

Abstracts

FMIC 11th Annual International Scientific Conference & 11th Quality Convention

“Healthier World: Together, Protect and Invest on Health, Quality and Research”

November 6, 2021

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Acknowledgement

The organizing committee of the FMIC 11th Annual International Scientific Conference & 11th Quality Convention gratefully acknowledges the financial and in-kind contribution of Global Affairs Canada (GAC), Agence Française de Développement (AFD), Aga Khan Foundation and other partners made to the conference and to various Programmes. These contributions enabled FMIC to organise a successful conference and quality convention.

Message from Chief Executive Officer

On behalf of the FMIC Board and Management, I extend a warm welcome to all the participants of the FMIC 11th Annual International Scientific Conference and 11th Quality convention.

The French Medical Institute for Mothers and Children (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. That partnership is the defining characteristic of FMIC, and one of its greatest strengths. Essential to a successful partnership is trust among the partners. That begins by sharing a common vision, and then committing resources toward that vision. Trust requires that the partners be open and transparent with one another. In FMIC's governance and management, we are deeply committed to that relationship. The level of commitment and cooperation among the partners is noteworthy. All are investors and have an ownership stake in FMIC. All have input into its governance and management, its priorities, strategies, and programs. Due to this unique bond; despite several challenges including the recent Covid-19 pandemic, and political changes in Afghanistan, FMIC has achieved remarkable success over the past 15 years.

FMIC is investing in the future of Afghanistan's healthcare system by providing medical professionals with international standard training and professional development. The Postgraduate Medical Education Programme is a flagship programme, which offers specialized training in nine different specialties of which five are rare in 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.

FMIC has so far organised nine International Conferences, on various emerging themes such as '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 Developing Countries in Transition' on October 23-24, 2014; "Emerging Trends in Reproductive, maternal, new-born and child health in Developing Countries" on December 8-9, 2015, 'Emerging Trends of Non-Communicable Diseases (NCDs) in Developing 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-19 Pandemic" on November 7, 2020.

This year, FMIC brings the 11th Annual International Scientific Conference and 11th Quality Convention to you with the theme of "Healthier World: Together, Protect and Invest on Health, Quality and Research". It is pertinent to note that besides the yearly international conferences since 2011; FMIC has also been organizing quality conventions with the objective to enhance patient safety, and nurture innovations in healthcare. This year, we have combined both events in the face of challenges posed by the Covid-19 pandemic. I do believe that you will find both the events most informative and useful.

Once again, welcome to the 10th FMIC Annual International Scientific Conference and Quality convention with best wishes for a stimulating and rewarding experience.

Aziz Ahmad Jan
Chief Executive Officer, FMIC
October 2020

Organizing Committee

Aziz Ahmad Jan
Chief Executive Officer

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Dr Mohammad Tareq Rahimi
Head and Programme Director, Paediatric Surgery

