5th Preparatory Scientific Meeting for the Students of KSAU-HS
24 Feb. 2014 12:30 pm
Convention Center,
KSAU-HS Riyadh Campus

Abstracts BOOK 2014
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FOREWORD

H.E. Dr. Bandar Al Knawy, MD, FRCPC
President, KSAU-HS & CEO, NGHA

It gives me great pleasure to introduce this booklet of the research production of our students at King Saud bin Abdulaziz University for Health Sciences (KSAU-HS). The volume and quality of abstracts published in this book represent a unique and significant achievement towards realizing our University mission of enhancing and fostering scientific research. What is special about this book is that all contents are authored by students from all Colleges of this University under the supervision of their faculty. In my own view, this is a good predictor of graduating health professionals who cares for research to make informed decision based on scientific evidence generated from high quality research.

I would like to take this opportunity to congratulate all the participating students in the Preparatory Research Conference, in addition to the scientific and organizing committees, for their hard work and team efforts to organize this important conference. From our side as leaders of this University, we will provide all possible support to encourage students’ research and similar activities in the future.
FOREWORD

Professor Youssef Al Eissa MD, FAAP, FRCPC
Vice President, Educational Affairs

Since the establishment of the King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), research has been highlighted as an important approach in realizing the mission, strategies, and activities of our University. Research is well incorporated and integrated in the curricula of all Colleges. For instance, the biomedical research block at the College of Medicine runs longitudinally through the four-year medical program where each student is expected to write a proposal, implement the research, and formulate a scientific manuscript. Therefore, it is not surprising to see this reasonable volume and high quality research that are put together in this booklet.

I am proud to convey this message to thank all students for their significant efforts, and perseverance that allow them to spend time out of their busy schedule to participate in this important conference. I would like to take this opportunity to thank all students, the scientific and organizing committees, and support staff for their collaborative efforts to ensure an organized and successful event.
FOREWORD

PROF ALI AL TUWAJRI,
Dean, Deanship of Student Affairs, KSAU – HS

As you are aware, KSAU-HS is organizing a very important university event – the preparatory meeting for the 4th scientific conference of higher education students. This meeting will be organized under the auspices of proof. youssef Al Eissa, vice president educational affairs. The event will commence on the 22 Dec 2012 and will be held simultaneously in the three campuses of the university (Riyadh, Jeddah and AL Ahsa), during which research papers will be presented in addition to the artworks representing students contributions and submissions to the 4th Scientific conference of Higher education student which will be held in Makkah on 29 April 2013 Activities include poster and oral presentations, in addition to distribution of awards for the best students. The main objective of this event is to encourage and strengthen, as well as creating conducive environment for supporting students’ research and their extra-curricular activities.
Submitted research entries coming from different colleges, statistically the submitted materials shows how our students patronize and support this annual event.
We mainly address this event “by the students, from students, to students.”
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- Dr. Mohammed Al Dubayee, Assistant Professor, Medical Education, College of Medicine, Riyadh
- Dr. Manal Bawazeer, Assistant Professor, Pediatrics, College of Medicine, Riyadh
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<td>Prof. Youssef Al Eissa</td>
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<td>13:00</td>
<td>Oral Presentation</td>
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<td>(15 minutes allocated for each study)</td>
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<td>14:00</td>
<td>Break/Poster Round</td>
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<td>15:15</td>
<td>Awards Ceremony</td>
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<td>Program Ends</td>
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# Schedule of Scientific Event

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<td>Ahmad Batarfi COM</td>
<td>Opening Ceremony</td>
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<td>13:00 - 13:15</td>
<td>Atheer Alhumaid COSHP</td>
<td>Prevalence of low back pain among medical practitioners in a tertiary care hospital in Riyadh</td>
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<td>13:15 - 13:30</td>
<td>Mushari Al Nemary COM</td>
<td>An experimental research on the effects of artificial sugar (Aspartame) on the histology and physiology of infertility and decreased fertility</td>
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<td>Eisa Al Rashidi CAMS</td>
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<td>Study of the correlation of vitamin D levels with hepatitis A/B patients</td>
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<td>Prevalence of depression and its association with socio-demographic characteristics among general population</td>
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<td>Abdulaziz Al Alwan COM</td>
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Thromboembolic disorders following isolated fracture of femur; Incidence and analysis of risk factors

Abdulaziz Hassan Al Hussain, Sami Al Eissa

Background
Several complications including thromboembolic disorders have been linked to fracture femur. A number of Western studies estimated the incidence of thromboembolic disorders between 2% and 8%. Several patient and operative risk factors have been linked to the development thromboembolic disorders. In Saudi Arabia, there is lack of studies assessing the incidence and the risk factors of thromboembolic disorders associated with fracture femur.

Objectives
To examine the incidence and risk factors of thromboembolic disorders among patients with isolated fracture femur.

Methods
The current design study was a retrospective cohort study done at King Abdulaziz Medical City. The charts of all adult patients presented with isolated fracture femur between 2002 and 2011 were reviewed. Thromboembolic disorders were defined as deep vein thrombosis, pulmonary embolism, and fat embolism.

Results
During the study, a total of 156 patients with isolated fracture femur have been identified. The majority (82.1%) were males and the average age was 32.6±17.0 years. Thromboembolic disorders were identified in seven patients which represented an incidence of 4.5%. Pre- and post-operative thromboprophylaxis (heparin) was given to the majority of patients (96.8% and 89.1%, respectively). The following factors were significantly associated with the development of thromboembolic disorders; blood transfusion, delayed mobilization, need for ICU admissions, prolonged hospital length of stay, and remote infection.

Conclusions
The risk of developing thromboembolic disorders in young traumatic patients presented with isolated femur fracture in Saudi Arabia was generally similar to the rates reported in many Western countries. Thromboprophylaxis in the current study was high and was not significantly associated with the development of thromboembolic disorders.
Patients’ characteristics and operative duration and prognosis of knee replacement at King Fahad National Guard Hospital in Riyadh

Abdulaziz Saud Al Turki, Mazen Ferwana

Background
KR is a safe and cost-effective procedure that improves patients’ quality of life, physical function and alleviates pain. The interaction between patients’ characteristics and the outcome and prognosis of knee arthroplasty is not agreed upon among physicians. The aim of our study was to examine the effects of some patients’ characteristics (age, gender, BMI and co-morbidities) on certain outcome measures (operative duration, revision rate, length of hospital stay and post-operative complications) of knee replacement. Main focus was on the association between the patients’ BMI and operative duration of knee replacement.

Methods
This is a cross-sectional chart review study. We included all patients who have undergone Knee Replacement (both unilateral and bilateral – both primary and revision) within the past five years. The study was conducted in the Orthopedics department at King Abdulaziz Medical City (KAMC) in Riyadh, Saudi Arabia, which is a tertiary hospital. The total number of patients included was 204 patients. Data were gathered from admission notes, nursing notes, operative report and discharge summary. After data collection was complete, SPSS V20 was used. P value of =< 0.05 was considered significant. We divided the data into unilateral TKR and bilateral TKR groups. Different statistical tests were used including ANOVA, correlations and T-tests.

Results
A total of 204 patients were included in this chart review study. Of those patients, 49 (24%) were males and 155 (76%) were females. The mean age was 70.1 years for males (SD±9.4). And for females the mean age was 62.7 years (SD ±8). Regarding the type of KR, 163 (79.9%) patients had unilateral and 41 (20.1%) had bilateral KR. Of the 204 patients included in this study only 9 patients (4.4%) had a normal BMI (18.5 to <25). Overweight patients (BMI 25 to <30) represented 18.1%. Obesity class I (BMI 30 to <35) and obesity class II (BMI from 35 to <40) were present in 23% and 29.9% of the patients, respectively. Morbid obesity (BMI greater than 40) was present in 24.5% of the patients. The mean duration of surgery was 126.3 minutes (SD ±30.8) for unilateral KR and 216.6 minutes (SD ±55.4) for bilateral KR. The mean length of stay in the hospital was 12 days (SD ±4.9). The complications that patients had after the operation
included 2 patients (1%) who developed Deep Venous Thrombosis (DVTs), 2 patients (1%) developed surgical wound infections and none had pulmonary embolism (PE). In our study we found that patients’ characteristics (including age, gender, BMI and co-morbidities) do not have an effect on the operative duration of knee replacement nor the length of hospital stay. The effects of patients’ characteristics on the complications and knee replacement revision rate could not be assessed because the numbers were too small to do appropriate statistical analysis.

**Conclusion**
KR is a safe and cost-effective procedure that alleviates pain and improves function. The relationship between patients’ demographics and outcome of KR is still not clear. Our study shows that patients’ characteristics particularly the BMI do not increase the operative time and do not prolong the hospital stay. We recommend that larger and controlled studies should be done to better assess this topic especially in Saudi Arabia.

**A-03**

**Evaluation of the perception of the undergraduate medical students about the role of PBL**

*Abdullah Saddiq Al Maghrabi, Dr. Andleeb Arshad*

**Objective**
To conduct a study to evaluative the perceptions of undergraduate medical students at King Saud bin Abdul-Aziz for Health Science university about problem base learning (PBL)

**Study Design**
Cross sectional survey.

**Methodology**
This study conduct At King Saud bin Abdul-Aziz University for Health Science (KSAU-HS), Riyadh, King dome of Saudi Arabia (KSA). All phase 3 medical students at KSAU-HS were selected. This included 3 batches (batch 5, 6 and 7) the total number of students were 118 students, all of them were Saudis. 33 of them were postgraduates and the rest are undergraduates (high school graduate).
Results
A total of 102 students participated and filled the questioner; the response rate was almost 86%. The participant rate in batch 6 medical student was (100%) , batch 5 (81%) and batch 7 (80%). The result showed that 60 students (59%) agreed that PBL is improving their diagnostic decision making skills. More than half of students agreed that PBL has helped to improve their thinking process and problem solving. Half of students agreed that the level of problems were at student level.

Conclusion
Based on student perceptions, PBL is improving diagnostic decision making skills, communication skills and thinking process. But this result limited to phase 3 students at KASU-HS so further studies with larger sample in more facilities are needed.

A-04
Prevalence of low back pain among medical practitioners in a tertiary care hospital in Riyadh
Ahmad Ali Batarfi, Sami Al Eissa

Introduction
Common low back pain (LBP) is one of the most important MSS. Many studies showed that LBP has higher prevalence among medical practitioners than any other MSS . In 1998, in the United Kingdom, the direct health care cost of back pain was £1632 million and the cost of informal care and related production losses £10668 million.

Methodology
This is a cross sectional study which was conducted in King Fahad National Guard Hospital (KAMC) in Riyadh. The study included a multinational team of physicians, surgeons, nurses, paramedics and other medical practitioners. We excluded from the study the retired medical practitioners and those who are not practicing clinical work at King Fahad National Guard Hospital (KAMC)

Results
The mean age of participants was 33.5 years ± 9.6 .the males were 121 (71.2%) and the females were 49 (28.8%) . the sample contained 114 (65.9%) questionnaires from Doctors and 59 (34.1%) from other healthcare professionals. The lifetime prevalence of back pain among all participants was 83.9% (146). When measuring the disability
caused by back pain we found that 135 (92.5%) had a minimal disability, 10 (6.8%) had moderate disability and only 1 (.7%) had severe disability.

**Conclusion**
There is high prevalence of back pain but only .7% needs detailed investigation and treatment. Approximately 1 in 4 visits a physician for the back pain and half of them take a sick leave. There is no significant difference between professions in the prevalence but other health professionals have more physician visits.

**A-05**

**Effects of antenatal education on primigravida perception of labor- cohort study in KAMC in Riyadh**

*A. Mohammed Al Jaloud, Hanan Al Kadri*

**Introduction**
Women always needed to be prepared for childbirth. The aim of this study is to identify the effect of antenatal education on primigravid women perception of childbirth. What make this study important is that Saudi population is under lots of inherited social, spiritual, and traditional influences that may result in false perceptions of childbirth.

**Methods**
This study is following a prospective cohort study design comparing two groups. Group A in the study was followed from the clinic where they were educated and were given a questionnaire after the delivery. Group B were primigravid women who were given a questionnaire post-partum but did not attend ANC clinic or did not receive ANE. The sample size is 250 primigravida, 69 of them in group A and 181 in group B.

**Results**
Most of women in group A found the ANE class helpful. But, there was no difference in prior level of knowledge between the two groups. There was a difference in the source of knowledge between the two groups. Most of those who attended used methods to facilitate delivery. Walking and breathing were used the most with significant difference between the two groups. There was difference between the two groups in the outcome of the childbirth. Group A had significantly less C/Ss. there was no other difference in maternal, delivery, and neonatal outcomes between the two groups.
Discussion and Conclusion
ANE was found to affect perception of labor in reducing anxiety, increasing satisfaction of the labor process and the overall perception of labor. It also was found to increase the ability to use relaxation and breathing techniques. On the other hand, ANE didn’t affect pain perception or the ability to cope with pain. ANE was reported beneficial by most of pirmigravid women in group A.

A-06
Factors contributing to low birth weight delivery
Bader Saud Al Othman, Hanan Al Kadri

Background
Low birth weight (LBW) has been defined by the World Health Organization (WHO) as weight at birth of less than 2,500 grams (5.5 pounds). Low birth weight is a major risk factor for short and long term infant morbidity and mortality. With the advance of health care provided, socioeconomic status and female education, we expected a change in the risk factors associated with the development of LBW in our population. We planned to conduct this research to answer the following question: what are the risk factors that lead to LBW.

Methods
Questionnaires were distributed to the pregnant women who were being followed up in the obstetrics and gynecology clinic in King Abdulaziz Medical City, Riyadh, Saudi Arabia and accepted to contribute to the research to collect antenatal data. Then, their files were collected after delivery to look for intrapartum, delivery and neonatal information.

Results
Out of 200 questionnaires distributed, we were able to collect 170 post-partum information. Out of 170 pregnant women who were following up in the clinic, 13 women delivered low birth weight infants. The mean birth weight was 3097.37 gm. Our data showed that women who delivered LBW infants are significantly younger, have less parity, gravida and number of living children. There was a significant association between maternal bronchial asthma and LBW delivery. The data also showed a significant association between twin pregnancy and the development of LBW. Our study showed that the gestational age for LBW infants was significantly lower than normal weight infants and that they were less frequently admitted at
nurseries and more frequently admitted at Intensive Care Nursery (ICN).

Conclusion
This study established risk factors found in the literature and was the first study on low birth weight in KAMC. We do recommend similar studies with larger samples to be done in our population in the future.

A-07
HLA mismatching and PRA in renal transplanted patients at King Abdul-Aziz Medical City
Bassam Faris Al Hassan, Salem Qurashi

Introduction
Panel Reactive Antibody (PRA) is a test used to detect anti-HLA antibodies in patients who are undergoing transplantation. A high PRA level suggests a low chance of finding a matching organ while a negative PRA suggests that a patient is at low risk of developing rejection to the transplanted organ. The aim of this study is to investigate the development of PRA post-transplantation in patients who underwent renal transplantation with the relation to HLA mismatching.

Methods
This is a retrospective study, analyzing information on 71 patients who underwent renal transplantation at King Abdulaziz Medical City, Riyadh. Demographic as well as HLA information were obtained from all patients.

Results
Majority of our patients had high HLA mismatching, only 10% had either zero or one mismatch. We compared the HLA mismatches between patients whom transformed from negative PRA pre transplantation to positive PRA post transplantation with patients whom were negative and continued to be negative post transplantation. We found that 85% of patients whom transformed from negative PRA to positive PRA had either 5 or 6 mismatches (OR 10.5, CI 95%, 1.5-71, p=0.018).

Discussion
Since HLA matching in renal transplantation is one of the major factors for the production of anti HLA antibodies, which affect graft survival, increased risk of rejection is noticed to be related to higher production of antibodies seen in higher HLA mismatching.
We found that HLA matching was very poor in the studied sample. Majority of cases (90%), had 2 or more mismatches. We also found an association between high production of anti-HLA antibodies and poor mismatching in our studied sample.

**A-08**

**Frequency and characteristics of salivary gland tumors presenting at KAMC Riyadh**

*Eyad Hussain Gutub, Abdulaziz Bin Ahmed*

**Introduction**

Salivary Gland tumors are relatively a rare disease, where major salivary gland malignancies comprise around 11% of all oropharyngeal neoplasms.\(^1\) And approximately 3 – 10% of all head and neck tumors.\(^2\) Benign salivary gland tumors account for 54 – 79%. While malignant salivary gland tumors account for 21 – 46%.

**Methods**

The study was conducted at King Abdulaziz Medical City- Riyadh, based on cases presented to pathology lab for biopsy. We included all patients treated from 2000 to 2011 with salivary gland tumors. The data was collected from the medical record department on a structured data collection sheet. The data was entered and analyzed using SPSS. All the records was collected on a structured data collection sheet and edited before entering into the SPSS file.

**Results**

A total of 46 cases were found in KAMC Riyadh. The male patients were 24 (52.2%), while the female patients were 22 (47.8%). The most affected gland was the parotid gland 35 (76.1%). Then the submandibular gland 10 (21.7%). And last the sublingual gland 1 (2.2%).

Most of the tumors were benign 42 (91.3%). And only 4 (8.7%) were malignant. In the benign tumors the most common type was the pleomorphic adenoma 31 (67.4%). Then the warthin's tumor 9 (19.6%). The anlage tumor and the myoepithelioma had 1 (2.2%) each. For the malignant 2 (4.3%) cases were muco-epidermoid carcinoma. The acinic cell carcinoma and the myoepithelial carcinoma 1 (2.2%) case each. Equal distribution between left and right side (50% each).

Only 2 (4.3%) cases required radiotherapy in addition to the surgery. The rest 44 (95.7%) didn't require any additional procedures.
39 (84.8%) cases continued following up in KAMC after the discharge. All of the 39 cases didn’t have recurrence and they were cured. Only 4 (8.7%) cases were from pediatric age group while the rest 42 (91.3%) were adults.

**Conclusion**

We share similar characteristics with different parts of the world since we have same common subtypes. Most of the patients don’t need additional procedures. Salivary Gland Tumors have good prognosis.

