Well conducted randomized controlled trials (RCT) provide answers to relevant clinical question with the highest level of evidence. However, cardiologist’s participation in RCTs remains disappointing low in Saudi Arabia despite the perception of its benefits for patients and clinical practice. The purpose of this study is to identify the challenges and barriers for cardiologists participation in RCTs as perceived by cardiologist’s working in King Abdul-Aziz Cardiac Center, Saudi Arabia. A self-administered questionnaire was completed by cardiologists from different subspecialties working at King Abdul-Aziz Cardiac Center, Riyadh. All cardiologists working in this center were invited to participate. The questionnaire used was validated before in a previous multicenter study conducted in the United States. A total of 61 cardiologists (consultants, Associates and Assistant consultants) participated in the study with a response rate of 91%. The mean duration of clinical practice was 7.5 ± 7.9 years. Half of the cardiologists reported that they did not participate in any RCT before. Among those who participated, only 21.3% were principal investigator (PI) or co-investigator, while others only assisted in enrolling patients. Most cardiologists (90%) agreed that RCTs improve patient care and an overwhelming majority (98.4%) reported that they would like to be involved in enrolling patients. The participating physicians believe that their organization is encouraging them to participate in RCTs. However, many cardiologists cited barriers to participating in RCT including lack of time (70.5%), lack of training/experience (74.5%) and lack of ancillary support staff (70.5%). This study identified a group of barriers that should be tackled in order to promote the active involvement of cardiologists in future RCTs. Most cardiologist are very enthusiastic about RCT, but they lack the skills and support staff to initiate RCTs. Future efforts should tackle these identified barriers to increase participation in multicenter and investigator initiated clinical trials.

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73. Surgical site infection after CABG: Root cause analysis and quality measures recommendation SSI quality improvement project

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Surgical site infection (SSI), is a preventable and devastating complication with significant morbidity after cardiac surgery. The reported SSI rate at our center, ranging from 3.4% to 11.2% (2007–2013). This rate is considered to be above the standardized rate recommended by the NHSN. Quality improvement project team to address the issue of SSI, (SCIP), where formed by the medical administration late 2014. The aim of the study was to identify SSI risk factors at our cardiac surgical unit, using evidence based practices while taking a local approach to problem solving. We performed Root Cause Analysis (RCA), and we applied other quality improvement tools to identify the area for potential improvement. Data include a Process Map of the pre-operative, intra-operative and post-operative factors that might contribute to SSI risk. We prospectively used the RCA form to investigate all the stages of the patient process map (pre, intra op, and post operatively). The data included the Patient related factors, the sterilization and the hygiene practice in the operating room, and the operating room traffic, and the compliance to the bundle of care. Figure represent the “Fishbone” diagram of the possible causes of SSI after cardiac surgery in our unit. Demographic features of patients with SSI were as follows: mean age-65 years; female 83%; time to infection (mean 101 days; range 1–36 days). The root cause analysis identified a significant weakness in the compliance to the bundle of care to prevent SSI. Furthermore, the patient flow, the operating theatre cleaning and traffic was also identified as a contributing factor to SSI. Surgical site infection after cardiac surgery is a preventable complication. The application of the evidence based practice and structured way of thinking in problem solving, will help identify the potential risk factors. Focusing on solving the right patient process and visually represents the problem will help identifying the potential solutions.

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Epidemiology
CLINICAL AND HOSPITAL-BASED OBSERVATIONAL STUDIES

74. Cardiovascular risk assessment for Saudi university employees and their families: Developing a framework for provision of an evidence-based cardiovascular disease preventative programme

