FMIC

Abstracts

12th Annual International Scientific Conference & 12th Quality Convention

"Human Health, Quality and Research: Challenges and Opportunities"

November 17, 2022

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Table of Content

Contents

Acknowledgement

Message from Chief Executive Officer

On behalf of the FMIC Board and Management, I extend a warm welcome to all the participants of the 12th Annual International Scientific Conference and 12th Quality convention at FMIC.

FMIC is the product of a unique four-party international partnership that includes the governments of Afghanistan and France, the Aga Khan Development Network, and the French humanitarian organization, La Chaîne de l'Espoir. This partnership is the defining characteristic of FMIC and one of its greatest strengths. FMIC partners and management are committed to providing continued services to the people of Afghanistan at this unprecedented time. We will continue to pursue our vision and mission with the help of partners, international donors, and well-wishers. Holding this event in a difficult time is one of the steps toward fulfilling a continuous mission of "capacity building". We encourage all participants in this conference; whether physically or virtually, to get the maximum benefit.

FMIC is investing in the future of Afghanistan's healthcare system by providing medical professionals with international standard training and professional development opportunities. The Postgraduate Medical Education Programme (PGME) is a flagship programme, which offers specialised training in nine different specialties, of which five are rare in the rest of the country. Since 2011, FMIC has annually sponsored an international scientific conference as well as a quality and patient safety convention, both of which highlight **Afghan health professionals' high capacity for critical thinking.**

So far, FMIC has organised eleven international conferences on various emerging themes, including **"Paediatric Care in Afghanistan" on February** 26-27, 2011; "From **Paediatric Care to Child Health" on December** 1-2, 2012; "Moving towards Quality **Healthcare for Mother and Child" on October 5-6 2013;** "Strengthening Academics and Health Services in Dev**eloping Countries in Transition"** on October 23-24, 2014; "**Emerging Trends in Reproductive,** maternal, new-born and child health in Developing Coun**tries" on December 8-9, 2015,** "Emerging Trends of Non-Communicable Diseases (NCDs) in Develo**ping Countries" on November 24, 2016;** "Healthy Lives and Well-being for **All" on August 5, 2017;** "Better health: reaching everyone, everywhere" on August 4, 2018, "**The science of** healthcare - **Access & quality" on August** 3, 2019; "Universal Health: Accessibility, Quality and Research in the Era of COVID-1**9 Pandemic" on Novembe**r 7, 2020; "**Healthier World: Together, Protect and Invest on Health, Quality** and Research" **on November 6, 2021.**

This year, FMIC brings the 12th Annual International Scientific Conference and the 12th Quality Convention to you with the theme of "Human Health, Quality and Research: Challenges and Opportunities. Sub-themes of the conference include: Nutrition and Food Safety, Quality and Patient Safety, Reproductive, Maternal, Newborn and Child Health, Mental Health and Well-being, Disaster Management, Communicable Diseases and Learning from the Pandemic (Covid-19), Non-Communicable Diseases, Nursing, Midwifery and Allied Services, Leadership, Governance and Healthcare management, Digital Health and Innovation in Healthcare, Environmental and Occupational Health.

FMIC has always advocated for quality services in healthcare and has been striving to practically demonstrate the same since its establishment in 2006. Our work has been recognized by national and international organizations for setting the standards for high quality tertiary healthcare. I am pleased to announce that recently we have been recognized by SafeCare for meeting their quality standards with 99% success rate after a rigorous accreditation process. This is a great source of happiness for the FMIC team and leadership who have

been working hard day and night to have such recognition despite the fact that we operate in a very challenging circumstance. We are committed to continue our efforts for improving the healthcare landscape in Afghanistan in the years ahead.

Last but not the least, we are cognizant of the fact that caring for the environment should be our top priority. We have been taking small steps in this regard and from now onwards we will take more concrete actions for the protection of our environment. For this we will need the support and commitment of our partners and all stakeholders.

Once again, welcome to the 12th FMIC Annual International Scientific Conference and Quality Convention with best wishes for a stimulating and rewarding experience.

Aziz Ahmad Jan
Chief Executive Officer, FMIC

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Conference Programme

Theme	Presentations
Session 1: **Reproductive, Maternal, Newborn and Child Health**	Oral Tamsulosin (an alpha1 blocker) can be effective for postoperative urinary retention after pelvic surgery a case series study
	Risk Factors Associated with Neonatal Hyperbilirubinemia in Neonates ≥35w in a Tertiary Care Hospital: Case Control Study
	Improving Safety and Quality of Caesarean birth
	Explanatory models of stillbirth among bereaved parents in Afghanistan: implications for stillbirth prevention
	Oral Hygiene Status Among 5 to 15 Years Old Children Stomatology National Hospital in Kabul City
	Indexes of Overall Diet Quality at the age of 6-24 months age group
	Prevalence and Risk Factors of Apnea in Preterm Neonates Admitted to the French Medical Institute for Mothers and Children Hospital in Kabul City_ An Analytic Cross-Sectional Study
	HSG findings in females with infertility, A cross sectional study in a tertiary care setting, Kabul - Afghanistan
	Descriptive Study of Neonatal Tetanus Cases in Afghanistan, 2018-2021
	Characteristics of patients with Severe Acute Malnutrition (SAM) who admitted in a tertiary care hospital in Kabul, Afghanistan
Session 2: **Quality and Patient Safety**	A Standardized Tracheostomy Education Across the Enterprise: "Evaluating the Effectiveness of Patient Family Education in Tracheostomy Tube Changes in Pediatric Population
	Evidence-Based Approach to Reduce Central Line Associated Blood Stream Infections (CLABSI) in Adult Surgical Intensive Care Unit
	Chasing Zero pressure injuries in Surgery department at a Tertiary Care Hospital in Karachi" quality improvement program to reduce hospital-acquired pressure injuries (a patient safety initiative)
	Quality Improvement project in Peads Cardiac Surgery: Increasing competent nursing Taskforce
	Elopement Identification and Preventive Measures in inpatient psychiatry
	Prevention of Physical and Verbal Violence in Inpatient Psychiatry
	Patient and hospital protection from consequences resulting from patient elopement: A proactive approach
	Complete Medical Documentation (Patient Safety)
	Radiation Dose Reduction Using Fluoroscopy System for Radiology Procedures
	Findings from Baseline Assessment of Higher Education Institutes Providing Higher Medical Education Including Dentistry
	Assessment of healthcare workers' mental well-being in Kabul public tertiary hospitals, 2021
	The Mediating Effect of Professional Behavior, Customer Satisfaction, Empathy, and Responsiveness at selected Hospitals of Babul
Session 3: Communicable Disease	Reinfection with SARS-CoV-2 in Afghanistan: A case study
	Determinants of Tuberculosis among children in Kabul, Afghanistan
	Investigation of Crimean-Congo Hemorrhagic Fever (CCHF) Outbreaks in north region of Afghanistan, 2021 – 2022
	Descriptive study of COVID-19 cases and deaths in six provinces of Afghanistan, 2020-2022
	Descriptive study of COVID-19 Vaccine Coverage in Afghanistan, 2021 – 2022
	Descriptive epidemiology of dengue fever cases in Nangarhar province- Afghanistan, 2021
	Descriptive epidemiology of measles vaccines coverage and dropout, Afghanistan, 2021
	Epidemiological Profile of CCHF in Herat province, Afghanistan, 2019-2021
	Descriptive Epidemiology of Visceral Leishmaniasis in Afghanistan, 2018-2022
	Contact tracing of COVID-19 in Afghanistan, 2020- 2022
	Measles Cumulative Incidence: A Nation-wide Cross-sectional Phone Survey
	COID-19 Cumulative Incidence & KAP Survey: A Nation-wide Cross-sectional Phone Survey

Session 4: **Non- communicable** **Disease**	JJ stent removal in pediatric patients by Trans urethral catheterization technique: A randomized trial
	Isolation and In-Vitro Characterization of Bacteriophage Against Methicillin Resistant Staphylococcus Aureus
	Prevalence, Distribution, and Histopathological Features of Malignant Tumors Reported at Tertiary Level in Afghanistan: A 3-year study
	Risk factors associated with Female Breast Cancer in Multi-Tertiary Care Hospitals Kabul, Afghanistan: A Case Control Study
	The Association between Dietary Inflammatory Potential and risk of Gastric Cancer: A Case-Control Study
	Proportion of and factors associated with thyroid dysfunction among those individuals who are referred to a tertiary care facility for thyroid function tests in Kabul, Afghanistan
	Prevalence of Treatment Non-adherence & Associated Factors in Hypertensive Patients in Two Medical Centers in Kabul: A Cross-Sectional Study
	Pig bronchus with recurrent upper lobe pneumonia: A case report
	Work-related musculoskeletal disorder among surgery trainees working in Aga Khan University Hospital Karachi-Pakistan Cross-sectional study.
	Comparison of Male versus Female breast cancer: A single center experience of over 30 years
	Patient characteristics who presented with cardiac complains to an Emergency Department of a tertiary care hospital in Kabul, Afghanistan
	Association of Hormone Receptors and Human Epidermal Growth Factor Receptor-2/neu Expressions with Clinico-pathologic Factors of Breast Carcinoma: A Cross-sectional Study in a Tertiary Care Hospital, Kabul, Afghanistan
	Risk factors related to cleft lip and cleft palate in children under 5 years of age coming to FMIC
	Patient reported outcomes measures (PROMs) trajectories after elective hip Arthroplasty
	Surgical outcome of Salter Osteotomy in patients with Developmental Dysplasia of the Hip among children with Neglected DDH.
	Large Primary Hydatid Cyst of Thigh: A case report
	Acute lymphoblastic leukemia with clonal evolution due to delay in chemotherapy: A report of a case
	Management of acquired bronchobiliary fistula: A case report
	Clinical characteristics and outcome of patients underwent cardiac catheterization procedures in a tertiary care hospital in Kabul – Afghanistan
	Squamous cell carcinoma arising in an epidermal cyst of urinary bladder associated with vesicolithiasis: A case report and review of the literature
	Characteristics and experience of patients undergone surgery for congenital heart defects at a tertiary care hospital in Kabul, Afghanistan

Oral Presentations

Scientific Sessions

Abstracts

Session 1

Reproductive, Maternal, Newborn and Child Health

Oral Tamsulosin (an alpha1 blocker) can be effective for postoperative urinary retention after pelvic surgery a case series study

Dr. Huma Ahmad Alizai MD

Introduction:

Incidence of POUR (Postoperative Urinary Retention) is reported 2-43 percent after pelvic surgeries. Age >50 years and postoperative day of catheter removal appear to be the most prominent risk factors for postoperative urinary retention in women undergoing pelvic surgeries. After pelvic surgery POUR could be caused by bladder (detrusor) dysfunction, urethral obstruction, or failure of pelvic floor relaxation. Pain prior to micturition can be accompanied with urinary retention. Oral Tamsulosin can prevent urinary retention after operation, if is given prior to pelvic surgery. Tamsulosin is an Alpha 1 blocker which relaxes bladder neck muscles and makes urination easy. It is used in cases of symptomatic BPH4. For women who produce retention of urine after pelvic surgery most references suggest bladder catheterization. We report three cases who found retention of urine after pelvic surgeries and after application of bladder catheter still had retention of urine. Oral Tamsulosin 0.4mg/day was given for the first time for treatment of urinary retention after pelvic surgery. The first dose was effective and they had normal voiding.

Methodology:

Files of women who received Tab oral Tamsulosin after pelvic surgeries were reviewed retrospectively. This is a case series study about three women of 50-60 years old. Total Vaginal Hysterectomy was done for two of them and anterior and posterior repair for one. Catheterization for twenty-four hours was not effective. Finally, first dose of Oral Tamsulosin 0.4 mg worked out.

Results:

All three patients emptied their bladders completely, after taking Tab Tamsulosin 0.4mg orally. After getting this medicine, patients emptied their bladders and no need was for further bladder catheterization.

Conclusion:

Tablet Tamsulosin0.4mg orally can be effective to cure urinary retention after pelvic surgeries. Further high quality researches are needed. It can improve practice through prevention of long term catheterization.

Risk Factors Associated with Neonatal Hyperbilirubinemia in Neonates ≥35w in a Tertiary
Care Hospital: Case Control Study

Nasrin Hakimzada, Abdul Jamil Rasooly, Sayed Murtaza Sadat Hofiani, Rubina Barolia, and Shireen Shehzad

Introduction:
Hyperbilirubinemia affects up to 80% of preterm and 60 percent of term neonates. Around 5 -10% of them develop clinically considerable hyperbilirubinemia that needs intervention like phototherapy or exchange transfusion. Significant neonatal jaundice if nottreated leads to acute and chronic complications including acute bilirubin encephalopathy and kernicterus.

Methodology:
a case-control study is conducted over neonates admitted from January 1st 2021 – 31st December 2021 at the Pediatrics Department of the French Medical Institute for Mothers and Children (FMIC). A total of 98 cases and 98 controls were included in the study. Univariate binary logistic regression test was done to identify the association between independent and the dependent variable.

Results:
A total of 98 cases and 98 controls were included in the study. According to chi square and univariate logistic regression test, male gender [OR 2.41 CI 95% (1.31 – 4.43)], ABO incompatibility [OR = 4.267 CI 95% (1.959 – 9.294)], Rh incompatibility [OR 4.216 CI 95% (1.721 – 10.330)], a sibling with neonatal Jaundice [OR 2.637 CI 95% (1.408 – 4.940)], a sibling history of Phototherapy or exchange transfusion [OR 9.366 (2.091 – 41.942)], breast feeding [OR = 3.185 CI 95% (1.428 – 7.105)], and birth asphyxia [OR=2.847 CI 95% (1.447 – 5.601)] are significantly associated with neonatal jaundice.

Conclusion:
Male gender, ABO incompatibility, Rh incompatibility, sibling history of neonatal jaundice, sibling history of receiving phototherapy/exchange transfusion, birth asphyxia and exclusive breastfeeding are risk factors associated with neonatal jaundice. Early identification of at risk fetuses and newborns will decrease the health and economic burden of neonatal jaundice.

Improving Safety and Quality of Caesarean birth

Ghutai Sadeq Yaqubi MD, Rita Hashimi Salim MD, Rabil Mubin Burhani MD, Kusum, FRCOG, MPH, Zakia Kohistani MD

Introduction:

With persistently high maternal and newborn mortality in Afghanistan, implementing partners are supporting the Ministry of Public Health (MoPH) to address these. Caesarean section (CS) is essential to prevent mortality and morbidity. Surgical safety is a concern and proven measures are inconsistently followed in a fragile conflict affected health system. The Helping Mothers and Children Thrive (HEMAYAT) USAID Funded project aimed to increase utilization of high-quality family planning and maternal and newborn health services.

Methodology:

HEMAYAT piloted a safer caesarean birth program in three tertiary hospitals in Kabul and Herat building on existing functional mentorship system. Baseline assessment of utilization of WHO Safe Surgery Checklist (SSCL) was undertaken. Advocacy meetings with MoPH, updates on knowledge and skills and **strengthening surgical team's** use of SSCL was done. Trainers and hospital mentors continued support **through WhatsApp's groups, face to face and tracked** utilization of SSCL.

Findings:

Usage of SSCL cases increased to 90% MMH, 100% KKH and 94% HMH from baseline rates of 15%, 38% and 21% respectively. During COVID 19 pandemic the SSCL utilization rate in MMH and HMH declined as more than 40% of staff were infected by COVID 19. All three hospitals improved immediate newborn care including initiation of breastfeeding. IP bundles including prophylactic antibiotic before skin incision was administered.

Conclusion:

The mentorship system served as a strong foundation for improving surgical safety. Engagement of hospitals management teams and professional association would increase sustainability. Quality and use of data need continuous support. WhatsApp for clinical staff is a new but promising approach in Afghanistan.

Keywords: Safe surgery, Caesarian Section Birth, maternal mortality, Afghanistan

Explanatory models of stillbirth among bereaved parents in Afghanistan: implications for stillbirth prevention

Aliki Christou, Camille Raynes-Greenow, Sayed Murtaza Sadat Hofiani, Adela Mubasher, Mohammad Khakerah Rashidi, Mohammad Hafiz Rasooly, and Neeloy Ashraful Alam

Introduction:
Local perceptions and understanding of the causes of ill health and death can influence health-seeking behavior and practices in pregnancy. We aimed to understand individual explanatory models for stillbirth causation in Afghanistan to inform future initiatives on stillbirth prevention.

Methodology:
This was a qualitative study of 42 semi-structured in-depth interviews with women and men with a recent stillbirth, female community elders and healthcare providers of Kabul province, Afghanistan between October-November 2017. We used thematic analysis to analyze the data framing the findings around **Kleinman's explanatory framework.**

Results:
Perceived causes of stillbirth were broadly classified into four categories – biomedical, spiritual and supernatural, extrinsic factors, and mental wellbeing. Most respondents attributed stillbirths to several categories, not just one primary cause, and many believed that stillbirths could be prevented. Prevention practices in pregnancy aligned with these causes and included self-care, religious rituals, superstitious practices and imposing social restrictions. Symptoms preceding the stillbirth reported by women included both physical and non-physical symptoms or no symptoms at all. The impacts of stillbirth concerned psychological effects and grief, the physical effect **on women's health, and the social implications for women** and how their communities perceive them

Conclusion:
Our findings show that local explanations for stillbirth vary and need to be taken into consideration when developing health education messages for stillbirth prevention. The overarching belief that stillbirth was preventable is encouraging and offers opportunities for health promotion and education. Such messages need to emphasize the importance of care seeking for problems, particularly around changes in fetal movement and should be delivered at all levels in the community. Community engagement will be important to dispel misinformation around the causes of pregnancy loss and reduce any social stigma.

Oral Hygiene Status Among 5 to 15 Years Old Children Stomatology National Hospital in Kabul City

Dr Shamila Azimi, Pediatric department of Kabul university of medical sciences

Introduction:

Oral health is a thoroughly important feature to maintain constant general health and quality of life. It is necessary to know the prevalence and distribution of oral health problems and understand the dental health practices that people follow. Such information is basic for formulation of oral health policies and appropriate programs. The appropriate policies and programs will facilitate in improving awareness and knowledge of the general public about the preventive and promotive aspects of oral health as well as, to create the required services and train the necessary dental manpower to meet these needs. Lack of awareness about dental diseases has resulted in gross neglect of oral health. the propose of the study is to determine the oral hygiene status in 5-15-year-old children, the lack of the previous data in in this field is one the reasons for conducting this research so that we can provide accurate statistics data in Afghanistan.

Methodology:

a descriptive cross-sectional study was carried out between 5-15-year-old in 431 children of stomatology hospital. Sample size was selected randomly from both gender group which were 161 males and 270 females. Oral hygiene status was assessed by using simplified-oral hygiene index. Gingival index (loe and sinless, 1963) was used for assessing gingival status. dmf and DMF for decayed, missed and filled teeth in primary and permanent dentition used to assess the prevalence of dental caries. Statistical analysis done by SPSS 0.20

Results:

21.2% of children had good oral hygiene status, 65.2% had fair oral hygiene and 13.6% had poor oral hygiene. The mean OHI-S was 2.4 ± 1.19. there is no statistical significant between gender and oral hygiene status ($p < 0.05$). 80.9% was the prevalence of dental caries. Mean dmf of males was 4.15 ± 3.03 and females was 3.05 ± 2.67 that shows prevalence of dental caries was higher than females. overall mean of dmf was 3.48 ± 2.86. 173 (40.9%) had normal gums. 31.6% of children not brush their teeth, 37.4% brush once in a day.

Conclusion:

oral hygiene status was fair in more than half of the sample size. High prevalence of dental caries seen in males. There is urgent need of preventive and curative programs must be taken by policy makers.

Indexes of Overall Diet Quality at the age of 6-24 months age group in Matiari, Sindh, Pakistan

Sanam Iram Soomro, Sheeraz Ahmed, Asad Ali, Fayaz Umran, Department of Pediatrics and Child Health, Aga Khan University, Karachi, Pakistan

Introduction:

The objective of this study is to evaluate the general indices of the diets. The standard used to measure overall diet quality includes those based on examination of nutrient intake, food groups, dietary diversity, or a combination of both, and some indicators such as breast milk feeding and non-breastfeeding patterns, etc. compared to standard recommended diets.

Methodology:

The newly developed index was used in a Pakistan Malnutrition Survey (SEEM) in rural Matiari District in Sindh in which we collected quantitative estimates of non-breast foods and breast milk consumed by children through a food recall form. 24 hours from 6 months onwards to 24 months every 2 months (n=4813). Index components included all nutrients and antinutrients, food diversity groups such as added sugar, total fat, polyunsaturated fatty acids, total fat and whole grains, fruits, vegetables, excess fruit juice, dairy, iron, and a term of interaction of total daily energy consumption. Points were assigned to reflect poor or excessive intakes. Means and standard errors were used to describe food intake and Dietary Quality Index scores. The ability to differentiate the diets was determined using the mean intake of food/nutrient groups and total energy intake. The highest and lowest quartile component scores of the quality index were compared.

Results:

The results show that the dietary pattern varies according to the age of the baby as recommended by the WHO/FAO, the intake of breast milk is reduced and complementary foods are increased from 6 months. The quality of the diets shows that 60% of the total energy intake comes from breast milk and 40% from other complementary foods, since as we progress to 6 months of age, the intake of nutrients from complementary food increases compared to breast milk. We have found that, depending on age, the dietary diversity of complementary foods is not as great, which may be the main cause of malnutrition. Only 3 different types of food were consumed under 12-month age group, including wheat-based snacks, wheat bread, cooked rice, cereal-based weaning foods, and potatoes. Therefore, it is necessary to add meat and other foods in their diets to meet the standard requirements.

Conclusion:

Study provides the comprehensive diet quality indexes of 6-24 months children, in which all standard quality indicators of WHO/FAO indicators were used to define the quality of food consumed in Sindh Pakistan under 6-24 months age group.

Keywords: Quality Index, Diet, Food groups, Nutrients intake, dietary diversity, Quality indicator

Prevalence and Risk Factors of Apnea in Preterm Neonates Admitted to the French Medical Institute for Mothers and Children (NICU) Hospital in Kabul City: An Analytic Case-control Study

Dr. Omid Ahmad Faizi, Neonatologist consultant, Head of NICU, FMIC, Dr. Farid Faqiri neonatologist consultant, FMIC and Dr. Mansour Aslamzai, Professor, Department of Neonatology, Kabul University of Medical Science, Kabul, Afghanistan.

Introduction:
Prematurity is one of the leading causes of neonatal death in Afghanistan and complicates a lot of serious problems including apnea. Although recurrent and prolong apnea may be directly or indirectly **associated with significant adverse outcomes, there isn't enough scientific information regarding the** incidence and pattern of this problem in Afghanistan, therefore, this study is performed to obtain such information.

Objective:
To find the incidence rate and pattern of apnea in premature neonates admitted to the Neonatal Intensive Care Unit of the French Medical Institute for Mothers and Children Hospital in one year, Kabul City.

Methodology:
This analytic Case-control study was conducted at the Neonatal Intensive Care Unit of the French Medical Institute for Mothers and Children Hospital in Kabul city, Afghanistan. All the preterm babies admitted during the study period were included in this research. Statistical analysis was performed by SPSS 22.

Results:
Seventy-five preterm newborn babies were evaluated for the incidence and pattern of apnea at the Neonatal Intensive Care Unit (NICU) of French Medical Institute for Mothers and Children (FMIC) Hospital, Kabul City. The overall incidence rate of apnea in premature newborn babies was 48% and the highest incidence rates were seen within groups of ELBW and early preterm infants. The mentioned data also describes, such apnea usually appeared on the second day of life and continued for one week. After the comparison of data between apnea and non-apnea groups, as shown in [Table-3], the lower mean neonatal birth weight and mean maternal age had a significant association with the development Page 5/8 of apnea in preterm neonates. The neonatal age, sex, gestational age, number of delivery, and mode of delivery had no statistically significant relationship with the occurrence of apnea in such infants.

Conclusion:
The overall incidence rate of apnea in preterm neonates was 48% and the highest rates were seen within extremely low birth weight and early preterm neonates. In most cases, the apnea has commenced on the second day of life and has lasted for six days. The lower neonatal birth weight and young maternal age were found to be the risk factors of apnea in preterm neonates.