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**A-09**

**Attitude and knowledge of healthcare providers in a major medical institute in Saudi Arabia to medical ethics.**  
*Faisal Abdullah Abuabat, Hamdan Jahdali*

**Introduction**

Medical ethics is defined as the moral conduct and principles that govern the medical professional behavior. It is important to recognize the presence of ethical issues and determine their relative importance and how to deal with these issues. Our aim was to assess the knowledge of healthcare providers in a tertiary care hospital in Saudi Arabia on common ethical issues they face in their daily practice.

**Methods**

This is a cross-sectional study using a self-administered questionnaire completed by all doctors working in King Abdulaziz Medical City (KAMC) who were selected by convenience sampling directly during symposia and conferences.

**Results**

A total of 240 questionnaire were distributed to physician and 210 questionnaire to nurses. The reponse rate was 80% for both groups with 200 phyicican responders and 168 nurses responders. Among the physicians, 68% (136) were male and (90%) among nurses were female. The mean age of the whole group was 34.08±10.43 years. Only 69% (138) of the physicians ever received any formal teaching in bioethics. The majority of physicians (77.5%) felt that they needed better guidelines to help them determine appropriate ethical decisions on therapeutic futility, while 54% of the physicians felt that they sometimes overtreat their patients.
Discussion & Conclusion
The results show that a good number of physicians show lack of knowledge in regards to certain ethical issues and clearly there is a lack of bioethics teaching to healthcare providers in the Kingdom of Saudi Arabia. Moreover, there seems to be a need for a uniform ethics teaching to healthcare providers, not only during medical school but also after graduation and during clinical rounds.

Incidence of congenital hypothyroidism in King Abdulaziz Medical City from 2001-2009

Faisal Ahmed Al Zahrani, Ibrahim Al Alwan

Introduction
Congenital Hypothyroidism (CH) can be defined as an inadequate thyroid hormone production in infants. It is regarded as the most preventable cause of mental retardation. Screening for congenital hypothyroidism is done in Saudi Arabia as part of the routine screening for all newborns. Screening is done using cord TSH levels, with levels above 60 µIU/mL considered diagnostic for congenital hypothyroidism.

Methods
This was a retrospective study, using chart review method of lab records and medical records of all newborns with TSH levels above 60 µIU/mL. Lab records were reviewed for all newborns with TSH levels above 60 µIU/mL. The medical records of these subjects were reviewed for subtypes and major signs and symptoms.

Results
Of 72,586 newborns in King Abdulaziz Medical City in Riyadh, Saudi Arabia screened in the period between 2001-2009, 34 cases of CH were identified and confirmed. This figure leaves us with an incidence of 1: 2135. The most common subtypes in this study were Dyshormonogenesis (35%) followed by an ectopic thyroid gland (30%) then Maternal antibodies (22%). The Dyshormonogenesis is the only subtype that is autosomally inherited. Consanguinity can explain Dyshormonogenesis prevalence compared to other subtypes which are more sporadic. Most cases of CH present with no signs and symptoms, due to the left-over maternal supply of thyroid hormone in the fetus. Of those who exhibited signs or symptoms, the most common ones
included constipation (32%) followed by Jaundice (29%) and bradycardia (21%). The newborns with CH exhibited normal weight and height compared to the normal population, which also can be explained by maternal supplementation of the thyroid hormone, along with the fact that thyroid doesn’t play a major role in intra-uterine growth of the fetus.

**Conclusion**
Congenital Hypothyroidism has an incidence of 1:2135 in this study, which is considered relatively high. The most common subtypes in this study were Dyshormonogenesis (35%) followed by an ectopic thyroid gland (30%) then Maternal antibodies (22%). Most CH newborns present with no signs and symptoms suggestive of the disease.

**A-11**

**Characteristics of renal transplant recipients at King Abdul-Aziz Medical City**

*Hamad Yousef Al Thiyab, Salem Qurashi*

**Introduction**
Renal transplantation is the ultimate treatment for patients with end stage renal disease. Renal failure is caused by many factors including autoimmune diseases, diabetes, hypertension and others \(^1\). The aim of this study was to investigate characteristics of patients who underwent renal transplantation at King Abdulaziz Medical City.

**Methods**
This is a retrospective study, analyzing information on 147 patients who underwent a renal transplant at King Abdulaziz Medical City, Riyadh. Demographic as well as diagnosis of renal failure, type of transplantation and dialysis were collected on all patients.

**Results**
A total of 147 patients were studied retrospectively using data from patient files. Females were 47% and males 53%. Mean age at transplant was 42 ± 15 years for the total group. The underlying cause of renal failure was mainly hypertension (51%) followed by diabetes (18%). The transplants were mostly from living unrelated kidney donors. Majority of the patients were on hemodialysis before transplant (59%).
Discussion
This study shows that the transplanted patients with renal failure were mainly middle aged. The majority of the patients suffered from hypertension. The modality of treatment before transplant, for more than half of the patients, was hemodialysis. The living donors were more than the deceased donors.

A-12
Survival of patients with acute lymphoblastic leukemia treated with hyper-CVAD protocol at King Abdulaziz Medical City-Riyadh

Hesham Saleh Mofada, Ahmed Alaskar

Background
According to Saudi Cancer Registry reported in 2007, which is the latest version available to date, 237 cases of Lymphoid Leukemia of both sexes have been reported in Saudi Arabia, which constitutes 42% of all newly diagnosed leukemia. The Hyper-CVAD protocol (which includes cyclophosphamide, vincristine, doxorubicin and dexamethasone, alternating with high-dose methotrexate and cytarabine) is the most effective treatment of ALL and was associated with better complete remission (CR) rates, CR duration and survival. We planned to study the effect and outcome of our ALL patients who received Hyper-CVAD regimen during the past five years.

Methods
All patients treated with hyper-CVAD chemotherapy with the diagnosis of ALL during five years period from January 2006 to December 2010 at the Adult Hematology department of King Abdulaziz Medical City in Riyadh and who were above 14 years of age were retrieved. Total of 24 patients were identified and data collected retrospectively.

Result
There were 13 patients alive (54%) and 11 patients dead (64%) and CR rate was 100% without any death induction or refractory disease. However, the 3 years survival rate was 36%. The median follow up period was 19.5 months and median age was 25 years. Furthermore, there was significant difference in term of survival between patients with t (9.22) and rest of patients P-value: 0.0229.
Conclusion
Compared with published studies, the 3 years survival rate is less than expected. This maybe due to small number of patients, elevated number of high-risk patients and short median follow up time.

A-13
Anti-tuberculosis therapy induced hepatitis in patients treated at King Abdul-Aziz Medical City, Riyadh

Hussain Abdullah Al Mulla, Ahmed Al Jabbary

Background & Aim
Tuberculosis is a fairly common disease in our society. Multi drug resistant bacilli necessitated the development of combination drug regimens. While being effective these combinations have resulted in severe side effects. Most importantly is the hepatotoxic effect. Studies across the globe concerning this hepatotoxicity have come up with conflicting results. This and the lack of local studies gave us the initiative to go through with this research to study both the impact on our community and identify risk factors

Methods
This is a retrospective chart review of 150 patients that received tuberculosis medications between (1/1/2009 & 31/12/2011) and met our criteria. We applied specific criteria to identify hepatotoxic patients. We also gathered information regarding the following: age, gender, marital status, employment, alcohol, smoking, weight, height, BMI, HIV, HBV, HCV, pretreatment AST/ ALT & bilirubin, post treatment AST/ALT & bilirubin, serum albumin, serum total protein, site of tuberculosis. Data was analyzed by applying the chi-square, student t-test and fishers exact test statistics

Results
Out of the 150 patients included in the study, 40 developed hepatotoxicity (27%). The following variables: low serum albumin (P=<0.001), HIV (P=0.02), unemployment (P=0.04) and multiple risk factors (P=0.03) were observed as significant risk factors.

Conclusion
Anti tuberculosis hepatotoxicity is of considerable impact on our patient population. Patients that are unemployed, co-infected with HIV, have low serum albumin or have multiple risk factors are at a higher risk at developing this hepatotoxicity.
**Risk factors and outcomes of community acquire MRSA infection among children admitted to a tertiary care hospital in Saudi Arabia**

*Mazin Saud Al Rasheed, Hanan Balkhy*

**Background**
Methicillin resistant staphylococcus aureus (MRSA) infection is an important rapidly growing infection. We aim in this study to identify prevalence of pediatric patients admitted to a tertiary care hospital with CA-MRSA infection, and to identify the pattern of infections caused by CA-MRSA in patient admitted to this hospital.

**Methodology**
It is a cross sectional study of retrospective collected data after reviewing patient’s charts. The research was conducted in the pediatric department of King Abdulaziz Medical City (KAMC). All pediatric patients with positive culture for MRSA from (dec 2009 to dec 2011) was initially included, and all patients how fulfill the inclusion criteria were included in the final analyses.

**Results**
A total number of 160 MRSA isolates were identified from December 2009 to December 2011 using infection control database. 53 patients were excluded: 27 with HA-MRSA, 10 had no clinical evidence of diseases and received no antibiotic therapy, and files were not found for 16 patients. So by dividing CA-MRSA/total MRSA the prevalence of CA-MRSA= 107/160=66.8%. Most of the patients had skin and soft tissue infection (62.6 presented with swilling). 37.4 of the patents had fever as one of their complaint. 35.8% of the MRSA infections had clindamycin resistant, 38.7 % resistant to erythromycin. Trimethoprim/sulfamethoxazole resistant was observed in only 3.8%. All of the study population showed no resistant to vancomycin.

**Conclusion**
Our finding that CA-MRSA represents 66.8% of total MRSA emphasize the importance of education of the public and health care workers in CA-MRSA epidemiology, and the infection prevention methods.
A-15

The prevalence and genotyping of human papilloma virus in women in King Abdul-Aziz Medical City, Riyadh

Mohammed Emaduldeen Mater, Abdulmohsen Al Kushi

Introduction
Cervical Cancer is one of the most common cancers worldwide. It accounts for 5.2 percent of the global cancer burden. HPV is a well-known cause of Cervical Cancer Worldwide. There are approximately 30 types of HPV that can infect the female anogenital tract, which have been divided into three risk groups based on their potential risk of causing cervical cancer. The most common cause of cervical cancer of the HPV is type 16, followed by types 18, 45 and 31 respectively. HPV 16 is most likely associated with squamous cell carcinoma, while HPV 18 is most likely associated with adenocarcinoma.

Objectives
To determine the prevalence of HPV and to identify the HPV types in women with cervical cancer/dysplasia in Saudi Arabia.

Methodology
This is a descriptive retrospective study in which the Oncology Data Management and the Pathology Department archives were searched to retrieve all the cases of cervical cancer and dysplasia that were diagnosed and treated at King Abdul-Aziz Medical City, Riyadh from November 1982 through December 2007. The pathology reports and tissue samples of all the cases were reviewed to confirm the diagnosis. The samples that are stored properly in formalin fixed in paraffin embedded tissue blocks underwent DNA extraction. Afterward, HPV genotyping was done using (SPF1/ GP6+ PCR) and then hybridization by gene-chip was used.

Results
The study included 110 patients. Of these, 91 (83%) were HPV positive. In individuals who were HPV positive it has been found that HPV type 16 was the most common type; accounting for 71 (78%), While HPV type 18 accounted for 15 (16.5%) of HPV positive individuals.
Conclusion
In conclusion, HPV infection is highly prevalent in patients with cervical cancer and dysplasia. HPV 16 and 18 are the most common types. These results show the importance of eradicating HPV by vaccination and screening programs as preventive measures in our society.

A-16

Physicians’ practices with regards to assessing children and adolescents for obesity

Mohammed Talal Al Damry, Fadia Buhairan

Objective
To study physicians’ current practices with regards to assessing overweight and obesity in pediatric and adolescents. The ultimate goal is to improve the quality of care provided to pediatric and adolescent patients at King AbdulAziz Medical City in Riyadh.

Methods
This study was a retrospective medical chart review. All children and adolescents aged 6-14 years visiting either the primary care clinic (Kashmalaan) or General Pediatrics Clinic (at KAMC-R) during January- June 2012 were eligible to participate. Because this age population is cared for both in the primary and secondary/tertiary care settings, exploring the practices in both settings will aid in informing the development of recommendations and practice guidelines for health care providers in both settings. Patients whose chief complaints were obesity-related were excluded. Specific variables were identified from the medical records and included demographics, height and weight, and management. The body mass index (BMI) for each patient was calculated and plotted on the CDC BMI charts. A p-value of <0.05 was considered as statistically significant. The Data was entered and analyzed using SPSS v 18.0.

Results
A total of 552 children and adolescents visited the primary health care center and pediatrics clinics. Height was not documented for 71 patients (13%) and they were excluded from the analysis. The total sample size was 481 patients with 213 patients from the primary care center and 268 from the pediatrics clinic. One hundred and three patients were found to be overweight\obese based on plotting their BMI on
charts creating a 21% prevalence of overweight/obesity. Thirty four patients (16%) were found to be overweight/obese in the primary care center and sixty nine (26%) in the pediatrics clinic. Thirty-four of these patients (33%) were seen at the primary healthcare center and 69 patients (67%) in the pediatrics clinic. Among these overweight\obese patients, only 17 patients (17%) were correctly identified (p= 0.002). Three patients (10%) and fourteen patients (20%) were identified and managed in primary healthcare center and pediatrics clinic respectively (p= 0.114). Of those correctly identified, 14 patients (82%) were managed. All of the overweight\ obese patients seen at the primary care were managed whereas only 11 patients (79%) were managed in pediatrics clinic. No significant association was found between the identification of overweight/obesity and patient age or gender.

**Conclusion**
Overweight/obesity is a prevalent condition among children and adolescents. Physicians do not identify this condition in the majority of patients. Increased efforts are necessary for the early identification and management of overweight/obesity.

**Pathological variation of pediatric head and neck tumors in tertiary center**

*Naif Abdullah Al Amer, Abdulaziz Bin Ahmed*

**Background**
Head and neck tumors have a significant cause of morbidity and mortality in pediatric population. Tumors are classified as benign and malignant. Most of the head and neck tumors are in benign conditions. Malignant tumors are rare. There are only few studies that have been published about head and neck tumors. Such data are not published in Saudi Arabia. We planned to report the frequency of each type of pediatric head and neck tumors.

**Methods**
A retrospective chart review study that was conducted at King Abdulaziz Medical City in Riyadh, Saudi Arabia. Of all pediatric patients presented with head and neck lesion for biopsy during the period of January 1998 to December 2009. Patients were identified from the pathology lab, data was collected from the medical records department. Lesions were classified into four categories: fibro-osseous, cystic,
vascular, neoplastic (benign and malignant). Age was divided into four groups: (0–5), (6–10), (11-15) and (16-18).

**Results**
Total of 88 patients were identified, ranging in age between 4 months and 18 years, including 40 males and 48 females. The overall gender ratio was 1:1.2 in favor of females. Benign lesions were more common (77.3%), malignant lesions counted (22.3%). Hemangioma was found to be the most common lesion (28.4%). Most of these lesions were most commonly seen in the cervical and lips area counting (40%).

**Conclusion**
Most of the lesions have a good prognosis and don’t require any additional procedures. This study would provide the clinicians with more reliable data and help them in reaching the diagnosis of these head and neck lesions.

**A-18**

**Grand multiparity and feto-maternal and neonatal outcome**

*Rami Abdulkader Akkielah, Hanan Al Kadri*

**Background**
Grand multiparous women (Para ≥5) have been considered to be at a higher risk to develop maternal, fetal and neonatal complications compared to women of lesser parity. However, this relationship between grand multiparity and obstetrical complications has been controversial. Saudi population has been found to have a fertility rate high enough to stigmatize it as a high risk population. There hasn’t been any previous study targeting the Saudi population.

**Objective**
To identify the association between different feto-maternal and neonatal outcomes and presence of maternal grand multiparity.

**Methods**
The medical records of 151 grand multiparous women (parity >5) and 212 women with parity of 2 to 4 was chosen were reviewed.
Results
Grand Multipara group tended to have a significant higher age (P<0.001), a significant higher tendency to abortions (P=0.02), a significant higher tendency to iron deficiency anemia with (P=0.03) and a boarderline significant higher tendency to hypertension (P=0.07), more multiple pregnancies (P=0.005). Multipara women neonates tended to require more initial resuscitation effort with P=0.001.

A-19

Effect of training ultrasonographers in detection of congenital heart disease

Sulaiman Ibrahim Al Hifzi, Fahad Al Habshan

Objectives
The aim of this study was to evaluate the effect of training obstetric ultra-sonographers in fetal echocardiography on the antenatal detection of congenital heart disease (CHD) in a tertiary care center in Saudi Arabia.

Methods
All 9 obstetric sonographers had training in detecting CHD in early 2006, the data were collected 3 years before and after the training for the assessment of the effect of training on the antenatal detection of CHD in the tertiary care center, all 9 sonographers were interviewed.

Result
There was a significant rise in antenatal detection of CHD from 13% (19/141) before training to 23% (29/125) after training (p=0.03). All 9 sonographers showed increase improvement in number of views of the fetal heart, knowledge and in comfort in using ultrasound machines.

Conclusion
Implementation of a training program to Obstetric sonographers in scanning the fetal heart has a major role in an antenatal diagnosis of CHD which alters the outcome. Therefore, we recommend the establishment of a well-structured program in scanning the fetal heart for sonographers in KAMC-Riyadh and elsewhere in tertiary care centers and centers with obstetric sonographers.
Prevalence of Energy Drinks Consumption among College Students and their Effects on Health

Muahan M. Al Nemary, Supervisor. Or. Amani Al Muallem

BACKGROUND:
Energy drinks are very popular among large Saudi youth since 1957 debLt DF Res BLII, leader of energy drink market. Energy drinks, including Red Bull, Bisor, Coce Rec ard Power Horse are designed to increased mental and physical exertion provided by the combination of stimulants which incLce caffeire. OBJECTIVES: To explore consumption patterns of energy drinks among college student and to determine if there are any relationships between energy drinks consumption and health symptoms.

METHODOLOGY:
A cross sectional descriptive study design was adopted in this study. The study was carried out in different universities (KSAU HS, UQU, Ibn Sina University, KSU, KUU). Students (age from 1 B - 3D years) were included with different specialties.

