trauma surgical Intensive Care Unit (ICU Trauma) in Khon Kaen Hospital, Thailand, and identify potential outcomes of malnutrition among these patients. From October 2012 to July 2013, 282 patients were screened with the Nutrition Alert Form (NAF) in the second day of their admission. Higher NAF scores signify poorer nutritional status. The patients were then followed until they were discharged from ICU Trauma.

Results Revealed that, 2 days after admission, over a half of the patients (n = 180, 63.8%) were withheld from oral intake of food and fluids. Moreover, most patients were severely malnourished (n = 240, 85.1%). When considering the success of endotracheal tube (ETT) removal as an outcome of care, it was found that those with successful ETT removal had significantly lower NAF score (= 13.61, S.D. = 4.4) compared to those who failed ETT extubation (= 17.08, S.D. = 9.7, t = -3.345, p = 0.001). NAF scores were not different between patients who survived and those who died in this study. These results indicated that critically ill patients are at high risk for malnutrition. Proper