Conference Programme

Theme	Presentations
Session 1: Public Health and Communicable Diseases	Knowledge, attitude, and practices towards spread, risk, prevention measures and vaccination of COVID-19 among students in Afghanistan
	Role of laparoscopy in the evaluation and management of tubal causes of infertility at FMIC, Kabul, Afghanistan
	Esophageal carcinoma and associated risk factors in a tertiary care hospital in Kabul, Afghanistan: A case control study
	Prevalence of vitamin D deficiency in patients referred to French Medical Institute for Mothers and Children, Kabul, Afghanistan
	Do Dipeptidyl peptidase 4 inhibitors (DPP4 inhibitors) confer protection from COVID-19?
	To assess the psychosocial consequences of corona virus pandemic on mental health of health care professionals in Pakistan.
	Musculoskeletal symptoms and disorders, and related knowledge, attitude and practices among female textile workers in Karachi, Pakistan - A cross-sectional study
	Resilience and its associated factors in head and neck cancer patients in Pakistan: an analytical cross-sectional study
	Beware of the toxic potential of pharmaceutical vitamin D Supplement: A cross-sectional survey from a tertiary care centre
	Pre-admission Testing for SARS COV-2 as a Screening Strategy for COVID-19: A retrospective Chart Review of Patients Admitted at Aga Khan University Hospital Nairobi
Session 2: Nursing, Quality and Patient safety	The effect the job satisfaction on intent to leave among nurses in teaching hospitals Kabul 2017
	Ensure patient safety through effective communication among healthcare professionals
	Reduce operational cost in the Operating Room
	Reduce the risk of patient harm resulting from falls in the hospital
	Ensure Safe Surgery through a Standardized and Consistent Approach to Save Life
	Impact of Accreditation on Institutional improvement of Quality and patient safety
	Feasibility of using a Virtual Learning Environment for Dried Blood Spot Specimen Collection Training
	Experiences of using Digital Technologies in a Multicountry Research on eLearning in Healthcare settings
Session 3: Non-communicable Disease	Urinary metabolomics of autistic versus non autistic children by Gas Chromatography–Mass Spectrometry (GC-MS)
	Primary Hemophagocytic Syndrome Triggered by Dengue Infection
	Comparison of anti-microbial efficacy of Calcipex and Metapex in endodontic treatment of chronic apical periodontitis- A Randomized Clinical Trial
	Determining the Relevance of HLA/KIR Matching/Mismatching on Kidney and Liver Transplantation Rejection: A Meta-analysis
	Complications of Transpedicular Spine Fixation in Afghanistan
	Acute Myeloid Leukaemia with inv (16) in a 2-year-old Boy: A Diagnostic Dilemma
	The Pattern and Proportion of Trigeminal Neuralgia among Afghan Patients between (30-80) years old in Stomatology Hospital, Kabul, Afghanistan
	A case report of abdominal conjoined twins from Afghanistan Successful surgical separation of abdominal conjoined twins; a case report from Afghanistan
	Surgical Management of Coxa Vara in Cleidocranial Dysostosis (Scheuthauer-Marie-Sainton Syndrome): Case Report at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan
	Outcomes of One-stage open reduction and salter's osteotomy with or without associated femoral shortening for bilateral developmental dysplasia of the hip (DDH) at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan

Oral Presentations

Scientific Sessions

Abstracts

Session 1

Public Health and Communicable Diseases

Knowledge, attitude, and practices towards spread, risk, prevention measures and vaccination of COVID-19 among students in Afghanistan

Said Iftekhhar Sadaat, Zabi Haris, Lutfurahman Aftab, Noorshah Kamawal, Basheer Habib, Alyas Hooshmand

Introduction:

The coronavirus disease (COVID-19) continues to spread around the world including Afghanistan. The aim of our study was to measure the knowledge, attitude, and practices towards spread, risk, prevention measures and vaccination of COVID-19 among students in Kabul, Afghanistan. We also measured the incidence of self-reported symptomatic COVID-19.

Methods:

Using simple random sampling, we enrolled 406 students (both sex, age 18 to 45) from Mili Institute of Higher Education in Kabul, Afghanistan from November to December 2020. The study utilized a structured questionnaire (demographics, COVID-19 knowledge, attitude, and practices, and any history of COVID-19 diagnosis or symptom). Satisfactory knowledge was defined as acquiring the pre-defined percent from the total score.

Results

Around 98.5% of the participants heard about COVID-19. Facebook (63.6%), television (57.6%), and health facilities (50.5%) were the most common sources of information among participants. 73.5 percent of the participants of the study showed correct knowledge about the spread of COVID-19. Around 48.3% of the respondents showed at least some level of worry about COVID-19. Similarly, almost 71.3% found themselves at high risk of contracting COVID-19. Around half of the respondents recently attended a gathering with many people (men 55% and women 44%) but still 66.9% of the respondents were wearing mask when leaving home (men 58.4% and women 75.7%) and 32% were wearing the mask with safety (not touching the mask surface when taking it off). Similarly, around 68.1% of the respondents used to wash their hands frequently for 20 seconds or use sanitizer for cleaning their hands. Forty-five percent (47.7% men and 5.1 % women) respondents reported exposure to an infected person with COVID-19 in the last three months.