RESULTS:
Total number of 497 medical students were enrolled in this study. Majority of participants were between the ages of 21 and 24 years. Results showed that males tend to consume energy drinks more than females with (P-value= D.DD1). An interesting significant correlation with energy drink consumption is shown in terms of type of college, Medicine students at KSAU HS are more likely to adapt energy drinks compared to the other college students. Students indicated that such drinks help them while they are studying or completing a project (35%). They stated that it keep them awake (43%). Also students think that it is tasty with percent of (43%) and it gives them good feeling, others use it for partying and gathering with their friends. They also think that it helps them during driving at long distances. Also, the most notable variable was smoking which indicated a great impact toward energy drink consumption among student. Regarding the side effects that students experienced from consuming the Energy Drinks, Heart Palpitation is found in high percentage (48%) followed by headache (25%). Also results assured that the more you consumed Energy Drinks the more you become addicted (P value e=.DO) either on a daily basis or on a monthly basis.
CONCLUSION:
The prevalence of energy drink consumption among our student is very high. This should be put into consideration, faculty members and Healthcare providers should be more aware of this prevalence and work on the prevention and education of the students. Authorities should restrict the false advertisement and to regulate the marketing of energy drinks. The media should enlighten people about the side effects and the harmful impact of such drinks.

A-21

Sleep questionnaires and clinical features as predictive for the diagnosis of Obstructive sleep apnea

Abdulaziz Ibrahim Al Alwan, Hamdan Al Jahdali

Introduction
Obstructive sleep apnea (OSA) is a disorder of breathing during sleep characterized by complete or partial upper airway obstruction.
We aimed to establish a valid screening tool for OSA risk in Saudi population.

Methodology
This is a retrospective study. We included all patients above 18 years old who were referred for sleep study at the Sleep Disorders Center in King Abdulaziz Medical City-Riyadh (KAMC) from June 2003 to November 2012. All patients had sleep apnea risk questionnaires. A total of 1017 patients were recruited for the study.

Results
Seventy-nine percent had positive Neck circumference>40cm in male and >36cm in female, (78.3%) had obesity (BMI ≥ 30Kg/m2), (43.7%) had apnea–hypopnea index (AHI) above 15/h, (32.4%) had history of diabetes and (41.3%) had Hypertension. Some factors were associated with OSA such as age (p= 0.001), male gender (p< 0.001), positive neck size (p< 0.001), obesity (p=< 0.001), and hypertension (p = 0.005). In comparison between Non-OSA Patients and OSA Patients that showed positive neck size, obesity, history of DM and Hypertension were associated with OSA (p = 0.001). Female gender was significantly associated with OSA (p=0.002). EPS Questionnaire (Epworth Sleeping Scale) and coronary artery disease were significantly associated with OSA (p = 0.005) and (p= 0.006), respectively. There was no significant association between Asthma, COPD, Pulmonary hypertension, heart failure and OSA.
Conclusion
Neck size, obesity and Age >50 are significantly associated OSA, along with presence of co-morbidities: DM, Hypertension, Berlin questionnaire was highly sensitive while the STOP-BANG questionnaire was highly specific.

A-22
Awareness of Saudi adult females regarding importance of folic acid in avoiding spina bifida and other neurological birth defects
Abdulaziz Sultan Al Shenaifi, Mohammed Al Jumah

Background
Neural Tube Defects (NTD's) are serious and often fatal conditions for newborn babies, that are large preventable through periconceptional folic acid supplementation. Local data on women awareness of folic acid importance is limited and the findings are inconsistent.

Objectives
The objectives of the current study were to measure the public awareness of folic acid among Saudi females of childbearing age and to examine the association of self-reported knowledge with the actual correct knowledge and behavior.

Methods
A cross-sectional study was done between January and June 2013. A questionnaire was distributed to adult females working in/attending different public places in the five districts of Riyadh, Saudi Arabia.

Results
A total of 206 Saudi females completed the study questionnaire. The average age was 28.5±7.9 years. Approximately 71% of the participants were aware of folic acid with 73% of them knew its protective effects against spina bifida. The awareness was associated with better education, older age, and being currently or previously married. Approximately 60% of the participants who heard of folic acid claimed they take sufficient amount of folic acid but the majority (61%) did not start their multivitamins preconceptionally. Self-reported higher knowledge was significantly associated with identification of the correct food sources and protective effects of folic acid. The main source of information about folic acid was healthcare providers (43%) followed by family members or friends (35%), internet (29%), T.V. & radio (18%), education in school and University (12%) and social media (9%).
Conclusion
Although we are reporting a good awareness of folic acid, the majority of the participants missed the right timing of starting folic supplementation. The study finding emphasizes the importance of pre-conceptional counseling and office education in improving the knowledge and intake of folic acid among Saudi women of childbearing age.

A-23
Characteristics of hospital acquired methicillin resistant staphylococcus aureus infection among pediatric patients in a tertiary care hospital in Riyadh, Saudi Arabia

Khalid Ahmad Al Rabiah, Sulaiman Al Ola

Introduction
Methicillin resistant staphylococcus aureus (MRSA) infection has been steadily increasing. It is divided into either HA-MRSA or CA-MRSA based on time of culture. Children are at higher risk of infection than adults. There are not enough studies in Saudi Arabia to study the characteristics of HA-MRSA in children.

Aim and Objectives
We aim to assess some characteristics of HA-MRSA like: risk factors, culture site, clinical manifestations, complications and outcome among pediatric patients in a tertiary care hospital in Riyadh.

Methods
This is a retrospective chart review study: case series. We took all patients equal or under the age of 14 year old, who were culture positive between 1st January 2009 to 31st December 2011. We used time of culture (≥ 72hr of admission) to differentiate between CA-MRSA and HA-MRSA. The final sample size was 39 patients.

Results and Discussion
We found that HA-MRSA to be more common in males and those with some risk factors like: previous surgery and previous hospitalization. They commonly had sepsis and mostly cultured with blood. They had a high PICU admission rate. About a quarter of them were either died or recovered with some complication.
Conclusion
HA-MRSA is an infection that can cause serious complications and high rate of PICU admissions. Certain clinical manifestations like: shock are associated with higher mortality and morbidity rate. Special care should be given to those admitted to PICU, as they have a high mortality and morbidity rate.

A-24
Hereditary neurometabolic causes of infantile spasms in infants presenting to a tertiary center in Saudi Arabia

Mohammed Abdullah Al Shaya, Muhammad Al Rifai

Introduction
Infantile spasms syndrome is a devastating infantile epileptic syndrome with variable etiology. One of the rarer causes of this syndrome are Hereditary Neurometabolic Disorders (HNMDs) which are inherited more commonly in an autosomal recessive pattern. Since the Saudi population has a high rate of consanguineous marriages, the aim of this study was to identify HNMDs as a cause of infantile spasms in patients presenting to a tertiary center in Saudi Arabia.

Methodology
The study is retrospective chart review case series study of cases of infantile spasms presented to the Pediatric Department at King Abdulaziz Medical City (KAMC)-Riyadh over 15 years (1995-2010). Study subjects included patients less than 2 years of age at time of diagnosis with seizure type and EEG pattern consistent with Infantile spasms. Data is presented as frequency and percentage for categorical variables and median (interquartile range) for continuous variables. We compared neurometabolic causes with other causes using statistical analysis tests for both continuous and categorical variables, with a p value < 0.05 considered to be statistically significant.

Results
During the study period, 80 cases of infantile spasms were identified. The etiology of HNMDs was present in 10 cases (12.5%). Of these cases, two were Leigh-like disease; and the rest had one case of each of the following diagnoses: Ethylmalonic Aciduria, Primary carnitine deficiency, Non-Ketotic Hyperglycinemia, Hyperinsulinemic hypoglycemia, Leukodystrophy, Short Chain AcylCoA Dehydrogenase deficiency (SCAD), Molybdenum cofactor deficiency, and neonatal hypoglycemia due to panhypopitutarism. After reviewing the literature, infantile spasms with the etiology
of molybdenum cofactor deficiency, primary carnitine deficiency, SCAD with no brain malformation and hypoglycemic brain injury due to panhypopituitarism are reported for the first time. Compared with the other etiology groups, the HNMDs group had a strong history of similar disease in the same family ($p = 0.002$) and consanguinous parents were present in the majority of cases ($p = 0.02$). Also, typical hypsarrhythmia pattern was more common in the HNMDs group ($p = 0.003$) and there was poor response to therapy ($p = 0.04$). There was no statistical difference with regards to the type of spasms, neuroimaging, outcome, and death.

**Conclusion**

HNMDs are relatively common causes of infantile spasms compared to other etiologies in this subpopulation of Saudi patients. We recommend early diagnosis via proper metabolic and genetic testing which in turn may have significant implication on applying specific treatments and proper family counseling.

**A-25**

**Clinical features and Immunophenotypes of adult patients diagnosed with Acute Myeloid Leukemia (AML) at King Abdulaziz Medical City**

*Ahmad Faleh Al Faleh, Abdullah Al Qouzi*

**Objective**

The aim of this research was to study the demographics and pathological subtypes of AML, evaluate the response and outcome to different treatment modalities including chemotherapy treatment, stem cells transplant, and study the phenotype of the malignant cells of each subtype.

**Method**

This was retrospective study of adult patients diagnosed with AML at KAMC, Riyadh, Saudi Arabia, between the years 2006 to September 2013.

**Results**

Ninety-one patients were included in the study with a male dominance. M1 was the most common FAB subtype in the population of the study with 23 cases. Among the study population patients with intermediate risk AML was the most common subgroup with 41 (48%) Remission rate in our study was found to be 84%, 64% of them
had relapsed. The median follow up was 19 months, with survival rate of 46% for all groups. Eighteen patients had been treated with Allogeneic stem cell transplant and at a median follow up of 17 months post-transplant the survival rate was 72%. CD13, CD33, CD117 showed the most common positive presenting antigens among the population, while CD2, CD4, CD7 showed the most common apparent lymphoid antigens expressed.

**Conclusion**

In our population, 91 cases of AML diagnosed over the period of 7 years at KAMC, Riyadh with an incidence rate of 13 cases per year. Most of the cases lie in the intermediate risk group 48%. Response to induction chemotherapy is exceptionally high in our patients with a total rate of 84%. However this was not translated into survival benefit in those patients mainly because of high relapse rate 64%.

**A-26**

**Survival of patients with advanced Hodgkin’s lymphoma in King Abdulaziz Medical City-Riyadh**

*Ahmad Mohammed Al Ameer, Ahmed Alaskar*

**Background**

The outcome of Hodgkin’s Lymphoma (HL) has improved markedly over the past few decades. The aim of this study is to assess our local experience and protocols at a single institution in treating advanced stage HL.

**Method**

From January 2007 to December 2010, all the patients age ≥ 14 years who were diagnosed as advanced stage HL (bulk >7cm, presence of B-symptoms, and/or stage III/IV) and treated at King Abdulaziz Medical city-Riyadh were identified. A total of 74 patients were retrospectively reviewed.

**Result**

The median age at diagnosis was 25 years and 50% were presented with stage IV. The median follow up was 30.3 months. Twenty-eight percent of the patients (28%) had disease progression and 15% of the patients died. The 3-year overall survival and progression free survival were 85% and 72%, respectively. The survival probability decreased significantly with the high risk IPS patients in comparison to low risk IPS
patients (P=0.01). Two regimens (ABVD and Hybrid –ABVD + BEACOPP-) were used with no significant difference in the overall survival and progression free survival (P=0.27 and P=0.28 respectively).

**Conclusion**
This study shows quite similar results to the published international studies in the overall survival and progression-free survival.

**A-27**

**Tarastzumab associated cardiac toxicity : who is at risk in Saudi Arabia? A single institution study**

*Shabab Mohammed Al Otaibi, Omalkhair Abulkhair*

**Purpose**
There is a growing concern about the long-term effect of trastuzumab-induced cardiotoxicity (TIC). Therefore, we retrospectively assessed the incidence of TIC and heart failure (HF) to identify possible risk among a group of saudi breast cancer patients.

**Methods**
This retrospective cohort study was conducted to review all Her2 positive breast cancer patients treated at King Abdulaziz Medical City in Riyadh, KSA, using trastuzumab in the adjuvant and metastatic settings between 2003 and 2012. Of 150 patients, 104 were eligible with good quality echocardiogram and base line LVEF > 55%. Cardiac function assessment was repeated every 3 months by echocardiogram thereafter.

**Results**
A total of 104 Her2 positive breast cancer patients were eligible for analysis, with median age of 49 years and range (29 - >78 y). A relevant significant decline in LVEF was observed in 16 patients (15.38%) at a mean exposure period of 15 months. A significant difference in LVEF decline was reported between diabetic and non diabetic patients treated with herceptin, 31.82% and 10.98% respectively (p-value 0.0161), as well as in 64.71% of patients diagnosed with hypercholesrolemia compared to 5.75% in the group of patients with normal cholesterol level (p-value 0.0001). 4/16 suffered CHF (25%). The median BMI value is 30.51 (range 25.47-34.01) P= 0.56
Conclusions
Given the limitations of this small retrospective cohort review, the results have reported a significantly higher prevalence of trastuzumab induced cardio toxicity (TIC) among young (median = 45 y) her 2 positive breast cancer saudi patients. The study highlighted significant correlation between diabetes and hyperlipidimia with development of TIC constituting a high risk group of patients who may need to be closely monitored for cardio toxicity (P<0.05).

A-28
Burn out among medical students: A King Saud bin Abdulaziz University for Health Sciences’ experience

Ahmed Mohammed Al Juhayman, Sajida Agha

Background
The aim of this study is to determine the prevalence of burnout among male and female undergraduate entry and postgraduate entry medical students of College of Medicine, King Saud Bin Abdulaziz University for Health Sciences - Riyadh.

Methods
A questionnaire to get the demographic information of the students including age, gender, and class of study was designed. The Maslach Burnout Inventory General Survey developed by Maslach & Jackson, a 16-item self-report questionnaire, a widely used measure of burnout was considered to assess the prevalence of burnout in medical students.

Results
Students who completed the questionnaire were 211/340 students with a response rate of (62%), 148/211 (70%) were male, 146/211 (69%) were at the basic sciences phase, 174/211 (82%) were undergraduates. The prevalence of burnout was 168/211 (80%). A significant difference between male and female on the factor emotional exhaustion was found (Chi-square = .002) that shows female were more exhausted than male counterpart. Another significant difference between undergraduates and postgraduates on the factor of emotional exhaustion was found (Chi-square = .001).
Conclusion
A high level of burnout was found among our population implying the need of student’s emotional and psychological care. Further research studies on similar issues within college and in other institutions are recommended.

Outcome and patient satisfaction after eye refractive surgery at National Guard comprehensive specialized clinics, Riyadh

Abdulmajed Saleh Al Fakhri, Khalid Al Jobair

Purpose
To evaluate the short-term outcome and patient satisfaction after eye refractive surgery in Saudi Arabia.

Methods
Vision data (pre-operative BCVA and post-operative UCVA) was obtained from 96 patients who underwent eye refractive surgery (55 LASIK and 33 TPRK) and they were asked to fill a questionnaire post-operation to obtain patients complains and satisfaction. And a different pre-operative group of 46 patients were required to fill up a questionnaire to obtain data regarding their reasons behind choosing eye refractive surgeries.

Results
A total of 97% of patients achieved complete correction after the eye refractive surgery and the satisfaction rate was 90%. There was a significant (P value = 0.004) correlation between vision correction and patients’ satisfaction.

Conclusion
Eye refractive surgeries achieves a high vision correction rate with 90% of patients achieved complete vision correction and patients satisfaction was as high as 90% in the short-term.
Compliance of health care professionals to guidelines in treating sickle cell crises in King Abdulaziz medical city in Riyadh

Ahmed Mansour Al Moallem, Ayman Hejazi

Introduction
Pain crises is the most common presentation of sickle disease (SCD) which leads to frequent multiple visits to emergency department (ER) seeking for pain relive. The aim of this study is to assess the degree of adherence of health care professionals to one of the most commonly used treatment guideline in cases of acute sickle cell crisis.

Method
This was a retrospective study done on 206 visit of SCD patients to the ER of king Abdul-Aziz medical city in Riyadh within 2000 to 2010 by collecting data in special data collection sheet to compare the type of initial management given to the recommended proper management by the guideline.

Result
Out of 206 visits 70% of patients presented with pain recommended initial assessment of pain site was not documented in 15%, duration of pain 24%, blood pressure 21%, respiratory rate 5%, oxygen saturation 3%, lab investigation 27%. Initial analgesia was morphine in 79% with 96% given through iv route. Median time between ER admission to initial morphine dose was 90 minute. Non-compliance regarding the initial morphine dose was found in 81% of cases.

Conclusion
Comparing the given management of acute pain crises in ER to the guidelines recommendations reveled lack of proper initial assessment, Delay in administration of initial dose of analgesia and lack of compliance regarding loading dose of morphine.

Saudi public awareness, attitude and practices of blood donation

Manar Abdulaziz Al Omani, Mostafa Abolfotouh, Mohammed Al Assiri, Al-Waleed Al-Johar, Abdulaziz Al Hakbani
Objectives
In Saudi Arabia, voluntary blood donors are the only blood source of donation. Aim of this study was to assess the level of Saudi public knowledge and attitude and practices of blood donation.

Methods
Using a previously validated questionnaire that comprises 38 questions, demographic and background characteristics, level of knowledge, attitudes and motivations towards blood donation, 469 Saudi adults who attended the different shopping malls in Riyadh, and outpatient clinics of King Abdulaziz Medical City were surveyed. Descriptive and analytical statistics were applied and Significance was set at P < 0.05.

Results
About one-half of subjects (53.3%) reported previous donation, of which 39% donated blood more than once. The knowledge percent mean score (PMS) was 58.07% denoting poor level, while attitude PMS towards donation was 75.45% reflecting neutral level. Donation was significantly more prevalent among males (66% versus 13.3%, OR=13.2, p>0.001). After adjustment for confounders, higher knowledge score (p=0.027), higher attitude score (p=0.001) and male gender (p<0.001) were significant predictors of blood donation practice. Inability to reach blood donation centers and fear of anemia were the main reasons for not donating blood in female (49.9% and 35.7%), while lack of time was the main reason for males (59.5%).