Hysterosalpingographic findings in females with infertility, a cross sectional study in a tertiary care setting, Kabul Afghanistan

Naqibullah Foladi MD, Mohammad Saboor Rastin MD, Sahar Maroof MD, Zohra Kakar Rastin MD

Introduction:

Infertility is a worldwide issue, and Afghanistan is not an exception. **Our study's objectives are identifying** imaging findings of hysterosalpingography and determining patterns of abnormalities in female patients referred for infertility either primary or secondary. The study is the first of its sort in the nation as far as we are aware.

Methodology:

This is a cross-sectional descriptive study carried out in a retrospective manner through hysterosalpingography reports from the electronic medical record (HIS-RAD) from January 01, 2019 until December 31, 2019. In this study we reviewed a total of 2527 female patients who were referred and underwent hysterosalpingography examination in the department of radiology, French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan. The sampling technique is non probability purposive method, targeting only the females who were referred to undergo the hysterosalpingography. The data is analyzed in SPSS 25.0.

Results:

A total of 2520 patients were included in the study. The mean age of the patients is 29. Amongst the patients, 1369 (54.3%) were with primary infertility, 957 (38%) had secondary infertility, and 194 (7.7%) with unprovided history. Out of the 2520 patients, 1760 (69.8%) had normal HSG findings; 92 (3.7%) had both the abnormal uterus and fallopian tubes; 223 (8.8%) had abnormal uterus only; 445 (17.7%) patients had only abnormal fallopian tubes. The most common uterine abnormality found in the patients was congenital Mullerian duct anomaly in 125 (5%) patients ensued by uterine filling defects in 102 (4%) patients. The most common Mullerian duct anomaly was arcuate seen in 54 (2.1%) patients followed by unicornuate uterus in 35 (1.4%). The most common fallopian tube abnormality was blocked fallopian tube seen in 410 (16.3%) patients, followed by combined blocked and hydrosalpinges in 103 (4.1%) patients. Bilateral blocked fallopian tubes 270 (10.7%) were the most commonly encountered in the study followed by blockade on the right side 138 (5.5%).

Conclusion:

Our study finds out that infertility is not uncommon in the respective society. Primary infertility was mostly observed. The most frequent type of uterine abnormality identified in the investigation was a mullerian duct anomaly. Additionally, the study shows varying degrees of uterine and tubal abnormalities. Further multicentric descriptive and analytic studies are suggested to find out root causes and associations, to pursue better management.

Descriptive Study of Neonatal Tetanus Cases in Afghanistan, 2018-2021

Ahmad Pohin Poya, M&E Focal Point NEPI, Afghanistan FETP Cohort IV resident, Khwaja Mir Islam Saeed, AFETP Technical Advisor, ANPHI, MoPH, Mir Salamuddin Hakim, AFETP Technical Officer, ANPHI, MoPH, Shoaib Naeemi, AFETP Technical Officer, ANPHI, MoPH

Introduction:
Neonatal tetanus is a major cause of morbidity and mortality in infants while being preventable. WHO reported 2.49 per 100,000 population cases with mortality rate of 54%. Afghanistan ranks 6th globally with burden of disease. The epidemiological profile of disease is not reported recently in the country. In this study, we have analyzed the causes and incidence rate of this disease; characterized and investigated the associated risk factors (including mortality) in Afghanistan.

Methodology:
A descriptive epidemiological study, compiled and extracted the national data of for neonatal Tetanus Cases and deaths in Afghanistan from 2018–2021. We used the DHIS-2 through qualitative and quantitative indicators. After cleaning, data were analyzed by Epi Info 7.2.1.

Results:
Totally, 244 cases and 39 deaths were reported from 2018 to 2021, with a case fatality rate of 16%. Nangarhar and Balkh provinces reported the most and least cases respectively, while there were some provinces with no case at all. As cases were compared by years, a 35% increase in 2019 and 40% increase in 2020 was found after analysis.

Conclusion:
This study reveals that neonatal tetanus cases are still being seen concerningly and the mortality is high due to lack of facilities. The cases show a dramatic increase in 2019 and 2020. There is need for increased public health campaigns to help achieve the elimination drive and increased investment in health care delivery to improve the survival of affected babies.

Keywords: Neonatal Tetanus, Cases, Deaths, Afghanistan.

Characteristics of patients with Severe Acute Malnutrition (SAM) who admitted in a tertiary care hospital in Kabul, Afghanistan

Munira Ramzi, Wais Mohammad Qarani, Dr M Elias Weqas

Introduction
Malnutrition occurs when a body does not receive the required nutrients. It occurs predominantly in children <5 years of age living in low-income and middle-income countries. Afghanistan is one of the countries with the highest numbers of children (upto 40%) under the age of five suffering from severe acute malnutrition. With the recent changes in the country; the situation is getting worse. Therefore, this study aims to determine the demographic characteristics of severely malnourished children who have admitted and managed at a tertiary care hospital in Kabul Afghanistan.

Methodology:
A retrospective data collection was implied using a standardized checklist. The data collection tool was developed using the literature and was validated through experts in the field. Total sampling technique was used; and medical record of all patients who were admitted during the project period were reviewed. Prevalence of wasting, stunting, under- and overweight are presented using SAM criteria of admission on WHO international reference population. Only in-patients were included in the analysis. Patients were also contacted through telephone for missing data.

Results:
Total 236 medical records were reviewed, among which 53.38% were boys and 46.61% were girls. 87.28% of patients were less than six months old. 50.42% of patients were admitted to the inpatient ward (mainly to the general ward) for further management, among which 18.48% of patients were requiring intensive care. Over 70% of the patients were referred from other health facilities. 23.52% of patients were with sepsis and shock; and 49.57% were with other infections at the time of admission. Among 54 parents who responded 51.85% of mothers and 57.40% of fathers were educated. 58.82% of the patients were resident of Kabul. Among 99 patients 24.24% were delivered at home. For 11 (9.24%) patients, the primary caregivers were others than their mothers. 65.90% of the patients had MUAC less than 10 cm; and 97.47% of patients with the BMI less than 18.5 at the time of admission. Among available patient records, 81 gained average weight 370 grams ranging from 4-1240 grams during their hospital stay. This excludes 24 patients who had oedema and on average lost their 960 grams. 73 (61.34%), 62 (52.10%), and 24 (20.16%) of the patients received 1st, 2nd, and 3rd generation antibiotics respectively.
The hospital length of patient stay was ranged from 1-46 with an average 8.74 days. The overall mortality was 6.72%. Upon 14th day of follow-up, 102 (85.71%) patients were in good condition.

Conclusion and recommendations
The demographic characteristics of the patients resemble what is reported in the literature and they were well managed and improved in terms of weight gain and clinical outcome. More resources are required to manage additional needy patients through this project.

Session 2

Quality and Patient safety

A Standardized Tracheostomy Education Across the Enterprise: "Evaluating the Effectiveness of Patient Family Education in Tracheostomy Tube Changes in Pediatric Population

Anum Moiz, Clinical Nurse Coordinator (Team Lead), Alvina Amin, Nurse Manger, Department of Surgery

Introduction:

Tracheostomy care needs a central approach towards the care of pediatric patients. Caring for and discharging patients of all ages with a tracheostomy tube is an interdisciplinary process that requires a consistent approach to adequately meet the needs of each patient and caregiver/family. In 2021, we identified an opportunity to improve our discharge and education processes for pediatric patients with tracheostomies (Fuller, Wineland, & Richter, 2021). Tracheostomy tube changes are important for several factors including prevention of infection, bleeding, stenosis, or other complications. A clinical practice guideline was made to implement and ensure the uniform practices throughout multiple specialties regarding tube change guidelines. These guidelines were further **endorsed by Cincinnati children's hospital. At cu**rrent in Pakistan there is no established benchmark for time duration of tracheostomy change in pediatric population also the need to educate family regarding trach changes. However, as per the international guidelines the standards. For pediatric patients, international practices suggest for pediatric patients, first change should be within 01 week and subsequent changes every 15 days by family. Family/care giver will be trained to change tracheostomy tubes by pediatric surgery team. If they require help, a follow up visit will be arranged in pediatric clinic every 15 days as endorsed by **Cincinnati children's hospital.**

Objective:

This quality improvement initiative aims to evaluate the effectiveness of patient family education in second and subsequent tracheostomy tube changes in pediatric population.

Methodology:

A detailed analysis at tertiary care hospital. Study was based on clinical record of hospitalized children who underwent through tracheostomy. The variable evaluated were the first change of tracheostomy after one week by the doctor in pediatrics and the subsequent change by family members after every 15 days. The study sample will be gathered through the admission log for all the pediatric patient underwent through tracheostomy procedure. To evaluate the compliance, the calls to the pediatric patient will be done confirming the change after every 15 th day. Reviewing the files for the follow up tracheostomy assessment and also, to review the file who specifically visited the clinic to change the tracheostomy.

Results:

The overall process indicator of compliance from January 1, 2021, till June 30, 2022, for pediatric population was marked in increasing trend. Hence, the first change was successfully compliant within 01 week of tracheostomy insertion and the second change was done by family after every 15 th day. The Percentage bar of the compliance in pediatric population was raised from 66.6% to 100%. Benefits: Changing tracheostomy by family members will make them more empowered and independent. Apart, from empowerment, this process will alleviate financial burden from

the family. With said that, less visit to the hospital/clinic will reduces the chances of infection. Following the clinical practice guidelines will improve process indicator as well.

Conclusion:

As a result of continuous follow-up calls, the compliance to tracheostomy tube changes has been **increase from Quarter I (66.6%) to Quarter III (100%) in year 2022. Reinforcing the patient's** family and nursing team to follow the guidelines will always be an integral part of care. Patients with regular tube changes have not undergone any tube related complications in these 06 months.

Evidence-Based Approach to Reduce Central Line Associated Blood Stream Infections (CLABSI) in Adult Surgical Intensive Care Unit

Ms. Yasmin Vellani (Nurse Specialist) Mr. Wasim Yousaf (Head Nurse), Ms. Kaynat Aslam (Registered Nurse), Ms. Zahira Amir Ali (Instructor)

Introduction:

A Central Line-Associated Blood Stream Infection (CLABSI) is a serious infection that occurs when germs (usually bacteria or viruses) enter the bloodstream through the central line. (CDC, 2019). Central lines are widely used in intensive care settings. Improper handling of these lines could lead to CLABSI. In the adult Surgical ICU, it was observed that in the year 2020 CLABSI rate was 4/ year, and in 2021 it further decreases that 3/year. But in the year 2022 by the end of two quarters, the CLABSI rate was 4. Therefore, the study was started in the month of June with the aim of reducing the CLABSI rates by zero per month for the next **quarter by reviewing care practices and enhancing nurses' knowledge.**

Method:

Plan, Do, Study Act (PDSA) framework was utilized to process this project. Firstly, the need assessment was done by stakeholders meeting and then the CLABSI prevention week flyer was prepared, and the Department of Infection Prevention and Hospital Epidemiology (DIPHE) was involved too. Moreover, many strategies were prepared including evidence base quick reference flyers, pre-and post-quizzes were conducted, Policies related to CLABSI prevention were shared with staff, a session on bundle compliance and hand hygiene was conducted and spot check and audit were performed by DIPHE. Audit observations were shared with staff to emphasize adherence to best practices. Also, specific criteria and protocols were shared regarding central line insertion, performing daily hub cleaning, and change of sterile dressing. In addition to that, the certified staff was solely responsible for dressing assessment and the need for change. All area NI and specialists were nominated for TOT central line workshop and signed off by DIPHE.

Results:

96% of nurses and doctors were signed off for central line handling. ICU staff pre-test knowledge results were increased from 75% to 97% in the post-test. ICU remain CLABSI-free in the month of July and August & received a 9-week CLABSI-free certificate from DIPHE.

Conclusion:

This project demonstrated that educating and strengthening practices enhances staff knowledge and improve their attitude toward CLABSI bundle compliance, ultimately reducing the CLABSI rates in long run.

Chasing Zero pressure injuries in Surgery department at a Tertiary Care Hospital in Karachi" quality improvement program to reduce hospital-acquired pressure injuries (a patient safety initiative)

Nausheen Kassam, Yasmeen Vellani, Zuhra Kashif, Anita Jannat Ali, Wasim Yousaf, Sadaf Khowaja

Introduction
According to the NP IAP, a pressure injury is localized damage to the skin and underlying soft tissue, usually over a bony prominence or related to a medical or another device. It can present as intact skin or an open ulcer and may be painful. This initiative aims to reduce the number of hospital-acquired pressure injuries by improving the quality of care, reducing the total number of hospitals acquired pressure injuries prevalence by at least 50% in the next three months, and faster chasing Zero pressure injuries in surgery.

Data collection:
Data collected on Excel sheet for the consequent 2. 5 months (June 2022 to 15 August 2022) at AKUH, Karachi, to see the trend of pressure injury in all surgical specialties, of the ward and special care It has well-known shows that hospital-acquired pressure injuries notably increased in the department of surgical operation, especially in neurosurgery and cardiac surgical treatment patients.

Methodology:
PDSA methodology tool was adapted, and various educational and practice improvement strategies were implemented that included evidence-based practice which include Introduction of department base champion, check system gaps, in-service sessions regarding the proper utilization of Braden scale, awareness of Skin Bundle, preparing flayer, introduced position clock, restructuring of risk assessment notification system, and daily round by specifically introduced champion nurse and via area management team.

Results:
The accelerated number of hospital-acquired pressure injuries in one of the units of our department the post-surgical patient became very excessive which was very alarming the total number of hospital-acquired pressure injuries was 2 in June and July and 4 till 15 of August, those numbers increasing at an alarming price.

Conclusion
Pressure injuries developed in hospitals are frequently predictable and curable. To strengthen collaboration, we must shift our attention from treatment to prevention. This lessens the agony of the patient and shortens their time in the hospital. The core concept of quality measurement is that if you can't measure it, you can't improve it.

Quality Improvement project in Peads Cardiac Surgery: Increasing competent nursing Taskforce

Zuhra Kashif, Nobel Bashir, Naveen Nizar & Yasmin Vellani

Introduction:

Nurses are the backbone of the healthcare system, and their contribution is critical in achieving the healthcare goals. Therefore, it is very important to educate nurses with ongoing changes and reconstruction of scope of services of the hospital. In our set up, we have 10 bedded CICU, 6 for adult and 4 for peads. As last quarter data projected, 17% of the time we loaned bed and staff to peads patient. Here the need arise to teach adult nurses the care of post cardiac surgery peads patients. Hence, to make sure the patient safety and delivery of quality care we initiated training adult staff for pediatric specialty to avoid any adverse events.

Methodology:

Following PDSA model we divided interventions in two categories

In a short run, to deal with the current challenge, we planned to assign senior and experienced adult staff on pediatric patients who have in return disseminated the knowledge to junior staffs. Moreover, we did adapt an in-service educational planner which teaches combined subjects for adult and peads both population for long run, we did the literature search (study) and devised an advanced teaching and learning module for adult nurses to build their competency in pediatric specialty. Secondly, a vigorous orientation program (Act) held necessary for those hired with previous experience for successful transition. Thirdly, a systematic, comprehensive curriculum developed addressing issues specific to the child with cardiac diseases enhances the skills and competency of an experienced ICU nurse.

Results:

As of now 15% of adult staff are fully trained to receive post op peads patient as an outcome of continuous educational sessions. Also, we have achieved pediatric surgeon 50 % satisfaction upon our staff delivery of care.

Conclusion:

We took change in services as an opportunity to grow and to enhance our knowledge, learning and built capacity. In near future we are also planning to train our nurses for PALS (Pediatric Advanced Learning Course).

Elopement Identification and Preventive Measures in inpatient psychiatry

Shafqat Shah, Sunita Irfan, Dr. Aisha Noor, Shehnila Rehmat Dr. Mohammad Yousuf

Background:
Elopement occurs when a patient leaves a designated area intentionally or unintentionally without permission. Elopement commonly occurs in the psychiatry department where; patients are forcefully admitted for treatment. The impact of elopement can lead to life-threatening conditions. It was evident that the patient escape from inpatient psychiatry was significantly high in the year 2020, a total of 6 incidences were reported and in 2021, 2 elopement events were reported. The mode of eloping was different every time which includes trying to escape from the main door, room windows, bathrooms, and recreational area.

Objective:
To develop a systematic process to assess, monitor, and prevent elopement by reducing the number of elopement events from 6 events to 0 by the 1st quarter of 2022.

Methodology:
We collected the data from the internal incident reporting process which is the adverse event management system (AEMS). We conducted root cause analysis through a fishbone diagram and based on the root cause we develop strategies to implement the process and sustainability.

Results:
We found from our review that in 2020, there were a total of 6 incidents reported. Out of 6 incidences, 4 were near missed events as staff identifies patient activity on the spot and prevents elope from the area. On the other hand, 2 were successfully eloped from the unit and caught by a security guard within the premises. In 2021 there were 2 near misses reported. In 2022, after implementation of action plan, training and education plan, risk assessment, early interventions there is no elopement was observed in the psychiatry unit.

Conclusion:
Identification and early interventions like initial risk assessment, infrastructural changes, providing one-on one observation to the patient, and ongoing educational sessions for nursing staff and security guards were effective ways to prevent elopement in psychiatry inpatient services.

Prevention of Physical and Verbal Violence in Inpatient Psychiatry

Shafqat Shah, Sunita Irfan, Dr. Aisha Noor, Shehnila Rehmat Dr. Bilal Ahmed

Introduction:

Violence is a common and complex issue in inpatient psychiatry. It has negative consequences, both on **the cures and on the patient and health care provider's safety.** The WHO has defined violence as 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either result in or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation'. To predict aggressive and violent behaviors, the frequency, and types of these behaviors in acute psychiatric inpatient settings were examined. There are different types of violence including physical, verbal, and emotional, which may cause harm to the patient self, other patients, healthcare providers, and institution property. In 2021 total of 6 physical incidences and 55 verbal incidences were reported.

Objective:

To reduce inpatient psychiatry physical and verbal violence and provide safety to employees, patients, and hospital property. For verbal violence, we conduct training on de-escalation techniques and handling of aggressive patients through the Lippincott checklist. We reduced the number of verbal violence from 55 to 10 in the year 2022 respectively. For reduction of Physical violence, we have developed the Broset Violence Checklist BVC check list for early identification and initiation of the care plan by 3rd quarter of 2022 and expect to reduce the number of incidents from 5 to 2 by end of 4th quarter of 2022.

Methodology:

Data on violent incidents were gathered by maintaining a unit-based log on daily basis by health care providers. Moreover, timely reporting of all physical violence incidences in the AEMS was also analyzed. After investigating prevalence data, factors associated with aggressive behavior and type of physical violence; eventually help in planning and implementing strategies to minimize disruption to patients, employees, and hospital property.

Results:

A total of 6 violent incidents were recorded in 2021, out of which 2 were harmful to other patients, 3 were harmful to nursing staff and 1 was equipment damage. In 2022, from January to July 5 incidences were reported, 4 incidences were harm to healthcare staff and 1 was harm to the patient self. We have done Root cause analysis and develop strategies and will implement the action plan for future sustainability.

Conclusion:

Violent incidents in psychiatric settings are a frequent and serious problem. Timely violence risk assessment through a tool, managing staffing by working on staff-patient ratio, arranging debriefing

sessions for affected staff, and ongoing educational sessions on violent patient handing, de-escalation techniques, and therapeutic communication during a crisis had a great impact on minimizing violence events in inpatient unit besides treatment modalities and disease process.

Patient and hospital protection from consequences resulting from patient elopement: A proactive approach

Parwana Poya Rajabi, Wais Mohammad Qarani, Masrooruddin Mansoor and Dr Sultan Alikozai

Introduction:
Patient elopement refers to an unauthorized departure of a patient from a hospital. Patient elopement is bringing new challenges to healthcare. In the event of patient elopement, despite that patient safety becomes an immediate concern; it may also pose regulatory, financial and reputation related consequences to the hospital. Additionally, when elopement is common particularly in pediatric hospitals; child abduction becomes an immensely greater concern. Therefore, we have to develop policies and procedures to prevent and respond to such incidents.
Purpose: This project aimed to detect loops in the systems; and design interventions to prevent patient elopement and events associated with patient elopement.

Methodology:
Data from numerous sources were extracted; including identification of the gaps in the hospital systems using a structured checklist. The number of patient elopement incidents were retrieved from the Quality and Patient Safety Department (QPSD) records indicating that there were; 1, 2, 2 and 2 patient elopement incidents during 2019, 2020, 2021and 2022 respectively which were considered a base for this project. The identifiable details of these events are kept confidential with QPSD. For this project we used Failure Mode and Effect Analysis (FMEA) framework; an ongoing team-based, systematic, proactive approach used to reduce unanticipated adverse events and other safety risks to patients, staff, and hospital.

Results:
All elopement incidents were happened un-noticed during different occasions and had no common characteristic. The review of the systems and processes identified loops that needed attention. Revision of the policies on Patient Visitors Hours and Child Abduction Prevention, Mock Drills, staff training on the policies, development of standardized visitor cards were significant interventions during this project. Besides that, patient family education about abduction risks, use of identically ID bands by the patients and parents, specialized card for the nurses who care these patients, access restriction and physical environment security measures were other means in this project to ensure safety of the patients in all patient care areas.

Conclusion:
Patients elopement from hospital can happen at any time anywhere that imposes a significant risk to patient and hospital. Patient elopement can mediate infant abduction in the hospital. Therefore, emergency management plans for newborn abduction must be in place in every institution that cares for infants.

Complete Medical Documentation (Patient Safety)

Ali Bigzaad, ,Hussain Muzaffary, Noor Rahman Ahmadzai , Sami Stanikzai, Reza Zaki,, Farhad Sadat

Introduction:

Documentation of patient care in medical record formats is always emphasized. These documents are used as a means to go on treating the patients, staff in their own defense, assessment, care, any legal proceedings and medical science education. so our aim was to find the documentation mistakes and complete them in Adult Medicine Department of FMIC.

Methodology:

The sample in this study were all files that were incomplete filling in September 2021-September 2022.Data from numerous sources were extracted to discover the incomplete and mistakes of files from medical records, monthly audit results and also JCIA external mock audit results which is being conducted through QPSD- Quality Improvement and Patient Safety Department were considered a base for this study. Besides that, weekly checking of all files in the mentioned department by a plan made for each member of the department and monthly presentations were held regarding the best documentation of files.

Results

Completing patients' files documentation increased sequentially from 83.4% to 99.3 % during plan-do-study-act cycles. The most parts of files with incompletion form were medical and drug history, plan for the next step of management, bad writing style which was not readable, health education part and not using clear impression (much using abbreviation on discharge sheets). which showed 82.2%, 77 %, 89,5% ,79.8%, 90.2 respectively for the year of 2021. As part of the improvement strategies; studding and focusing on these parts the result increased to medical and drug story 100%, plan of management 99.8 %, writing style 99.5 % and 98 % was health education.

Conclusion:

This project provides information that quality of medical documentation has several far-reaching impacts, from directly affecting the quality of patient care, to influencing hospital funding. Unfortunately, good documentation can become a low-priority for some busy doctors. Good documentation promotes continuity of care through clear communication between all members involved in patient care. On the other hand, this project showed that some of mistakes were made due to lack of enough staff. Hope this issue be considered.

Radiation Dose Reduction Using Fluoroscopy System for Radiology Procedures

Zeenatullah Zarin Samkanai, Mohammad Moein Omerzad , Department of Radiology, French Medical Institute for Mothers and Children, Kabul-Afghanistan

Introduction:

My objective is to describe Fluoroscopy. It is a study of moving body structures similar to an X-ray "movie." A continuous X-ray beam is passed through the body part being examined. The beam is transmitted to a TV-like monitor so that the body part and its motion can be seen in detail.

Methodology:

A retrospective review was performed of the medical records of 1272 Patients with 1272 procedures. 151 MCUG (Micturating Cysto Urethrography), 331 Upper GI (Gastrointestinal), 550 IVP (Intravenous Pyelography), and 235 lower GI). The Patients had a mean age of between 2 months - 65 years and comprised 837 males and 381 females.