Conclusion

This study provided comprehensive information on the knowledge, attitude, and practice towards COVID-19 among undergraduate students. The information should be used for planning and implementing the preventive measures against COVID-19 in the higher education settings.

Role of laparoscopy in the evaluation and management of tubal causes of infertility at FMIC, Kabul Afghanistan

Dr. Farzana Wali Jebran MD - OBGYN consultant, laparoscopic and obstetric fistula surgeon, Dr. Huma A. Alizai MD, Dr. Nilofar Sadeq MD Data analysis: Farhat Jebran

Introduction:

In Afghanistan, very few gynecologic surgeons perform therapeutic laparoscopy for reversal of tubal patency. Therefore, there is less data in this regard. Tubal factor contributes to (30%) of infertility cases. Consequently, if other causes of infertility are excluded, laparoscopy is preferably used to find pelvic or tubal cause of infertility. The advantages are sooner discharge, less postoperative discomfort, and hastily return to the routines. This study aimed to determine the role of laparoscopy in diagnosis and reversal of tubal cause of infertility.

Methods:

A prospective cross-sectional observational study conducted for laparoscopic surgeries on 50 patients with infertility visited the hospital during December 2020 to July 2021. All were evaluated during their stay from admission to discharge. A structured excel sheet was used to collect information.

Results:

Out of 50 patients, 66% (33) had primary infertility, 34% (17) had secondary infertility, 76% (38) had blocked tubes and 24% (12) patients had open tubes before operation. 56% (28) patients had distal blockage and 20% (10) patients had proximal blocked tubes from which 14% (7) remained blocked and 9.7% (3) got open. 48% (24) had bilateral blockage and 28% (14) had unilateral blockage. Out of 38 blockages, 81.6% (31) got patent by the end of the procedures from which 90.3% (28) got patent bilaterally and 9.7% (3) unilaterally. Cyst drainage and deroofing were performed for 12 patients and ovarian drilling was done for 6 PCOS patients.

Conclusion:

Diagnostic and therapeutic laparoscopy have crucial role in the diagnosis and treatment of infertility. This study showed the reversal of most tubal blocks by laparoscopy. This procedure helps patient to conceive without IVF (In Vitro fertilization) and provide them a chance to have repeated normal pregnancies. We recommend follow up studies for fertility outcome after reversed tubal patency.

Esophageal carcinoma and associated risk factors in a tertiary care hospital in Kabul, Afghanistan: A case control study

Ramin Saadaat, Jamshid Jalal, Nooria Atta, Tazeen saeed Ali

Introduction

Esophageal Cancer (EC) is the seventh most common cancer in the world in term of incidence and sixth common cancer in term of mortality. We carried out this study to determine the associated risk factors with EC at French Medical Institute for Mothers and Children (FMIC) in Afghanistan.

Methods

A hospital-based unmatched case control study was conducted on 132 EC cases and 132 normal controls to find out the associated risk factors with EC at FMIC.

Results

In the current study the mean age of the case-group was 59.48 ± 9.9 years and control-group was 48.05 ± 11.02 , (OR: 1.070, 95% CI). Majority in the case-group were male (69.6%) (OR: 3.538, 95% CI). Participants living in rural areas had 16-times higher risk of EC than living in urban. Un-educated and lower education were highly related with EC (OR:48.343, 95% CI) and (OR:35.25, 95% CI), respectively. However, most of the EC patients were from low socio-economic status but statistically no significant relation was shown. Oral snuff dipping was highly associated with the risk of EC (OR:4.541, 95% CI); but, smoking and alcohol consumption were not statistically associated factors. Hot tea drinking was highly associated with the risk of EC (OR:5.395, 95% CI) but amount of tea drinking was not a risk factor. Eating homemade naan comparing bakery naan, spicy food and pickled vegetables showed no significant relation with EC. Fresh fruit consumption once a week comparing to consumers more than two times per week had higher risk of EC (OR:63.303, 95% CI). Having family history in first degree family highly associated with EC (OR:4.581, 95% CI). Doing ever exercise then never marginally associated with the risk of EC (OR:8.957, 95% CI, P-value: 0.053).