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In the Kingdom of Saudi Arabia (KSA), cardiovascular diseases (CVDs) are the primary cause of death among adults, representing 46% of total mortality in 2014. This study’s objectives were to assess the prevalence of cardiovascular risk factors (CVRFs), and calculate the cardiovascular risk (CVR) among King Saud University
employees and their families. Moreover, it aimed at assessing the possible effects of living in KSA on the heart health of expatriate employees and their families. A cross-sectional study was conducted on 4500 university employees and their families aged ≥18 years old, using the World Health Organization STEPSwise approach to surveillance of CVRFs. CVR was then calculated for participants using the Framingham Coronary Heart Risk Score calculator. The mean age of participants was 39.3 ± 13.4 years. The prevalence of CVRFs was as follows: low fruit/vegetable consumption of <5 portions/day (88%), physical inactivity (77%), overweight/obesity (BMI ≥25 kg/m² and ≥30 kg/m² respectively, 72%), obesity (36%), abdominal obesity measured by WHR (59%), dyslipidaemia (22–37%), diabetes (22%), hypertension (22%) and current tobacco use (12%). One quarter of the participants were estimated to have >10% risk to develop CVD within the following 10-years. Furthermore, this study showed that expatriates had significant negative effects on behavioural risk factors after residing in KSA, namely: high rate of physical inactivity, high consumption of fast food, low consumption of fruit and vegetable. However, there was no effect on the pattern of tobacco use. The prevalence of CVRFs is substantially high among the study population. To combat the future expected burden of CVDs, a proposed prevention programme for employees’ cardiovascular wellness is designed and recommended to be implemented and institutionalized within the university.

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75. King Abdulla Medical City – Makkah (KAMC) echocardiography service experience & challenges during hajj season (pilgrimage)

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2–4 million Muslims attend Hajj each year over last 4–5 years. Umra visitors are seen all along most the year. This creates high demand on all services provided specially the medical. The majority of Hajjes are elderly with co morbidities. They are subject to intense emotional, spiritual & physical endurance during the short period of Hajj season. For the last 4 years King Abdulla Medical City (KAMC) is the centre of care for almost all cardiac services provided in Makkah. Echocardiography is a pivotal & integral part of any cardiology service, providing important information about morphology, function & possible etiology in many cases. There is an increasing demand on echo service in KAMC especially during Hajj season. Our service model is unique to meet this increasing demand during Hajj season. To report: we report the service set up. The volume of cases done our experience & challenges met during last four years. The service is provided between first & 15th of Dhul Haja each year. The service is 24 h divided into 12 h shifts. The two shifts are adequately covered by well trained echocardiographers & experienced non-invasive consultant cardiologists. This staff is distributed within the various cardiology clinical areas, to insure rapid response. The studies are done Philips (i30, Epic7) machines. Data acquired is transmitted by special ports/WiFi to our echo lab (Xcelera system) where the data is stored & available for viewing & reporting. Reports are created by the responsible consultants using a number of dedicated stations. Viewing stations are well distributed over the whole hospital. The results of this abstract are analyzed using simple Microsoft office tools. Between years 2011 and 2015 there is exponential increase of echo studies done in KAMC, with similar increase in the number of studies done among Hajjes. There was an increase in the number of echo machines, echocardiographers & consultants (See Tables and Graphs attached). Between the years 2011–2012 and 2012–2013 there was a significant jump in the number of echo studies done in KAMC & during Hajj season. Between the years 2013–2014 and 2014–2015 the incremental rate slowed down. (See Table 2). Some of challenges noted during Hajj season: locum staff needed to cover the Hajj period High volume of echo studies needed done & reported within short time. Language barrier causing lack of important medical information & causing delay/failure to consent when special studies are needed eg TEE. The infrequent lack of clinical data in the request forms to guide the study & reporting. There is occasional complex cases. Hajj season is unique & challenging experience to most Hajjes & service providers. Our service set up is demanding but quite adequate to meet the expectations. The data gathered over last 4 years showed clear & exponential increase in the number of echo studies. Service providers need to plan & accommodate this expected increase.

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76. Profile and spectrum of congenital heart defect in pediatric patient with down syndrome

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Down syndrome is one of the most common chromosomal abnormalities worldwide. It occurs in 1 of every 800 live births. Almost one-half of patients with Down Syndrome have congenital heart defect. Our objective is to describe the frequency and spectrum of congenital heart defect (CHD) among children with Down Syndrome in