Results:

Using fluoroscopy, 1272 cases were successfully detected. procedures were reviewed in a random order using image analysis of a fluoroscopy machine at (FMIC – Kabul – Afghanistan) at only 1272 Patients, 837 males, and 381 females. This study highlights that no need for extra images and high-dose radiation. Also, we avoided wasting time. We used roughly 38.5% less radiation for patients. It benefits saving the **tube's life and we decreased about 30% of contrast media.**

Conclusion:

This project concludes that procedures of the patients should refer to the department of radiology at **FMIC which decrease the total 38.5 % radiation for each patient also we can save the machine tube's life** and stop wasting time. This study was performed with 100% success.

Findings from Baseline Assessment of Higher Education Institutes Providing Higher Medical Education Including Dentistry

Ghulam Farooq Mansoor, Khalilullah Shefa, Najibullah Safi, Nargis Neyazi, Sayed Fasihullah Sadat, Abdul Ghani Ibrahimi,

Objectives:
To Explore challenges in ensuring quality of higher medical/education in public and private institutions

Methodology:
The assessment used qualitative interview with the schools' deans which aimed to explore challenges the institutions face in and solutions for ensuring quality of the higher medical education/dentistry; specific areas explored were teachers and students' issues, curriculum, resources, teaching hospitals, governance and finances.

Findings:
Students' issues: Low basic knowledge of high school graduates who makes to the private medical schools, excessive number enrolled than school capacity.
Teachers: insufficient availability of qualified dentists, poor cooperation of government medical universities with private, no job security and retirement benefits are provided to the academic staff in the private universities Curriculum: not regularly updated, poor opportunities for practical work
Governance: there is a positive progress in digitalization of the higher education management, however, bureaucracy, favoritism, nepotism and undue interference from the founders in the processes and lack of financial liberty, challenge transparency and quality. Resources: insufficient space in private schools, Skills Laboratory not equipped, no criteria for number of students in class and in practical working groups, Books in libraries are out dated, Inadequate specialized hospitals in the dentistry field, lack of mechanism for standardizing teaching hospitals, Lack of plan for practical training, Few patients in private teaching hospitals. Public hospitals do not cooperate with students from private schools

Implication for policy:
Findings provide critical information for establishing minimum standards of quality in higher medical and dentistry education. There is need to develop standards or adapt the MOHE standards for the medical schools in line with the WFME framework for quality assurance of higher medical education.

Assessment of healthcare workers' mental well-being in Kabul public tertiary hospitals, 2021

Shoaib Naeemi, Sayed Murtaza Hofiani Sadat, Ahmad Komail Forgh, Mohammad Rahim Niazy

Introduction:
Healthcare workers (HCWs) are prone to suffer from poor mental health in conflict or post-conflict settings due to high stress and low resources environment which eventually leads to medical errors and lack of engagement in provision of healthcare for target population. This study aims to assess the psychological distress symptoms (PDS) of HCWs in Kabul.

Methodology:
A cross-sectional study on HCWs of 16 tertiary hospitals of Kabul from September-October 2021. Afghan Symptoms Checklist (ASCL) was used to assess the psychological distress and IBM SPSS V.26 was used for data analysis. Alpha level for all tests was set for 0.05 with 95% confidence interval.

Results:
A total of 280 HCWs were interviewed which consisted of 144 (51%) males and 136 (49%) females with mean age of 35±9.8 years. Based on profession, 103 (36.6%) of respondents were medical doctors compared to nurses 68(24.4%) and midwives 55(19.7%). Apparently, 85 (30.7%) of respondents tended to leave the country while 87 (31.4%) of them have seen their professional colleagues left the country. Respondents scored an average of 51.8±20.1 in ASCL which had significant difference in those who saw their colleagues left the country (F(3)=4.893, p=0.002, CI95%: 2.9-22.7), those who lived individually (t(233) = -3.45, p=0.04, CI95%: 0.2-15.2) and timeliness of salary (t(233) = -3.46, p=0.001, CI95%: 3.6 – 12.02). **However, sex, age and profession didn't have significant correlation with ASCL score.**

Discussion:
The findings of this study reflect that instant changes, evacuation procedures, financial instabilities and individual lifestyle resulted in lower ASCL score of respondents indicating psychological distress contrary to what of gender and age. Results of this study indicate the dire need for sustainable financial resources along with mental health support of HCWs to lower medical errors caused by psychological distress.

Keywords: Psychological Distress Symptoms, ASCL, HCW, Kabul

The Mediating Effect of Professional Behavior, Customer Satisfaction, Empathy, and Responsiveness at selected Hospitals of Babul

Nazila Azizi, FMIC

Introduction:

The aim of the current study was to provide the information in order to understand the role of professional behavior of staff on the relationship among service quality and customer satisfaction in healthcare system of Afghanistan, as it is considered as an important issue for ongoing healthcare operations. The current healthcare setting issues are affecting quality and customer satisfaction, therefore through this study all private healthcare organizations will be able to improve their healthcare system as well as the possible solutions and the recommendations. A brief explanation is given regarding Healthcare Service Quality and staff professionalism. It is also mentioned that why this current study is too crucial regarding its objectives and limitations.

Methods:

Population will be the different employees and customers who will be coming to French Medical Institute for Mothers and Children and Amiri Medical Complex and Rule of Thumb sample size will be used, by which total number of questions or units will be multiplied by 5-10 times.

N= units of total number of questions multiply by 10 times

N= 20*10=200

N=200

Results

So as to understand the exact effect level of moderating variables, is shown to represent the result as below. In the table, the Sig. values show that the relationship between variables Empathy, Responsiveness, Professional Behavior and customer Satisfaction are not significant because their values are (.715), (.852), (.711) and (.758) respectively and they are greater than (0.05). Meanwhile the Sig. values for Empathy, Responsiveness, Professional Behavior are (.310), (.000) and (.000) which two items are fine and one is higher than (0.05) therefore it says that their relationships are not significant with the dependent variable which Customer Satisfaction.

Conclusion

This study provided comprehensive information on the knowledge, attitude, and practice of healthcare professionals to behave in a professional manner with customers.

Session 3

Communicable Disease

Reinfection with SARS-CoV-2 in Afghanistan: A case study

Sayed Tariq Pachakhan, Hasamuddin Sayedi, Shahid Ullah Zadran, Abdullah Sahar, Ahmad Mujtaba barekzai*

Introduction:

One of the critical concerns about the COVID-19 pandemic caused by SARS-CoV-2 is how long the host is protected from reinfection after the first infection. Here we report an individual with two instances of SARS-COV-2 infection.

Methods:

A 26-year-old man who has a resident of Kabul, Afghanistan, presented to Afghan Japan Communicable Diseases Hospital on two occasions with symptoms of viral infection and had RT-PCR-confirmed SARS-CoV-2 infection on 16/06/2020. Fourteen days after the initial test, the patient tested positive, again confirmed by RT-PCR results on 30/06/2020, in the patient's isolation, symptoms determined he continued to feel well. However, after 91 days, on October 14, 2020, he tested positive for reinfection to SARS-CoV-2. ELISA (enzyme-linked immunosorbent assay) was performed to detect antibodies in the blood.

Results:

A 26-year-old patient was reported with two SARS-CoV-2 positive test results within 91 days. The first positive test was reported on June 16, 2020, and the second positive test (reinfection) was reported on October 14, 2020. An immunoassay analysis in the second infection showed a positive result of IgG and IgM that confirms the availability of disease in the patient's body. It was found that the second infection was symptomatically more severe than the first infection.

Conclusion:

Based on the results obtained from RT-PCR and Immunoassay analysis, we found that the patient had two positive SARS-COV-2 tests. However, the genetic confirmation of the spacemen obtained from the first and second infections remains unknown.

Determinants of Tuberculosis among children in Kabul, Afghanistan

Dr. Roohullah Hares,Dr. Sheila Hares, Bhawna Sati, Dr. Mutraza Hofiani ,Dr. Noorudin Himmat, Ahmad Walid Atif

Introduction:

Tuberculosis (TB) is the leading infectious cause of death and ranks ninth in cause of all deaths worldwide. In Afghanistan, childhood tuberculosis remains a neglected area of research despite the severe risk of morbidity and mortality. Also diagnosis is more complicated and challenging in children.

In this study we collate several new datasets to investigate the risk factors and main causes of tuberculosis amongst children in Kabul.

Methodology:

After approval of IRB-MOPH, a case-control study carried out in a sample of randomly on 80 cases and 80 controls between march till June 2021 at health facilities providing TB care to find out the determinants of tuberculosis among children aged < 15 years within an overall framework of a comprehensive study in this community including socio-cultural and economic determinants; environmental factors; and health seeking behaviors, outcomes were favorable.

Results:

In the current study the mean age of the case-group was 8 years and control-group was 7 years. Majority in the case-group were male (77.5%). Employment along with low income families and Non-immunized children with BCG were highly related with Children TB (OR: 32.54, 95% CI) and (OR: 25.19, 95% CI). However, most of the TB patients were in household crowding status but statistically no significant relation was shown. Lack of sunshine raying (UV) and lower education were highly associated with the risk of children TB (OR: 5.25, 95% CI) and (OR: 3.49, 95% CI); but, children with no breastfeeding were not statistically associated factor. Vitamin D deficiency was common in this high-risk group of TB-exposed people, more common in females. Pulmonary tuberculosis comprised the greatest number of cases (65%) amongst children, then Miliary TB (17.5%) which is the most cause of death in children. Pleural TB (5%) which is the most cause of respiratory distress.

Conclusion:

In impoverished families, having TB disease was associated with being poor and not vaccinating. This research confirms that TB among children remains a social disease. Quantifying the independent social determinants that constitute poverty and contribute most strongly to acquiring TB infection and progressing to TB disease remains complex. The associations identified between season, and vitamin D emphasize the potential for improving nutrition, correcting vitamin D deficiency, and reducing poverty to contribute to TB prevention.

Investigation of Crimean-Congo Hemorrhagic Fever (CCHF) Outbreaks in north region of Afghanistan, 2021 – 2022

Farhad NIAZI, Balkh National disease surveillance and response (NDSR , Dr Khwaja Mir Islam ,SAEED AFETP National Technical Advisor, ANPHI, MoPH, Mir Salamuddin HAKIM, AFETP National Technical officer, ANPHI, MoPH, Shoaib NAEEMI, AFETP National Technical officer, ANPHI, MoPH

Introduction:

Afghanistan is one of the endemic countries for Crimean-Congo Hemorrhagic Fever (CCHF). Since report of first case from Takhar province in March 1998, several outbreaks of CCHF have been reported in the country. This study sought to determine the epidemiological, clinical, and laboratory features of confirmed cases of CCHF admitted in Mazar-e Sharif regional hospital, Afghanistan.

Methodology:

We conducted a descriptive study of secondary data available using registries of Mazar-e-Sharif regional hospital for CCHF from January 2021 to June 2022. The cases were consisting of all confirmed patients admitted from different provinces of north region to the hospital. Surveillance cases definition were used to identify and register the cases. Data were extracted from District Health Information Software 2 (DHIS2) and analyzed using Epi Info V 7.2.

Results:

Totally 37 cases were admitted to the hospital of whom 18 (47%) were recorded from Balkh province while other were from neighboring provinces in north region. Male to female ratio was 11:1 with mean age of 42 years. There was 1 death showing an 8.3% of case fatality rate. Of total cases 12 (32%) were butchers and 6 (15%) were shepherds compared to other occupations 24 (65%). The clinical manifestation of patients was fever, hemorrhage, myalgia, headache, back pain, joint pain, stomach pain, vomiting and diarrhea, red eyes, flushed face, sore throat, and petechiae. Many cases visited the hospital during the late phase of infection.

Conclusion:

In north region, Balkh province had the highest number of cases with males being more vulnerable for infection. Individuals involved with animals in one way or another are at higher risks of infection. Wearing protective clothing, early and correct removal of ticks are recommended beside raising awareness and conducting campaigns during expected peak of cases (mostly during Eid-ul-Adha).

Keywords: Afghanistan; Balkh, CCHF, Surveillance, Outbreak

Descriptive study of COVID-19 cases and deaths in six provinces of Afghanistan, 2020-2022

Wahidullah RAWOFI, Gull Mohammad OMAKIWAL, Sadruddin EZZAM, Khwaja Mir Islam SAEED, Mir Salamuddin HAKIM, Shoaib NAEEMI

Introduction:
The first COVID-19 case in Afghanistan was detected in February, 2020. As of July 2022, there are 192,000 recorded positive cases with 7777 deaths. This study aims to elucidate the COVID-19 cases and deaths in six provinces of Afghanistan.

Methodology:
This is a descriptive secondary data analysis of DHIS2, and COVID-19 hospitals report from 2020-2022. Confirmed cases of Wardak and Zabul provinces and characteristics of deaths due to COVD-19 in southeast region (Paktia, Paktika, Khost and Ghazni) were analyzed using Epi Info V.7.2.1.

Results:
A total of 5,273 and 2,972 confirmed cases were reported in Wardak and Zabul respectively. In Wardak, mean age of cases were 42 with 2,913 (55%) males and 2,360 (45%) females and 215 deaths. In Zabul, 82 deaths were recorded of whom 53 (65%) were males and 29 (35%) were females. Majority of cases occurred during 17th -33rd weeks in both provinces. Apparently, 46% and 39% of cases were recorded in Qalat and Maidan districts of Zabul and Wardak respectively. However, 391 deaths were recorded in southeast region with 234 (59.8%) males and 157 (40.1%) females with only 193 (49%) from Paktia. Respiratory failure accounted for 187 (48%) of total deaths characteristics compared to cardiopulmonary arrest antiseptic shock 87 (22.2%).

Conclusion:
The cases almost project similar characteristics in all provinces with males being more prone to infection and death in addition to urban areas while respiratory failure was the most prominent characteristic of deaths in southeast region. Community engagement, considering safety precautions, raising awareness and strengthen contact tracing procedures in Afghanistan is recommended to decrease the number of deaths.

Keywords: COVID-19, Zabul, Wardak, Southeast region, Afghanistan

Descriptive study of COVID-19 Vaccine Coverage in Afghanistan, 2021 – 2022

Hamidullah MATIN, Nazir Ahmad NAZARI, Khwaja Mir Islam SAEED, Mir Salamuddin HAKIM, Shoaib NAEEMI

Introduction:

Mass immunization is an economical and effective way to control the pandemic of COVID-19. Afghanistan has started first COVID-19 vaccination campaign in national level in February 2021. Upon initiation, 10 target groups have been given priority to get vaccinated. This study focuses on descriptive analysis of COVID-19 vaccination coverage nationwide.

Methodology:

This is descriptive secondary data analysis on COVID-19 vaccination coverage in all 34 provinces of Afghanistan between February 23, 2021-June 30, 2022. All data analyzed in this study was provided by District Health Information System 2 (DHIS2), National EPI's database for tracking EPI indicators and analyzed using Epi Info V.7.2.1.

Results:

Since the launch of the COVID-19 vaccination 33% of Afghanistan's target population have received at least one dose of the vaccine, while 26% of the population are fully immunized. The coverage accounts for 13% of the total population of Afghanistan - including both eligible and eligible population. Among the immunized population, 48% are female and 52% are male clients. At the provincial level, Kabul is the top performing province with 54% of target population followed by Kandahar 43%. Zabul and Nooristan had the lowest vaccination coverage of target population with vaccinated only 5%. Vaccines produced by Johnson & Johnson are widely used (67%), followed by Sinopharm (18%) and AstraZeneca (15%).

Conclusion:

Vaccine coverage for all categories is lower than expected with higher interest to one-dose regimen vaccine. The low coverage shows low demand for vaccine uptake. Provinces with lower coverage could undertake extended campaigns to maintain and enhance the coverage of vaccination. There's demand for interventions to improve public awareness about COVID-19 as well. Furthermore, advocacy for full vaccination is required.

Keywords: COVID-19, vaccination, Afghanistan, Coverage

Descriptive epidemiology of dengue fever cases in Nangarhar province- Afghanistan, 2021

Dr Hizbullah Jalil, Monitoring and Surveillance Officer in EHIS, MoPH & AFETP third cohort resident, Dr Khwaja Mir Islam SAEED AFETP Technical Advisor, Mir Salamuddin HAKIM, AFETP Technical officer, Shoaib NAEEMI, AFETP Technical officer

Introduction:

Outbreaks of Dengue fever have been reported sporadically in east, southeast and south regions of Afghanistan recently. Being a vector born disease, it has not been reported in the country before 2013. This study aims to describe cases of dengue fever in Nangarhar province based on clinical features as well as epidemiological characteristics such as time, place and person.

Methodology:

A descriptive study was conducted in Nangarhar province on cases registered including all age groups and both sexes in 2021. Data were obtained and extracted from District Health Information Software 2 (DHIS2) dashboard and analyzed using MS Excel 2016. Descriptive measures including proportions of variables in and clinical features were calculated and reported.

Results:

A total of 775 cases were registered from 19 districts of Nangarhar province from September to December of 2021. Of the total cases 61% were male and 39% were female. The highest number of cases (196) were reported in age group of 20-29 years while lowest (15) were in 1-5 years. The common clinical manifestations were fever 703 (90.7%), headache 671 (86.6%), muscles pain 651 (84%), vomiting 190 (24.5%) and hemorrhage 12 (1.5%). The most affected districts were Momandara (450), Durbaba (149), Ghanikhil (63) and Jalalabad city (47). The peak of cases was recorded in fall season (October) while lowest cases were reported in winter (December).

Conclusion:

Dengue is reported for the first time in the country since 2013. As it is a new health problem in Afghanistan, further studies are required for its identification and reporting. It affected young generations which is a matter of concern. Specific attention is needed to east and south region of the country.

Keywords: Dengue, Outbreak, East region, Afghanistan

Descriptive epidemiology of measles vaccines coverage and dropout, Afghanistan, 2021

Rahmatullah Wafa, Sayed Amrullah Sayeedzai, Khwaja Mir Islam Saeed, Mir Salamuddin Hakim, Shoaib Naeemi

Introduction:

Regardless the availability of vaccines, measles remains the major cause of morbidity and mortality among the children of under 5 years. Measles first dose global coverage decreased from 86% in 2019 to 84% in 2020. Measles 2nd dose global coverage also dropped from 71% in 2019 to 70% in 2020. Measles I and II coverage are affected by the COVID-19 pandemic in Afghanistan which has caused neglect of vaccination and emergence of outbreaks. This study aims to compare the Measles-I and Measles-II vaccines coverage and describe dropout rate of 2021 at national level, Afghanistan.

Methodology:

A descriptive secondary data analysis was conducted for Measles-I, Measles-II vaccine coverage and dropout of year 2021. National wide data of Afghanistan from District Health Information System 2 (DHIS-2) was extracted and analyzed using Epi Info V 7.2.1, and Ms. Excel. Statistical descriptive measures were calculated and reported.

Results:

Measles-I and Measles-II vaccines coverage were 71% and 52% respectively. Kunar province had the highest coverage of Measles-I (94%), and Nuristan province had the lowest coverage (40%). Nangarhar province had the highest rate of Measles-II coverage (73%) and Nuristan had the lowest coverage (18%). Measles I and II coverage in Ghazni province were 78% and 53% respectively. Measle-I and Measle-II dropout rate was found 26% which is higher than the threshold of 10%.

Conclusion:

Apparently, there was an unacceptable difference between Measles-I and Measles-II vaccines coverage, causing high dropout rates in all provinces of Afghanistan. Nangahar with highest Measles-II coverage and Nuristan with lowest coverage shows the possibility of gap in the program, outreach and mobile activities and inadequate tracking system at health facility level for Measles-II dose. Special interventions at provincial level are needed to reach the strategic objective of Global vaccine action plan (GVAP) to eliminate Measles.

Keywords: Measles-I, Measles-II, Dropout, Coverage, Afghanistan

Epidemiological Profile of CCHF in Herat province, Afghanistan, 2019-2021

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Introduction:

Crimean-Congo hemorrhagic fever (CCHF) is a geographically widespread tick-borne hemorrhagic disease caused by Nairovirus. Many outbreaks of CCHF have been reported in Afghanistan, in last decade, including Herat province while its epidemiological profile is not sufficiently reported. This study aims to illustrate the clinical and epidemiological features of CCHF cases in Herat province.

Methodology:

This is a descriptive epidemiological study using data extracted from Herat regional hospital registries for four years, January 2019 to December 2021. Cases from other provinces of west region were excluded. Case definition for surveillance were used for case identification and registration. Statistical measures regarding clinical features, demographic and associated risk factors were analyzed and reported. Data management and analysis were performed using Epi info v.7.2.3.1.

Results:

A total of 226 CCHF cases including 166 (73%) males and 60 (27%) females, with a mean age of 33.6±14.7 years were included in the study. One-third of patients (31%) were in 20-30 age category, 27% were housewives, 43% were farmers, shepherd, and butchers. The most prevalent clinical presentations were fever (100%), headache (100%), muscle pain (100%), ecchymosis (52.0%), epistaxis (27%) hematemesis (10%) and hemoptysis (5%). Totally, 81 (44.5%) cases were from Herat city, 66 (35.6%) from Injil district and the rest from other districts. The case fatality rate was 8%. Conventional measures were insufficient to control the disease.

Conclusion:

Apparently, males who were involved in animal husbandry as well as with related products and housewives are at more risk for CCHF. Considering the significant social, economic and health burden of CCHF in the community, alternative or enhanced public health measures are required to prevent and control the disease.

Keywords: CCHF, Herat, Afghanistan, Epidemiology

Descriptive Epidemiology of Visceral Leishmaniasis in Afghanistan, 2018-2022

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Introduction:
Visceral Leishmaniasis (VL) is fatal if left untreated in 95% of cases. An estimated 50,000 to 90,000 cases of VL occurs worldwide annually. Afghanistan is an endemic country for V. This study aims to illustrate the epidemiological profile of VL and report treatment outcomes in Afghanistan.

Methodology:
A descriptive study using secondary data was conducted to reflect the epidemiological profile of VL in Afghanistan. It covers period of 2018-2022 using a paper-based surveillance system at Malaria and other Vector Borne Diseases (MVDP) for VL cases. The study included 18 provinces with confirmed diagnosis. The treatment outcomes were collected by phone calls. Epi Info V7.2.1 was used for data analysis.

Results:
Totally 77 VL cases were recorded during 2018-2022 of whom 48 (62%) were males. More than half of 45 (58%) were in age group of 1-3 years while 3 (4%) were in age group of 10-13 years. Geographically, 28 (36%) were reported from Faryab followed by Baghlan 9 (12%) compared to Ghazni 1(1.2%). Four (5%) and 7(9%) cases reported family member with cutaneous leishmaniasis VL respectively. Fever 75 (97%), splenomegaly 71 (92%) and weight loss 26 (34%) were common clinical manifestations. Upon follow-up, 42 out of 77 total cases responded of whom 31 (74%) were cured and 11 (26%) had died. Apparently, 22 (85%) with early diagnosis were cured compared to 9 (56%) with late diagnosis.
Conclusion: Most of the cases were recorded from northern region with high burden in males. Splenomegaly was a prominent clinical feature. Early diagnosis had good outcome compared to late diagnosis. Further study is required to identify the risk factors. Additionally, access to diagnosis is recommended for the betterment of outcome.

Keywords: Visceral leishmaniasis, treatment outcome, Afghanistan

Contact tracing of COVID-19 in Afghanistan, 2020- 2022

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Shoaib NAEEMI, AFETP Technical officer, ANPHI, MoPH, Bahara RASOOLY, EBS/ EIOS Coordinator/ M&EHIS, MoPH

Introduction:
Pandemic of COVID-19 spread in Afghanistan in Feb 2020 and still continues. Despite of surveillance, contact tracing is a vital strategy to prevent and avoid further transmission of COVID-19 in the country. The objective of this study is to elucidate a descriptive analysis of contact tracing in Afghanistan.

Methodology:
An epidemiological descriptive study was conducted based on contact tracing of COVID-19 confirmed cases. The data were recorded accordingly in District Health Information Software (DHIS2) from 2020 to June 2022 which is a database in ministry of public health. Data were cleaned in MS Excel and analyzed in Epi Info V.7.2.1.

