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).

779 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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780 ASSOCIATION BETWEEN APACHE II SCORES, TRISS SCORES, AND THE OUTCOME OF CARE IN TRAUMA PATIETNS

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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 (AOD = 1.26, 95% CI: = 1.12–1.41). Similarly, when TRISS score increased 0.1 point, survival rate increased 5.42 times (AOD = 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.

781 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

nutritional management may lead to improved care outcome such as successful ETT removal.

Conclusions Critical care settings should develop a nutritional management protocol for critically ill patients.

782 ADVERSE CHILDHOOD EXPERIENCES AFFECT PSYCHOLOGICAL OUTCOMES OF INJURY IN URBAN BLACK MEN IN THE US

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Background Injury is not evenly distributed across race and class. In the U.S., urban Black men are at high risk for injury and poor outcomes from injury. Our purpose was to examine the contribution of adverse childhood experiences (ACEs) to post traumatic stress disorder (PTSD) and depression after recent serious physical injury in Black men.

Methods This prospective, cohort follow-up study consecutively enrolled adult Black men hospitalised for serious injury at a Level I Trauma Centre. Men with head injury or currently receiving medical treatment for PTSD or depression, and those in police custody were excluded. ACES (7) were collected by self-report during the intake interview. The outcomes of PTSD (measured by the PCL-C) and depression (measured by the QID-SR_{16}) were collected during in-person interviews in the men's homes 3 months after hospital discharge.

Results 320 (mean age = 36.8 years) were enrolled. Injury was classified as unintentional (50%) or intentional, i.e. the result of interpersonal violence (50%). The mean number of ACEs did not differ between intentional and unintentional injuries (2.64 vs. 2.35, $p = 0.187$). 81% reported at least 1 ACE, 45% reported 3 or more ACEs and 34% reported $\geq$ 4 ACEs. Intentional injuries were associated with higher mean PCL-C scores (42.4 vs. 33.7, $p < 0.001$) and higher mean QID-SR scores (10.0 vs. 7.6, $p < 0.001$). In adjusted multiple regressions, younger age, intentional injury, and number of ACEs were independently associated with higher PCL-C scores. Intentional injury and number of ACEs were independently associated with higher QID-SR scores.

Conclusions This sample of urban Black men reported substantial histories of childhood trauma and adversity. Results provide evidence that adverse childhood experiences increase the risk for depression and PTSD after serious injury. (Funded: NIH R01NR013503 to Dr. Richmond)

783 IMPACT OF HELMET USE ON TRAUMA CARE OUTCOME IN MOTORCYCLE ACCIDENT PATIENTS OF KHON KAEN HOSPITAL

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Background Road Traffic Injury (RTI) is the burden and serious problem, especially in Thailand, it is the major problem. The policy of helmet use was established for many years, but the proportion of helmet use is still unsatisfied. We would like to show that how do the helmet use impact in term of outcome and motivate our patients to use it, as well.

Methods Cross sectional study and data were extracted from trauma registry system of Khon Kaen Hospital (KKH). We enrolled motorcycle accident patients who visited or/and admitted to our hospital between January 2014 to December 2014. We use Chi-square and Fisher exact test for analysis data.

Results Overall we enrolled 2,473 eligible patients. Of these, helmet used patients were 11.85% (293). Low Glasgow Coma Scale (GCS) [OR (odds ratio), 6.39; 95%, CI: (confidence interval), 3.63–11.24; $p < 0.0001$], High Abbreviated Injury Scale (AIS) [OR, 3.63; 95%, CI: 2.50–5.27; $p < 0.0001$], and mortality rate [OR, 10.06; 95%, CI: 2.47–40.84; $p < 0.0001$] were associated with non-helmet used patients. Over all mortality rate was 5.78%

Conclusions This study was shown strongly impact of the benefit in helmet used motorcycle accident patients. Obviously, it was able to reduce severity of injury and mortality rate, but there was still low proportion of helmet use in these patients. The helmet use policy should be emphasised and encouraged by the Government more and more.

784 CARE AT THE RIGHT LEVEL: REFERRALS OF CHILDREN WITH BURN INJURIES AT A LARGE REFERRAL HOSPITAL

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Introduction Severe burn injuries require timely medical attention at an appropriate level of care. Correct referral of patients with burns depends on accurate estimation of injury severity. This study aims to determine how often patients at a trauma unit in a large referral hospital in South Africa are referred to the Burn Unit according the guidelines for burn referrals.

Methods Patients presenting with a burn injury to the trauma unit at the Red Cross War Memorial Children's Hospital (RXH) during a 7-months period were included in the study. Patient medical records were studied and compared to the Western Cape Guidelines for referral of patients with burns to determine the number of patients that met the criteria, as well as the number who did not meet the criteria.

Result In total, 702 patients were included in the study. The most common reasons for referral were patients "under two years of age", and "burns to special areas". Out of the 702 patients that were seen at the trauma unit, 499 were transferred to the burns unit. Out of the 499 patients who were referred, 94% met the criteria for referral. Out of the patients who were not referred to the burns unit, 80% also met the criteria for referral. This group of patients differed in that they had significantly smaller burns compared to those who were referred.

Conclusion The data suggests that most patients were referred according to the guidelines, with a potential over-triage in very few cases. However, a large numbers of patients met the criteria for referral but were not transferred to the burns unit. These burns were mostly minor burns that likely did not require specialist care. In conclusion, while referral guidelines do catch the patients that need referral, they also catch many that do not need referral.