Conclusion
Previous blood donation was less than satisfactory among Saudi public, probably due to misconceptions and poor knowledge. Educational programs are necessary to upgrade the level of knowledge and attitude of the Saudi public towards blood donation in order to encourage more donations. Barriers for donations have to be looked at.
Learning styles and satisfaction with educational activities among pediatric physicians at KAMC – Jeddah

Adnan Mohammed Al Shaikh, Nadia Al Attas

Introduction
The learning style (LS) is the method of processing information that an individual prefers. It has been suggested that analyzing learning styles may help decide the most effective instructional methods. There are very few studies evaluating the degree of satisfaction of pediatric physicians with educational activities and its association with their learning styles (LS). This study aims to determine such a relationship through identifying the learning styles of pediatric physicians in King Abdulaziz Medical City (KAMC) - Jeddah, identifying the degree of satisfaction with educational activities, and analyzing the association between learning styles and satisfaction with educational activities.

Methods
The study was a cross-sectional descriptive study conducted in the Pediatric department at KAMC– Jeddah. All physicians in the department were included (n = 86). This is cross-sectional descriptive study. As the whole population was approached, sampling techniques were not required. The Learning Style Inventory (LSI) by David Kolb and the Modified student’s satisfaction survey, based on Mott Community College Student Satisfaction Survey, Michigan were utilized. The Questionnaire was Self-administered. The Predictor variables were demographic data and the learning styles. The outcome variables were physician’s satisfaction level.

Results and Discussion
A total of 86 pediatricians were surveyed with an overall response rate of 87% (n = 75). The mean age was 36 years ± 8.9, with almost equal gender distribution (males 52%, females 48%). The mean of practice years in pediatrics was 8.7 ± 7.2, and mean of working years in KAMC-Jeddah is 6 ± 5.4. There was equal distribution of learning styles between pediatric physicians in KAMC-Jeddah. We found significant difference in LS between males and females. Satisfaction scores showed an overall degree of satisfaction (68%) with education in the pediatric department. There was
no association between LS type and degree of satisfaction with educational activities. Convergers scored lower in satisfaction levels compared to other learning styles but with no statistical difference demonstrated.

**Conclusion**

There were no predominating LS in pediatricians at KAMC-Jeddah. Although there is general satisfaction with education, the level of satisfaction is considered borderline, and one third of pediatricians in KAMC-Jeddah are unsatisfied with facilities of education. There was no association between LS types and satisfaction degree with instructional methods in the population studied. This study suggests that we don’t need to modify the educational program based on specific LS to achieve satisfaction.

**Recommendations**

This study suggest that preparing education training program may not require to consider trainees individual LS. Further exploration of reasons why the level of satisfaction is borderline in pediatricians at KAMC-Jeddah. Further research should look into qualitative analysis of the degree of satisfaction, identify reasons for borderline satisfaction and explain gender difference in LS.

**B-02**

**Satisfaction of medical students with simulation based learning at King Saud bin Abdulaziz University for Health Sciences in Riyadh, Saudi Arabia**

*Asma Yehya Al Hamrani, Sajida Agha*

**Introduction**

Medical education programs are increasingly adopting simulation in both undergraduate and postgraduate curricula. The primary aim of the project is to evaluate medical students’ satisfaction with simulation based strategy at King Saud Bin Abdulaziz University (KSAU-HS). Simulation can be used for skills training and competency assessment in medical education.

**Method**

A cross-sectional survey was conducted at the College of Medicine (COM), KSAU-HS in Riyadh. All third and fourth year medical students (approximately 185 students)
both male and female studying at KSAU-HS were included. A self-administered questionnaire was developed to determine the satisfaction of students with SBL as teaching and learning tool. The questionnaire was validated by experts review and the reliability was calculated for all the questionnaire’s items. Ethical consent was taken before the administration of the questionnaire. The responses were measured on a five point Likert scale and the data was analyzed using SPSS version 20.

Results
The response rate was 62% (n=115). The alpha coefficient for the all questionnaire’s items was 0.873. Overall, respondents from both years (male and female) were satisfied with their SBL. The challenges reported were the available skill labs facilities, students’ cooperation, allocated time for skill labs and the role and knowledge of instructor. When we compare the result among gender and years we found a significant difference between the satisfaction scores among two genders (p= 0.01). Whereas no significant difference was identified between the participants’ scores on the satisfaction with SBL and year of education (p= 0.34).

Conclusion
In conclusion, majority of the students were satisfied with the simulation based learning in KSAU-HS, and found it a useful learning strategy. They expressed the need for more access of mannequins and training of staff for the better implementation and effectiveness of the technique. Avenues for future research were suggested.

Keywords: Clinical skills, medical education, medical simulation, simulators

B-03

Needs assessment of dental postgraduate programs in King Abdulaziz Medical City, Riyadh, Saudi Arabia

Abdullatif Mohammed Al Manee, Sajida Agha

Introduction
The need assessment for dental training programs is imperative for advancement and planning of patient care services. The most recent report from Saudi Arabian ministry of health shows the dentist to population ratio is 1:2849 including the private and non-Saudi dentists in Saudi Arabia. Highly qualified specialized dentists usually perform their procedures faster and with better quality comparing with general practitioners. This study was designed to assess the need for dental postgraduate programs in
King Abdulaziz Medical City (KAMC), Riyadh, Saudi Arabia through the assessment of patients treatment needs and the perception of stakeholders to introduce the specialty and need to develop new skills.

**Methods**
The study was cross sectional survey study design. Study was in two parts.

*Part 1:* Total 317 patients who had been seen in one of the three main primary health care centers in (KAMC) treatment plans were analyzed and recorded the type of treatment, the specialties who conducted those specific procedures and the time spent on each procedure.

*Part 2:* Ten stakeholders’ perception on specialty need, training program requirement and satisfaction with present Saudi board requirement was sought.

The data was entered and analyzed using SPSS software.

**Results**
The most needed specialties were Advanced General Dentistry (AGD), Restorative and Prosthodontics while the least specialty was periodontics.

The stakeholder perception revealed that the most needed specialties were AGD and pediatric dentistry and the least needed was the oral surgery.

**Discussion**
The high caries prevalence and the low dentist to people ration in Saudi Arabia demonstrate the needs for increase the workforce in dentistry with a well-trained and qualified dental specialties according to the patients’ needs. Our study result are similar with the National oral health survey data, This study results affirm the high needs of AGD, prosthodontics and restorative specialties need. Family dentistry was the most recommended by the stakeholders as a new specialty. A study on need of dental postgraduate program was done in Saudi Arabia. Result showed the need for a program in Dental Public Health.

**Conclusion**
Both parts of the study support the fact that the AGD is the most needed specialty based on the patients’ needs.

The use of different assessment methods (triangulation) strategy increases the validity of research findings. The high caries rate in Saudi Arabia reveal the high need to dental workforce and particularly to dental public health specialty.
Clinical teaching in respiratory therapy: Perception of students and interns at King Fahad hospital, Riyadh

Salem Muraye Al Qahtani, Sajida Agha

Introduction
Teaching and learning in the clinical environment is more than demonstration of skills and knowledge. To teach skills to respiratory care students, bedside teaching is an effective tool that includes the direct demonstration, observation and timely feedback. Where respiratory preceptors take responsibility of interns/students’ progress, in addition to managing patient care.

Method
In this cross sectional study 47 participants (students= 25, interns= 22) were included. There were 45 males and 03 females from King Saud ben Abdul-Aziz University, Dammam University and Loma Linda University- Riyadh. A self-administered questionnaire was designed including domains of modeling, coaching, scaffolding, articulation, reflection and exploration. Ethical approval from University and verbal consent from the participants was taken. Responses were entered and analyzed by using SPSS. Frequency Means and SDs and Independent-Sample t-test was done to see and compare the perception of both groups.

Results
The total response rate was 85 %. The age ranged between 21 to 26 years old. Ninety seven percent students were involved in ICU unit and 2.5% in Wards. There was a significant difference between the responses of both group on Modeling (P=0.004) and learning environment (p=0.02). Overall mean scores suggested students’ satisfaction with the training program.

Conclusion
The findings from this study, although not statistically significant on many domains, do have pragmatic implications for clinical practice. It can increase placement opportunities for respiratory care students, assist staff with workload pressures and increase faculty time with patients, while further developing students’ knowledge, skills and attitudes.
Introduction
Multiple mini interviews (MMI) had replaced traditional interviews in many undergraduate programs due to its better reliability, predictive validity of future performance and stakeholder’s acceptability. Its use in postgraduate admission is limited and no data exists regarding its use in Saudi Arabia. This report is to assess the reliability, acceptability and feasibility of MMI as an assessment tool for candidate’s selection into internal medicine residency training program at King Abdul-Aziz medical city at Jeddah (KAMC-J).

Methods
All candidates (n=34) passed through 6 minutes, 6-MMI stations with one interviewer per station. Guided by CanMEDS roles, MMI blueprint was designed to assess a different non-cognitive attribute at each station. Reliability was determined and correlation of MMI with grade point average (GPA) and Saudi licensing examination (SLE) were analyzed. Candidate’s completed an acceptability exit survey.

Results
Overall reliability was Cronbach’s alpha of 0.53. The Pearson correlation between MMI and GPA was -0.13 (p-value 0.47) and between MMI and SLE 0.17 (p-value 0.33). GPA correlated significantly with SLE 0.37 (p-value 0.03). Ninety seven percent of candidates found the MMI process was fair and objective while 92% felt MMI was pleasant and friendly. MMI consumed 80 percent less interviewer person-hours time.

Conclusion
MMI demonstrated reliability, acceptability and feasibility in residency admissions across different cultures and social systems. The non-cognitive attributes assessed by MMI differed from cognitive attribute assessed by GPA and SLE. Multiple methods of resident’s selection are advocated.
Problem based learning effect on learning styles of undergraduate medical students at medical college – Jeddah

Bander Abdulaziz Al Mutairi, Mohi Magzoub

Introduction
KSAU-HS adopted an integrated PBL curriculum to provide students with optimal learning experience and fit more to their learning styles. This study tested the hypothesis that the integrated PBL curriculum has an effect on the learning styles of the Undergraduate Medical Students at Medical College – Jeddah.

Aim
To assess the change in learning styles of undergraduate medical students after emerging into Problem based curriculum at medical college.

Objectives:
To identify learning styles of undergraduate medical students upon entering PBL experience.
To determine whether students learning styles change after engagement into PBL experience.

Methods
We used Kolb learning styles inventory 3.1 to assess the medical students learning styles and demographic questionnaire twice in the academic 2011/2012 and the academic year 2013/2014. KLSI allow the categorization of medical student learning styles into four groups: converging, accommodating, diverging and assimilating. Descriptive statistics was used in the form of tables (frequency, percentage, change and change percentage) and bar charts. Learning styles were plotted and coordinate vector was calculated and plotted. We used Fisher Exact test as test of significance.

Results
A total of 28 students participated (response rate 100%). In the academic year 2011/2012, the learning styles of the students were mixture of the four learning styles: converging (8, 28%), assimilating (8, 28%), diverging (7, 25%) and accommodating (5, 17%). After two years of engagement into the integrated PBL curriculum students...
did change their learning styles (16, 57%) with the prevalent learning style was converging (11, 39%), followed by accommodating (7, 25%), assimilating (6, 21%) and lastly diverging (4, 14%). However, this change was statistically insignificant (P=0.586).

Conclusions
The study showed that the integrated PBL curriculum at KSAU-HS did not significantly affect students’ learning styles within 2 years, although the students did change their learning styles with the converging learning style being the most frequently preferred learning style and the diverging learning style being the least preferred learning style.
College of Applied Medical Sciences, Riyadh

C-01

Febrile seizures among children less than three years up to six months old presenting to emergency department at King Fahd National Guard Hospital, Riyadh, Saudi Arabia

Ahmed Alqahtani, Ahmed Alyahya, Dhaffer Aldoussari, Abdullah Alanazi, Talal Alharbi, Mohammad Shaalan, Sameera Aljohani, Hazem Aqel

Objectives
The aim of the study was to determine the frequency, Laboratory and physical examinations, signs and symptoms, treatment and hospital duration of FS in Children (for Both gender) who were younger than 3 years up to 6 months age from 2001 to 2012.

Methods
The study was done in the pediatric emergency department in King Fahd National Guard Hospital which is located within the King Abdulaziz Medical City Complex in Riyadh, Saudi Arabia. It had included male and female children patients of ≤ three years of age. This study was a retrospective chart review study. A computer printout of demographic data and clinical events/outcomes were collected from medical records for all episodes of hospital discharged patients that were coded for diagnosis of fever without sources at the pediatric emergency department from January 2001 to December 2012.

Results
A total of 124 patients with FS were identified and participated in this study. Patients from 12–24 Months had the highest hospital duration which is 57.72 %. Majority of patients with FS were admitted for 1 to 4 days. Fever and Cough were the most common symptoms in the patients with FS from both genders. Fever symptom was high in the male and female. But in female, the UTI disease was higher. The upper respiratory tract infection had the highest number of patients compared with other symptoms.

Conclusion
Patients from 12–24 Months had the highest hospital duration which is 57.72 %. Majority of patients had the site of infection in Upper Respiratory Tract. The tests
that showed abnormal results in most patients are [Calcium, BUN and phosphorus]. Majority of Microbiological, Serological, X-ray, EEG test, CT Scan, Urinalysis and PCR tests showed negative results. Majority of patients had symptoms of: fever, cough and shortness of breath.

C-02

Effects of stress on students in College of Applied Medical Sciences, King Saud bin Abdul-Aziz University for Health Science, Riyadh

Dakheel Alotaibi, Abdullah Alanazi, Haitham Alalaty, Abdul Mohsen Alanzi

Objectives
The Aim of this study was to measure and monitor the stress levels among the students of College of Applied Medical Science (CAMS), King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS) and uncover the challenges faced by them.

Methods
A Cross-sectional study was conducted at CAMS, KSAU-HS, and Riyadh, Saudi Arabia. All students belonging to different batches of CAMS, KSAU-HS were enrolled in any of the undergraduate programs were recruited for this study on stress. The study instrument was a questionnaire comprising of 21 selected basic questions prepared according to DASS21 and distributed among the students of CAMS.

Results
The stress during all the four years showed that the maximum stress was in third year, while the stress in first and fourth year was almost identical. The stress during the second year was more than the first year and less than the third year. A comparison between Pre-Applied Medical Science (Pre-AMS) years first and second and Applied Medical Science (AMS), years third and fourth showed the latter to be statistically significant (Chi Square p value = 0.002).

Conclusion
Most of the students experienced a normal level of stress. The findings suggest that the level of stress was higher in the third year compared to other batches. The stress level in the initial two years was lower than the last two years.
Fever without sources in infants presenting to emergency department at King Fahad National Guard Hospital in Riyadh, Saudi Arabia

Abdulaziz Almutairi, Abdulah Alanazi, Talal Alharbi, Sameera Aljohani, Mohammad Shaalan, Hazem Aqel

Objectives
The aim of this study is to determine the frequency, laboratory and physical examinations, signs and symptoms, treatment and hospital duration of fever without sources in infants who were younger than 3 months age from 2010 and 2012.

Methods
The study was done in the pediatric emergency department in King Fahad National Guard Hospital which is located within the King Abdulaziz Medical City Complex in Riyadh, Saudi Arabia. It had included male and female children patients of ≤ three months of age. This study was a retrospective chart review study. A computer printout of demographic data and clinical events/outcomes were collected from medical records for all episodes of hospital discharged patients that were coded for diagnosis of fever without sources at the pediatric emergency department from 2010 and 2012.

Results
A total of 178 patients with fever without sources of ≤ three months of age diagnosed as fever without sources were included in this study. Twelve of the patients were male while 154 were female. Monthly admission shows that the fever without sources considered not a seasonal disease since most of the admissions were distributed in different months (April, June, July, September and November). There were variations in the temperature that collected from data. The highest temperature observed was 40.4°C about 1.28% in female. There was low temperature due to using antipyretic that was 36.2°C. The most ordered tests for patients with fever without sources were respectively as the following hematology 310, microbiology 284 and chemistry 218.

Conclusion
The most common symptoms showed differently in both gender: crying present in female only and poor feeding present in male only. The analysis had indicated that, urine/nitrate esterase and Urine/leucocytes esterase counting were useless tests with fever without sources since they were negative for all tested patients. CSF counting
highly important to check with fever without sources in infants that gives a clear indication of the severity of the disease. Fever without sources was not a seasonal disease, since it happened in all months. Fever, cough and vomiting were the most common symptoms in fever without sources. Most common medication that given to fever without sources patients are cefatoxime, ampicillin and paracetamole.

C-04

Febrile neutropenia in children with cancer presenting to emergency department at King Fahad National Guard Hospital in Riyadh, Saudi Arabia

Abdulkarim Alanizy, Abdullah Alsubayyil, Abdullah Alanazi, Talal Alharbi, Mohammad Shaalan, Sameera Aljohani, Hazem Aqel

Objectives

Determined the frequency, Laboratory and physical examinations, signs and symptoms, treatment and hospital duration of FN in children with cancer (Both gender) who were younger than 15 years age from 2008 to 2012.

Methods

This was a retrospective chart review study. A computer printout of demographic data and clinical events / outcomes was collected from medical records for all episodes of hospital discharged patients that were coded for diagnosis of FN at PED from January 2008 to December 2012.

Results

A total of 78 patients with cancer of ≤ fifteen years of age diagnosed as FN were included in this study. Forty seven of the patients were male while 31 were female. Monthly admission shows that FN considered not a seasonal disease since most of the admissions were distributed on different months April, June, July, September and November. The reason for that because FN following chemotherapy treatment. There was a different in hospital duration form male to female. The longest period for male was 1-4 days which is about 45.63% and the less period was < 2 months which around 6.6%. While the longest period for female was 5-9 days which is around 40.5% and the less period was < 2 months which about 4.17%. Signs and symptoms show that some of symptoms were only found in male and some found in female only, also there were some of them found in both gender. Example of some symptoms that were found in male includes abdominal mass, cutaneous abscess and running nose. Some
symptoms that were found in female include Chest Pain, Pallor and Otitis Media. Fever, cough, vomiting are example of symptoms found in both gender. The most ordered tests for patients with FN were respectively as the following microbiology 34.21%, others 29.39%, chemistry 21.93%, hematology 14.04% and blood bank 0.44%. Other tests include (CXR, NPA, EKG, MRI, etc...). There were variations in the temperature that collected from data. The highest temperature observed was 40.7 about 1.28% in female. There was low temperature due to using Antipyretic that was 36.3.