Results:
A total of 182,614 COVID-19 positive cases were reported in Afghanistan since February24, 2020-June 30, 2022, of whom 130,397 (72%) positive cases were traced. In total 373,849 close contacts were identified by positive cases, from whom 216,085 (57.8%) were males and 157,764(42.2%) were females with mean age of 25 years (11-88 years). During follow-up, 16,304 contacts became laboratory-confirmed COVID-19. In addition, among all the contacts, 272,910 (73%) were household and 100,939 (27%) were community contacts. During 2020 and 2021, majority of cases (31% and 46% respectively) were traced in June. Based on regions, central west region reported 73% of cases being traced followed by east region 65%, contrary to central east with 34%. Based on contact tracing challenges 22,480 (12%) were not traced due to operational problems, 21,852 (12%) due to unavailability of phone numbers and 7,888 (4%) due to provision of no consent by the contacts.

Conclusion:
Contract tracing is a corner stone for controlling outbreaks in infectious diseases. Problems identified should be taken while implementing the contact tracing. Community engagement and enhanced timeliness of contact tracing is recommended to strength the program.

Measles Cumulative Incidence: A Nation-wide Cross-sectional Phone Survey

Sayed Ataullah Saeedzai, Giti Azim[1], Soraya Safi, Sayed Jamaluddin Ahadi, Monitoring & Evaluation and Health Information System General Directorate

Objective:

The current study aimed to identify cumulative incidence of Measles suspected cases at national level, as well as to estimate the measles vaccination rate among household members who were infected with measles.

Methodology:

The Measles Cumulative Incidence and KAP Phone Survey was a nation-wide cross-sectional study conducted among 1367 population of Afghanistan. Participants were asked questions on measles suspected cases within their family members for the duration of past 4 months from 22nd Dec 2021 to April 2022 and cumulative incidence of Measles was estimated accordingly. Sample size of the study was randomly selected from different phone sim companies namely Roshan, Etisalat, MTN and Salam; calculated proportionate to size of 34 provinces of the country; and online data was collected through phone interviews. The Measles suspected cases were identified based on their sign and symptoms as per WHO case definition, laboratory testing and doctors' diagnosis.

Results:

The study result shows that around 5% of respondents' household members have been suspected measles cases as per their sign and symptoms based on WHO case definition; of which 87% of them visited a doctor among which 98% of them were diagnosed as measles patients by doctors. Furthermore, 69% of household members with measles sign and symptoms took measles vaccination.

Conclusion:

The finding of this study shows that near a quarter of households have had a family member with measles sign and symptoms; and people got infected with measles despite getting measles vaccination.

COVID-19 Cumulative Incidence & KAP Survey: A Nation-wide Cross-sectional Phone *Survey*

Sayed Ataullah Saeedzai, Giti Azim, Soraya Safi, Sayed Jamaluddin Ahadi, Monitoring & Evaluation and Health Information System General Directorate

Introduction and Objective:

The current study aimed to identify cumulative incidence of COVID-19 suspected cases at national level, as well as to estimate knowledge, attitude and practice of COVID-19 vaccination and non-pharmaceutical interventions usage and to estimate excess deaths between 22nd December 2021 to 15th April 2022.

Methodology:

The COVID-19 Cumulative Incidence and KAP Phone Survey was a nation-wide cross-sectional study conducted among 1367 population of Afghanistan. The questions were asked for the duration of past 4 months from 22nd Dec 2021 to April 2022 and cumulative incidence of COVID-19 was estimated accordingly. Sample size of the study was randomly selected from different phone sim companies namely Roshan, Etisalat, MTN and Salam; calculated proportionate to size of 34 provinces of the country; and online data was collected through phone interviews. The COVID-19 suspected cases were identified based on their sign and symptoms as per WHO case definition.

Results:

The study result shows that around 44% of population have been suspected COVID-19 cases as per their sign and symptoms based on WHO case definition; of which only 9% of them took laboratory tests (PCR, RDT, GeneXpert) from which 63% of them were tested positive. Furthermore, 21% of the participants received complete vaccination for COVID-19; more than half (55%) of the study participants said yes for using Mask; however, only 6% of them always used mask.

Conclusion:

The finding of this study shows that during the fourth wave of COVID-19, high percentage of people were infected by COVID-19. People had less interest for laboratory confirmation for COVID-19, and mask was not used widely during the fourth wave.

Session 4

Non-communicable Disease

JJ stent removal in pediatric patients by Trans urethral catheterization technique: A randomized trial

Dr. Roohullah Hares, Dr. M.Tareq Rahimi, Dr. Toryalai Hakimi, Dr. Haseeb ur Rahman, Dr. Mutraza Hofiani, Dr. Abdullah Bahloli

Introduction:

JJ stents placed at the end of pediatric urological surgeries which require another cystoscopy under general anaesthesia for removal. We developed a novel technique for the first time for entrapping the JJ stent in outpatient department (OPD).

The aim of the study is to describe the novel technique for JJ stent removal and comparing of this technique with cystoscopy. Therefore, the study designed a randomized trials where the trans urethral catheterization technique evaluated against cystoscopy which is a gold standard for removal of JJ stents.

Methodology:

A randomized trial carried out on 160 child patients, including 106 boys and 54 girls, who had a JJ ureteral stent were randomly assigned 1:1 to two groups, which were subjected to non-cystoscopic group and cystoscopic group respectively, at FMIC and Maiwand teaching hospital. Patients were evaluated for success rate, costs, hospital length of stay and postoperative complications.

Results:

In this study, 160 children with JJ stents were enrolled from June 2019 to December 2021. They were randomised by equal allocation (1:1) to cystoscopic and trans urethral catheterization technique removal arms. The catheterization technique and cystoscopy were successful in 95% (76/80) and in 100% (80/80) cases, respectively, with no statistically significant difference in the outcome (p = 0.182). The average cost for cystoscopic removal of the stent was 17,859 Afs and was 1483 Afs for the catheterization technique.

Also the mean length of stay at hospital of non-cystoscopy group was significantly shorter than that of cystoscopy group (0.35 ± 0.4 hour Vs 8.29 ± 4 hour). There was no significantly difference in complications between two groups.

Conclusion:

The trans urethral catheterization technique for JJ stents removal is a practical low-cost and less hospital length of stay safe alternative to cystoscopic removal of JJ stents in children. Although the technique has a high success rate, it still needs the backup option of cystoscopy under general anaesthesia.

Isolation and In-Vitro Characterization of Bacteriophage Against Methicillin Resistant Staphylococcus Aureus

Muhammad Khan Mphil Microbiology, Dr. Muhsin Jamal Associate Professor

Introduction:

Staphylococcus aureus belong to the Gram-positive division of bacteria. Human beings are best reservoir for S. aureus. It is normal flora on skin. Staphylococcus aureus causes many infections like wound infections, abscesses, endocarditis, bacteremia and mastitis. A major concern is the development of resistant to best **quality of antibiotics like aminoglycoside, fluoroquinolones, β**-lactam antibiotic and glycopeptides. Now it is cry of the day to find alternative of antibiotics for MRSA. Best alternative is bacteriophage. Bacteriophages are human friendly viruses that attack bacteria and kill them by inside replication. Bacteriophage therapy is target specific.

Methodology:

S aureus was cultured on mannitol salt agar. Later confirmed by PCR (universal primer). 450 water samples were collected for phage isolation. Phage isolation was carried by spot tests and confirmed through plaque assays. The isolated phage was characterized for its stability at different pH and temperature. Also its burst size and MOI was calculated. The host range of phage was determined.

Results:

In research study lytic phage against methicillin resistant S. aureus was isolated. Best lytic activity and stability of phage was observed at 40 to 47°C and at 6 to 9 pH. Latent period of isolated phage was 20 minutes and 650 virions were released at single burst. Isolated phage showed best reduction in the bacterium planktonic cells at different MOIs 5, 1, 0.5 and 0.1. Magnesium and Calcium ions increased adsorption rate of bacteriophage with bacteria. Narrow host range was observed for the isolated phage.

Conclusion:

This study was aimed to isolate and evaluate lytic phage against MRSA. On the basis of obtained results it is concluded that isolated bacteriophage is lytic. The high stability at wide temperature and pH, and short latent period with high burst size signifies its potential to be used against methicillin resistant S. aureus. Isolated phage has narrow host range which is the property of phage due to specific receptors. The isolated phage has potential to be used in phage therapy.

Prevalence, Distribution, and Histopathological Features of Malignant Tumors Reported at Tertiary Level in Afghanistan: A 3-year study

Haider Ali Malakzai, Ahmed Maseh Haidary, Saleema Gulzar, Mujtaba Haidari, Abdul Sami Ibrahimkhil, Ramin Saadaat, Ahmadullah Hakimi, Sayed Murtaza Sadat Hofiani, Soma Rahmani and Jamshid Abdul-Ghafar

Introduction:
Cancer is the leading cause of mortality and morbidity and therefore tremendous research work is continuously being done around the world with consideration of etiopathogenesis as well as identification of therapeutic targets. Decades of continuous war in Afghanistan has left the medical infrastructure of the country in a miserable situation. There is serious deficiency of research work in the fields of pathology and oncology at the moment that minimal data is available to elaborate about the demographic characteristics of various malignant disorders, which would be indispensable to pave the way for further research and development.

Methodology:
A descriptive cross-sectional study was conducted to describe the prevalence, distribution, and important histopathological features of malignant tumors diagnosed at tertiary level in Afghanistan.

Results:
In our study, 2328 consecutive cases of solid malignant tumors were included, in which 93.8% were primary and 6.2% were metastatic. Overall, breast was the most common site of origin for primary malignancy constituting 14.8% cases. For females, breast cancer was the most frequently diagnosed malignancy constituting 29.5% out of 1094 cases followed by esophagus, skin, bone and soft tissue, colorectum, ovary, uterine body and uterine cervix. For male, esophagus was the most common site of primary malignant tumors constituting 16.3% out of 1089 cases followed by skin, bone and soft tissue, colorectum, urinary bladder, testis, stomach and prostate. Invasive ductal carcinoma was the most common type of malignancy in breast constituting 87.9% of cases. Considering esophagus, squamous cell carcinoma was the most common type of cancer constituting 77.1% of cases in both the genders. Similarly, for both the genders, squamous cell carcinoma was the most common type of skin cancer, whereas osteosarcoma was the most common type of malignancy considering bone and soft tissue. Glioblastoma was the most common diagnosis in central nervous system tumors. Small intestine was common site for involvement by extranodal non-Hodgkin lymphomas. Overall, majority of the cases were diagnosed in stage-II.

Conclusion:
Findings in our study were similar to data presented in other parts of the world, with some significant differences that could be explained to be related to the local factors. An important finding was that most of the malignant tumors were diagnosed in later stages of the disease, attributable to scarcity of specialized oncology institutions and public awareness.

Keywords: Cancer; prevalence; lymphoma; sarcoma; Afghanistan.

Risk factors associated with Female Breast Cancer in Multi-Tertiary Care Hospitals Kabul, Afghanistan: A Case Control Study

Zekrullah Baset, Jamshid Abdul-Ghafar, Yasmin Nadeem Parpio and Ahmed Maseh Haidary

Introduction:
Breast cancer is one the second most common causes of women death worldwide. The two most common among all breast cancers are the histological types of Invasive Ductal Carcinoma (IDC) and Invasive Lobular Carcinoma (ILC) which account for 75% and 15%, of incidence respectively.

Methodology:
A retrospective case-control study of 201 case and 201 controls was conducted with the aim of identifying risk factor associated with female breast cancer, Kabul, Afghanistan. Data collection was done by interviewing the patient through a structured questionnaire. The data was analyzed by using logistic regression with univariate and multivariable analyses to determine the association between breast cancer and predictors.

Results:
The results of the current study showed that factors such as: age (OR=1.02; 95%CI: 0.99-1.04; p-0.148); age at menarche (OR=0.83; 95%CI: 0.72-0.92; p-0.008); age at first baby (OR=1.14; 95%CI: 1.07-1.20; p-<0.001); educational status (OR=1.93; 95%CI: 1.16-3.22; p-0.011); smoking (OR=2.01; 95%CI: 1.01-3.99; p-0.04) and family history of cancer (OR=1.98; 95%CI: 1.18-3.32; p-0.009) were significantly associated with breast cancer. However, the study didn't determine any statistical significance with some of the predictors highlighted in literature such as: marital status, Body Mass Index (BMI), use of hormonal contraceptive, breastfeeding and exercise.

Conclusion:
The findings of this study have manifested that age at menarche, and age at first baby birth, educational status, smoking and family history of cancer are the factors associated with breast cancer among females in Afghanistan. Educating females about these predictors will be valuable in decreasing the burden of breast cancer among population and will reduce its impact on the healthcare system in Afghanistan.

Keywords: Risk factors, Breast cancer, Afghanistan

The Association between Dietary Inflammatory Potential and risk of Gastric Cancer: A Case-Control Study

Ahmad Mujtaba Barekzai, Azadeh Aminianfar, and Ahmad Esmaillzadeh

Introduction:
No report is available about diet-disease associations in the understudied region of Afghanistan. Although the inflammatory potential of diet has been linked with several cancers, information about gastric cancer is scarce. The present study aimed to investigate the relationship between the inflammatory potential of the diet and the odds of gastric cancer in Afghanistan.

Methodology:
In this hospital-based case-control study, we enrolled 90 newly-diagnosed cases of gastric cancer and 180 age (±5) and sex-matched controls. All cases were pathologically confirmed gastric cancer patients, with no history of any type of other pathologically confirmed cancers. Controls were healthy individuals and relatives of patients in the hospital. Dietary assessment was done by a pre-tested food frequency questionnaire. DII was calculated based on energy-adjusted amounts of several foods and nutrients with inflammatory or anti-inflammatory potential, as introduced by earlier studies.

Results:
The mean age of study participants was 54 years, of the 73% were males. After adjustment for age and sex, individuals in the highest tertile of the inflammatory potential of the diet were 2.47 times (95% CI: 1.31-4.66) more likely to have gastric cancer compared with those in the lowest tertile. Further adjustment for other potential confounders did not substantially affect the association; such that participants with the greatest inflammatory potential of the diet had approximately 3.59 times (95% CI: 1.16-11.02) increased odds of gastric cancer than those with the lowest adherence. Additional adjustment for BMI strengthened the association (OR: 3.75; 95% CI: 1.14-12.30).

Conclusion:
We found a significant positive association between the inflammatory potential of the diet and the risk of gastric cancer. Further studies with prospective nature are required to confirm this association.

Proportion of and factors associated with thyroid dysfunction among those individuals who are referred to a tertiary care facility for thyroid function tests in Kabul, Afghanistan

Mohammad Naeem Lakanwall MD, PGD.

Introduction:

The thyroid gland, located just below the vocal cord on each side of and anterior to the trachea, is one of the main endocrine glands. Its normal weight is 15 to 20 grams in adults. The thyroid secretes two most important hormones, thyroxine and triiodothyronine, usually called T4 and T3, respectively. These hormones greatly increase the metabolic rate of the body. In addition to T3 and T4, the thyroid gland secrets calcitonin as well which is a significant hormone for calcium metabolism.

Methodology:

An analytical cross-sectional study was conducted from July to Sep 2018. A non-probability consecutive sampling was used to recruit study participants. The study was approved by the Ministry of Public Health (MoPH) Afghanistan and French Medical Institute for Mothers and Children (ERC# 20-FMIC-ER-18). An informed consent was received from the study participants and they were informed about study purpose in detail. Data was collected by the principal investigator using a structured questionnaire via one to one interview. Blood samples were obtained by qualified phlebotomist using standardized tubes, with standard precaution , The blood sample tube was centrifuged and serum TSH were measured by direct chemiluminescence immunoassay on automated immune analyzer ADVIA Centaur (Siemens Diagnostics USA). Serum TSH levels were measured, and the patients were divided into three diagnostic categories according to their serum TSH levels. 1) Hypothyroidism 2) Hyperthyroidism 3) Normal thyroid

Results:

A total of 127 individuals were part of the sample for the final analysis. Majority study participants (77%) were females. A large number of the participants (92%) did not have family history of thyroid dysfunction and majority of the female participants, (85%) were not pregnant in the last two years. Furthermore, a 98% participants, were non-smokers.

Conclusion:

The findings of the current study showed a high prevalence of thyroid dysfunctions in individuals coming to FMIC for thyroid functions tests. The findings also indicated that aging and smoking are the factors associated with thyroid dysfunctions. Further studies are needed to find out the prevalence of and factors associated with thyroid dysfunctions.

Prevalence of Treatment Non-adherence & Associated Factors in Hypertensive Patients in Two Medical Centers in Kabul: A Cross-Sectional Study

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Introduction:
Systemic hypertension is a common health problem. Hypertensive complications like stroke most commonly occur in uncontrolled hypertensive patients. Non-adherence to pharmacologic & non-pharmacologic treatment is a main cause for poor control of hypertension & thus leading cause for hypertensive complications. Non-adherence to treatment in hypertensive patient is a nearly common problem in all over the world including Afghanistan. Main objectives of this study were to identify non-adherent hypertensive patients to pharmacologic & non-pharmacologic treatment & its associated factors in two medical centers in Kabul.

Methodology:
Study design was cross-sectional. Sampling was consecutive & data were collected directly by interview with 200 hundred patients attended to an OPD clinic & patients hospitalized in a tertiary care hospital in Kabul (Sardar Mohammad Dawood Khan Teaching Hospital) during 4 month period from April to July 2021. Data were entered into SPSS program & analyzed.

Results:
Among 200 patients, 156 patients (78%) had not taken their medicines regularly, 76 patients (38%) did not follow low-salt, low-fat diet & 181(90%) did not exercise regularly. Mean age in non-adherent group was 55y (SD=12). Most of patients in non-adherent group were women (N=89, 57%). Regarding education, 103 patients (66%) were illiterate, however when compared to adherent group the difference was not significant (OR=1.2). Most non-adherent patients lived in urban areas in comparison to rural areas (71 % vs 82% respectively); however, living in urban areas was protective (OR=0.5). Median duration of hypertension in non-adherent group was 5y (IQR=2-8y). In non-adherent group 123(79%) patients & in adherent group 39 patients (89%) were able to purchase anti-hypertensive medicines (OR=0.4). Frequency of patients educated by treating physician in non-adherent & adherent groups were 34 (21%) & 19 (43%) respectively (OR=0.3).

Conclusion:
In comparison with most countries in the world, in this study non-adherence to treatment in hypertensive patients was found to be high. Associated significant risk factors for non-adherence in this study were: living in rural areas, cost of medicines & patient unawareness about hypertensive complications & risks of treatment non-adherence.

Keywords: systemic hypertension, non-adherence, associated factors, cross-sectional study

Pig bronchus with recurrent upper lobe pneumonia: A case report

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Objective:

Tracheal bronchus refers to an abnormal bronchus that originates from the trachea, carina, or other bronchus and is directed to the upper lobes. In most cases originated from the bronchus (69 percent) rather than the trachea (23 percent) or carina (8 percent). Tracheal bronchus accounted for 7.5 percent of tracheobronchial anomalies. Most cases involve the right upper lobe. A specific malformation in which a single right upper lobe bronchus arises from the right side of the trachea above the carina is known as bronchus suis (or "pig bronchus") because it is the normal anatomic configuration seen in swine and other ruminant animals. We present a case report of pig bronchus which is presented by recurrent pneumonia at age of 40days.

Methodology:

It is a rare case report of a 40- days-old girl from consanguineous marriage presented to FMIC with chief complaints of Cough, Noisy breathing and breathing difficulty. Due to the severity of the disease patient was initially admitted in ICU for almost 12 days and then shifted to ward, but patient was not stable enough to be cared in ward, thus shifted back to ICU and after few days of stay in ICU the patient got stabilized and was shifted to the ward again, since then patient is being managed in the ward and still needs supplemental oxygen. The patient has taken multiple medication at the different stage of her management since birth. We did some investigations like:

-CBC, CRP, BLCS, ABO, PT, APTT, SGPT were deranged especially acute phase reactants is increased therefore IV antibiotics were given accordingly.

-Serum Electrolytes (Na, Mg, K, Ca) were within normal limits.

-Chest X-Ray multiple was taken and always with upper lob haziness / atelectasis has been found.

-Chest CT-Scan. In chest CT scan reported right upper lob ectopic bronchus (Pig bronchus) arising directly from supra carinal trachea and predisposing right upper lobe to recurrent infection which is evident by consolidation associated with segmental atelectasis.

Though tracheal bronchi are usually asymptomatic however can present with recurrent infections, atelectasis, and bronchiectasis, especially when blind ending. We suspected for congenital airway anomaly in above mentioned case based on recurrent upper lob pneumonia Which was nor responded with medical therapy.

Results:

Pig bronchus usually is asymptomatic and considered an incidental finding on bronchoscopy performed for unrelated reasons. However, affected children can have respiratory morbidity. after delivery from 1 day to 54 months of age presented with recurrent pneumonia, stridor, respiratory distress, or thoracic mass. We diagnosed the patient as a Pig bronchus with chest CT scan and timely referred her to surgery for lobectomy because it was not managed by medical therapy.

Conclusion:

The patient had respiratory difficulty a few days after birth and admitted at 40 days of age at FMIC. We treated the infectious process with proper antibiotics and diagnosed Pig bronchus by chest CT scan

which is not the first technique of diagnosis for such an anomaly. The diagnosis usually made by bronchoscopy performed by unrelated reasons, but we did chest CT scan timely found the anomaly and referred for surgery.

Work-related musculoskeletal disorder among surgery trainees working in Aga Khan University Hospital Karachi-Pakistan Cross-sectional study.

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Introduction:
Work-Related Musculoskeletal Disorders (WRMSDs) are a group of disorders that affect muscles, tendons, the skeleton, cartilage, ligaments, and nerves. Surgery trainees are at high risk for developing WRMSDs as many procedures require ergonomically challenging positions for extended hours.

Methodology:
This was an analytical cross-sectional study conducted on 139 trainee surgeons working in tertiary care hospitals Karachi. Non-probability purposive sampling was used to recruit participants who spend at least 1 year in the same hospital as a trainee. A structured questionnaire was adapted from Nordic Musculoskeletal Questionnaire and Global Physical Activity Questionnaire. Penalized Logistic Regression was used to assess the association of factors with WRMSD among trainee surgeons by using STATA version.16.

Results:
The mean working hour among those who developed WRMSD is 24.8 ± 18 vs those who have not developed disease 28.09 ± 18.4 the frequency of WRMSD among trainees was 84%(n=117) The frequency of neck pain was reported high 88% (n=103) as compared with other anatomical position such as shoulder and upper limb. Only 13% have attended a training session on ergonomics in the past. Working hour, specialty, and weight has been adjusted for the final model The odds of getting WRMSD among trainees who was working in Orthopedic, Neurosurgery, and Cardio-thorax were high as 16.6 (95% CI:1.92-300.7) our study found no association between a working hour in operation theater with WRMSD.

Conclusion:
Sub-specialties are associated with WRMSD, our finding of frequency is similar to a study conducted in other developed countries. WRMSDs are easily preventable through behavior modifications. Our study was not only identified the prevalence of WRMSDs in Pakistan but also found important associations which may help to develop preventive strategies and improve the working conditions for surgery trainees. Ergonomic training (for surgical trainees) is crucial, so the trainees can effectively have worked, in the intense environment of the operation theatre.

Comparison of Male versus Female breast cancer: A single center experience of over 30 years

Sana Zeeshan, Safna Naozer Virji, Maria Zahid, Aga Khan University Hospital, Karachi, Pakistan

Introduction:

Breast cancer is the most common cancer diagnosed in women worldwide, while male breast cancer accounts for less than 1% of all malignancies among men. Screening for breast cancer has led to early diagnosis and cure among women, however, due to lack of screening in men, it is usually diagnosed at a relatively advanced stage. We present the comparison between male and female breast cancer over a period of more than 30 years at a tertiary care hospital in Pakistan.

Methods:

This was a single center, retrospective review conducted at the Aga Khan University Hospital Karachi, Pakistan which included all patients, male and female, who were diagnosed with breast cancer from 1986 to 2018. Male breast cancer cases from the study published by the same institution in 2021 were included in our study and a comparison with female breast cancer patients was made. Comparison was based on patient demographics, tumor biology, staging, and outcomes.