Conclusion

The current study estimated that high age, male gender, low education, snuff habit, less fruit consumption, hot tea drinking, less exercise and having positive family history were statistically associated with the risk of EC. Further studies are recommended to identify risk factors and proportion of the EC among Afghan population.

Prevalence of vitamin D deficiency in patients referred to French Medical Institute for Mothers and Children, Kabul, Afghanistan

Maryam Ahmad PharmD, Ahmed Maseh Haidary MBBS, Dr.Path, Soma Rahmani, Farahnaz Erfani PharmD and Jamshid Abdul Ghaffar MD, PhD.

Introduction

Vitamin D deficiency is an epidemic public health problem worldwide. It is more severe in women and children. Insufficient dietary intake in countries with lower socio-economic status adds on to the prevalence of vitamin D deficiency, especially in women and children. This study was conducted to assess the prevalence of vitamin D deficiency and its associated risk factors in women, living in Kabul, Afghanistan.

Methods

A cross sectional study was conducted for which Serum 25-hydroxyvitamin D (25(OH)-D) was measured in 85 women aged between 18 to 61 years, 34 Men aged between 18 to 78 years and 49 children aged between 1 to 16 years. Socio-demographic, lifestyle, health status characteristics, as well as information regarding intake of selected dietary supplements were collected for the analysis.

Results

Vitamin D deficiency (25(OH)D <20ng/mL) was reported in 65% of patients. Mean of serum 25(OH)D was calculated to be 20.7 ng/mL. Intake of supplements of vitamin D, multi-vitamins or calcium were identified as factors that associated with a lower risk of hypovitaminosis-D.

Conclusion

In Afghanistan, women and children have the highest risk of developing vitamin D deficiency, mostly due to nutritional deprivation. Furthermore, due to Hijab, women are less exposed to sun-light during the day time, which is another factor. Therefore, a national strategy is needed to control hypovitaminosis D crisis in Afghanistan. This could be accomplished by raising public awareness regarding vitamin D fortification, supplementation and screening vitamin D status among women and children, who are at high risk.

Keywords: Vitamin-D deficiency, prevalence, FMIC, Kabul, Afghanistan.

Do Dipeptidyl peptidase 4 inhibitors (DPP4 inhibitors) confer protection from COVID-19?

Hina Shahabuddin, Aga Khan University Hospital

Introduction

Both DPP4 and ACE2 have been implicated in the pathogenesis and virulence of SARS CoV-2. The interaction of virus spike protein with DPP4 resulted in enhancement of DPP4 activity and subsequent increased inflammatory cytokines release and exaggerated inflammatory response. Moreover, plasma DPP4 levels are high in people with type-2 diabetes, obesity and metabolic syndrome; and increases with age; all of these are significant risk factors for unfavorable, COVID-19 outcomes. Prior studies of SARS CoV-1 and MERS virus demonstrated reduction in inflammatory response when DPP4 activity was blocked. Hence, it is imperative to discover the role of DPP4 inhibitors in COVID-19 acquisition and clinical outcomes.

Methodology

After approval from the Ethical Review Committee, a retrospective cohort study of 820 type 2 diabetic patients who were admitted with COVID-19 infection in AKU from April 2020 until December 2020 was conducted. Data regarding demographics, comorbidities, exposure to DPP-4 inhibitors, severity of COVID-19 and outcomes in terms of mortality were gathered. Continuous variables were described as mean and standard deviation, while categorical variables were described as percentages. Continuous variables were compared between the two groups (i.e. DPP4 inhibitors users versus non-users) using the Wilcoxon test; whereas categorical variables were compared using the Chi Square test. Outcomes were analyzed with the Kaplan-Meier method and compared using Coxregression, both unadjusted and adjusted. P value < 0.05 was considered significant.