Conclusion
1. Symptoms that were present differ in both genders. For example, pallor, limb pain and chest pain in female only and massive pleural effusion and neck swelling present only in male.
2. The study has indicated that, the most tests requested were for microbiology.
3. The study shows that, the most common antibiotics were gentamicin followed by tazocin.
4. Febrile neutropenia considered not a seasonal disease, because it is following chemotherapy treatment.
5. Fever, cough and vomiting are the most common symptoms in FN.

C-05
Study on the correlation of vitamin D levels with hepatitis patients

Eisa Al Rashidi, Raed M Kanan, Talal Alghasab, Waleed Tamimi

Objectives
Vitamin D is increasingly becoming recognized as an important physiological regulator with pleiotropic functions outside of its classical role in skeletal homeostasis. This study aims to investigate the correlation of vitamin D levels and hepatitis B and C in patients with and without HIV infection.

Methods
A retrospective analysis of data collected from 5408 patients’ laboratory chart records, which include AFP, hepatitis B/C status, and vitamin D levels. The patients were referring to King Abdulaziz Medical city in Riyadh, Saudi Arabia. Data tabulated and analyzed using Microsoft Excel 2007 sheets and Statistical Package for Social Sciences. The statistical analysis included Mann-Whitney and students T-test.
Results
Our research included: 5408 samples which divided to positive and negative. The totals of positive samples were 1544 and the totals of negative samples are 3856. Our results showed that low vitamin D is more common in non-hepatitis B patients (n=1484, vitamin D level: 17.58 ± 4.18 nmol/L) than the positive ones (n=254, vitamin D levels: 18.51 ± 3.76 nmol/L) with a p value <.001.

Conclusion
Our results contradict previous reports, which could be explained by the high presence if low vitamin D level among Saudis.

C-06
Respiratory therapy preceptors’ perceptions of clinical education and learners
Faraj Al Enezi: Sami Al Ossaimi, Dr. Saleh Al Oraibi, Sami Al Ossaimi, Faraj Al Enezi, Salem Al-ahtani

Objectives
The aim of this study is to explore the perceptions of RT preceptors of clinical education and learners.
1. To understand the process of clinical teaching at KAMC.
2. To understand the knowledge and experiences of RT preceptors.
3. To understand students behaviors in their clinical placements.

Methods
Cross sectional study design was used in this study; Data was collected from King Abdulaziz Medical City (KAMC) in Riyadh. KAMC provides services for a rapidly growing patient population in all of its catchments areas. King Fahad National Guard Hospital has evolved to be part of the KAMC with many other prominent medical centers. Respiratory therapists work at 12 Intensive Care Units: Adult ICU, Pediatric ICU, Neonate ICU, Burn Units, Truma ICU, Surgical ICU, Neurolgical Critical Care Units, Intermediate Medical Care Units, Emergency ICU, Medical Cardiac ICU, Adult CardioVascularare ICU, and Pediatric CardioVascularare ICU.

Results
Fifty three Respiratory Therapy preceptors were participated in this study. The study duration was 5-monthes period between January 1, 2013 and May 20, 2013. Table 1 shows the study participants characteristics, table 2 shows the perception of RT
preceptors about supervision of number of students at one time, table 3 shows attitude of RT Preceptors about clinical education, and table 4 shows Knowledge of RT Preceptors about clinical education.

Conclusion
Based on the findings of this study, it is recommended that the university should inform the preceptors about the students' level; also assign one student to one preceptor. In the contrary, the university should do some workshops about the clinical education and the best way to teach students in the clinical area, and invite the preceptors to attend those workshops.

C-07
Defining the learning curve of paramedical students’ focused abdominal assessment with sonography for trauma

Mazen Sanad Mazen Alharbi, Majid Al Salamah, Abdulmohsen Alsaawi

Objectives
The main objective of this study was to define the accuracy of FAST interpretation of paramedical students and the amount of knowledge retained after 4 hours session. And to identify the accuracy of paramedical students performing FAST after an introductory course

Methods
Nineteen paramedical students were included in this study to assess their performance of FAST. The study's inclusion criteria were paramedical students from KSAU-HS and KSU, And Male students. All students participated in didactic\practical (hands-on) course before the study. The course had given by an EM consultant at king Abdulaziz medical city. The course consisted of one -hour lecture on ultrasound physics and knobology and a one-hour lecture on FAST history, principles and pitfalls followed by a hands-on session in which 2 healthy volunteers were imaged. The students had no experience neither in ultrasonography nor FAST. Pre and post-course tests which consist of 10 MCQ and 10 films have administered to test the amount of information retained and accuracies.

Results
Seventeen student from King Saud bin Abdulaziz University for health sciences
participated in the experiment they were two consecutive forth. Tow student were from prince Sultan University for emergency medical services they were from second batch.

**Question that related for basic medical science:**
In pre assessment 14(73, 7) students didn’t know that left kidney in comparison with right is more superior and posterior and in the posttest 11(57, 9%) know the correct answer. The amount of knowledge changes is 32% the difference between the pre-post assessments was very significant the P-value is 0.024.

**Question that related for knowledge about ultrasound:**
(In table1) in pre assessment of question number one (see index 2) 19(100%) students didn’t know that the point-of-care ultrasound assessment in the traumatized patient “FAST” is the identification of peritoneal free fluid and in the posttest 6(32) students knew the correct answer. The amount of knowledge changes is 32% the difference between the pre-post assessments was very significant the P-value is 0.004. In question ten (see index 2) 14(73, 7) students didn’t know that the cardiac views is part of the fast scan and in the posttest 4(21, 1) students knew the correct answer. The amount of knowledge changes is 75% the difference between the pre-post assessments shows insignificance.

**Question that related to skills of about ultrasound:**
(In table2) in pre assessment of question number three (see index 2) 9(47, 4) students didn’t know that the structures in the picture represented by the letter A is the liver. In the posttest 19(100) students knew the correct answer. The amount of knowledge changes is 47%. The difference between the pre-post assessments was very significant and the P-value is 0.001. In question twelve (see index 2) 7(36, 8) students didn’t know that the diagnosis of the FAST in the clip #12 is peritoneal free fluid. In the posttest 15(78, 9) students knew the correct answer. The amount of knowledge changes is 16 % (see figure two) the difference between the pre-post assessments shows insignificance.

**Conclusion**
Pre-hospital ultrasound has the potential to improve patient outcomes by improving time to diagnosis and early delivery of critically ill patients who are amenable to time-dependent lifesaving interventions. It also has the promising ability to assist in making appropriate destination decisions for the patient Our study shows that paramedic students can perform the FAST exams after a introductory course with a high degree of accuracy. A 4 hours lectures +hands on training show a tremendous outcome in paramedic students’ ability to conduct and interpret FAST.
**Recommendation**

1. Implement ultrasonography physics and FAST exam in paramedicine teaching curriculums.
2. Accredit and conduct a continuous courses for the paramedic in FAST examination and Interpretation.
3. Accredit and conduct a continuous courses to the paramedics for the FAST as a tool of triage in mass causality incidents.
4. Mandate the usage and the presence of FAST examination in protocols of paramedicine practice.

Pre-hospital ultrasound has the potential to improve patient outcomes by improving time to diagnosis and early delivery of critically ill patients who are amenable to time-dependent lifesaving interventions. It also has the promising ability to assist in making appropriate destination decisions for the patient. Our study shows that paramedic students can perform the FAST exams after an introductory course with a high degree of accuracy. A 4 hours lectures + hands on training show a tremendous outcomes in paramedic students’ ability to conduct and interpret FAST.

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**C-08**

**Poor basic life support awareness among medical and College of Applied Medical Sciences students necessitates the need for improvement in standards of BLS training and assessment for future health care providers**

*Maher Al Sulami, Azzam Al Nemer, Omar Al Somali, Abdulmajeed Al Murshdi, Ahmed Al Qusairi*

**Objectives**

Basic Life Support (BLS) is medical procedures and skills utilized in case of an emergency to save lives. It is given to the victims of life-threatening illnesses or injuries until provision of full medical care at hospitals. BLS is given by health care providers such as physicians, paramedics, emergency medical technician and by lay-persons with BLS training. College of Applied Medical Sciences (CAMS) and college of medicine (CoM) students at King Saud Bin Abdulaziz University of Health Sciences (KSAU-HS) Riyadh are the future health care providers in community, which makes their awareness and knowledge of BLS crucial. Therefore, the objective of this study was to find out the level of BLS knowledge among CAMS and CoM students, to figure out their attitude to obtain knowledge of BLS skills and to practice these skills whenever and wherever needed.
Methods
This study was conducted by assessing the responses of CAMS and CoM students to a questionnaire consisting of 20 questions about BLS. Response of students to the questionnaire was recorded and documented using Microsoft Excel. Data was analyzed using SPSS version 16.0.

Results
Most of the responders (CAMS 63.4%, CoM 67.36%) had secured less than 50 score corresponding to poor level of BLS knowledge. None of the CoM students secured 80% more score corresponding to excellent BLS awareness and only 1.38% got above 70% score. Six (6%) CAMS students secured 90-100 score (outstanding level), 3 (3%) scored 80-89 (excellent level), 8 (8%) got 70-79 score (very good level), 7 (7%) scored 60-69 (good level) and 13 (13%) secured 50-59 score (satisfactory level). The means score was for CAMS and CoM students was 45.05% and 37.9% respectively. Our data shows overall poor BLS knowledge, specifically about CPR, among CAMS and CoM students.

Conclusion
Poor BLS awareness, specifically about CPR, among CAMS and CoM students shows the need for their training and experience in this field. Improvement in standards of BLS training and assessment are recommended at our college. We also recommend carrying out BLS awareness surveys in students of all KSAUHS colleges to improve the BLS awareness and skills.

C-09
Prevalence of second hand smoking among CAMS students

Mohammed Mesfer AlQahtani

Objectives
Specific Objectives
1. To recognize the prevalence of secondhand smoking in Saudis College students.
2. To identify the exposure locations of secondhand smoking.
3. To identify the exposure time of secondhand smoking
Secondary Objectives:
1. To recognize the magnitude of the smoking problem among College students in Saudi Arabia.
2. To provide a foundation of the current status of SHS exposure among college students in Saudi Arabia.
3. To provide a framework for the development of policy strategies for reducing smoking and SHS exposure on various locations.

Methods
A cross-sectional study was performed to identify factors associated with SHS exposure among CAMS college students in Saudi Arabia. Data was collected from College of Applied Medical (CAMS) Students at King Saud Bin Abdulaziz University for Health Sciences in Riyadh, Saudi Arabia.

Results
Data from 61 students were included in this study. We found out that roughly 56 students (91%) out of 61 had been exposed to SHS during the last 2 months of questioner administration in contrast to 5 students (8.2) which were not exposed. Exposure in Estirah was the most common place reported by 67.2%, followed by exposure in the university 39.3%, coffee shop 29.5%, public area 26.2, car 21.3% and home 14.8%.

Conclusion
From this study, we admitted the prevalence of second hand smoking (SHS) among the students especially at the Estiraha and we should implement campaigns that aware students and their families regarding SHS and its effects. Moreover, we should propose policies to prohibit smoking at college facilities to decrease the percentage of SHS exposure.
Patient safety culture status culture within hospitals in different Arab countries: Systematic review

Badriah Al Harthi

Objectives
The primary objective is to conduct a baseline assessment of patient safety culture status within Hospitals in Arab world.
A secondary objective is to summarize the psychometric properties of the tools used to measure safety culture in the Arab world.

Methods
A systematic review of studies from Arab countries that assessed patient safety culture/climate was performed. Studies were identified through: Medline, Google scholar and other sources and published between 2004 -2013.

Results
A total of 7 studies met the final inclusion criteria. Three from K.S.A, and one from Lebanon, Qatar, Egypt and Palestine. Ninety eight hospitals and 11,681 respondents assessed, and majority of respondents were nurses. Results suggest more positive patient safety culture in Saudi Arabia and Lebanon hospitals compared to Egypt, Qatar and Palestine hospitals. All studies showed need for improvement in a non-punitive approach to adverse event reporting and analysis, open communication founded on trust teamwork across unit, and shared belief in the importance of safety.

Conclusion
Decision about patient safety culture status is not easy and feasible with limited studies on patient safety culture in the Arab countries. Overall, results suggest evidence to support initiatives that promote patient safety culture in the Arab countries hospitals are very limited and patient safety culture needs more attention. Countries in the region should support and encourage assessing patient safety culture in their healthcare organizations and Patient safety should be a top strategic priority for policy makers, managers, leaders and all health care providers.
The impact of mobile phone screen size on user comprehension of health information

Ebtisam Alghamdi, Mowafa Househ, Faisal Yunus

Objectives
The paper describes our recent experimental study of the impact of the mobile screen size on user comprehension of health information and application structures.

Methods
An experimental study conducted to measure the impact of the screen size on the user comprehension. Participants were given the same simple scenario consists of searching in different menu, navigating and reading some contents. They were timed, tracked for correctness and were given the follow-up survey consists of rating scale of some usability measurement and comprehension/retention type questions.

Results
The result of this study showed that there is a significant difference between the mobile phone screen size and reading speed, which was lowest in small screen (p-value=0.02). Also, Ease of reading characters was hardest in a small screen (p-value=0.01). In addition, there is significance different between the three sizes regarding the organization of information of the application, showing that the smaller the screen size, the more organized the information.

On the other hand, there is no significant impact of screen size on user comprehension and retention scores. Additionally, no significant impact on the screen size on the effectively completing the tasks variable but it was better in large screen size.

Conclusion
This study was carried out to explore the impact of mobile screen size on user’s comprehension of health information and structure of the application. It concludes that the screen size is not the main concern of comprehension of content or structure. However, reading speed affected by screen size and that improves when text size increased and screen size become larger. Also, completing the tasks and understanding of the application elements could be better in a large screen size. In addition, large screen help more in remembering and recall information. On the other hand, searching and navigating do not affect by screen size but the number of errors increased when using small screen size.
Do patients with varying demographic and regional characteristics equally miss appointments in the various dental specialties? Evidence from King Faisal Specialist Hospital & Research Center (KFSH&RC).

Hind Al Baloushi, Omar Daar

Objectives
To identify factors that result in patients missing their dental appointments.
To examine whether patients with varying demographic and regional characteristics equal miss dental appointments in the various specialties at KFSH&RC.
Suggest actions needed to be taken to reduce frequency of dental “No shows” and to apply to wider health sector based on the findings of this study.
To suggest areas for further studies.

Methods
Data were obtained from KFSH&RC warehouse.

This is the most recent year for which complete and well-kept record was available.

KFSH&RC availed the data as Microsoft Excel. We coded all variables and entered in the (IBM- SPSS- STATISTICS 20). We coded the variables in a manner to conform to statistical technique and to allow us to answer the central research questions of whether one category of patients is more likely to miss dental appointments, or whether a given characteristic of a patient category is associated with missed dental appointment.

We tested the hypothesis by using Chi-square (χ²) test for independence in SPSS version 20. The Chi-square (χ²) method was chosen because the variables of interest were not only measured at an ordinal or nominal level, that is, categorical data, but also they consisted of two or more categorical, independent groups hence lending itself to this method.

Results
One of the results of the present study is that female patients were more likely to have missed dental appointments because female patients had less dental awareness and satisfaction with oral health, which may explain they miss appointments. Additionally,
previous studies also found that patients who broke their appointments were married, homemakers, above forty years in age, and of low to middle socioeconomic status.

Further, the present study found that both adults and children did not equally miss all the dental appointments in the various specialties at KFSH&RC. Previous studies found that difficulty of transportation and commitment to family and children as being responsible for the high proportion of women who “No show” to dental appointment. This may somewhat affect children’s appointments.

Patients having appointments during Ramadan were more likely to have missed dental appointments. This result is in part, consistent with previous studies that found that the most common reasons for failed appointments include fasting in the Holy month of Ramadan.

In the previous studies, the understanding of the association between patients’ registration types and missed dental appointments has been limited or absent. Thus, the present study considers this inclusion as a fresh contribution to the literature. The present study found that patients with varying registration types do NOT equally miss all the dental appointments in the various specialties at KFSH&RC. In particular, those employees and their dependents were most likely to have “No show” in General Dentistry, but were least likely in all other specialties relative to protocol and ordinary patients.

**Conclusion**

With current problem of ‘no shows’ in dental appointments, the findings of this study is expected to inform KFSH&RC and the wider Kingdom to institute policies and guidelines to address “No shows” to both improve the rate of “honored appointments” and minimize the many unused visit hours.
Hind Mohammed Al Mutlaq, Amin Bawazir, Hoda Jaradi

Aims
This study aims to describe the patterns of cancers in Saudi Arabia over a ten years period, (1999-2008).

Objectives
To estimate the incidence of cancer in Saudi Arabia in ten years period (1999-2008).
To determine the top ten incidence of cancer in Saudi Arabia.
To describe the pattern of cancer based on demographic factors such as: age, gender, region, marital status, working status, and education status.
To describe specific characteristic of breast cancer, colorectal cancer, lymphoma, and leukemia according to demographic and topographic factors.
To determine the pattern of childhood cancers (<14 years) in Saudi Arabia.

Methods
This is a descriptive retrospective study based on secondary data from Saudi Cancer Registry from 1999 to 2008. All Saudi males and females, who were diagnosed with cancer in the study period, were included in this study.

Results
The total Saudi cancer cases were registered during the period 1999 – 2008 were 74548 cases, of them 37134 male cases (49.8%), and 37414 female cases (50.2%). The incidence among Saudi increased from 38.9 per 100,000 to 49.2 per 100,000. The incidence rate of cancer cases increased with increasing age in most of cancer types. The study also showed that the top five common cancers among Saudi population in the study period in both genders were breast cancer, followed by colorectal cancer, then leukemia, lymphoma, and thyroid cancer. Furthermore, the incidence rates of childhood cancers were higher in boys than girls, and leukemia was the commonest childhood cancer in Saudi Arabia.