Results:

A total of 4840 patients were diagnosed and treated for breast cancer at our institution among which 99.2% were women. Majority of the female patients (54.9%) were between the ages of 40-60 years, whereas 55.3% of the male patients belonged to the age category of 60 and above. Invasive ductal carcinoma was the most frequent histological type, while invasive lobular carcinoma was exclusively found in women. In men, T4 lesions were more common (28.9%). The overall 5-year survival was 82.0% among women and 36.8% among their male counterparts with breast cancer. Disease recurrence was seen in a total of 396 (8.2%) patients. Disease recurrence among women was only 7.7% compared to 63.2% among men.

Conclusion:

Male breast cancer is very uncommon accounting for 0.8% of all the cases diagnosed, and frequently presents at an advanced stage as compared to women, thereby leading to early recurrence and over all poor survival as compared to the female population.

Patient characteristics who presented with cardiac complains to an Emergency Department of a tertiary care hospital in Kabul, Afghanistan

Ms. Marufa Muradi, Mr. Wais Mohammad Qarani, Dr. Ahmad Seir Aziz

Introduction:

Chest discomfort is one of the most common complaints among people who visit Emergency Department (ED). These patients differ depending on the cause of their reported symptoms and subsequent mortality. There are numerous potential reasons of chest pain, so it's crucial for an Emergency Department team to rapidly rule out ones that could be fatal, including an acute myocardial infarction (AMI).

Objectives:

The purpose of this study was to determine the characteristics of patients who have visited the ED with cardiac conditions.

Methodology:

A descriptive cross-sectional study was conducted and the medical record files of 661 patients were reviewed. Total sampling technique was used and the data of all patients who have registered in the ED during 2021 with the complain of cardiac problems were recruited to this study. The data collected from the medical records through a tool after ensuring the content validity. ERC exemption was taken from the institutional Ethics Committee. Measures were in place to ensure confidentiality of the medical records and the data.

Results:

Total 661 patient records were reviewed 54.01% male and 45.99% female with 96% married. More than 91% were at the age greater than 35 years. 589 patients were jobless, and almost 92% of females were housewife. More than 50% of the patients were resident of Kabul. 86.84% patients arrived to ED directly from home and 13.16% from the healthcare facility. The mode of transportation for majority 91.53% was wheelchair and stretcher; while 7.1% came ambulatory. 72.01% had pain, and 75.03% were on medications for cardiac related issues at the time of registration in ED.

Echocardiography was done for 430 patients among which 46% had either single, double or triple vessel diseases; and 23.72% had other conditions such as; CHD, MVR, TR, AR, AS. 35% of the patients who were screened for Trop-I, had abnormal results.

The average turnaround time of the patients in ED was 114 minutes. 66.57% admitted to the highest level of care with 7.95% (35) mortality.

Total 310 patients underwent angiography among which 58.70% required angioplasty and 0.64% patients required CABG. Patient stay in the hospital ranged from 1-16 with an average 1.69 days. Only 37.54% of the patients appeared for the follow-up with satisfactory condition.

Conclusion/Recommendation:

Our patients resemble the same demographics as it is reported in the literature; and patients discharged with an acceptable condition. FMIC as a tertiary care hospital can be a safe referral site for patients requiring cardiac care; however, uniform clinical pathway can further improve the services.

Association of Hormone Receptors and Human Epidermal Growth Factor Receptor-2/neu Expressions with Clinico-pathologic Factors of Breast Carcinoma: A Cross-sectional Study in a Tertiary Care Hospital, Kabul, Afghanistan

Dr Jamshid jalal, Dr Ahmed Masih Haidary and Dr Ramin Saadaat

Introduction:
Cancer is a major cause of death and an important barrier to increasing life expectancy in every country of the world. It is the first or second cause of death in many countries before the age of 70 as per World Health Organization (WHO) in 2019. The burden of cancer incidence and mortality is rapidly growing and it is not uniform around the world. As per WHO estimation in 2020, breast carcinoma has the highest prevalence rate 2.3 million (11.7%) and with 6.9% deaths. Breast carcinoma (BC) is not a single disease but a group of several important tumor subtypes, each with a different natural characteristic and requires a different treatment. Out of 19450 cancers in all age and sex in Afghanistan, 3062 were breast cancer. The burden of breast carcinoma can be reduced by early detection and diagnosis.

Methodology:
A cross sectional analytical study design was used in this study. It is an observational nonexperimental study design. This study measures prevalence of health outcomes or determinants of health, or both, in a population at a point in time or over a short period. This design was used to show the association of Her/neu and ER/PR receptors with other clinicopathologic parameters among women who have breast cancer and are referred to the French Medical Institute for Moder and Children (FMIC). These women were checked for status of Her2/neu and ER/PR receptors in (20-80 years) age group from Dec-2020 to March-2022 and they meet the inclusion criteria of the study. Consecutive nonprobability sampling was used for this study.

Results:
A total of 120 female participants with diagnosis of breast carcinoma between the age of 20 to 80 years old referred to FMIC from 1st of Dec 2020 up to 31th March 2022 were included in this study. Descriptive statistics was used to estimate the expression rates of ER/PR and Her2/neu receptors. The association between immunohistochemical (IHC) stains and clinicopathological characteristics were assessed by using Pearson Chi-square test. The mean age was (44.58 ± 11.16) in years. Most of the females 68 (56.7%) were above 40 years and were married 108 (90%). Among married women 94 (78.3%) were multiparous and 88 (73.3%) had a history of breastfeeding. Less than forty percent of women 40 (33.3%) were within the age range of menopause (40 -50). The positive expression rates of ER, PR and Her2/neu was found to be 48.8% ,45.3% and 44.6 % respectively. ER negative expression rate was higher than ER positive likewise in PR. The over expression of Her2/neu were found higher among patients who were tested negative on estrogen and progesterone.

Conclusion:
Our study found that most of breast carcinoma is invasive ductal carcinoma grade II occurring mostly in older age women (>40 years) in Afghan population and prevalence of ER & PR negative breast carcinoma is high (50.4%) and (54.5%) respectively moreover concordant (ER and PR both negative) is also high (45.5%). An inverse correlation of Her2/neu expression with ER and PR expression was also observed. These observations support use of Immunohistochemical stains classification as a clinical tool as it is a clinically-used, therapeutically informative classification of breast cancer based on immunophenotypes.

Risk factors related to cleft lip and cleft palate in children under 5 years of age coming to FMIC

Dr. Haseeb ur Rahman, Dr. M.Tareq Rahimi, Dr. Reshadullah Jurat, Dr. Abdullah Bahloli, Dr. Roohullah Hares, Dr. Mutraza Hofiani.

Introduction
Cleft lip and palate are the most common congenital facial anomaly in children, which involves disruption of the embryological tissue planes above the lip that may continue into the hard and/or soft palate. Cleft lip is defined as a congenital abnormality anterior to the incisive foramen. The cleft can be complete, incomplete, unilateral or bilateral and may or may not involve the alveolus. Cleft palate is defined as a congenital abnormality of the secondary palate: this forms part of the hard palate and all of the soft palate. This includes: Submucous clefts, partial clefts of the soft palate, complete clefts of the soft palate with incomplete clefts of the hard palate, complete clefts of the soft and hard palate.

Objective:
To evaluate association between folic acid deficiency and exposure to smoke as risk factors with cleft lip and cleft palate.
To evaluate association between anemia, multiple pregnancies, interval between pregnancies, level of **literacy of mother's age of mother, age of father, infections during pregnancies, diabetic mother, number** of children, use of un-prescribed meds with cleft lip and cleft palate.

Methodology:
Study design: A case-control design was used to identify potential risk factors associated with cleft lip and palate among patients coming to FMIC. Descriptive analysis was done by finding frequency and percentage while inferential analysis was done by mono-variate regression and multivariate regression models. To know the significance of variables chi-square test was run to find p-value

Result:
A total 140 participants were included from which 70 were cases and 70 were controls. Frequency and percentage were found in descriptive analysis while for the inferential analysis mono-variate and multivariate regression tests were used. It was revealed that several factors contributed in development of orofacial clefts in which not using of folic acid during pregnancy protected mothers, smoke exposure, having hemoglobin of less than 9gm/dl, gap of less than 2 years in between pregnancies and positive history of disease in family were significant risk factors by giving us p-value of (.005) (.000) (.031) (.000) (.017) respectively.

Conclusion:
The major risk factors were not using folic acid supplements, smoke exposure, anemia, shorter gap between pregnancies, positive history of disease in family and usage of unprescribed medication. While **the gender, obesity, father's age, exposure to radiation, and torch infection were not a significant risk factor** in occurrence of orofacial clefts. To sum up the finding our main variables which were folic acid supplement usage and no smoke exposure gave significant protection against development of cleft lip and palate.

Patient reported outcomes measures (PROMs) trajectories after elective hip Arthroplasty

Ahamd Khatab Osmani Orthopedic and joint replacement consultant, French Medical Institute for Mothers and Children (FMIC), FSCH of South Korea soonchun young university hospital [SCH}

Introduction:
Total hip replacement is a frequently done and highly successful surgical intervention. The procedure is undertaken to relieve pain and improve function in individuals with advanced arthritis of the hip joint. Symptomatic osteoarthritis is the most common indication for surgery. we focus on how patient factors should inform the surgical decision-making process. Substantial demands are placed upon modern implants, because patients expect to remain active for longer. Assessment of surgery outcomes should include patient-reported outcome measures and implant survival rates that are based on data from joint replacement registries. Patient-reported outcome measures (PROMs) are an extensively used tool to assess and improve the quality of healthcare services. PROMs can be related to individual demographic and clinical characteristics in patients undergoing hip arthroplasty (HA).

Objective:
The aim of this study is to identify distinct subgroups of patients with unique trajectories of PROMS scores and to determine patients' features associated with this subgroup.

Methods:
A prospective case series study design was employed. The data was collected from the available records of 80 participants who had undergone hip arthroplasty procedure at FMIC hospital at the period 2020 to 2022. Length of stay at hospital was about 3-5 day. Post operation follow was 12-30 months.

Results:
We found three distinct trajectories for each PROM score. These trajectories indicated a response heterogeneity to the HA among the patients (n = 80). Patient's gender, ASA score, and obesity were significantly associated with different PROMs trajectories. About 65(81%) of participants had no post-op complication, 3(4%) of participant had dislocation, 6(7.5%) of participants develop contracture and 6(7.5%) of participants develop leg length discrepancy (LLD).

Conclusion:
We identified three distinct trajectories for each of the three PROMs indicators. Several demographic and clinical characteristics are associated with the different trajectories of PROMs at 12 and 30 months after HA and could be used to identify groups of patients with different outcomes following HA surgery. These findings underline the importance of patient-centered care, supporting the usefulness of integrating PROMs data alongside routinely collected healthcare records for guiding clinical care and maximizing patients' positive outcome.

Surgical outcome of Salter Osteotomy in patients with Developmental Dysplasia of the Hip among children with Neglected DDH.

Dr Hashmatullah Zia Orthopedic surgeon, French Medical Institute for Mothers and children, Kabul Afghanistan.

Introduction:

Developmental Dysplasia of the Hip (DDH) is one of the most common orthopaedic problems seen during childhood which includes subluxation, dislocation and dysplasia of the hip. The treatment of DDH after walking age is surgery in order to have concentric reduction and stable hip.

Objective:

The aim of this study was to investigate the radiological and clinical outcomes of Salter Osteotomy in children who had DDH with regard to complication rate, length of stay, family satisfaction level, Acetabular index and clinical outcome.

Methodology:

A retrospective case series study design was employed on 110 (14.5 % male and 85.5 % female) patients who underwent Open reduction and Salter Osteotomy. The data was collected from the available recorded files during the period of 2010 up to 2020 and called to 110 patients' families to validate the data. The mean age was 3.5 years (2-6 years), the clinical results were evaluated based on Modified Mackey criteria and Modified Harris hip score and presence of avascular necrosis according to Kalamchi-MacEwen's classifications criteria.

Chi-square test of independence and T-test for two independent samples were run to determine an association between variables. All the ethical principles were followed throughout the study process.

Results:

The study results explore that there are significant improvements in Pre-operative, Post-operative and last follow up acetabular index in the surgical treatment of DDH with Salter Osteotomy, the mean preoperative acetabular index was 36.5 deg (30-55 deg) and mean post-operative index was 15.37 deg (10-25 deg). There was a statistically significant association between age and clinical outcome (P-value <0.001) the younger patient had excellent result rather than older patients. In the clinical outcome there were 74 patients (67.3%) had excellent result, 22 patients (20.0 %) had good result, 9 patients (8.2%) had fair result and 5 patients (4.5%) had poor results. Overall, we had satisfactory result (excellent and good) in 96 patients (87.3 %) and unsatisfactory result (Fair and poor) in 14 patients (12.7 %) of patients. avascular necrosis of femoral head seen in 9 patient (8.2 %) type 1 7 patient (6.4 %), type 2 one patient (o.9 %), type 3 one patient (0.9 %). And hip pain was another important criterion that was evaluated that there were 3 patients (2.75 %) who had mild pain which does not affect their ordinary activity. There were was 10 patient who had limp (9.1 %) and 2 patients had post operative stiffness and range of motion was another valuable variable that was evaluated 4 patients had mild limitation of range movement.

Conclusion:

The study result shows that Salter Osteotomy is safe and effective procedure with satisfactory clinical and radiological result for the surgical treatment of neglected DDH in children 2-6 years old with mild to severe acetabular dysplasia. Keywords: DDH, Salter Osteotomy

Large Primary Hydatid Cyst of Thigh: A case report

Dr. Salahudin Seraj, Dr. Roohullah Hares

Introduction:

Hydatid cyst is a parasitic infection mostly caused by Echinococcus granulosis. The most frequent sites of the cyst are liver and lungs. Occurrence in the head and musculoskeletal system is extremely rare. A high index of suspicion is required to diagnose hydatid cyst in such rare location even in endemic areas of the disease.

In this study we aim to highlight the rarity of thigh hydatid cyst and the diagnostic difficulties raised by this unusual site and discuss the clinical features and treatment options of it in the light of a case report.

Case report:

A 32-year-old female was presented to our outpatient clinic with an isolated swelling in the right thigh growing over a period of 3 years. On physical examination, a mass was palpable on the antero-lateral side of the right thigh which was soft in nature with a long axis of 16 cm, immobile, well-defined margins and non-tender.

Thigh ultrasound scan was done, and showed a well-defined cystic lesion involving the antero-lateral aspect of right upper thigh area and report was suggestive of intramuscular hydatid cyst Laboratory workup was normal.

Excisional biopsy was done and patient was discharged in second post-operative day with Albendazole orally for 3 months. The outcome was good, with no recurrence.

Discussion

Thigh is an unusual site of hydatid disease, accounting about 0.75% of all hydatid sites.

In our case, medical imaging reports were more in favor of a lipoma and possibility of hydatid cyst. Treatment of choice is surgical excision.

Conclusion

The diagnosis of such isolated thigh hydatid cyst is challenging due to the presence of simulating and more common cystic pathological conditions in the musculoskeletal system. Although the treatment of choice in such cases is surgical excision, but the prevention remains essential to break the parasitic cycle by conducting public awareness sessions concerning the importance of hand hygiene and properly washing fruits and vegetables.

Acute lymphoblastic leukemia with clonal evolution due to delay in chemotherapy: A report of a case

Maryam Ahmad, Dr. Ahmed Maseh Haidary

Introduction:
Clonal evolution in acute leukemia is one of the most important factors that leads to therapeutic failure and disease relapse. Delay in therapeutic intervention is one of the reasons that leads toward clonal evolution. In this report, we present a case of acute lymphoblastic leukemia in which therapeutic delay resulted in clonal evolution that was detected by conventional karyotyping **and was responsible for non-responsiveness of the disease to conventional chemotherap**y.

Case Presentation:
A 17-year-old boy presented with generalized body aches, rapidly progressive pallor and lethargy. Bone marrow analysis was consistent with the diagnosis of B-cell ALL. Karyotypic analysis revealed 46, XY male karyotype. The patient left the hospital due to financial reasons and after 40 days came back to the hospital. Repeated bone marrow analysis including cytogenetic studies revealed presence of three different clones of blast cells: one clone showed 46, XY with del(9p) and t (11;14), second clone showed 46, XY with del(7q) and del(9p), and the third clone showed 46, XY normal karyotype. The patient did not respond to chemotherapy and **died within 1 week of induction chemotherapy (HyperCVAD-A).**

Conclusion:
Timely diagnosis and institution of chemotherapy in acute leukemia patients is the key to prevent clonal evolution and thus resistance of the disease to therapeutic interventions.

Keywords: ALL, Clonal Evolution, Delay, Chemotherapy.

Management of acquired bronchobiliary fistula: A case report

Dr. Mohammad Tareq Rahimi, Dr. Roohullah Hares, Dr. Haseeb ur Rahman

Introduction:

Bronchobiliary fistula (BBF), which often presents with bilioptysis, is an abnormal communication between the bronchial system and biliary tree. Although hydatid disease is still the leading cause, extensive surgical interventions and invasive procedures of the liver have altered the profile of patients in recent decades.
In this study we aim to highlight the rarity of BBF as well as management plan including surgical intervention options of it in the light of a case report.

Case report:

A 17-year-old girl was presented to our outpatient clinic with productive cough (bilioptysis), chest pain and loss of appetite. Her past medical history revealed that he had undergone thoracotomy and laparotomy thrice 10 months ago, due to hydatid disease of the lung and liver. Blood analysis, otherwise normal, revealed increased septic markers (CRP=7.3 & WBC=15200). Thoraco-abdominal computerized tomography scan showed evidence of biliary-bronchial fistula and possibility of splenic and peritoneal hydatid cysts. Right thoracotomy was performed through the 10th intercostal space. Phrenotomy was performed; the adhesions between the diaphragm and liver were divided to expose the fistula tract, which was subsequently excised. Infected tissue in the dome was debrided, and bile leakage was carefully examined. A drain was inserted above and below the diaphragm. The chest drain was removed on the 5th postoperative day, and the subdiaphragmatic drain was removed on the 14th day. Clinical follow-up has been continuing since 12 months without any complaint.

Discussion:

In 1850, Peacock described the first case of BBF in a patient presenting with liver hydatidosis. BBF has also been reported as a congenital malformation.
Persistent fistula with a patent biliary channel is an indication for thoracotomy. A delay results in further damage of the lung and requires lung resection. In our experience, we perform an inferior thoracotomy and expose the liver through the diaphragm without any difficulty. Therefore, we assume that thoracoabdominal approach should be reserved for the cases who requires a wide exposure over the fistula tract.

Conclusion:

BBF is a condition that requires a high index of suspicion for diagnosis and a well-planned strategy for management. In the absence of these, it may cause a number of troublesome complications and even result in death.

Clinical characteristics and outcome of patients underwent cardiac catheterization procedures in a tertiary care hospital in Kabul **–** Afghanistan

Fatima Hotak, Mohammad Naim Rahmat, Wais Mohammad Qarani, Dr. Sheer Ahmad

Introduction:
Coronary artery disease (CAD) involves the reduction of blood flow to the heart muscle due to build-up of atherosclerotic plaque in the arteries of the heart. It is the most common of the cardiovascular diseases in which may end up into sudden cardiac death. A common symptom is chest pain or discomfort which may travel into the shoulder, arm, back, neck, or jaw. Other complications include heart failure or an abnormal heartbeat. Cardiac cauterization is the primary intervention for the patients who do not recover with medical treatment. Therefore, the patients should quickly have wheeled to the CathLab.

Objective:
the purpose of this study is to evaluate the outcome patient undergone cardiac catheterization procedures at FMIC

Methodology:
French Medical Institute for Mothers and Children (FMIC) is a member of the International Quality Improvement Collaborative for Cath Lab (IQIC) since 2020. Through this collaboration, the data of the patients who undergo for catheterization procedures is collected through a standardized tool and entered into a centralized database called IQIC Cath Database. The figures of this study are extracted from the IQIC Cath Database, and represents the 2021 data only. Access to this database is restricted and measures are in place to ensure confidentiality of the data.

Result:
Total 1131 patients were gone under catheterization procedures during the year 2021. Among all 1131 patient, 1067 patient (63%) male and (37%) female undergone for angiography and angioplasty procedure. Majority, 1011 (95%) of patients were falling in the age category >40 years at the time of **procedure; while the rest 56 (5%) fallen in their ≤40 years of age. 625 (58**.12%) of the patients were either overweight or obese.
The procedures were mainly diagnostic coronary angiography 770 (72%), Percutaneous coronary intervention 297 (28%) and other procedures 64 (6%). The Cath lab stay varied base on procedure from 3 minute to 220 minutes with an average of 32.12 minute.
All patients underwent the procedure with no intubation. Only two patient end up into ventricular arrhythmias during the procedure, and two others were wheeled for the open heart VSD closure.
The hospital stay varied from 8 hours to 72 hours with an average 24 hours. The mortality rate was 0.1% during Cath procedures.

Recommendation / conclusion
The characteristics of our patients resemble what is reported in the literature. Patient outcome is comparable with international standards. And FMIC can be considered as a referral site for the quality cardiac services.

Squamous cell carcinoma arising in an epidermal cyst of urinary bladder associated with vesicolithiasis: A case report and review of the literature

Mujtaba Haidari, MD, Ramin Saadaat, MD , Haider Ali Malakzai, and Jamshid Abdul-Ghafar, MD, PhD

Introduction and importance:

Epidermal cysts can rarely occur in internal organs, but epidermal cyst of the urinary bladder is extremely rare with a very low tendency for malignant transformation. This article will guide the physicians to be aware of such rare complex neoplastic combinations to take proper decisions in management and treatment of the patients.

Case presentation:

A 40-year-old rural male patient with hematuria and urinary frequency presented to a hospital. Ultrasonography reported a cyst and a 2×1.5 cm stone in the urinary bladder. Surgery planned to remove the cyst and the stone. During the surgery, a cyst with solid parts and a stone were observed. The cyst had superficial penetrations into the bladder wall, the patient refused to done radical cystectomy, therefore the cyst excised from the bladder and sent for histopathological examination. The histopathological examination confirmed a well differentiated invasive squamous cell carcinoma arising from epidermal cyst with detrusor muscle invasion, staged pT2aNx. After diagnosis the patient received chemotherapy and improved his urinary symptoms. The possibility of further radical cystectomy and radiotherapy in neighboring countries remains open.

Discussion:

Urinary bladder cysts associated with stones are uncommon but the occurrence of epidermal cyst in the urinary bladder is an extremely unusual incidence and malignant transformation of this lesion made it even rarer.

Conclusion:

Despite the rarity of malignant transformation in epidermal cyst and the unknown etiology of its occurrence in the urinary bladder, further clinicopathological and molecular studies are needed to reveal the possible pathogenesis with involved risk factors.

Characteristics and experience of patients undergone surgery for congenital heart defects at a tertiary care hospital in Kabul, Afghanistan

Mohammad Naim Rahmat, Wais Mohammad Qarani, and Dr. Noor Amin

Background:

Congenital Heart Defects (CHD) are the most common developmental anomalies in the heart. Some CHDs in children are simple and don't need treatment; while, others are more complex and may require several surgeries over a period of several years. CHDs are CHDs are associated with lifelong comorbidities requiring frequent healthcare services; and they are considered to be the leading non-infectious cause of mortality. For this reason, CHDs have to be detected and corrected as early in life as possible.

Objective:

The purpose of this study is to determine the clinical outcome of patients who have undergone surgery for congenital heart defect during the year of 2019 and 2020 at French Medical Institute of Mothers and Children.

Methodology:

FMIC is a member of the International Quality Improvement Collaborative for Congenital Heart Surgery (IQIC) since 2014. Through this collaboration, the data of the patients who undergo surgery for congenital heart defects is collected through a structured tool and entered into a centralized database called IQIC Database. The data of this study are extracted from the IQIC Database centrally; and analysed accordingly. Access to this database is restricted and measures are in place to ensure confidentiality of the data.