Results

Amongst 820 type 2 DM patients with COVID-19, 18% were DPP4 inhibitors users versus 82% who used other antidiabetic medications. Among DPP4 inhibitors users 7.4% died versus 18.2% non-users which was not significant after adjustment for age, sex, and medical history (adjusted hazard ratio [HR], 0.83 [95% CI, 0.67-1.03]). Severe COVID-19 occurred in 14.1% of DPP4 inhibitor users versus 31.9% of non-users (adjusted HR, 1.04 [95% CI, 0.89-1.23]).

Conclusion

COVID-19 acquisition, severity and mortality was not significantly associated with prior use of DPP4 inhibitors amongst type 2 diabetics.

Assessment of the psychosocial consequences of corona virus on mental health of healthcare professionals in Pakistan

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Objective:

To assess the psychosocial consequences of corona virus pandemic on mental health of health care professionals in Pakistan.

Methods:

This is a cross sectional study where a questionnaire containing demographics, fear scale, depression and anxiety scale was made on Google drive and was sent to health care workers in different hospitals in Pakistan, through WhatsApp on their smart phones. Study period was from 1st May to 30th June 2020. Filling the form is considered as consent to participate. Data was analyzed using SPSS.

Results:

Out of 400 participants, 263 (65.8%) were physicians and 137 (34%) were nurses and paramedical staff. 57% were less than 40 years, whereas 18.3% were more than 50 years of age. Majority of participants 65.5% (n= 262) experienced moderate level of fear and 16.5% (n= 66) had high level of fear. 19% feared death. 57% reported social media to be responsible for increasing their fear. On depression and anxiety scale, 22% (n=87) reported moderate to severe level of depression and anxiety. A significant relationship was demonstrated between the depression level and age, education, profession ($p < 0.001$). Similarly, anxiety and depression scores were strongly related to availability of Personal Protective Equipment ($p < 0.001$).

Conclusion:

High level of fear, anxiety and depression in low resource country raises concerns regarding the psychological wellbeing of professionals. Strategies and programs to be in place to reduce psychological effects on patients.

Musculoskeletal symptoms and disorders, and related knowledge, attitude and practices among female textile workers in Karachi, Pakistan - A cross-sectional study

Ali Hussaini – Assistant Manager Research – Aga Khan University, Karachi. Pakistan

Objectives:

The aim of this study was to determine the prevalence of Musculoskeletal symptoms and disorders (MSD) and to assess Knowledge, Attitude and Practices regarding Musculoskeletal symptoms and disorders among female textile workers in Karachi, Pakistan.

Methodology:

To assess the prevalence of MSD, we used the adopted version of Nordic Musculoskeletal Questionnaire (NMQ). For assessing individual and work-related factors, a structured questionnaire was developed and used. Data was captured on EpiData and analyzed using SPSS 19. Percentages and frequencies were calculated for musculoskeletal symptoms and disorders, socio-demographic and work-related factors. Standard deviation (SD) and mean were calculated for age, duration of work and monthly income. For KAP variables, responses were coded as “positive” or “negative”. Those scoring “positive” were considered as having good knowledge, attitude, and practices.

Results:

311 female textile workers participated in this study. 253 (81.4%) of the female textile workers reported musculoskeletal symptoms. The Lower back was the most frequently affected region (71.7%), followed by shoulders (70.7%), neck (43.4%), forearm and elbow (24.4%), hands and wrist (20.6%), upper arms (15.1%) and upper back (5.1%). Self-reported average difficulty of pain was moderate, and most individuals (29.6–53.1%) reported duration of pain to be between 3-5 days. Nearly 69.5% female workers were very dissatisfied with their working space. Frequency of musculoskeletal complaints were popular among 26-35 years of age bracket. Higher monthly income, up to 5 years spent working in the textile industry, marital status and lower educational attainment all correlated positively with complaints. Those with MSD complaints were more likely to have better knowledge and safer practices score.

Conclusion:

There is a high prevalence of musculoskeletal symptoms and disorders among female textile workers in economically developing countries. Preventive measures and worksite interventions are needed to reduce work-related musculoskeletal disorders in this population. Health insurance, treatment and reimbursement schemes should be launched.