Conclusion
Cancer is an important public health problem in Saudi Arabia, and its trend increasing throughout the years, more studies are required to describe the patterns of cancer, related etiology, and risk factors in Saudi Arabia.
The association of computer literacy, training on clinical productivity and satisfaction of electronic medical record

May Al Asmary, Mowafa Househ

Objectives
The scope of this study was to explore clinical productivity and satisfaction of the currently implemented Electronic Record system and it is association with computer literacy in Prince Sultan Medical Military City in Riyadh.

Methods
Using a self-administrated questionnaire that was distributed in Alwazrat Family and Community Center, this study attempted to identify the impact of the computer literacy on the newly implemented EMR. A convenience sample size of 112 health care Professionals participated was used for this research (65 Nurses and 47 physicians). A combination of correlation and regression tests in addition to One Way ANOVA and paired t-tests was used in this study.

Results
The results showed correlation between computer literacy and users’ satisfaction towards the system. A statistically significant medium positive correlation between Computer Literacy and satisfaction, $R=0.343$ at ($p < 0.01$) level of significant were found as a result to regression tests. This means that overall participants were highly computer literate and satisfied with the system. Additionally, the majority of the participants were generally satisfied from the system (mean=3.04. However, the physicians were more satisfied about the system than nurses given a mean of satisfaction 3.1922 while the nurses satisfaction mean were lower 2.9283.

Conclusion
Increasing productivity and EMR user satisfaction could be an ultimate goal to any healthcare association. This study has demonstrated considerable factors that could have an impact of the users’ high satisfaction which was satisfaction of the training and high computer literacy.
Workplace health promotion programs to increase physical activity: Are they appropriate for women in Saudi Arabia?

Nada Albwardi, Hoda Jradi, Hazzaa Al Hazzaa

Aim
To determine if workplace health promotion programs (WHPP) are appropriate to decrease physical inactivity among Saudi women.

Objectives
To assess the prevalence of physical inactivity and sedentary behavior among Saudi employed women.
To evaluate their intention to participate in a WHPP.
To determine the psychosocial, environmental and organizational factors that may facilitate or hinder a women’s WHPP in Saudi Arabia.

Methods
A cross-sectional study of 420 Saudi women aged 18 to 58 years working in office based jobs in eight worksites in Riyadh, Saudi Arabia were given a self-administered survey to evaluate the prevalence of inactivity and sedentary behavior among this sample and their willingness to participate in WHPP. Weight and height were measured to determine body mass index. The built environment was assessed by the author through a second instrument; an audit of five structural elements (staircases, walking areas, facilities for exercise and individual work space).

Results
Results showed the majority of subjects to be overweight or obese (58.3%) and more than half (52.1%) were insufficiently physically active. Sedentary behavior, measured by total minutes of sitting during the day, was also well above international figures (mean ± SD), 681±219 min/day on workdays and 566±271 min/day on non-work days. The subjects however showed high intention (>80%) to participate in WHPP. The built environment was found to be conducive to physical activity promotion in 7 out of 8 worksites.

Conclusion
This study provided evidence for the viability of the workplace as a setting for
physical activity promotion for women in this population due to the high prevalence of inactivity, the high intention shown by the employees to participate in WHPP and a physical environment that may be used to facilitate a change to healthier lifestyle habits.

**D-07**

Patients’ satisfaction with health education services at primary health care centers in Riyadh, KSA

*Nadia Asiri, Amen A Ahmed Bawazir, Hoda Jradi*

**Objectives**
The purpose of the study is to assess different aspects of patients’ satisfaction in relation to the health education services provided in Primary Health Care centers at a Major Medical Center in Riyadh, Kingdom of Saudi Arabia.

**Methods**
This is a cross-sectional survey targeting attendees of PHC centers at Prince Sultan Military Medical City in Riyadh. A total number of 400 participants were enrolled in this study. Data was collected over a 5 months period (Dec 2012 to April 2013).

**Results**
The overall satisfaction reported with health education services was 68%. One to one education clinic was the most preferred method for delivery of health education. The majority of participants preferred the physician as a health education provider.

**Conclusion**
Findings from this study showed that our participants expressed a positive evaluation of the distinct dimensions of the health education services provided. However, services of health education were poorly attended in this institution. Barriers causing poor attendance were attributed to the shortage of trained health education staff, lack of time for the providers, cost, and misunderstanding for the role of the health educator.
**D-08**

The influence of health beliefs regarding diabetes on diabetes prevention associated behaviors among adolescent in Riyadh City: A pilot study

*Reem Al Mutairi, Amen Bawazir, Hoda Jradi*

**Objectives**

The incidence of type 2 diabetes mellitus is growing at rapid rates in the Saudi population. However, studies of psycho-behavioral factors that may be aggravating the incidence of diabetes in this population are limited. This study is exploring the influence of concepts described in the Health Belief Model (HBM) on healthy lifestyle behaviors related to Diabetes Mellitus DM prevention, among adolescent.

**Methods**

A cross-sectional study was undertaken with 426 non-diabetic secondary school students from public and private schools. The study population comprised both genders from one region of Riyadh city, the capital of KSA. This study had used a Knowledge, Attitude and Practices assessment questionnaire based on the HBM as an instrument. Data was analyzed with descriptive statistics, Pearson correlation, chi-square and t-test.

**Results**

From the overall 426 school students, 48.1% were females & 51.9% were males. The overall mean age 17 years (±SD) 0.96 year, the majority (63.4%) of participants had at least one first degree relative with diabetes. Participants had shown moderate level of knowledge related to DM risk factors, nature of DM and prevention methods, while less than one third of them were aware of DM complications. High levels of perceived benefits, moderate levels of perceived seriousness and self-efficacy, and low levels of perceived susceptibility and perceived barriers were discovered among participants. More than half of the participants were physically active on a regular or irregular bases and following healthy dietary habits. There were significant correlations between adopting DM prevention behaviors and perceived benefits, (P < 0.05), perceived self-efficacy (P < 0.05) and perceived barrier (P < 0.05). There was no significant correlation between health beliefs and participant’s family history of DM or their school sectors.

**Conclusion**

Primary prevention of type 2 DM should be a priority in all community health institutions and primary health care settings. Many intervention programs have
been established in Saudi Arabia to prevent type 2 DM. Therefore, the next step is to determine the most effective way of targeting the high risk population. The Health Belief Model is a useful theoretical framework for developing highly effective diabetes prevention programs

**D-09**

**Capacity of National Guard Primary Health Care Centers (NGPHC) for cancer prevention early detection and control in central region, Saudi Arabia**

*Salwa Mohammed Bahkali, Amen Bawazir*

**Objectives**

This research aims to assessing the availability and capabilities of the human resources, health infrastructure, services, and other resources of relation with preventive, early detection and control of cancer at the primary healthcare level in the National Health Care Affair (NGHA), Saudi Arabia.

**Methods**

Cross-sectional survey conducted in 2013. The study sample was 22 clinics. Data were collected using the standard WHO questionnaire

**Results**

All facilities responded (100%) and they show that most of the resources are allocated in class A category within Riyadh region. Most of the educations were focused on NCDs in general not in cancer. Essential medication, and medical equipment related to cancer screening or diagnosis were almost available/ or can be requested in most of the centers. There was no existence or poor implementation of preventive and screening cancer clinical guidelines/policy/program in all NGPHC.

**Conclusion**

The findings of this survey confirm that most of the NGPHC facilities in central region have the capacity to implement effective preventive programs in prevention, and control of cancer diseases. However, human resources are not in parallel to perform the cancer preventive measure as due to weak or absence of training, accountability, and policies. More investment and focus are needed to establish effective, sustainable, high quality cancer prevention program.
Antenatal education: An assessment of pregnant women knowledge and preferences in Saudi Arabia

Tahani Al Otaiby, Tahani Al Otaiby, Hoda Jradi, Amen Bawazir,

Objectives
To assess the antenatal knowledge and describe the learning needs and preferred information seeking behavior of expecting and/or new Saudi mothers.

Methods
A cross-sectional study was conducted at multiple primary health care centers in Riyadh city, Saudi Arabia. A questionnaire was used to assess levels of antenatal knowledge, educational preferences, and information seeking behavior among 468 participants.

Results
The mean antenatal knowledge score was low (34.8/100). Educational material in written format was preferred by 39.8% of the sample, followed by a preference for one to one education (18.8%). Physicians were the preferred source of information by 2/3 of the participants. Preferred educational strategies were motivation and support, guidance, problem solving, and dos and don’ts. Selected content ranged from identifying pregnancy symptoms, to post-partum care.

Conclusion
Antenatal knowledge scores were low with no variation with age or educational level among this population. Reform in antenatal educational content, channels, and formats should be adapted according to the preferences of the target population. Further research is recommended on the evaluation of the content of antenatal education and its cultural relevance.

Detection of pre-analytical laboratory testing errors using a literature review guided protocol

Wafa Abdullah Al Zahrani, Mohamud Sheikh
Objectives
To draw attention of laboratory personnel to pre-analytical phase, which currently appears to be more vulnerable to errors than other phases.
To evaluate the leading causes of pre-analytical errors in clinical laboratories mainly focusing on hemolysis and misidentification of specimens.
To identify the effects of pre-analytical errors on the quality of laboratory medicine.
To establish a protocol check list with important strategies that would improve the quality of tests in clinical laboratory.

Methods
Several scientific databases MEDLINE, EMBASE and Google Scholar were searched for studies published over twenty three years: from January 1990 to March 2013 which reported the frequency of pre-analytical errors among total testing process. Many search terms were used to search for the articles such as: pre-analytical errors, pre-analytical mistakes, hemolysis, hemalysis, identification errors and much more.

Results
Based on the finding from the studies, error rates for pre-analytical and post-analytical activities were higher than for analytical activities. The pre-analytical errors accounted for 68-81% of all laboratory errors occurring in clinical laboratory. The representative studies showed that the hemolysis was the most frequent pre-analytical errors with 53%-60% of the total laboratory errors reported while patient’s misidentification specimen accounted for 3%-9% of the pre-analytical errors. Another finding indicates that the specimens collected from inpatient had more errors than outpatient and the specimen collected by laboratory staff showed significantly lower rejection rate than specimen collected by non-laboratory staff.

Conclusion
The findings indicate that a large percentage of laboratory errors occur in the pre-analytical phase which needs more attention and intensive monitoring of its activities. Our findings indicate that a large percentage of laboratory errors occur outside the laboratory and mainly by non-laboratory personnel as compared to qualified laboratory personnel. This encourages efforts to assign skilled phlebotomists with laboratory background to collect and handle specimens. The clinical laboratory should tack and identify the pre-analytical errors by implementing mandatory error reporting system to collect data, analyze and gives a feedback for service and quality improvement.
College of Nursing, Riyadh

E-01

Knowledge and practices of weaning among Saudi mothers and family child-caring women in central Saudi Arabia: A cross-sectional study

Aseel Alayed, Jamilah Alqahtani, Anwar Ahmed, Mohammed Abushal

Introduction

Weaning is the introduction of solid food to a baby gradually as milk alone is no longer sufficient. World Health Organization (WHO) recommends mothers to start weaning at 6 months and beyond. Inadequate, abrupt and late weaning have many physical and psychological impacts on mothers and their babies. Our main objective is to assess weaning knowledge and practices among Saudi mothers and family-child caring women in Central Saudi Arabia.

Methods:

A community based, cross sectional design was conducted in Riyadh city, Kingdom of Saudi Arabia with a convenient sample of 350 women. Data was collected from different public geographical distributions and social classes to ensure representativeness. A self-administered questionnaire composed of 31 questions divided into 4 sections: screening questions, socio-demographic profile, knowledge and practice sections. Data was coded for entry and analysis using SPSS version 18.

Results:

Majority of women were multiparas, aged 26-35, housewives and held diploma degree and higher. Participants have a good knowledge about weaning (80.28%). Eighty percent of women’s know about weaning from family and friends. Approximately 67% of women exhibited a fair practice of weaning. High Income was significantly associated with good knowledge (P < 0.024). The study revealed a significant correlation between educational level, family type and practice (P< 0.042, 0.001 respectively).

Discussion & conclusion:

This study revealed that women have a good level of knowledge regarding weaning. Women’s practice varied. We recommend replicating the study using an experimental design. Also, a culturally sensitive awareness programs to improve practice.
Chronic illness and mood status among chronically ill patients
Khairyah Al Ali, Reem Al Mutairi, Samia Al Enizy, Fawziah Al Enizy, Hanem F. Mohamed

Introduction
Research has proven that chronic illnesses are associated with mood disturbance. Chronic illnesses are complex conditions that last for lifetime and cannot be cured completely. Chronic illnesses are known to reduce patients’ ability and energy to live well, exercise, live a normal life or cope with their illnesses. In addition, signs and symptoms of mood disturbances often overlooked. This adds a burden on the individual patient, health care providers and the community. With the increasing number of patients with chronic illnesses, understanding the relationship between chronic illness and mood status is vital to improve community health. The objective of this study was to identify the association between chronic illness and mood status among Saudi chronically ill patients.

Methodology
The study used a descriptive cross-sectional design to answer the following questions: (1) Is there a relationship between chronic illness and mood status among chronically ill patients? (2) What is the relationship between the number of chronic illness and mood status? (3) What is the relationship between the type of chronic illnesses and mood status? (4) Does adherence to diet and medication affect mood status among chronically ill patient? and (5) Does mood status differ by demographic characteristics of chronically ill patients? A convenience sample of 473 patients was interviewed while visiting the out-patient clinics at King Fahd Hospital. Eligible subjects were interviewed in a semi structured interview by the researchers after agreeing to participate in the study. Plus demographic profile, the Brief Mood Introspection Scale was used to collect data.

Results
64.3% were females, 46% were in the age group 40 to 59 years old with a mean age of 47.9(15.9). Majority was married, 25.6% graduated from colleges, 19.2% from high school and 28.1% were illiterate. 58.3% of the participants have 1 or 2 chronic illnesses and 34.7% have 3 to 4 chronic illnesses and 7% reported having more than 5 chronic illnesses. 78% indicated that they are adhering to medication, and 45% are adhering to diet. There was no statistical relationship between chronic illness and mood status (r = .03, p = .69). Mood on the other hand significantly correlated with
the number of chronic illness ($r = .21^{**}$, $p = 0.01$), age ($r = .16^{**}$, $p = .004$), gender ($r = .26^{**}$, $p = .001$), and adherence to medication ($r=.36^{**}$, $p = .002$).

**Conclusion and recommendation:** Chronically ill patient are at more risk for mood disturbance especially with the increasing number of chronic illness. Screening for mood disorders is important for early detection of more serious psychological disorders. Intervention to identify mood disturbances and differentiate them from the consequences of the chronic illness is vital for improving quality of life and health related outcomes among chronically ill patient. Using qualitative analysis plus the current quantitative method may provide wide range of assessment and understanding.
An experimental research on the effects of artificial sugar (Aspartame) on the histology and physiology of infertility and decreased fertility

Atheer Alhumaid

The research aimed to study the effects of artificial sugar (Aspartame) on the histology and physiology of infertility and decreased fertility.

Methods:

The study included 60 female rats divided into two groups: the treated group received Aspartame in their drinking water, and the control group did not. The study aimed to measure the effects of Aspartame on the histology and physiology of the reproductive system.

Results:

The results showed that Aspartame had no significant effect on the histology and physiology of the reproductive system, as there was no significant difference between the two groups in terms of the number of offspring and their weights.

Conclusion:

Aspartame had no significant effect on the histology and physiology of infertility and decreased fertility.
Introduction:
Studies indicate global decrease in fertility in both sexes, in Saudi Arabia the percentage of infertility and lack of fertility reached up to 20%.
Aspartame: industrial sweetener with few calories used commonly to reduce weight gain and by diabetic patients to help in maintaining blood glucose level in normal range. This sugar is present in more than 6,000 product traders in the form of food, soft drinks and drugs.
Hypothesis: in this study we aim to investigate the relationship between Aspartame consumption and infertility, we hypothesize that a Aspartame consumption by 40 mg per 100 ml of water per day for 50 consecutive days, will affect the following:

Number of male sperm movement and activity
The possibility of pregnancy, the number of births and their weight. Ovarian and testicular tissue.

Methods:
Experimental case control study on rats with and without Aspartame exposure. Sperm count, number of mating, pregnancy rate, and birth weight were calculated in both groups. Histological examination of ovarian and testicular tissues was conducted.

Result:
Sperm count
*The number of sperm in the experimental rats was higher than control
*Sperm activity and movement was high when compared to the control, however it was not statistically significant, P value 0.17
Mating
*Fertility rate and mating were reduced in male and female rats in experiment group and were not able to get pregnancy. *The number of births decreased in experimental group compared to control group, P value 0.01, but birth weight was not significantly different. Histological examinations of testicular and ovarian tissue indicate no difference between experiment and control group.

Conclusion:
Aspartame consumption may lead to difficulties in pregnancy, decrease birth rates and birth weight in rats. Sperm count and activity can be affected by Aspartame ingestion, further studies are needed to investigate long term effect of Aspartame on ovarian and testicular tissue.
**Nicotine dependence among cigarette smokers in Riyadh**

_Sara Alfadili, Jehad Alharbi, Mohammed Alsheef, Rana Aldawsri, Muhand AlJotly, Naif Alkhalifi, Abdulrahman Altwaijri, Muhad Algaed, Arshad Mian_

**Objectives**
Our study’s aim was to estimate the degree of nicotine dependence among cigarette smokers in Riyadh using the FTQ.

**Methods**
This study was a survey of 300 subjects selected randomly from Coffee-shops, Hookah cafés and public places. Participants were in the age group of 15 - 60 years old. Those who consented to participate were asked to complete a questionnaire that was collected immediately afterwards. The FTQ consisted of six items related to nicotine dependence. Data was entered and analyzed using SPSS version 19. The analysis consisted of frequencies and cross tabulation with significance being tested using Chi Square.