Results:

In total 528 patients 269 (50.94%) female and 259 (49.06%) male were operated during 2019 and 2020. Majority, 430 (81.43%) patients were falling in the age category less than 18 years at the time of surgery where 82% of these patients were falling within <5th percentile according to WHO/BMI for age percentile. The procedures were mainly repair of TOF 70 (13.25%) patients, VSD 121 (22.91%) patients, ASD 143(26.70%) patients, and PDA 130 (24.62%) patients. Post-surgery patient outcomes include; 19 (3.6%) in-hospital death, 6 (1.14%) bleeding, 2 (0.3%) surgical site infection and 1 (0.12%) central infection. Majority of the patients fall in RACH-1 Risk Category-1 226 (23.86%) patients RACH-1 Risk Category-2 170 (32.20%) patients. The mortality rate was higher (4.92 %) in patients with RACH-1 Risk Category 3 and above. The median for ICU stay was 36.3 hours and for ventilation time 6 hours. Upon 30-Day follow-up, 446 patients reported feeling well after surgery; while 7 (1.32%) others were expired after discharge at home. Average length of hospital stay was 6 days including pre-operative hospital stay.

Conclusion:

The demographic characteristics presented by the patients resembles what is reported by the literature. Patient clinical outcome after surgery is considered within the international benchmark, and complications were minimum and well managed. FMIC as a tertiary care hospital can be a safe referral site for patients requiring cardiac surgery.

Poster Presentation

Abstracts

1	**Improving efficiency and compliance of MSDS across Aga Khan University Hospital, Nairobi.**
2	**The association between COVID-19 and risk of hypertension among Afghan participants: A quantitative descriptive research**
3	**Late incidental CT findings of bilateral carotid body tumor, a case report**
4	**A rare nasopharyngeal foreign body (Pepsi can tab), a case report**
5	**An Approach to Proactive Nursing Care: Hourly Rounding to Improve Nursing Responsiveness**
6	**Intrafamilial Screening for Helicobacter Pylori Infection using the Urea Breath Test**
7	**Reducing the rate of central line associated blood stream infections; a quality improvement project**
8	**Investigation and control of measles outbreaks in Baghlan province, 2022**
9	**Descriptive Study of cholera outbreaks in Kandahar province, 2022**
10	**Review of Penta vaccine coverage in Jawzjan province, Afghanistan 2021**
11	**Knowledge, attitude and practice of caregivers in treatment of diarrhea among children under 5 years in Bamyan and Kandahar, 2018-2019**
12	**Investigation of Measles Outbreak in Kal Qishlaq village of Sarepul province, Afghanistan, 2022**
13	**Descriptive epidemiological study of Acute Flaccid Paralysis (AFP) in Takhar Province, Afghanistan 2021**
14	**Descriptive epidemiology of Tuberculosis in Paktia province Afghanistan, 2021**
15	**Descriptive Epidemiology of Leprosy in Jaghori and Malistan districts of Ghazni Province-Afghanistan 2020-2022**
16	**Descriptive Epidemiology of Measles cases in Urozgan province, Afghanistan, 2021- 2022**
17	**Descriptive epidemiology of maternal deaths and its main causes in Kunduz province, Afghanistan 2020 – 2021**
18	**Descriptive analysis of measles outbreaks in Nuristan Afghanistan, 2019 – 2022**
19	**Descriptive epidemiology of COVID-19 reinfection, Afghanistan, 2022**
20	**Outbreak investigation and control of measles in Samangan province, 2021-2022**
21	**Epidemiological Profile of measles outbreak in Helmand province, Afghanistan, 2020-2022**
22	**Descriptive Epidemiology of Post-Earthquake Acute Watery Diarrhea (AWD) in Paktika Province, 2022**
23	**Wild Polio Virus Cases and Genetic Clusters Analysis Afghanistan, 2011-2022**
24	**Descriptive epidemiological profile of Tuberculosis in Kabul province, 2019-2021**
25	**Pattern of Influenza laboratory confirmed cases in Afghanistan-2021: a descriptive epidemiological study**
26	**Descriptive epidemiology of measles outbreaks in Badghis province, Afghanistan 2021**
27	**Institutionalization of Quality and Patient Safety.**
28	**Metastatic renal cell carcinoma to pancreas and gastrointestinal tract: a clinicopathological study of 3 cases and review of literature**
29	**Premenstrual syndrome among female university students in Kabul- Afghanistan**
30	**Re-assessment of Pont's index in Angle class one normal occlusion amongst Kabul population**
31	**Dapagliflozin in heart failure with preserved and mildly reduced ejection fraction**
32	**Probiotic Lactobacillus rhamnosus Supplementation Improved Capecitabine Protective Effect against Gastric Cancer Growth in Male BALB/c Mice**

33	Perceived Stress levels among Anaesthesia and Intensive Care staff during the third wave of the COVID-19 pandemic: A report from Afghanistan
34	Patient Engagement in Health Care: Power in the hands of Patients
35	MEWS- Decision making power to nurse, safe path towards healthy recovery (A project initiative on prompt detection of high risk management)
36	A Qualitative project to reduce cost and improve the environment from carbon emission
37	Quantitative Assessment of Higher Institutes Providing Higher Medical Education
38	Effect of Frequency of Parent to Child Maltreatment on Symptoms of Anxiety Disorder in Pakistani Adolescents: A Community Based Cohort Study
39	Probiotic Lactobacillus rhamnosus Supplementation Improved Capecitabine Protective Effect against Gastric Cancer Growth in Male BALB/c Mice
40	Investigating the prevalence of violence and its related factors in pregnant women in Ghazni city in 2018

Improving efficiency and compliance of MSDS across Aga Khan University Hospital, Nairobi.

Susan Muhuri, Jackline Agunda

Introduction:
A material safety data sheet (MSDS) is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. MSDS is one of the Hazardous materials and waste management Key Performance Indicator (KPI), which was a low performing KPI in 2021. This continual Quality improvement project was conducted to improve MSDS availability, knowledge and access across AKUHN.

Methods:
A multi-disciplinary team was assembled from various departments. The team held fortnight meetings to brainstorm and identify the gaps within AKUHN which were; only one person had access to the online platform to upload and delete obsolete MSDS which caused delays, users engage suppliers directly without involving Purchasing & Supply Chain Management Division (PSCMD), no written ordering processes for non-stock and emergency hazardous products which due to time constraints do not go through evaluation process, lack of standardized evaluation forms for all hazardous products

Results:
Standardization of evaluation process where Hazmat evaluation section has been included where one of the Sub-Committee representative needs to sign off confirming MSDS has been availed by supplier during evaluation stage. Hazmat officer granted rights to access online platform, to ensure timely upload of MSDS. Linkage of all MSDS against each product on the hazardous materials master inventory list on the online platform. MSDS KPI has improved from an average of 47% across 2021 to 85% as of end of Q2 2022.

Conclusion:

This improvement project provided information on MSDS gaps and resulted in tremendous improvement in 2022.

The association between COVID-19 and risk of hypertension among Afghan participants: A quantitative descriptive research

Ubaidullah Niazi, Hasamudin sayedi, Abu zar Shinwari, Naseer Ahmad Shinwari, Ahmad Mujtaba Barekzai, Rasool khan, Abdul Rafey, Abdullah Sahr, and Dr Rayhana Rahyab,

Introduction:
According to reports in Afghanistan, hypertension has been widely reported in COVID-19 among all ages. To the best of our knowledge, there if no study revealed the association of hypertension with COVID 19 among the adult population in Kabul, Afghanistan. Therefore, we aimed to investigate the association between hypertension and the risk of COVID 19 in Kabul.

Methods:
A quantitative descriptive research design has been used to analyze the primary data collected from the hospital. The data has been collected from 98 hospitalized patients from two government and private hospitals (Adie Medical Teaching Complex (AMTI) and Afghan japan is a government hospital). The formal letters have been written to both ADEI medical complex (AMTI) and Afghan japan hospital to collect data

Results:
The study population consisted of 98 adult hypertension patients with COVID-19 infections. Our analysis demonstrated that in these 98 hospitalized patients 65 (65.31%) were male and 33 (34.69%) were females. Our research revealed that 29.6% of participants had primary hypertension. The 66.3% and 4.1% of the population had secondary and pro hypertension. The table shows that (96.9%) of patients had a cough and **only (3.1%) didn't have a cough while having COVID**-19 and hypertension.

Conclusion:
hypertension with COVID-19 was significantly more likely to have essential comorbidities and mortality in old ages. it is recommended to COVID-19 old patients stay normal and not worry about the infection, which they have their blood pressure level stays normal.

Late incidental CT findings of bilateral carotid body tumor, a case report

Mohammad Saboor Rastin, Mer Mahmood Shah Hoshang, and Naqibullah Foladi

Background:

Carotid body tumors (CBTs), also known as paragangliomas, are rare neuroendocrine neoplasms which arise near the carotid. The reported incidence of CBTs is 1-2 per 100,000. They are generally slow-growing benign tumors that become symptomatic by expansible growth.

Case presentation:

Authors present a case of late incidental CT findings of bilateral carotid body tumor in a 75-year-old female patient.

Conclusions:

Authors conclude that bilateral carotid body tumors are not uncommon lesions, therefore radiologist, general surgeons, neurosurgeon and internal medicine doctors should think of the disease while dealing with patients having sign and symptoms of bilateral neck masses and avoid unnecessary and risky recommendation of biopsy.

A rare nasopharyngeal foreign body (Pepsi can tab), a case report

Hidayatullah Hamidi, Mohammad Saboor Rastin

Background:
Foreign body ingestion and inhalation is a very common problem in children while nasopharyngeal foreign body aspiration in children is rare but can present, therefore timely diagnosis of the nasopharyngeal foreign body is crucial and vital for the patient.

Case presentation:
Authors present a rare case of nasopharyngeal foreign body (Pepsi can tab) in 1-year old male child.

Conclusions:
Authors suggest that although nasopharyngeal foreign body aspiration is a rare entity, but should be considered as a crucial diagnosis in pediatric patients with history of foreign body aspiration.

An Approach to Proactive Nursing Care: Hourly Rounding to Improve Nursing Responsiveness

Ms. Anum Moiz, and Ms. Kiran Ali, Aga Khan University hospital

Background:
Hospital stays lead patients and their families to significant stress and anxiety. At this crucial time, patient **satisfaction is a key metric that influences hospital's quality services and ensures top clinical care. Studies** have suggested that purposeful nursing rounds can improve patient satisfaction but the evidence to date has not been systematically examined (Mitchell et al., 2014).

Methodology:
A comparative survey was performed during the period of June 2022 till July 2022 in one of the department of surgery units, in which a particular block was chosen where two hourly proactive rounds were performed ensuring 4Ps to be addressed. Considering basic needs to be responded immediately which take delays. By taking the initiative to address ba**sic needs such as use of the bathroom ("potty"), positioning, pain control,** and proximity of personal items, nurses can decrease patient anxiety and minimize help uncertainty. Those patients who experienced proactive nurse response gave positive verbal feedback than those who did not receive the proactive responses.

Result:
The practice of proactive and two hourly regular checks of hospitalized patients in the chosen block aids to minimize patient anxiety, thus increasing patient satisfaction level and trust as compared to those patients where staff did not perform two hourly proactive rounds.

Conclusion:
Our findings show that work engagement and availability of support services have a significant impact on patient satisfaction, a finding that should be considered by nurse executives in designing the best systems of care.

Intrafamilial Screening for Helicobacter Pylori Infection using the Urea Breath Test

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Introduction
Helicobacter pylori (H. pylori) infection spread is more common in low socioeconomic status and Intrafamilial spread. The aim of this study is to evaluate the intrafamilial acquisition of H. pylori organisms by investigating the urea breath test of household members of an index case with H. pylori infection.

Methods:
A cross-sectional study was conducted from January to June 2022. The index cases with positive H. pylori infection were identified and their immediate household members, persons living with index case for >3 months, voluntarily participated in the study and underwent 13C urea breath test. For comparison three negative persons and their household members were included. Analysis of the breath samples was performed by UBiT- IR300 Infrared Spectrophotometer of POCone Infrared Spectrophotometer.

Results:
Families of 11 index cases and 3 controls were included, total participants were 63, 49 in in group I (index cases + their household members) and 14 in group 2 (controls + their household members).
In group I, 67% (n=33) were positive on UBT testing while 43% (n=6) were positive in group II. The odds for a household member of an index case to have positive UBT or developing H. pylori infection was 2.4, while odds for a household member of a control was 0.75.

Conclusion:
Spread of infection is higher in households of a person with an active H. pylori infection. Therefor the eradication strategies should be focused on family rather than a single person.

Reducing the rate of central line associated blood stream infections; a quality improvement project

David Odada, Hellen Munyi, Rodney Adam, and Ruth Thuku

Introduction:
Central line associated blood stream infection is among healthcare associated infections that can be prevented using evidence-based interventions, compliance to central venous catheter insertion and maintenance bundles and controlled use of restricted antibiotics. The aim of this study is to establish if the reduction of central line associated blood stream infection rates was due to the interventions of the quality improvement project at a Tertiary University Hospital.

Methodology:
This is a retrospective review of a quality improvement project to reduce the rates of CLABSI implemented using the Plan-Do-Study-Act quality improvement cycle between 1st April 2021 to 31st March 2022. Data collection focused on practice compliance to central venous catheter bundles and use of restricted antibiotics as interventionas and central line associated blood stream infections as outcomes in four critical care units: intensive care unit, high dependance unit, cardiac coronary unit and cardiac thoracic intensive care unit. Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) was used for reporting outcomes and Interrupted time series (ITS) was used for analyzing outcomes pre and post intervention.

Results:
The CLABSI rate per 1000 patient- days dropped by 21% (5.63/ 7.16). Compliance to central venous catheter insertion and maintenance bundles was 98% (451/462) and 98% (206/210) after intervention. There was an increase in adherence to the use of restricted antibiotics, 70% (67/96) infectious disease consultant consults, Increased discontinuation of category two antibiotics at 72 hours to 91% (32/35) and the use category two antibiotics beyond 72 hours decreased to 2%. Central venous catheter care bundles intervention was responsible for 30% drop of the rates trend from the predicted observations and was statistically significant.

Conclusion:
Compliance to central venous catheter care bundles have a significant effect on the rates of central line associated blood stream infections. Conceptual frameworks and effective use of theory in actual improvement projects is key for successful outcomes. Statistical analysis of outcomes should be used to measure and quantify the impact quality improvement projects.

Investigation and control of measles outbreaks in Baghlan province, 2022

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Background:
Afghanistan is among top 10 countries with global measles outbreaks in 2022. Despite of routine immunization, the outbreaks of measles have been rising in the country. Baghlan province has reported many outbreaks while no reinforcement vaccination campaign was conducted in last three years. This study aims to conduct a descriptive analysis of measles outbreaks in Baghlan province and provide recommendations for control and prevention of the disease.

Methods:
In January 2022, Baghlan province surveillance unit received reports of suspected measles cases from three districts. The available case definition of measles in surveillance unit was used to identify and list the cases. Furthermore, in June-August of 2022, the secondary data analysis was conducted using District Health Information software (DHIS2) and Expanded Program on Immunization (EPI) databases of Baghlan province. Data were analyzed using MS Excel.

Results:
Out of 1962 suspected measles cases, 69 (3.5%) were laboratory confirmed. Cases were recorded from Nahrin, Pul-e-Khumri and Baghlan Jadid districts with latter had the highest number of cases. Ratio of incidence among females was 1.1:1 compared to males. The case fatality rate was 0.3% (6 deaths). Cases in lower age category (0-5 years old) was found to be 66% compared to 21% of 6-10 years age category. Only 3.5% of all cases were received at least one dose measles vaccine. Upon initiation of the vaccination campaign on February 18th, outbreak continued with 22 cases/month rate. Second larger vaccination campaign conducted on Mar 17-24 and 3161 children immunized. Subsequently the cases decreased after August 2022.

Conclusion:
Higher incidence of cases recorded in females and also in lowest age group. The low vaccination coverage contributed to measles outbreak which is confirmed by other national surveys. To prevent and control measles outbreaks there is a need to strengthen routine immunization and plan and implement vaccination campaigns intermittently.

Keywords: Afghanistan; Baghlan; Measles; Outbreak; Vaccination

Descriptive Study of cholera outbreaks in Kandahar province, 2022

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Background:

Acute watery diarrhea (AWD) has been a big public health problem in Afghanistan. Upon recent political changes, delivery of health services faced major difficulties in terms of implementation. Cholera outbreaks have been rising since 2021 in Afghanistan including Kandahar province. This research aims to describe the clinical and epidemiological features of the cholera cases in Kandahar province during 2022.

Methods:

We conducted descriptive analysis of cholera cases which have been registered using District Health Information System 2 (DHIS2) in Kandahar province from April to July 2022. Data were extracted from DHIS2 and cleaned in MS Excel 2019 and analysis was performed using Epi Info V 7.2.

Results:

Totally 132 suspected cases have been registered in the established Cholera Treatment Centers (CTC) in the city as well as in health facilities and community in Cholera Treatment Unit (CTU). No deaths were recorded during the timespan of the study. The most common sign and symptoms are AWD with dehydration, vomiting, and sunken eye. The mean age of cases was 30 years old, with males being more affected, 69 (52%) compared to females, 63 (48%). Most of the cases occurred in the capital of Kandahar 80 (61%) compared to other districts such as Dand 20 (15%) and Panjwaye 15 (11.4%).

Conclusion:

Recent unprecedented situation in Afghanistan set the scene for cholera and other communicable diseases outbreak. Relying on current results, a continuous mechanism of public awareness programs, clean water supply and empowerment of surveillance systems to investigate outbreaks earlier is required.

Keywords: Cholera, Outbreak, clean water, sanitation

Review of Penta vaccine coverage in Jawzjan province, Afghanistan 2021

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Background:
Pertussis, Diphtheria, Tetanus, Hepatitis-B and Hemophilus Influenza (Penta) are vaccine preventable diseases by immunization. In Jawzjan province, 36 medical facilities provide immunization services including Penta vaccination. This study aims to review the Penta vaccine coverage and its dropout rates in Jawzjan province.

Methods:
A descriptive epidemiological study using secondary data analysis was conducted on Extended Program of Immunization (EPI) database in Jawzjan province in 2021. All procedures of immunization were covered in this study. Data were analyzed using Epi Info V 7.2. The coverage of Penta1, 2, and 3 and their dropout rates were calculated at provincial and districts level.

Results:
The Penta vaccination coverage were 91%, 88% and 88% for Penta-1, Penta-2 and Penta-3 respectively. In the first six months of the year, the vaccination rate for all Penta vaccines was 53034 compared to second six month of the year, 40763. From the total vaccinated individuals, 51% were male and 49% were female. Dropout rates, based on districts in Jawzjan, showed Qarqeen with 35%, Aaqcha 25% and Sheberghan 12% compared to Mardeyan 4%, Khamyab 3% and Fayzabad -3%. The results indicated the 92% coverage of Penta vaccine coverage in Faizabad and 97% in Khamyab districts compared to 75% and 78% in Qarqeen and Mangejak districts respectively. Some negative dropout rates were reported as well.

Conclusion:
There were some high coverages of Penta in few districts while in others high dropout out rate were reported. Negative dropout rate is probably due to poor microplanning of related district. No difference in males and females. Difference in number of vaccinations in two half of the year is a matter of concern to be taken into account.
Keywords: Penta vaccine, Dropout rate, Coverage, Jawzjan, Afghanistan

Knowledge, attitude and practice of caregivers in treatment of diarrhea among children under 5 years in Bamyan and Kandahar, 2018-2019

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Background:

Diarrhea has been a major public health problem in Afghanistan. One-third of c children experience **diarrhea disease in Afghanistan. This study aims to assess caregivers' knowledge, attitude and practice** (KAP) in prevention and home-based treatment of diarrhea among under-five children in Bamyan and Kandahar.

Methodology:

The team conducted a retrospective descriptive study using dataset of the KAP survey conducted by health promotion department of Afghanistan National Public Health Institute (ANPHI) of ministry of public health (MoPH) over span of 2018-2019 in Kandahar and Bamyan provinces. Data were analyzed by using Ms Excel 2019.

Results:

Totally 2139 caregivers of under 5 years were interviewed in KAP survey. A high number of participants in Bamyan (83) and (68) reported that the main cause of diarrhea was eating contaminated food. In Bamyan 95 believed that child may die from diarrhea while in Kandahar this was 69 participants. The main score of **respondents' attitudes in Bamyan and Kandahar were high for dr**inking boiled water (53 &43), and low towards the prevention and treatment of diarrhea for eating cooked fruits/vegetables (14 & 11) respectively. In addition, the attitude and practice of caregivers in Bamyan and Kandahar provinces regarding the treatment of diarrhea were (55 & 20) for taking medicine, (38 & 15) for giving ORS, (11 & 27) for dinking more fluids, (6 & 13) for drinking a mixed water of salt and sugar respectively. Besides the education level of caregivers in Bamyan was higher (29%) than in Kandahar (6%).

Conclusion:

Majority of respondents knew the main cause of diarrhea and its consequences. However, inappropriate attitudes toward treatment and prevention were reported. Community awareness is needed for situation improvement.

Keywords: KAP, caregivers, home-based, treatment, diarrhea, Afghanistan

Investigation of Measles Outbreak in Kal Qishlaq village of Sarepul province, Afghanistan, 2022

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Background:

Among ten countries with high number of measles cases in June, 2022, Afghanistan was ranked 7th. Outbreaks of measles are consistently reporting in Afghanistan since decades while the country is planning for its elimination. This study reported the investigation of a measles outbreak in Sarepul province in order to describe the cases epidemiologically, control the disease and prevent future outbreaks.

Methods:

An outbreak of suspected measles outbreak reported from Kal Qishlaq village of the Sarepul Province in January, 2022. The investigator team get prepared and investigated the outbreak. The blood samples were collected and shipped to Balkh reference laboratory for serological tests and confirmation. The surveillance case definition for surveillance were used for case detection and identification. The cases were line listed and clinical and epidemiological data were collected. We accessed and included dataset from District Health Information Software (DHIS2) from January to June, 2022. The extracted data were analyzed by using Epi Info V.7.2.

Results:

After investigation the team detected and identified a total of 16 cases of measles. Mean age was 23 months with minimum of 48 months and maximum of 9 years. Most of the cases were in age group of 2-3 years (8) following by 3-5 years (5) and lowest in over five years (3). The males were highly affected 95%. The most common sign and symptom were maculopapular rashes (90%), fever (80%) cough (50%) conjunctivitis (20%). Vaccination coverage estimation by a random sampling of houses were found 35%, while the related health facility reported 65%.

Conclusions:

Consistent outbreaks of measles occur due to low immunization coverage. Strengthening routine immunization; including routine outreach-services for the surrounding area, and periodic campaigns are needed to ensure measles elimination and prevent future outbreaks.

Keywords: Measles, Outbreak, Vaccination, Afghanistan

Descriptive epidemiological study of Acute Flaccid Paralysis (AFP) in Takhar Province, Afghanistan 2021

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Background/ Objectives:

Globally, there are still two polio endemic countries, Afghanistan and Pakistan reporting wild polio cases. In 2021, 3 cases in still in 2022, 2 cases of Polio were recorded. The aim of this study is to present the descriptive and epidemiological picture of Acute Flaccid Paralysis (AFP) in Takhar province.

Methods:

Descriptive epidemiological study) was conducted to analyze and report the acute flaccid paralysis (AFP) cases in Takhar province. Using the specific case definition, the AFP surveillance is functional all over the country and data are collected as a proxy for polio cases. The dataset for this surveillance for 2021 was accessed and analyzed using MS Excel 2019.

Results:

Total number of AFP as the suspected Polio cases were 126 in 2021 in Takhar province. The case definition was any patient under 15 years of age with acute, flaccid paralysis, or a patient in whom a clinician suspects polio. Samples was taken from all of them and none of them were Polio confirmed. The mean age was 57 month and high number (39) of cases were reported from age group of 1- 24 months. Of cases, 54.8% were males and 48.2% were females. The youngest child suspected of polio was 11 months and the oldest is 166 months old. AFP cases are declining in 2021 (126) compared 2020 (166). The lowest number of cases reported from Hazer Samouch and Chal districts (1) while highest (34) were reported from Taloqan, the capital of Takhar., and according to the average age with mean of 57 months.

Conclusions:

The number of confirmed polio cases and AFP are declining in Afghanistan as well as in Takhar province. Males and children less than two years should have more attention. Active surveillance should be maintained.

Keywords: Polio, AFP, Takhar, Afghanistan

Descriptive epidemiology of Tuberculosis in Paktia province Afghanistan, 2021

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Bbackground/Objective**:**
One-third of the world population infected with Tuberculosis (TB). It is a great public health problem in developing countries including Afghanistan. According to WHO estimation the incidence, prevalence and death rate due to tuberculosis in Afghanistan are 193/100,000, 340/100,000 and 26/100,000 population respectively. The epidemiology of TB is poorly studied and reflected in literature in the country. This study aims to epidemiologically describe the TB cases in Paktia province.

Methodology:
A descriptive epidemiology was conducted and available secondary data of all cases of TB in Paktia province were accessed from District Health Information Software 2 (DHIS2) during 2021. Data were analyzed using Epi Info V. 7.2. Total number of cases including missing, success and detection rate as well as other indicators were calculated and reported.

Results:
Total presumptive TB cases in 2021 were 6625 (1%) of total OPD cases in Paktia province. Furthermore, 942 or 70% of estimated cases were detected showing 30% of cases were missed in 2021. The treatment success rate is 899 (95%). Death rate is 21 (2.2%) while cured rate is 333 (81%) treatment failure rate is 5 (0.5%). Household contact screening rate was 24%. Isoniazid Preventive Therapy (IPT) rate is 28%.

Conclusion:
Based on indicators of World Health Organization (WHO), majority of indicators were achieved during 2021 in Paktia province despite the political and burden of COVID-19 challenges. However, missed cases overwhelmed the expectations and may suggest the unavailability of health facilities and weak triage system in rural areas.

Keywords: Tuberculosis, INH, Paktia, Afghanistan.

Descriptive Epidemiology of Leprosy in Jaghori and Malistan districts of Ghazni Province-Afghanistan 2020-2022

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Background:

Leprosy is a chronic disease transmitted through close and frequent contact with respiratory droplets via nose and mouth. Afghanistan is one of few countries with cases of leprosy in the world. This study aims to elucidate the cases of Leprosy based descriptive epidemiological characteristics in Ghazni Province.

Methodology:

This case series descriptive study was conducted using data collected consistently by LEPCO (LEProsy COntrol) health center in Jaghori and Malistan districts of Ghazni province in time span of 2020 to 2022. LEPCO is working for Leprosy in Ghazni province. Data were analyzed using MS Excel. Each patient was followed individually and their clinical and epidemiological characteristics were recorded and analyzed.

Result:

There were 291 cases were reported in Jaghori (212) and Malistan (79) districts in Ghazni provinces since many years. In total, during study time 8 patients were referred to Lepco Health Center with clinical features in resemblance with Leprosy. These cases were recorded recently during 2020 (3), 2021 (4) and 2022(1). From the recorded patients, 5 (62.5%) were male and 3 (37.5%) were females. The most prominent clinical feature was colorless spots in back or behind of hands. Just four cases are under treatment and cases recorded in 2020 completed their treatment procedures compared to 2021 and 2022. Cases were distributed in age range of 33 to 65 years old. These cases are reported and recorded in Hazara ethnicity in the country.

Conclusion:

Prevalence of leprosy was high in these two districts and particularly in males and adult populations. Stigma, lack of proper nutrition and lack of access to medical facilities act as obstacle of leprosy eradication in Afghanistan.

Keywords: Leprosy, Ghazni, Afghanistan, Epidemiology

Descriptive Epidemiology of Measles cases in Urozgan province, Afghanistan, 2021- 2022

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Background:

Measles is a highly contagious infectious disease typically occurring in childhood. Afghanistan is an endemic country having more outbreaks since July of 2021. The aim of this study is conducting a descriptive epidemiological analysis of measles cases in Urozgan provinces in 2021 and 2022.

Methodology:

A descriptive epidemiological study using secondary data was conducted during May to July 2022 in Urozgan province. District Health Information Software 2 (DHIS2) database served as data source for this study and analysis was performed using MS Excel 2016. The cases were illustrated by indicators in terms of time, place and person.

Result:

The measles cases in the first six months of 2021 and 2022 were 102 and 211 respectively which shows the rising of cases. In January 2022, 69 cases were recorded compared to 20 cases in January 2021. From all cases in 2021, 57 (56%) were male and 45 (44%) females. In 2022, 123 (61%) of cases were male while 88 (39%) were female. Trinkot, the capital of Urozgan province, recorded 114 cases in 2022 compared to Dehrawod 20, Gizab 43 and Chinarto 44. The highest dropout rate of measles 1 and measles 2 vaccination were (18%), (17%) in January and February 2022. During first six months of 2022 totally 17 outbreaks of measles were reported which was higher than same period in 2021 (6).

Conclusion:

The cases peaked in the first six months of 2022 with males being more affected compared to females in both years. Based on districts, Trinkot, which is the capital of Urozgan reported higher number of cases along with Chinarto and Gizab. With more cases in 2022, strong vaccination campaigns are recommended to increase the vaccination coverage and lower cases.

Keywords: Measles, DHIS2, Urozgan, Afghanistan

Descriptive epidemiology of maternal deaths and its main causes in Kunduz province, Afghanistan 2020 – 2021

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Background/Objectives:
Maternal deaths refer to death of women due to complications, underlying conditions, and management of pregnancy which occurs during or within 42 days after termination of pregnancy. Afghanistan has one of the highest maternal mortality rates (638/100,000 live births) while information for Kundoz province is not clear. This study has been conducted with the aim of descriptive analysis of maternal deaths and their causes in Kunduz province.

Methodology:
This is a retrospective descriptive study of maternal death occurred during 2020 and 2021 in Kunduz province. Related data were collected using hospital registries of four comprehensive, two district and one seminary hospital of Kunduz province. Data were analyzed using Epi Info V.7.2.

Result:
In total 31 deaths were recorded of whom 16 in 2020 and 15 in 2021. Kunduz city recorded 7 (23%) in 2020 and 3 (10%) deaths in 2021 compared to Imam Sahib with 4 (13%) in 2020 and 4 (13%) in 2021. However, Khan Abad recorded 1 (3%) death in 2020 and 2 (6%) in 2021. From total deaths, hemorrhage accounted for 12 (39%) deaths followed by pre-eclampsia 8 (26%) and prolonged pregnancy 4 (13%). The mean age of mothers on death was 35 years with 15 (48%) deaths in age group 30-40 years. First delay (at family level) accounted for 14 (45%) deaths followed by secondary (physical barrier) delay 10 (32%) and finally 7 (23%) due to third barrier (at facility level).

Conclusion:
Hemorrhage accounted for major cause of death while first delay could worsen the situation. Adequate use of prenatal and postnatal care services will better the outcome. Focus should be given on all delays to avoid maternal death.

Keywords: Maternal Deaths, Reproductive health, Kunduz, Afghanistan

Descriptive analysis of measles outbreaks in Nuristan Afghanistan, 2019 - 2022

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Background/Objective:
Measles is endemic in Afghanistan, with almost all provinces reporting suspected cases annually. Particularly, the cases are increasing since July 2021. Most affected provinces are Balkh, Ghazni, Helmand, Kandahar, Kabul, Paktika, Nuristan and Paktia. The situation is not sufficiently described in Nuristan province. This study aims to present the descriptive analysis of the outbreaks of measles in Nuristan province.

Methods:
Based on predetermined case definition for measles, the outbreaks are detected and responded in Nuristan province by national diseases surveillance and response unit. Using data of District Health Information Software 2 (DHIS2) in Nuristan province, measles outbreaks from 2019 to 2022 were accessed and analyzed. MS Excel 2016 was used for data management, analysis and development of tables, graphs, charts and calculation of indicators.

Results:
A total of 12 outbreaks occurred during 2019-2021 with total of 237 cases and 31 deaths. The estimated vaccine coverage was under 60%. Most of outbreaks occurred during February and April 2021. Age was ranging in age from six months to ten years. Male to Female ratio was 1.3/1 with attack rate of 6.64% in 2020. Totally 51 samples collected and tested and 45 were positive for measles, average of positivity was 82%. The case fatality rate in 2021 was 19.17% which was higher compared to other years. The investigation team has vaccinated 220 under 10 years' children during 2019, 459 during 2020, 503 during 2021.

Conclusion:
Low vaccination coverage may account the likely cause of these outbreaks. We recommend strengthening routine-immunization, including routine outreach-services for the surrounding area and periodic campaigns to ensure recommended 95% two-dose measles vaccination coverage. The surveillance team should strengthen the surveillance system to detect, investigate and response early on time.

Keywords: Measles, Investigation, Outbreaks, Nuristan, Afghanistan

Descriptive epidemiology of COVID-19 reinfection, Afghanistan, 2022

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Background:
Despite over millions of COVID-19 infections worldwide since the beginning of the pandemic, relatively few confirmed cases of COVID-19 reinfection have been reported. Reinfection is not illustrated in Afghanistan yet. This study aims to describe the burden of reinfection cases in Afghanistan along with the epidemiological and demographical patterns.

Methodology:
A descriptive study of secondary data analysis of COVID-19 reinfection cases was conducted nationally in Afghanistan during January-June 2022. The data were extracted from the District Health Information Software 2 (DHIS2) from beginning of pandemic in Feb 2019 until June, 2022 and managed using Microsoft Excel and Epi Info V.7.2.

Results:
Out of 13324 laboratory confirmed positive cases of COVID-19 in 2022, totally 79 (0.59%) reinfection cases were recorded. In total 45 (57%) males and 34 females 34 (43%) were affected. The average age of reinfected patients was 39 (SD= ±15.2) ranging from 10 to 90 years. Majority were from Wardak province 30 (37.97%). It mostly occurred among housewives 31 (39.24%) and 11 (13.92%) health workers. Generally, 46 (58%) reinfection cases occurred between interval of six months after the primary infection. The prevalent sign and symptom was cough 73 (92.41%) and non-common symptom was diarrhea 19 (24.05%). Moreover, only 26 (32.91%) patients had vaccinated two doses, 8 patients vaccinated first dose and 44 (55.70%) hadn't received vaccination. Totally 44 (55.70%) recovered and 5 (6.85%) were death.

Conclusion:
The COVID-19 reinfection rate is very low and common in males. Cough was more common symptom among reinfection patients. Relying on the results, vaccination may play a protective role in reinfection. Preventive measures are recommended to prevent further.

Keywords: COVID-19, Reinfection, Vaccination, Afghanistan

Outbreak investigation and control of measles in Samangan province, 2021-2022

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Background:

Measles is endemic in Afghanistan, with almost all provinces reporting suspected cases every year. During 2021-2022 totally 35319 suspected cases were reported with 156 deaths due to measles were reported in Afghanistan. The epidemiological profile of measles in insufficiently described for Samangan province in the country. We conducted a descriptive study about measles outbreaks in Samangan province to describe the distribution and trend of cases.

Methodology:

A descriptive secondary data analysis was conducted. Data were extracted from Samangan province's surveillance measles line list and analyzed using Epi Info V.7.2. The profile was described in terms of time, person and place. Descriptive statistics measures along with indicators were calculated and reported.

Results:

From Jan 2021 to August 2022 totally 1510 cases of measles were reported in Samangan province of whom 208 samples were collected and tested and 56 were laboratory confirmed. During this period seven outbreaks of measles occurred in this province. Anyway, In November 2021 an outbreak of measles hit the Samangan province and five districts were affected. A total of 110 cases were line listed from until June 2022 from affected districts. Of the total cases, 49 (45%) were females and 61 (55%) were males. Fever, maculopapular rash and conjunctives were the main clinical manifestations. Most cases were reported from Sherekyar village of Aybak city. Totally, 70 (64%) cases were hospitalized and 17 (15.45%) cases were laboratory confirmed. Most cases, 40 (36.36%), were in age category of 3 to 5 years. Vaccination status showed that 97 cases (81.18%) were unvaccinated and 6 (5.455%) were vaccinated with one dose only and 7 (6.36) were vaccinated with two doses.

Conclusion:

Low measles vaccination coverage is a likely reason for the increase measles case reporting rate in **Samangan province. Less than five years' children are mostly affected by measles.** Amplification of measles surveillance and routine immunization system in Samangan province are recommended.

Keywords: Measles, outbreak, investigation, Afghanistan

Epidemiological Profile of measles outbreak in Helmand province, Afghanistan, 2020-2022

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Background/ Objectives:

Afghanistan is endemic for measles despite of being a vaccine preventable disease. Annually, measles outbreaks and cases have been reported from all provinces. Outbreaks are detected, investigated and controlled in Helmand province while the profile if inadequately reflected. The aim of this study was to characterize the outbreaks of measles in Helmand province from 2020 to 2022 and describe them clinically and epidemiologically.

Methods:

This is a descriptive epidemiological study using data extracted from Helmand surveillance department for three and half years, January 2020 to August 2022. The data management and analysis were done using MS excel, and Epi info v.7.2.3.1. We calculated the descriptive statistic measures and reported.

Results:

A total of 32 measles outbreak were reported from 2020-2022 in Helmand province. During same period a total of 13237 measle cases reported of whom 2484 were in 2020, 6776 were in 2021 and 3977 in 2022. Aggregately, there were (57%) males and (43%) females. There were 4 (12.5%) outbreaks in 2020, 8 (25%) outbreaks in 2021 and 20 (62.5%) outbreaks in 2022 showing a greater number just in first seven months of 2022. The most prevalent clinical presentations were fever (100%), rash (100%), cough (100%) and conjunctivitis (60%). Totally, 10 (35%) outbreaks were from Lashkargah city and 22 (65 %) from other districts. Vaccination coverage for measles was 30%, 30% and 40% in 2020, 2021 and 2022 respectively. Dropout of measles vaccination for measls-1 and measles-2 is consistently reported.

Conclusion:

Occurrence of measles outbreaks showing low immunization status which is needed to strengthen the routine vaccinations and plan for campaigns. It seems most of the cases clustered around age group of under five years which is required to be focused by measles vaccination.

Keywords: Measles outbreaks, Helmand, Afghanistan, Epidemiology

Descriptive Epidemiology of Post-Earthquake Acute Watery Diarrhea (AWD) in Paktika Province, 2022

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Background:
Outbreaks of infectious diseases are common public health problem after earthquake. Such outbreaks are rising due to damage of water/sanitation systems as well as degradation of sanitary conditions. This study aims to illustrate the burden of acute watery diarrhea (AWD) after earthquake in two affected districts of Paktika province.

Methods:
A descriptive study was conducted to compare burden of AWD before and after an earthquake occurred in two districts of Gayan and Barmal of Paktika province in June, 2022. Dataset of District Health Information Software 2 (DHIS2) were used. Indicators regarding AWD was calculated and Ms Excel and Epi Info v.7. were used for data management and analysis. Epidemiological profile in terms of time, person and place were analyzed, compared and reported.

Results:
On 22nd June 2022, an earthquake with magnitude of 6.1 Richter affected Gayan and Barmal districts of Paktika with 480 and 600 deaths respectively. In Gayan, there was an average of 423 monthly cases of AWD before and 1537 monthly cases post-earthquake showing three times increase. In Barmal, there weas an average of 700 cases per month before compare to 510 monthly cases after event showing low cases. In Barmal and Gayan, 1122 (54%) and 826 (64%) of cases were reported in under five children respectively. Whereas, in mentioned districts 562 (74%) and 1514 (65%) were registered in age group of over five. There were no deaths.

Conclusion:
The number of AWD cases were raised in less than two months after the earthquake and most cases were among males, however decrease in number of ARI cases in the affected areas are recorded. Emergency preparedness are required at provincial level for such outbreaks to control the morbidity and mortality due to infectious diseases after such earthquakes.

Keywords: Earthquake, AWD, Paktika, Afghanistan

Wild Polio Virus Cases and Genetic Clusters Analysis Afghanistan, 2011-2022

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Background/ Objectives:
As poliomyelitis is untreatable paralytic viral disease, its eradication has been the cornerstone of immunization campaigns since the discovery of effective vaccines. Despite the efforts, polio virus is still endemic in Afghanistan and Pakistan. The aim of this study is to identify the specific cluster circulation based on geographical areas and descriptive epidemiology of cases as well.

Methods:
A descriptive study was conducted on all poliomyelitis cases in Afghanistan from 2011 to 2022 on genetic sequences and clusters from World Health Organization (WHO) surveillance cell. Epidemiological description was performed on all confirmed cases. Data were analyzed using MS Excel and Epi Info V.7.2.1.

Results:
Totally, 350 poliomyelitis cases were recorded from whom 84 (24%) were in 2011 compared to one case in 2022. Kandahar recorded 107 (30%) of cases followed by Helmand 68 (20%) and Kunar 31 (8%). Of cases 213 (61%) were males and 137 (39%) were females. Approximately, more than half of cases 188 (54%) were in age category of 12-35 and 93 (27%) were in 36-60 months. Cluster analysis revealed the prominence of R4B5 series circulation in both Afghanistan and Pakistan. The R4B5C4C2 had circulation in southern Afghanistan and western Pakistan. Additionally, R4B5C5B2A virus cluster found circulating in east region of Afghanistan, northern Punjab and central Khyber Pakhtunkhwa. The intervention has been interrupted occasionally due to insecurities.

Conclusion:
Since being historically at lowest point of WPV-1 cases in Afghanistan, odds for eradication of polio in Afghanistan is high. The virus cluster link in both endemic countries and circulation of similar clusters and raise in cases. Furthermore, eradication single handedly is not possible and further coordination with Pakistan is recommended. Additionally, immunization campaigns which have been interrupted due to insecurities could be reinforced with recent political changes in Afghanistan.

Keywords: Poliomyelitis, WPV-1, Afghanistan, Pakistan

Descriptive epidemiological profile of Tuberculosis in Kabul province, 2019-2021

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Background/Objective:
Tuberculosis (TB) is a public health problem accounted as one of the top 10 causes of death worldwide. One-third of world population is infected with TB. The disease is more common in developing countries including Afghanistan. The objective of this study is to describe the epidemiological profile of TB in Kabul, capital of Afghanistan.

Methods:
A descriptive study using secondary data of paper-based surveillance system of TB was conducted to reflect the epidemiological profile of TB in Kabul province during 2019 to 2021. Data were analyzed using Epi Info V7.2.1. Descriptive statistic measures were calculated and reported.

Results:
Totally 100,967 presumptive and 18,185 confirmed positive TB cases were reported during 2019-2021 in Kabul province. Based on gender, 9,641 (53%) of cases were females compared to 8,544 (47%) of males. Additionally, 3,892 (21%) of cases were in age category of 15-24 years compared to 1,636 (9%) of older than 65 years. Furthermore, in 2020 there were 4,607 confirmed cases compared to 2019 and 2021 with 6,613 and 7,105 cases respectively. From total cases during study period, 6,553 were pulmonary bacteriologically confirmed and 553 extrapulmonary bacteriologically confirmed. Of suspected cases 14% in 2019, 11% in 2020 and 16% in 2021 were sputum positive. Case detection rate was 73%, 49%, 78% respectively from 2019 to 2021. Positive predictive value for lab tested cases was 17%, 15%, 21% for 2019, 2020, and 2021 respectively.

Conclusion:
Apparently, the females and young age category were at high risk of TB with prominence of pulmonary bacteriologically confirmed cases. Cases declined in 2020 due to peak of COVID-19 pandemic. There's a dire need for public awareness and high level of efforts to lower the cases both by BCG vaccination and detection and treatment of cases.

Keywords: Tuberculosis, COVID-19, Afghanistan, Kabul

Pattern of Influenza laboratory confirmed cases in Afghanistan-2021: a descriptive epidemiological study

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Background/Objective:

Influenza is an acute viral respiratory infection affecting one tenth of world's population with half million deaths annually. First outbreak of Influenza was recorded in July 2009 in Afghanistan. This study aims to elucidate the descriptive epidemiology of influenza laboratory confirmed cases in Afghanistan.

Methods:

A descriptive study on influenza cases conducted using the data extracted from nine influenza regional surveillance sites (regional provinces) of Afghanistan. All confirmed cases recorded in 2021 were included in this study and MS Excel, Epi Info V. 7.2.1 and FluNet were used for data management and analysis.

Results:

In total, 3300 influenza samples were received from all sites in Afghanistan during 2021 f from which 125 (4%) were confirmed for influenza and 59 (1%) for COVID-19. Out of 3300 tested Samples 1320 (40 %) were collected from Influenza like Illness (IL 1980 (60%) from severely acute respiratory illness (SARI) required hospitalization. Based on gender, 61 (49%) of confirmed cases were females and 64 (51%) were males. Additionally, 37 (32%) of cases were in age category of 16-50 compared to 6-15 and older than 65 with 30 (26%) and 4 (3%) respectively. Bamyan regional site had highest confirmed cases 26 (32%) followed by Kabul 18 (22%) and Paktia 16 (20%) compared to Baghlan 4 (5%). Based on subtypes, AH3 consisted of 56 (24%) of total cases followed by B Victoria 37 (30%), AH1N1 30 (24%) and B Yamagata 2 (1%).

Conclusion:

In the light of this study's findings, it has been elucidated that the central and southeast region of Afghanistan reported majority of influenza cases with prominence of AH3 subtype. Most adult cases require attention to this stratum. The influenza data must be added in HMIS System of MoPH for detection of outbreaks.

Keywords: Influenza, AH3, FluNet, Afghanistan

Descriptive epidemiology of measles outbreaks in Badghis province, Afghanistan 2021

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Background/objectives:
Measles is a contagious disease in children with high morbidity and mortality in developing countries. Afghanistan is endemic for measles and is outbreaks occur annually in majority of the provinces. Badghis province has been witness of many outbreaks of measles recently. This study aims to describe the epidemiology of measles outbreak and illustrate clinical features in Badghis province in 2021.

Methods:
A descriptive study was conducted for illustration of the outbreaks of measles occurred during 2021 in Badghis province. These statistics were extracted from the surveillance system of Badghis province and were studied and analyzed from July to August 2022. The demographic and clinical characteristics of measles cases in these outbreaks were analyzed and included in the study. Excel (2013) and Epi info software were used for data management.

Results:
In 2021, a total of 10 outbreaks of measles were detected, investigated and controlled in Badghis province. Out of these, 4 outbreaks (40%) were occurred and responded only in Qadis district. In addition, three other districts have witnessed outbreaks of measles in this province. Overall, in these outbreaks, 211 cases of measles have been recorded, of whom 71 cases (34%) were in Qadis district and 21 cases (10%) has been registered in Moqur district. Among the cases of measles, 122 (58%) were in males and 89 (42%) were females. There were 5 deaths showing a case fatality rate of 32.%.

Conclusion:
The insecurity situation (last years), the epidemic of covid-19, the closure of the outreach program and the displacement of the population have caused the weakness of monitoring and follow-up of routine vaccination coverage. It seems the coverage of vaccination is low which is required to be improved and strengthened. Immunization campaigns are needed to be conducted intermittently.

Keywords: Measles, Vaccination, Badghis, Coverage, Outbreaks, Afghanistan

Institutionalization of Quality and Patient Safety.

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Objectives:
The biggest challenge to institutionalization of quality and patient safety remains deficient engagement of staff who provide patient care and those oversighting. An effective way to enhance this engagement would be the transfer and embedment of responsibility for its operationalization to the service units/departments. This can be achieved by establishing Unit/Departmental Quality Improvement and Patient Safety (DQIPS) committees tasked to enhance ownership of the quality agenda, data-driven continuous improvements and sustained engagement of service staff in the improvement of quality and patient safety, ultimately creating a safety culture.

Methodology:
Supported by quality department leadership, service leaders were tasked to set up multidisciplinary DQIPS committees whose mandate was to provide quality and patient safety oversight, drive regular review of departmental/unit Key Performance Indicator (KPI) data and formulate appropriate improvement action plans. DQIPS committees were required to ensure continuous collection of KPI data, effect monthly data review and consultatively design improvement approaches. These committees are chaired by appointees of the service-line leads. Following every monthly sitting, the DQIPS committee chair briefs the service-line chair and together they disseminate appropriate improvement information to all members of the department for action. The service-line chair is responsible for providing quarterly reports to hospital leadership on the DQIPS activities in their units/departments.