**Results**
Among the 300 subjects, 9 (3.2%) were females, and 291 (96.8%) were males. 31.5% of the subjects were between 25 and 29 years of age, and the mean age was 28.62 (±8.0). 77.9% of subjects had a Bachelor’s degree or higher. Nicotine dependency scores had a minimum score of 0 and maximum of 10, with a mode of 7 (±2) indicating severe dependence. There was a strong association between the age group and severity of nicotine dependence (p<0.001). There was no association found between educational level and degree of severity (p=0.485). Among the FTQ questions, “smoking the first cigarette within 5 minutes after waking up from sleep” yielded the strongest association with severity of nicotine dependence (p<0.001).

**Conclusion**
The vast majority of participants demonstrated severe nicotine dependence based on FTQ, and most of them were between ages 15-34 years. This study is of importance for developing and implementing tobacco cessation strategies.
Are there enough neurosurgeons in Saudi Arabia?
*Kholoud Khalid Al Ghamdi, Ali H. Aljuzair, Kholoud Khalid AlGhamdi2, Abdulrahman J. Sabbagh,*

**Aim**
The aim of this report is to review the statistics of neurosurgeons in Saudi Arabia, estimates the Population Neurosurgeon Ratio (PNR), and compare it with other population ratios.

**Methods**
Data were collected from different sources (Saudi Council of Health Subspecialties, Saudi Association of Neurological Surgeons, Central Department of Statistics and Information and personal Contact Information) and looked at the PNR in each of Saudi major and intermediate cities.

**Results**
The Kingdom of Saudi Arabia has a total of 207 qualified neurosurgeons of multiple nationalities, Saudis and Egyptians forming the majority with 62 neurosurgeons (29.9%) each. The Kingdom has a mean of one neurosurgeon per 131096 population. The highest number of PNR being Khamis Mushait (PNR 1: 512599) and, the lowest in Al Khobar (PNR 1: 32,138).

**Conclusion**
Workforce and Neurosurgical manpower should consider the vast territories of Saudi Arabia and the demographic distribution in the future plans of neurosurgeons employment, accompanied by providing acceptable facilities to maintain international standard of service.

**Background**
Neurosurgery is one of the latest surgical specialties. The adequate number of neurosurgeons per capita has always been a debate. It differed from population to population and from time to time. It has been proposed in 1977 in the “Study on Surgical Services for the United States” report (SOSSUS) to be 1 neurosurgeon per 100,000 population ratio1,2. Manpower requirement in medicine is being evaluated continuously. Thus, the evaluation of each country’s requirement of neurosurgeons is badly needed.
Rationale
There are no previous studies in Saudi Arabia or in the Middle East that have ever calculated the PNR. So the need to calculate the number of neurosurgeons and their distribution in Saudi Arabia is absolutely necessary.

G-03
‘A ticking time bomb’ descending thoracic aortic aneurysm due to brucella melitensis: A case report
Rana S Aldosary, Nizar Bakhsh1, Nahar Alanezi2, Arshad Mian3, Mohammed Alsheef4, Rana aldosary5, Lina H alsharif6

Objectives
To report a case of aorto-esophageal fistula secondary to mycotic thoracic aortic aneurysm due to Brucella Melitensis treated with endovascular repair.

Methods
Case Report: Case Description:
A 52 years old male, with long-standing T2DM, presented to our emergency department (ED) with a history of central, dull chest pain, radiating to the back. He complained of intermittent high grade fever, chills, rigors, diaphoresis, unintentional weight loss and dysphagia for three months. History was positive for raw milk ingestion and animal contact. Vitals revealed a temperature of 39.1°C; physical exam was unremarkable. Admission laboratory data showed WBC 10/mm3, haemoglobin 16.1 mg/dL, platelet count 350, C-reactive protein 28.5 mg/dl, erythrocyte sedimentation rate of 76 mm/h, normal electrolyes and coagulogram. Thoracic CT-angiogram demonstrated a saccular aneurysm arising from the descending aorta, distal to origin of the left subclavian artery, with peri-aneurysmal hematoma compressing the carina, main bronchi, and esophagus (Fig. 1). Two sets of blood cultures were positive for B. Melitensis. Transthoracic and transesophageal echocardiograms ruled out infective endocarditis. Brucella mycotic aneurysm was diagnosed; appropriate intravenous and oral antibiotics were initiated. During hospitalization, patient developed massive haematemesis necessitating transfusion of six units Packed RBCs. Angiography exhibited aorto-esophageal fistula (Fig. 2), and urgent endovascular repair of the aneurysm was done. Subsequent angiography demonstrated satisfactory stent position with no endovascular leak. Patient received intravenous gentamicin for six weeks in the hospital, and was discharged home on long-term oral antibiotics.
Results
Patient was discharged home. He again revisited with massive hematemesis with a hemoglobin drop, but no endovascular leak on imaging. Blood transfusions were given. Vascular surgeons decided to re-stent, as the thoracic surgeon deemed patient unsuitable for invasive surgical intervention for aorto-esophageal fistula. Esophageal stenting was done, but the patient could not tolerate oral intake, requiring stent removal. The following day patient became unstable, coded and expired.

Conclusion
Aorto-esophageal fistula in the setting of mycotic aneurysm due to brucellosis is rare and fatal disease and may require aggressive surgical management.

G-04
“Prevalence of depression and its association with socio-demographic characteristics among general population”

Abdulaziz A. Al Atami, Abdulaziz A. AlAtmi 2, Abdulaziz U. Joury1, Sara A. AlBabtain 3, Mohammed Alsharif 2, Norah A. AlBabtain 3, Abdullah Bin Mogbil 2, Mohammed A. AlRuwaili 2

Objectives
The main aim of this study was to determine the relationship between certain chronic diseases; hypertension, diabetes, low hemoglobin level and socio-demographic characteristics, with the presence of depressive symptoms among general population. Determine its associated factors such as sleeping hours, smoking, health and nutritional status among adults in Saudi Arabia in 2012.

Methods
This is a cross-sectional study, measures depression by using the Beck Depression Inventory (BDI-II) scale. Weight and height had been taken to measure the body mass index (BMI) of the participants. Blood pressure (BP), random blood glucose (RBG) level, and hemoglobin (Hb) level, were measured using standard methods routinely used at the primary health care centers.

Results
Among those 787 participants, 323 (41%) were having normal mood variation based on BDI-II scale, and the remaining 463 (59%) were ranged between moderate to
extreme depression. For the socio-demographic characteristics 397 (50.4%) were female, 549 (69.8%) were married, and 527 (67%) were Saudi. 144 (18.3%), was having at least one chronic disease. About 103 (16.1%) of the participants were either currently smokers or ex-smokers. Based on the measurements, only 210 (21.2%) of participants were having normal BMI. For the RBS measurement, 687 (87.3%) were having normal blood sugar reading. For BP measurement, 672 (85.4%) were normotensive with BP reading below 140/90 mmHg. Anemia was present in 22 (5.7%) of males and 79 (19.9%) of females. The results showed that there were no significant relation between depression and having at least one chronic disease chronic with p-value 0.092.

Conclusion
More than half of the sample size have different symptoms of depression ranged between moderate and severe depression. However, there is no significant association between depression and chronic diseases among population who lived in Riyadh, Saudi Arabia. Further studies with larger sample size recommended to be done in future.

G-05

Histopathological changes in brain and spinal cord tissues following the short-term use of hydrogen peroxide as a hemostatic agent in rats
Mohammad M. Alshardan, Mohammad M Alshardan, Sadeq Aldandan, Shreef Alwateedi, Ali M Mustafa, Abdulrahman J Sabbagh

Objectives
The primary objective of the present study was to evaluate the safety of hydrogen peroxide (HP) as a hemostatic agent in normal neuronal tissue during neurosurgical procedures conducted in rats. A total of 90 male Wistar albino rats weighing 250 g to 300 g were divided into two groups: the first group (group A, 60 rats) underwent cortical irrigation with HP; and the second group (group B, 30 rats) underwent spinal irrigation with HP. Both groups were further divided into three subgroups (20 rats per subgroup for group A and 10 rats per subgroup for group B). Group A underwent a craniotomy while group B underwent a laminectomy; both groups were irrigated with different concentrations of HP (1%, 3% or 6%) for 3 min. After irrigation, tissue biopsies from the spinal cord or the brain were obtained, which were examined histologically and compared with control tissues. Control tissues were the opposing hemisphere of the brain from each rat, irrigated with normal saline, or the upper level in the spinal
cord. Data were evaluated using the appropriate statistical tool to compare treated tissue with the respective controls. Histopathological findings revealed that only dark neurons were observed; these were quantified in percentages (0% to 25 %, 25% to 50%, 50% to 75% and 75% to 100%). The cytoplasm revealed condensed and dark Nissl substance, and the neurites and axons exhibited a corkscrew morphology. No ischemic changes or inflammatory infiltrates were observed. The majority of the dark neurons were observed at the periphery of tissue fragments.

Conclusion
The present study showed no significant histopathological changes when using HP compared with saline for irrigation of rat brain and spinal cord tissues. The present study may confirm the safety of HP as a hemostatic agent in neurosurgical procedures. There was no necrotic effect observed on any of the samples.

G-06
Factors associated with diabetes mellitus prediction among pregnant Arab subjects with or without gestational diabetes
Naji Aljohani, Najla Almujally, Maha Alsharqi, Amal Al Serehi, Amjad M. Ahmed, Badr Aldin M. Buhari, Saad Alzahrani, Eeman At Taras, Najla Almujally, Maha Alsharqi, Mohammed Alqahtani, Mussa Almalki

Objectives
There is scarcity of available information on the possible significant risk factors related to diabetes mellitus (DM) prediction among expectant Saudi mothers with or without gestational diabetes mellitus (GDM). The present study is the first to identify such risk factors in the Arab cohort.

Methods
A total of 300 pregnant subjects (mean age 33.45 ± 6.5 years) were randomly selected from all the deliveries registered at the Obstetrics Department of King Fahad Medical City, Riyadh Saudi Arabia from March/2011 to April/2013. Demographic and baseline glycemic information were collected.

Results
A total of 7 highly significant and independent risk factors were identified: age, obesity, family history of DM, GDM < 20 weeks, macrosomia, insulin therapy and recurrent GDM. Among these factors, subjects who had insulin therapy use are 5 times more
likely to develop DMT2 (p-value 3.94 x 10^{-14}) followed by recurrent GDM [odds-ratio 4.69 (Confidence Interval 2.34-4.84); p=1.24 x 10^{-13}).

**Conclusion**
The identification of the risk factors mentioned with their respective predictive powers in the detection of DMT2 needs to be taken seriously in the post-partum assessment of Saudi pregnant patients at highest risk.

**G-07**

**The status and challenges of research on bioethics in the Arab world**
*Haila O.AL-Othman, Prof. Omar Hasan Kasule, Dr. Abdulaziz F. Al Kaabba, Dr. Ghaith M. Hussien, Haila Al Othman, Ghaya Muhammed*

**Objectives**
The main objective of this research was to assess the quantity and quality of ethics research output in the Arab world.

**Methods**
Research reports were retrieved from PUBMED and local journals in the Arab world. A questionnaire on knowledge, attitudes, and practices related to research was administered to researchers on ethics identified from publication reports.

**Results**
Analysis of the questionnaire data showed interest in various ethics fields as follows: health ethics 71.4%, clinical ethics 71.4%, research ethics 85.7%, public health ethics 35.7%; environmental ethics 7.1%, organizational ethics 10.7%, and others 3.6%. About 85.7% had ethics included in their current job title. Exposure to ethics was 83.3% during undergraduate, 45% during postgraduate education, and 59.3% after professional training. Attendance at conferences was a major source of training, 77.8% reported attending conferences on ethics. 81.5% reported publishing or research on ethics in the past 5 years. Levels of satisfaction with ethics research in the Arab world were low. The main problems of ethics research were stated as: lack of financial support 13 (26.5%), shortage of human resources 9 (18.4%), low motivation 11 (22.4%), policy issues 9 (18.4%), and others 7 (14.3%).

**Conclusion**
There were many gaps in the published research regarding ethical issues in the Arab
world. The attitudes and practices of physicians regarding disclosure, consent, and professionalism were very variable precluding any generalizations. Many publications were found on medical errors making them the most published ethical problem. Healthcare workers’ attitudes and practices regarding reporting errors were low. Public awareness of errors was high with an increasing number of litigations against physicians and hospitals. In conclusion, ethics research in the Arab world is limited and much remains to be done.
Desmoplastic infantile astrocytoma: A case report and review of the literature
Faris Attieh Al Zahrani

Objectives
1. Reporting a case of desmoplastic infantile astrocytoma
2. Recent review the literature regarding desmoplastic infantile astrocytoma & desmoplastic infantile ganglioglioma (from the year 2004 to the year of 2013).

Methods
We search the database PubMed using the terms “desmoplastic infantile astrocytoma,” “desmoplastic infantile ganglioglioma,” “cerebral superficial astrocytoma of infancy,” & “desmoplastic cerebral astrocytoma of infancy.”
Then, we retrieved all articles from 2004 up to now. All those articles that had a diagnosis different from DIA or DIG were excluded. Some of the articles were also excluded, because they were written in a non-English language, & there were no translation for the article.

Results
A total of 53 articles were reviewed. A total of 47 cases have been reviewed, including our case. DIA/DIG is more common in males than in females.

Conclusion
DIA & DIG are rare, large, supratentorial, dural-based tumors, that arise in the first 24 months of life. Although large in nature, it does not exhibit any malignant features; such as, mitoses, necrosis, or atypia. The prognosis of such tumors are fairly benign after gross total resection, & recurrence is not common. However, there have some cases that demonstrated a malignant course or recurrence.
**College of Nursing, Jeddah**

**I-01**

The relationship between learning styles and academic achievement of nursing students

*Amal Saad Alshehri, Amjad Khayat, Wafika Suliman*

**Aim and Purpose**

To assess the relationship between academic success and learning styles of nursing students in the conventional (Stream I) and the accelerated (Stream II) baccalaureate nursing education programs. This study will be beneficial to students, faculty and institutions as it will help them to acquire better understanding of learning styles of nurses, as well as the relationship between learning styles and academic success.

**Method**

This was a descriptive correlational study. The convenience sample consisted of 40 Stream I and 30 Stream II students. Data were collected by the use of Kolb (1985) Learning Styles Inventory; and the Grade Point Average was used as a measure to participants’ academic achievements. Descriptive statistics (i.e., means and standard deviations) and inferential statistics (Pearson Correlation Coefficient) were used to analyze data.

**Results**

The predominant learning styles of Streams I and II were the diverger and the assimilator, respectively. The findings indicated a non-significant weak correlation (range of $r = -0.102 - 0.098$) between learning abilities and academic success.

**I-02**

Management of dysmenorrheal symptoms among Saudi nursing students at the College of Nursing- Jeddah (CON-J)

*Hanin Saed Aljehni, Waad Abdulrahman Segaf, Rzaz Aziz Saidi, Dalia Sunari*

**Background**

Dysmenorrhea is one of the most common gynaecologic problems that affect most adolescents and young adults. This process has negative impacts on the quality of life...
of a large percentage of adolescent and young adults. This study will aim to determine the prevalence of primary dysmenorrhea among female university students. Moreover, it will identify management strategies used by Saudi girls highlighting the most common method to relieve dysmenorrhea.

**Study Design**
The study used a descriptive design. The study included 60 female, nursing students aged between (18- 30) years.

**Results**
In this study, the mean ages of the study participants were 21.63 ± 2.26 years. Approximately 90% suffered from dysmenorrhea pain. 63.3% never experienced diarrhea during menstruation while 55 % always had back pain. In addition, 71.7% of students were applying heat and almost 87% used bed rest. However, 60% never used NSAIDs and only 23.3% always used other analgesia and 40% are taking different herbal treatments.

**Conclusions**
The prevalence of dysmenorrhea among Saudi nursing students found to be 90% which is compatible with other studies sharing the same demographic data distribution.

The most common symptom the students complained of was back pain. Therefore, it is understandable that the most common management method found to be bed rest. Although, NSAIDs are widely used as first-line therapy in women with primary dysmenorrhea, 60% of our participants never use NSAID as management of dysmenorrhea. Traditional treatments are widely used to treat dysmenorrhea. This may be related to the fact that some women perceive dysmenorrhea as normal and not requiring the use of medication.
I-03

Role of the school nurse as perceived by students’ parent in Jeddah

Dema Ahmed AlHudaifi, Mervat Mahdi Bajoudah, Ghida Omran Almaggrby, Houida Helal

School health programs are considered one of the most effective strategies that a nation would use to prevent major health problems and disasters. In addition to the role of the family, schools are the major institution for providing the instruction and experiences that prepare young people for their roles as healthy, productive adults. School nurses facilitate positive student responses to normal development; promote health and safety; intervene with actual and potential health problems; provide case management services; and actively collaborate with others to build student and family capacity for adaptation, self-management, self-advocacy, and learning”. In this study Descriptive research design was used to determine the role of the school nurse as perceived by the students’ parents in Jeddah. A convenience sample was recruited for the study. The estimated number was 200 school students’ parents living in Jeddah. The study was conducted at different public places in Jeddah. The study questionnaire included three parts, first, Socio-demographic data, second, a list of responsibilities of a school nurse classified according to the school health program components and third, open ended questions regarding the most important responsibility of the school nurse and the most important health education topic as perceived by the parents. The results of this study revealed that 82.5 % of the study subjects were mothers. The majority of schools don’t have school nurse and 6 % have a school nurse and all the parents prefer hiring a school nurse for their children schools. Regarding the most important responsibility of the school nurse as perceived by the parents, screening was considered her first responsibility by nearly a quarter of parents, while 22 % of the parents agreed that prevention and control of communicable diseases was the first important health education topic. Recommendation: The Ministry of Education should recruit a nurse for each school with at least a bachelor’s nursing degree and provide her with enough equipment and facilities.
Sleep disorders among nursing students: The association with their academic performance

Reham Faiz Alshehri, Reema Ahmed Aqabawi, Alia Attiah Al-shomrani, Zahra Abdu Alshehri, Reham Saud Alhindi, Aljawhra Mohammed Abuaali, Amal Khalil

Background
Sleep is a vital part of students’ development, poor or inadequate sleep can have dramatically negative impact on a student’s daily functioning, particularly school performance.