Results:
Following this initiative all service lines formed and operationalized DQIPS committees. Over 95% of DQIPS committees meet monthly and are actively driving improvement initiatives in their units/departments. All service line chairs provide quarterly reports to senior leadership team as expected. Since inception of the DQIPS committees, there has been an institution-wide enhancement of line-staff involvement in quality and patient safety activities, improved quality of KPI data collected and habitual use of data to drive continuous quality and patient safety improvement.
Positive patient experience has steadily risen from an average of 80% to above 95% in virtually all service areas.

Conclusion:
Embedment of responsibility for quality and patient safety into service departments is a potent driver for improved patient experience and outcomes in hospitals.

Metastatic renal cell carcinoma to pancreas and gastrointestinal tract: a clinicopathological study of 3 cases and review of literature

Jamshid Abdul-Ghafar, Nasir Ud Din, Ramin Saadaat & Zubair Ahmad

Background:

Renal Cell Carcinoma (RCC) metastasizes in approximately 20–30% cases. The most common sites for metastases are the lungs, bones, liver, and brain. Metastases of RCC in the gastrointestinal tract (GIT) are very rare. Metastatic RCC has a poor prognosis. We herein present a case series of three patients with metastatic disease in the colon, duodenum, and pancreas following complete resection of RCC.

Methods:

Hematoxylin and Eosin and immunohistochemically slides of 3 cases of RCC metastatic to GIT were reviewed. These cases were diagnosed between 2002 and 2019 at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan, and Aga Khan University Hospital (AKUH), Karachi, Pakistan. We also present a detailed review of published literature.

Results:

We reviewed cases of three patients, two females and one male, with a mean age of 57.3 years (range 40–67 years) who underwent nephrectomy for RCC. They developed metastases in the colon, pancreas, and duodenum, respectively 12–168 months (median time 156 months) following primary tumor resection. The patient with metastatic RCC in colon presented with abdominal pain and constipation. An ulcerated mass was found on colonoscopy 30 cm from the anal verge. Diagnosis of RCC with rhabdoid features was confirmed in both primary and metastatic tumors. The second patient developed a metastatic nodule in the head of pancreatic while the third patient developed metastatic nodules in the duodenum and pancreas which were detected by Computed Tomography (CT) scanning. Histopathological examination confirmed the presence of clear cell RCC in the metastatic nodules in both cases.

Conclusion:

Metastatic RCC should be considered in the differential diagnosis of mass in the gastrointestinal (including pancreaticobiliary) tract especially in presence of a past history of RCC. These patients should be screened thoroughly by physical examination and appropriate imaging studies.

Premenstrual syndrome among female university students in Kabul- Afghanistan

Zainab Ezad, Abbas Ali Husseini, shafiqa Hakimi

Background:

Most girls experience pain and other discomforting symptoms during their menstrual periods. Premenstrual Syndrome (PMS) is a very common problem with symptoms that can negatively affect normal daily life. Premenstrual dysphoric disorder (PMDD) is a more severe condition that includes functional impairment and disruption of personal relationships such as chronic depression. This study aims to evaluate the prevalence, severity, and impact of premenstrual syndrome (PMS) on female students in Kabul- Afghanistan.

Methodology:

A cross-sectional study was performed on 307 female students using a validated PSST means Premenstrual Symptoms Screening Tool to estimate the prevalence of PMS, and relevant sociodemographic data.

Results:

The prevalence rate of PMS was 38.4% that influenced the emotional, psych behavioral, and physical domain, and 35.5% had PMDD.A statistically significant relationship was seen between education and premenstrual syndrome. Among the nineteen symptoms, the highest mean is related to work efficiency, relationship with family, social life activities, household responsibilities, Anger/irritability and the lowest mean was related to overeating and Feeling overwhelmed.

Conclusion:

PMS and PMDD are highly prevalent among girls students in Kabul- Afghanistan.
PMS symptoms are more common and more severe among highly educated women. Health awareness **programs should be encouraged to improve girl's knowledge regarding menstrual disorders.**

Key words: PMS, PMDD, Girls students

Re-assessment of Pont's index in Angle class one normal occlusion amongst Kabul population

Dr Abdul Mubin Hamed, Dr sarwary

Background:

In orthodontic cases management, many information obtained from dental cast which are critical in diagnosis, treatment planning and evaluation of treatment results. Pont's index which was introduced and published by Pont in 1909 shown that the ratio b/w sum of maxillary incisors and inter-premolar arch width (MPV) in maxilla is (0.80) and inter-molar arch width (MMV) is (0.64).
 Aims: to re-asses the Pont's index in angle class one normal occlusion amongst Kabul population, its validity and reliability for the predication of ideal arch width of interpremolar and intermolar area.

Methodology:

it's a descriptive and statistical study, sample size consist of 35 male and female aged 16 to 36 years old, cast are measured for maxillary incisors and interpremolar arch width from distal pits and intermolar arch width from central occlusal pits with sliding caliper(Metal Varner clipper), data analyzed by IBM SPSS 25 version.

Results:

descriptive and statistical analysis shown that (calculated premolar value) CPV and CMV (calculated molar value) are greater than what is measured as Measured premolar value and measured molar value on the cast. So the mean ratio b/w sum of maxillary incisor and MPV is estimated to be (0.85) and MMV was (0.66).

Conclusion:

Pont's analysis shown different values amongst Kabul population from that was reported as Pont's index, for its clinical use in Kabul best to consider current study suggestions.

Keywords: **Pont's index, MPV** (interpremolar arch width), MMV (intermolar arch width, CPV, CMV.

Effect of Afghan Senjed (Elaeagnus Angustifolia L.) Leaves Aqueous Extract on Memory of Male Rats

Kawsar Alami, Mujtaba Haidari, Khalil Ebrahimi, Ali Ahmad Makarem Nasery Bakhtiari, Meysam Sajjadi1, Sayed Yousof Mousavi

Abstract:

This study is aimed to evaluate the effect of Elaeagnus Angustifolia leaves extract on the memory of male rats. Rats were divided into 7 groups: 4 groups in the first stage (Control, drug 100, 200 and 400 mg/kg) to determine the effective-dose of Elaeagnus Angustifolia on memory; and 3 groups in the second stage (Normal, Scopolamine and Elaeagnus Anustifolia leaves extract effective-dose) to evaluate the effect of Elaeagnus Angustifolia leaves stract on scopolamine-induced memory impairment. Rats received Elaeagnus leaves extract by i.p. administration for 14 days and the memory function of all groups was evaluated by the Y-maze test on days 8 and 15. Only scopolamine and effective dose of Elaeagnus leaves extract groups were received scopolamine 30 min before Y-maze test. The total cholesterol and triglyceride levels of stage 2 rats were also measured. On day 8, the percentage of spontaneous alternation (%SA) was significantly increased in Elaeagnus leaves extract 400 mg/kg group, as compared with the control group. On day 15, there was a significant difference in %SA only between Elaeagnus leaves extract 100 mg/kg group and the control group. The %SA was significantly increased in the Elaeagnus leaves extract effective-dose group only on day 15, as compared with scopolamine group (P<0.05). The effective-dose of Elaeagnus leave extract was also significantly decreased the total cholesterol (P<0.01) and triglyceride (P<0.001) levels in comparison with scopolamine group.

Conclusion:

a high dose of Elaeagnus leaves extract only in a short-term administration period and its low dose in a long-term administration period had memory-enhancing effects. The low dose of Elaeagnus leaves extract as an effective-dose of Elaeagnus leaves extract could reverse the scopolamine-induced memory impairment.

Dapagliflozin in heart failure with preserved and mildly reduced ejection fraction

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Background:
Patients with heart failure and preserved ejection fraction (HFpEF) have a high burden of symptoms and functional limitations and have a poor quality of life. Sodium–glucose cotransporter 2 (SGLT2) inhibitors reduce the risk of hospitalization for heart failure and cardiovascular death among patients with chronic heart failure and a left ventricular ejection fraction of 40% or less. Whether SGLT2 inhibitors are effective in patients with a higher left ventricular ejection fraction remains less certain.

Objectives:
Sodium–glucose co-transporter 2 (SGLT2) inhibitors, originally developed as glucose-lowering agents, have been shown to reduce heart failure hospitalizations in patients with type 2 diabetes without established heart failure, and in patients with heart failure with and without diabetes. Their role in patients with heart failure with preserved and mildly reduced ejection fraction remains unknown.

Methodology:
literature reviewed of studies on effect of Dapagliflozin in heart patient shows consecutive findings that Dapagliflozin Evaluation Improve the LIVEs of Patients With PReserved Ejection Fraction Heart Failure (DELIVER) which is an international, multi center, parallel group, event-driven, randomized, double-blind trial in patients with chronic heart failure and left ventricular ejection fraction (LVEF) >40%, comparing the effect of dapagliflozin 10 mg once daily, vs. placebo, in addition to standard of care. Patients with or without diabetes, with signs and symptoms of heart failure, a LVEF >40%, elevation in natriuretic peptides and evidence of structural heart disease are eligible. The primary endpoint is time-to-first cardiovascular death or worsening heart failure event (heart failure hospitalization or urgent heart failure visit) and will be assessed in dual primary analyses – the full populationPerceived Stress levels among Anaesthesia and Intensive Care staff during the third wave of the COVID-19 pandemic: A report from Afghanistan and in those with LVEF <60%.

Conclusions:
Dapagliflozin reduced the combined risk of worsening heart failure among patients with heart failure and a mildly reduced or preserved ejection fraction, in addition determine the efficacy and safety of the SGLT2 inhibitor dapagliflozin, added to conventional therapy, in patients with heart failure and preserved and mildly reduced ejection fraction.

Perceived Stress levels among Anaesthesia and Intensive Care staff during the third wave of the COVID-19 pandemic: A report from Afghanistan

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Introduction:
Hospitals are highly challenging and stressful workplaces. The COVID-19 pandemic adds even more stress to intensive care unit (ICU) and anaesthesia staff who are at the frontline dealing with COVID-19 patients, and are highly likely to experience psychological disturbances and mental health problems. Reported factors that contribute to these mental and psychological effects include increased workload in ICU, lack of Personal, Protection Equipment, lack of a vaccine or treatment, social stigma, and concern of spreading of the disease, especially to their families.

Methodology:
In this study, we examined the demographic characteristics associated with level of stress among clinical anaesthesia and ICU department staff via a questionnaire and scoring scale. 311 people were invited to participate in the survey, and a total of 175 completed it during June 19, 2021 to July 26, 2021 from thirteen Kabul public and private hospitals. The questionnaire included information about age, gender and 10 questions of Perceived Stress Scale during the third wave of COVID-19 pandemic.

Results:
The results showed that 96.6% of respondents reported moderate to high stress levels. Chi-square analysis found that age groups of equal or less than 40 years old, anaesthesia staff, participants who had occasional contact with COVID-19 and female gender were associated with high stress levels. Anaesthesia and ICU staff experience high levels of self-perceived stress during the COVID-19 pandemic. Consideration may be given to stress reduction techniques.

Conclusion:
Moderate to high stress levels were reported by 96.6% of clinical ICU anaesthesia workers in Kabul, Afghanistan.

Keywords: Emotional Stress, Covid-19, Intensive Care Units, Anaesthesia Department, Afghanistan

Patient Engagement in Health Care: Power in the hands of Patients

Misbah Dilawar

Introduction:
Engaging patient in care has become priority in clinical practices. Patient participation means involvement of patient in decision making or expressing their opinions on treatment modalities. Study revealed that patient illustrate better health outcomes when they participate in their care plans (CDC, 2021). Engagement of patients permits them to boast their confidence either in knowledge, attitude and practice, thereby, **enhancing patient's empowerment.** The purpose of the study **is to evaluate patient's engagement to** improve care quality.

Methods:
A hospital based quantitative research design was used to recruit 200 patients/ staff in the hospital over the period of one month. The data was collected by adopting questionnaire tool given by Rodgers, composed of 17 questions. The questionnaire contained 4 attributes for instance, 1) patient involvement, 2) patient information, 3) Communication and, 4) relationship to the staff. Participants were enrolled in this study through inclusion and exclusion criteria by ensuring involvement of both patients and their care takers.

Results
The study revealed that patient's participation can positively impact on care quality. It is critical in shaping the way forward. Results were derived by utilizing licker scale. Result showed that 60% for patient involvement, 75% for information provision, 65% reported communication with staff and 90% showed good relationship with staff. In general, 72.5% patient reported sufficient participation in their own care plan.

Conclusion
Engaging patient in their care is paramount to improve health outcomes, improve patient satisfaction, **enhance service delivery and develop clinician's experience. Evidence shows that engaging patients can help** improve their care and treatment that fits their needs and ultimately resulting in improved outcomes. To ensure sustainability, ongoing trainings of health care team, and various activities to involve patients and families is must and vital. Few small projects were initiated in B1 ward, like Hi tea in seminar room, patient engagement week celebration in collaboration with Quality and Patient Safety Department, coordinated **care trials which facilitates patient's involvement, providing information, good communication and ideal** relationship with Health care provider proven positive impact on treatment.

MEWS- Decision making power to nurse, safe path towards healthy recovery (A project initiative on prompt detection of high risk management)

Rozina Karim, Sadaf Khawaja, Sumera Danish

Introduction:

Serious adverse events can be prevented by recognizing and responding to early signs of clinical deterioration. **"Clinical and physiological deterioration is evident for six** to eight hours before cardiopulmonary arrest. Non-recognition of deterioration in clinical status has implications for patient **survival, which depends on nurses' decisions to summon assistance."** Kyriacos, U., Jelsma, J., James, M., & Jordan, S. (2011). MEWS scoring facilitates in recognition of abnormal physiological parameters in patients, considered as first indicators of clinical decline and is used to prompt patient assessments, intervention needed and helps staff to prioritize among patients. In MEWS, points are allocated to vital signs based on their degree of abnormality, and summed to yield an aggregate score. A score above a threshold would elicit a clinical response such as a rapid response team (RRT).

Objective:

To explore nursing staff's perceptions of MEWS, score in assisting early identification of unstable patients in the general surgical ward environment.

Problem:

The central data of MEWS audit 2021in Department of Surgery showed that 10.3% of the MEWS were marked false with 3.8% not documented.

Methodology:

A descriptive, Quazi experimental design was chosen with target population throughout ward nursing staff. The survey includes random MEWS spot checks, pre/post-test abstracted from Lippincott course, in-service sessions to explore participants KAP of MEWS through week celebration.

Results:

Total 81 nursing staff participated in the project. The comparison data shows improvement in MEWS documentation, with significant decrease in false and fabricated data.

Conclusions:

MEWS score is widely used tool in daily clinical practice, with simple in design, easy to use, and not increase workload. It also enhances ability to identify deteriorating patients. Literature recommends educational interventions are required for knowledge base understanding.

A Qualitative project to reduce cost and improve the environment from carbon emission

Sumera Danish (Nurse Instructor- Team Lead). Sadaf Khowaja- (Head Nurse- Team Lead), Sanam Sadique-(Asst. Head Nurse), Raheel ilyas Registered Nurse, Alvina Amin (Nurse Manager)

Background:
Health care is the sector that contributes to carbon emissions. It is the responsibility of healthcare industries to take steps to the reduction of carbon emissions without undermining their service quality (Weisz et al., 2020). Globally, carbon emission is approximately 2 billion tons Pakistan's carbon emission contribution to the world has increased four times in these years (Dunnan et al., 2020). There are many contributing factors to carbon emission includes, including burning fossil fuels, electricity heat production, industry, agriculture, forestry, and other land. This paper highlights the contribution of the disposal and incineration of used surgical items to carbon emissions as it is evident that surgical operations and equipment have a significant contribution to carbon emissions (MacNeil et al., 2017).

Methodology:
An observational study design was used to conduct a pilot study in a surgical unit of a tertiary care hospital. The aim of this study was to assess the effective utilization of all the sterile items available in disposable dressing packs for the central venous catheter (CVC) dressings only. The study duration was from two months from June 1^{st,} 2022, to July 31^{st,} 2022, in which a random sample of 100 dressing packs was taken to observe each item's necessary usage in CVC dressing. The data were analyzed using SPSS software.

Result:
Out of 100 random samples, 25% of items were found underutilized in CVC dressing. Each time when the pack opens these items are also disposed of with the used pack. This resulted in extra costs along with an increase in incineration burden that had a detrimental impact on the environment (increase carbon emission leads to climate change) along with the total medical care cost load.

Quantitative Assessment of Higher Institutes Providing Higher Medical Education

Ghulam Farooq Mansoor, Khalilullah Shefa, Najibullah Safi, Nergis Neyazi,

Objective:
To assess educational institutes readiness for providing quality medical education

Methodology:
Quantitative method that included interview with students and assessment of the medical school. A standardized checklist, inspired from the World Federation of Medical Education standards and sub-standards, was used including physical measurements, observation and review of records.

Findings:
Students' issues: Lowest score a student enrolled to curative medical school was 269 in public vs 70 private). Over the past 7 years, on average public medical schools enrolled 60 students and private 218. Student services included 55% student association, 90% counseling services, 40% career counseling and 15% alumni association.
Teachers: 27% of teachers at private schools were permanent; less than a quarter had academic rank. On average for every teacher there were 19 students in the public and 105 in private schools.
Curriculum: 50% **(71% public vs 38% private) of the schools' curriculum had spelt out study period** outcomes. Educational methods used included PBL (45%), CBL (40%), SCL (90%)and OBE (75%).
Assessment; Online attendance was functional in only 25% of the schools. The practical work logbook was available in 85% schools (57% public vs 100% private) which recorded information on groups of students not individuals. No external examiners were invited for examinations.
Governance: No financial liberty in public schools. Student database was available in 90% of schools (public 71% vs private 100%)
Resources: 60% of the schools had a primary care facility mainly in the form of outpatient department and 45% had a teaching hospital. 50% of schools had a research center.
Implication for policy:
Findings provide critical information for establishing minimum standards of quality in higher medical and dentistry education. There is need to develop standards or adapt the MOHE standards for the medical schools in line with the WFME framework for quality assurance of higher medical education.

Effect of Frequency of Parent to Child Maltreatment on Symptoms of Anxiety Disorder in Pakistani Adolescents: A Community Based Cohort Study

Maryam Pyar Ali Lakhdir, Aneela Pasha, Asad Allana, Asif Khaliq, Salima Farooq, Naureen Akbar Al, Apsara Ali Nathwani, Syed Iqbal Azam

Objective:
To investigate the association between Parent to Child Maltreatment and the occurrence of anxiety disorder symptoms among Pakistani adolescents under 18 years.

Methodology:
A prospective study was conducted to examine the effect of frequency of Parent to child maltreatment (PTC) on the occurrence of anxiety disorders in a community setting. A sample of 800 adolescents who reported none to rare, occasional, and frequent were followed for the occurrence of anxiety disorder symptoms over two years. PTC was evaluated using ICAST-C (International child abuse screening tool). Anxiety disorder symptoms were evaluated using the SCARED (Screen for children anxiety-related disorders) tool. Risk ratios were estimated using Cox Proportional Algorithm.

Results:
The risk of occurrence of anxiety disorder symptoms in adolescents who have exposure to frequent PTC is 3.8 times (2.9, 4.9) as compared to those with none to rare exposure to PTC. Among adolescents suffering frequent PTC whose, mothers also reported a history of domestic violence, the risk of anxiety disorder symptoms is 3 times (2.2, 4.1) higher. Female gender (RR 1.5; 1.2-1.9), stressful home environment (RR 1.4; 1.1-1.8), and parental substance abuse (RR 1.6; 1.2-2.0) are significant predictors of anxiety disorder symptoms.

Conclusion:
Frequent PTC is significantly associated with the occurrence of anxiety disorder symptoms among Pakistani adolescents. Given these findings, there is a dire need to develop specific interventions to address anxiety disorder symptoms among adolescents and to develop programs to prevent parent to child maltreatment.

Investigating the prevalence of violence and its related factors in pregnant women in Ghazni city in 2018

Ms Nafisa Saeedi

Introduction and purpose:
pregnancy alone imposes a lot of physical and mental pressure on a person, and therefore its combination with other stressful factors such as violence can cause negative effects on the fetus and mother. These complications, in turn, will increase the mortality of mothers and infants. This study was conducted with the aim of investigating the prevalence of violence and its related factors in pregnant women in Ghazni city in 2018.

Materials and methods:
This study is descriptive-analytical and was conducted on250 pregnant women. The tool used was a questionnaire that consists of two parts, one part is related to demographic questions and the other part is related to the violence questionnaire derived from the World Health Organization model and analyzed by SPSS software version 16.

Findings:
In this study, the average age of the research subjects is 29.4 years.76.8%of these people were illiterate, 63.2% of their spouses were illiterate, and 79.6% of their residence was in the district. 86% had no job and 53.2% of these people had a household income of less than 5000 Afghanis. 90% did not want the current pregnancy. In 48% of the cases, the perpetrator was other than the spouse. 80.8% of the total people studied have been subjected to violence. Of these, 32% were subjected to physical violence more than 5 times, 76.8% were subjected to emotional violence more than 5 times, and 72% were subjected to sexual violence more than 5 times. And in all these cases, the amount of violence has increased with age.

Conclusion:
According to the results of the above study, which shows the high prevalence of violence during women's pregnancy. To reduce the violence of women during pregnancy in all aspects of counseling and awareness to eliminate violence, encouraging women and their husbands to go to obstetrician-gynecology and psychotherapy, as well as wider studies and awareness in this field are recommended.

Keywords: pregnancy, violence against women

Probiotic Lactobacillus rhamnosus Supplementation Improved Capecitabine Protective Effect against Gastric Cancer Growth in Male BALB/c Mice

Ahmad Mustafa Rahimi

Introduction:

Gastric cancer is the fifth most common cancer in the world. Annually, worldwide 723,000 patients die of the gastric cancer. Among Iranian men, it is the first, and among Iranian women, it is the third common cancer. That the incidence rates are above the world average.

Unfortunately, the available therapeutic options are not desirable due to many limitations like high expanses, side effects, availabilities, equipment etc. This work was designed to try probiotic effects on gastric cancer because they were widely used on other type of cancers, and probiotics are more save than chemotherapy, radiotherapy and surgery. In addition, probiotics were used to cure the breast, lung, colon and some other cancers in both in vivo and vitro models.

Methodology:

This study was interventional, fifty-six male BALB/c mice were inoculated with human gastric cancer subcutaneously into the right and left armpit to develop a xenograft model of gastric cancer.

Animals in this study were randomly divided to 7 groups each group 8 mice (n=8), control, probiotic, Capecitabine, sham, cancer, and combination of probiotic and Capecitabine group.

To suppress the animal's immunity system for preventing graft rejection, they were received Cyclosporine.

For treatment, Capecitabine and Probiotic (*Lactobacillus rhamnosus*) were gavaged.

Results:

two weeks before and four weeks after cancer induction, the cancer volume markedly decreased in probiotic group than cancer group "mm^3" $P<0.0001$(131.0375 ±5.28Vs 247.1250±15.73). Moreover, probiotic-received mice had profoundly increased apoptotic cells. At the end of 6th week compare to cancer group, serum IL-6 was increased in probiotic group compare to cancer group, in mice induced cancer which received probiotic and Capecitabine combination the Bax level was significantly increased and of Bcl-2 the level was significantly attenuated in tumor tissue than cancer group without treatment. Probiotic also increased the WBC level in sham group than control group (WBC 1000/μl, 5.8750 ±0.31vs 2.89±0.26 $P=0.08$). The RBC and PLT levels were significantly increased in sham group than Capecitabine group.

Conclusion:
this work shows probiotic (*Lactobacillus rhamnosus*) treatment can decrease gastric cancer volume and stimulate immunity system. We may be able to harvest benefits from the probiotic (*Lactobacillus rhamnosus*) in-patient with gastric cancer and for prevention of GC in high-risk patients.

Keywords: Probiotics, Capecitabine, Cyclosporine, Xenograft, Gastric Cancer.