Aim of the Study
The present study was designed to investigate the sleep disorders among nursing students, and its effect on their academic performance.

Participants and Methods
A quantitative descriptive correlational design was used to collect data from 130 nursing students from stream 1 and 2 with different academic levels at college of nursing, Jeddah. Our tool consists of 3 main parts including: demographic data of the target group, Questionnaire on sleep and daytime habits (QS and DH) was adopted from Jain et al., 2013. QS, and DH of multiple choice type, covered sleep and daytime habits (25 questions), life-style and academic progress (3 questions), and one question of course curriculum. The Epworth Sleepiness Scale (ESS) was also included to identify sleep disorder and grade point average was recorded for academic performance.

Results
There were 130 responses with a response rate of nearly 55%. The ESS score demonstrated that 33.2% of participants were considered to have abnormal sleep habits, with a negative correlation -.036 between academic performance and those having problems of sleep disorder and positive correlation 0.089 between academic performance and course curriculum.

Conclusion and Recommendation
Study reported presence of sleep disorder among the studied group of nursing students Analysis of the relationship between sleep disorder and academic performance indicates a significant relationship between abnormal ESS scores, QS
and DH, and academic performance. Therefore, an educational program should be developed to educate the undergraduate nursing students about the importance of adequate sleep to their academic performance, and general physical and psychological wellbeing.

I-05

Willingness of nursing students to provide care for patients with HIV/AIDS

Zahra Hassan Alsharde, Ohud Shawqi Banjar, Fatimah Salem Ba Shmail, Sahar Radi

Background

Human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) are serious life-threatening illnesses. Nurses have always been in the front line of fighting the HIV epidemic. To our knowledge, in the Gulf region, specifically in Saudi Arabia, there are no published studies assessing willingness of Baccalaureate nursing students to care for HIV/AIDS patients in Jeddah, Saudi Arabia.

Purpose of the Study

The purpose of the current study was to investigate willingness of nursing students to care for patients with HIV/AIDS.

Methodology: The design of this study was descriptive correlational. A convenient sample comprised of 112 students enrolled in Baccalaureate nursing program, college of nursing, King Saud Bin Abdulaziz University for Health Sciences-Jeddah are used in the study. Students’ knowledge about HIV/AIDS was measured using HIV/AIDS Knowledge Questionnaire (HIV-KQ-18) (Carey & Schroder, 2002) and students’ attitudes toward patients with HIV/AIDS was measured using the HIV/AIDS Attitude Scale (AAS) (Froman et al., 1992).

Results

Students reported high level of knowledge about HIV/AIDS (M=13.1, SD=2.4), and high levels of positive attitudes toward patients with HIV/AIDS (M=55.4, SD=6.1). Students’ positive attitudes toward patients with HIV/AIDS was significantly correlated with their knowledge about HIV/AIDS (p< .01; r = 0.26). 2

Conclusion

Findings indicated that there was high level of knowledge about HIV/AIDS and high positive attitudes toward patients with HIV/AIDS among nursing students.

Recommendation: Study findings suggested providing current, correct information
about HIV/AIDS, especially HIV mode of transmission for nursing college students. It is also recommended to improve nursing students’ willingness to care for patients with HIV/AIDS.

I-06

Eating patterns among adolescents in Jeddah

Sabah Hamid Alzahrani, Zainah Lafay Al Sulmy, Eman Mohammed Al Shomrani, Wafaa Elarousy

Introduction
Adolescence is a critical growth and transitional period between childhood and adulthood. Adolescents’ dietary behaviors will influence the risks of chronic diseases later in life and produce a new generation with bad dietary behaviors (4). About 70% of obese adolescents grow up to become obese adults.

Aim of the Study
The aim of the study was to investigate the eating patterns among adolescents in Jeddah.

Methodology: A descriptive design was used. A questionnaire was developed by the researchers. Convenient sample of 160 male and female adolescents were recruited from 2 schools in Jeddah.

Results
The results revealed that the majority of participants (96.3%) do not follow a special diet. When participants were asked about the meal that they regularly eat, breakfast was reported by 13.1% while lunch and dinner were reported by 41.3% and 45.6% respectively. Twenty five percent of participants reported that they eat out or order food daily while more than half of them reported that they ordered food weekly.

Conclusion
It was reported that twenty five percent of adolescents are eating out or ordering food in on daily or weekly basis and weekly was reported by 55% from the study. It can be concluded that adolescents do not have healthy eating patterns and they will be at risk of increasing the incidence of obesity among adolescent.
Recommendation
Health education and physical education programs in the schools are recommended to promote healthy life styles and dietary habits.

I-07
Corporal punishment from the children’s point of view

Abeer Khalied Almotiri, Nojood Alrayes, Wafaa Elarousy

Introduction
Corporal punishment (CP) is the use of physical force with the intention of causing a child to experience pain, but not injury, for purposes of correction or control the child’s behavior. Across decades of researches, corporal punishment has been implicated in the etiology of criminal and antisocial behaviors by both children and adults.

Aim of the Study
The aim of the study was to assess corporal punishment from the children’s point of view.

Methodology
Descriptive design was used. Non-propability “Quota”sampling was used in order to obtain a representative sample (300 children) from the 3 levels in two intermediate schools. A questionnaires was developed by the researchers after reviewing of literature.

Results
Three hundred children participated in the research equally presented by gender and three intermediate educational levels. Fifty two percent of the participants reported that they experienced corporal punishment; 60.2% of them did not remember the last time while corporal punishment was reported today by 12.8% and last week by 18% of them. About half of the participants were punished by their fathers and around 48.1% of the participants were punished by hand followed by use of stick (43%). Misbehavior, incomplete homework; missing prayer and bad school performance were the reasons for corporal punishment (39.1%, 15.4%, 9% and 7.7% respectively). No statistical significant differences were found in relation to using corporal punishment and family size, father’s employment or parent’s health status. Most of the participants reported that they will not use CP in future with their children.
Conclusion
The study revealed that fifty two percent of the participants reported that they experienced corporal punishment, about half of the participants were punished by their fathers and around 48.1% of the participants were punished by hands followed by stick (43%). Most of the participants reported that they will not use CP in future with their children.

Recommendations
· Develop strategies that prohibits corporal punishment in all settings
· Increase awareness among parents about child rearing in our Islamic rules and the ways to modify the children behaviours rather than corporal punishment.

I-08
Electro convulsive therapy: Impact of an educational program in developing knowledge and attitude of psychiatric nurses working at psychiatric hospital Jeddah

Azizza Gabir Alsulami, Alaa Eissa Abud Alwahed, Amal Khalil

Objective of Study
To assess knowledge level and attitudes of nurses toward ECT. (Pre, and post assessment). Investigate the association between the knowledge of and attitudes towards ECT , and examine the relationship between nurses’ knowledge of and attitudes towards ECT and their gender, age, and length of work experience.

Sample
The study sample consisted of 20 nurses’ males and females working at psychiatric hospital Jeddah affiliated to Ministry of Health who agreed to participate in the program.

Tool
Three-part questionnaire including (first part: Socio – demographic data questionnaire, the second part consists of two questions; both questions are concerned with participants’ knowledge and the third part is a 28 item self-reported questionnaire).

Results
The total number of participants was 20, males and females were equal in number. The
majority of participants (80%) had more than 3 years of work experience at psychiatric hospital Jeddah. Two indicated that the mean score of participants on ECT program pre-test was 65.4 and that their mean score of the post-test was 71.4. The difference is statistically significant in favor of the post-test ($P = .011$). Indicated that the mean score of participants’ knowledge was 45.15, and the mean score participants’ attitude was 25.25. There was no statistical significance ($P > 0.05$) between participants knowledge, and attitude with their gender, age, and experience.

**Conclusion**

Providing and expanding accurate knowledge about ECT is necessary in order to improve the attitudes towards ECT. Despite the limitations of the study, these results were extremely promising.
**J-01**

**Fast food pattern and body mass index among female students at CON-A**  
*Athmar Ali M Al Herz*

**Introduction**  
In Saudi Arabia and other Gulf countries, the remarkable economy growth has affected the population lifestyle in a negative way. In addition, dietary habits have undergone major changes as well. Frequent consumption of fast-food is harmful as it usually contains more fat and less fibers than ordinary food. Data on dietary habits and food consumption patterns among Saudi population are limited.

**Objective**  
To explore the BMI distribution among Saudi female university students’ food consumption pattern. Additionally, health related nutritional behaviors were assessed.

**Methods**  
A cross-sectional design was utilized. A total of 237 students were selected from College of Nursing in Al-Ahsa (CON-A) at King Saud Bin Abdul Aziz University for Health Sciences after the approval of the College Review Board. All participants were collected at their free time and asked to fulfill the Fast Food Consumption questionnaires at their own pace in addition to weighing and measuring highest of each participant for measuring BMI of each participant.

**J-02**

**Perceived stress of bachelor of nursing students at initial clinical practice and physio-psycho-social status : A Pilot Study**  
*Hajjah Hajjan Mubarak Alanazi, Batool Abdullah Hussin Al Mogarrib, Shurooq Ahmed Mohammed Al Aqnam, Zainab Hussain Abdullah Al Qanbar*

**Introduction**  
The impact of stress on the health of nursing students has not been extensively researched in the discipline of nursing. The initial clinical experience on a new ward has been identified as a source of stress and anxiety for nursing students. Although it
is natural for student nurses to encounter stress in their clinical practice experiences, excess or prolonged stress can have detrimental effects on student nurses’ physical, psychological, and social health and well-being.

**Aim**

to investigate Effect of perceived stress (PSS) of BSC nursing students at initial clinical practice on their physio-psycho-social (PPSRS) status

**Methods**
The study was conducted at the College of Nursing in Al-Ahsa (CON-A) at King Saud Bin Abdul Aziz University for Health Sciences (KSAU-HS). Descriptive cross-sectional design was utilized. A total of (42) students were interviewed to fulfill out PSS and PPSRS scales at their own pace.

**Results**
The Mean total stress score was (M=2.12±.565); Mean of stress aroused from lack of knowledge was (M=1.85±.695); assignments and workload was (M=2.5821±.70311); taking care of patients was (M=1.9018±.78938); clinical environment was (M=2.0595±.96821); and from teachers and nursing staff was (M=2.0802±.72168). The Mean total score of PPSRS was (M=1.0107±.689). There were a significant correlation between stress scores and physiopsychosocial status; (r=0.652**; P=.000) Multiple regression analysis indicated that stress from clinical environment and stress teachers and nursing staff were predictor variables of physio-psychosocial status (Beta =0.516; P=0.45; Beta 0.582; P= 0.47)

**Conclusion**
Perceived Stress from clinical practice (PSS) affects physio-psycho-social (PPSRS) status. Stress aroused from clinical environment, teachers and nursing staff were predictor variables of physio-psycho-social.

**J-03**

**The perception of female nursing students about the influence of technology on family relationships**

*Duaa Ali Ahmad Al Saad, Duaa Abdulgani Ali AlBrahim, Anhar Ali Al Herz, Sakinah Abduljalil Bensaad*
Objectives
Explore the frequency of use of technology among nursing students
Describe the influence of technology on relationships
Explore the impact of technology on relationships

Methods
A qualitative, explorative and descriptive design was used through which data was collected by in-depth interviews with 20 participants who were proportionally randomly selected in one nursing college in Al Ahsa. An interview guide was used to guide the interviewer and focus on the objectives of the study.

Results
Most of the participants were unmarried (82%), made use of smart phones, all had between 2-3 cell phones. All possessed at least 3 to 7 types of technological communication devices. The time spent in using technology was mostly 3-8 hours per day on the smart phone and other devices intermittently. Interestingly, all family members used some or other kind of technological device during conversations. Communication in groups and families were reported to be superficial and interrupted. Five themes and several subthemes emerged from the study. Main themes were “Effect on studies and study time”; “Expression through communication”; “Exposure through technology; “Impact on family life” and “Maintaining cultural, religious and social identity”.

Conclusion
Interesting information was revealed. The impact on the family was less than the impact on the studies of the students. Almost all participants deviated from the interview topic about the family and focused more on the influence of technology on education and training.

J-04

The perceptions of the Saudi community of Saudi females pursuing a career in the profession

Thikrayat Saad Saleh Al Farhan, Husa Abdullateef R Al Yousif, Hajar Abdullah Al Oufy, Angam Yahia A Farzei, Eidah Yousef Khalil Al Harran, Ghaida Naser A Al Hajraf

Objectives
Explore the perception of Saudi’s towards nursing as a profession
Describe how cultural and religious beliefs influence perceptions of the nursing profession for Saudi females
Describe where the nursing profession fits in Saudiazation
Explore how the nursing profession has contributed the empowerment of Saudi women

Methods
This was a qualitative, explorative and descriptive design through which data was collected by in-depth interviews with twenty five participants, of which 15 males and 10 females, with an average age of 35 years, who were selected by means of snowballing. The study was conducted under the National Guard employees and their families in the Al Hassa region of Saudi Arabia.

J-07
Impact of different teaching strategies on classroom anxiety for English as a second language (ESL) learners
Kawthar Yusof Habeb Al Yusof, Hanadi Saud Fahd Al Abood

Introduction
Since successful language learning is a multifaceted creation where many variables have complex relationship together, they eventually influence student’s attitude towards learning a language.

Objectives
The aim of this study is assess the College of Nursing Al-Ahsaa (CON-A) students’ level of anxiety in communication with others, fear of failure in exams, and fear of negative evaluation that may occur in any social evaluation.

Methods
Students’ anxiety levels before and after implementing and enhancing classroom-student centered teaching strategies was assessed. Student’s anxiety level was assessed before and after exposure to the language anxiety concept through two formal lectures and workshops. The Horwitz et al. (1986) The Foreign Language Classroom Anxiety (FLCAS) questionnaire was administered at the two times.

Results
A total of 118 students (n=58) before implementing the teaching strategies (n=60) and after implementing the implementation. The mean age of participants was 18.6 years, 18 students were married and at least had 1 child. Forty-three students had
previous exposure to studying English language at a private institute before their admission to CON-A which might be an intervening factor with the results.

No significant differences existed when comparing the students anxiety level before and after implementing teaching strategies (mean Anxiety Score was $98.7759 \pm 19.45850$ the before stage and $95.9500 \pm 20.70638$ in the after stage).

**Conclusion**

The researchers conclude that there could be a relationship between the student’s previous exposure to English language learning at private institutes before their admission to CON-A, and anxiety level. Not overlooking the fact that the second questionnaire was administered to students a week before their final exams.

**J-08**

**Perceptions of psychiatry among first year Saudi university students in the Al-Hassa population**

*Eman Abdullah Alabdalbage*

**Objectives**
- Explore the perceptions of junior female nurses about psychiatry
- Explore the perceptions about psychiatric patients
- Describe reasons for delayed treatment for psychiatric patients in the community

**Methods**

A qualitative, explorative and descriptive design was used. Two focus group interviews with 12 participants each were randomly selected from a population of 83 first year students. Focus group discussions were held in one College of Nursing in Al Ahsa. An interview guide consisting of five possible questions was used as a guide for the interviewer.

**Results**

Five main themes were identified in both groups. It was evident from the content of the two groups that there was consistency with their perceptions. Data saturation was reached after the second group. Themes were: “The perceptions of the causes of psychiatric disease”; “Feelings towards the person suffering from a psychiatric disease”; “Erosive attitudes leading to the stigma of psychiatry”; “Feelings towards with mentally ill patients” and “Nurses working in psychiatric hospitals”.


Conclusion
The study was indeed interesting and many recommendations were made which also showed a lack of knowledge, however all the participants agreed that this would be an interesting field to study and work in. The literature reviewed after data collection and analysis concluded that many of the sub-themes were also found in other countries and that fears and superstitions experienced and expressed by Saudi Nurses was not unique but consistent with others who had not yet been exposed to psychiatric training.

J-09
Assessing the correlation of examination stress and eating behavior among adolescent nursing students at College of Nursing (CON A) Al Ahsa

Heba Fareed AlDhaif, Sajidah Abdulaziz AlHashem

Objectives
The study focused on assessing the effects of stress on students’ eating behavior before and during examination period.

Methods
Descriptive correlational design was implemented. Data was collected from CONA Stream I nursing students in two phases, during the fall semester 2013-14. Three self-administered questionnaires were developed for demographic, stress level and eating behavior.

Results
A total of 129 CON A students participated in phase 1 and 110 in phase 2. Most of the students live with their families do not regularly exercise and they do listen to music in their leisure time. Students weighed from 38 to 110 Kg with a mean of 54.5 ± 11.84, and their height ranged from 142 to 171 Cm with a mean of 156.2 ± 5.7.
Phase I data showed that total score of students’ stress level ranged from 47 to 115 and a mean of 79.03 ± 12.38 (maximum stress level score is 130). For the students eating behavior their score ranged from 69 to 121 with a mean of 101.3 ± 9.7 (maximum eating behavior score is 170). There was no significant correlation between students’ stress level and their eating behavior in phase one (r = 0.08, p = 0.33).
Phase II data showed that students stress level ranged from 48 to 116 with a mean of 78.9 ± 13.09. For the students eating behavior their score ranged from 79 to 145 with
a mean of 101.8 ± 10.9. There was a non-significant negative correlation between students stress and eating behavior scores ($r = -0.16$, $p = 0.08$). Additionally, there was no significant difference between phase I and II results.

**Conclusion**
Students’ eating behavior is unhealthy and the study results showed that students eating behavior was not affected by the examination stress.
Calligraphy, Photography, Arts, Documentaries

Calligraphy

نسرين المولد

صفية أبو شفة
Photography

RIAN IBRAHEEM ALHAMAD

Photography

ABDULAZIZ KHALD ALMENIFI
Photography

عبدالعزيز خالد السعد
Photography

فاطمة صالح الخميس
Photography
مرام عبدالرحمن الملحم

Photography
سلمى الوباري
Photography

ابتسام اليحياوي

Photography

أنهار الحرز
Photography

يارا فهد القريني

Painting

سارة الحربي
Painting

إسراء باحميدان

Painting

لجين مؤمنة
Painting

نسرين المولد

Drawing

هبة المهارك
Drawing
ولاء بوشيت
الأفلام الوثائقية

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خدمة مجتمعية

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