Resilience and its associated factors in head and neck cancer patients in Pakistan: an analytical cross-sectional study

Nida Zahid, Wajeeda Zahid, Wardah Khalid, Iqbal Azam, Mubasher Ikram, Aneesa Hassan, Haissan Iftikar, Shireen Shehzad Bhamani, Adnan Abdul Jabbar, Shabbir Akhtar, Moghira Iqbaluddin Siddiqui, Mohammad Sohail Awan, Nargis Asad and Khabir Ahmad

Introduction:

In Pakistan, a South Asian LMIC, collectivist culture prevails, family ties are greatly promoted thus resilience and social support is highly prevalent in head and neck cancer patients resulting in lower prevalence of depression and anxiety. This study aimed to assess resilience and its associated factors in head and neck cancer patients, post-treatment in a low middle income country (LMIC) such as Pakistan.

Methodology:

An analytical cross-sectional study was conducted from November 2019 to May 2020 among head and neck cancer patients aged at least 18 years at the largest private tertiary care hospital, in Karachi, Pakistan. Information regarding their resilience scores was collected through Wagnild and Young's Resilience scale that comprises of 14 items (RS-14). Moreover, depression and anxiety were assessed using Hospital Anxiety and Depression Scale (HADS); and social support was assessed using Enriched Social Support Instrument (ESSI). The data was analyzed by linear regression modeling. Unadjusted and adjusted beta coefficients with 95% CI were reported.

Results:

A total of 250 head and neck cancer patients were recruited, 79% of them were males. Mean age of the patients was 51.59 years with 93% having high social support and only 8% having severe depression and 3% having severe anxiety. After adjusting for the covariates in multivariable analysis, resilience was associated with severe depression ($-17[-20.98, -12.93]$) or borderline depression ($-4[-8.41, -0.39]$), severe anxiety ($-11[-17.88, -4.18]$), low social support ($-6[-9.62, -1.71]$), having family members of > 6 in the household ($-2[-4.31, -0.29]$), smokeless tobacco users post-treatment ($10[5.79, 14.45]$), and those who underwent tracheotomy ($-4[-7.67, -0.21]$). There was a significant interaction between education and role in the family (decision maker).

Conclusion:

Our study highlights that higher resilience is prevalent among small families less than six members, as the welfare of the individual is prioritized over multiple needs of the family. Formal Education and role in household/decision making power are effective modifiers in our study, demonstrating its protective effect on the mental health of head and neck cancer patients. High resilience scores were reported among current smokeless tobacco users as compared to quitters post treatment. Resilience-building interventions should be formulated to aid head and neck cancer patients to cope with the disease and its sequel.

Beware of the Toxic Potential of Pharmaceutical Vitamin D Supplements: A Cross-Sectional Survey from a Tertiary Care Centre

Hafsa Majid, Nazia Shamim, Aysha Habib Khan

Department of Pathology and Laboratory Medicine, Department of Pediatrics and Child Health, Aga Khan University, Karachi, Pakistan

Objective:

The increased awareness about vitamin D deficiency provoked significant increase in supplementation. This study aims to determine the frequency, clinical features, and pharmacological factors of hypervitaminosis D in children.

Methodology:

A retrospective cross-sectional study was conducted. All children <18 years with 25-hydroxyvitamin D (25OHD) levels performed between January 1 to December 31, 2018 at AKUH Clinical Laboratory were evaluated. Medical records of children at AKUH with vitamin D level >50ng/ml were reviewed for clinical features and pharmacological risk factors.

Results:

A total of 118,149 subjects were tested for serum 25OHD level in 2018, out of which 16,316 (13.8%) were children. Of these, 16.6% (n=2720) were registered at AKUH for consultation. Twenty-two percent (n=602) had serum 25OHD levels >50 ng/ml. The median age and 25OHD levels were 3.1(17.93) years and 70.1(100) ng/ml with 57.3% (n=345) boys. The use of vitamin D supplementation was reported in 33.1% (n=197) and of these 97.9% (n=193) were prescribed by physicians. Mega-doses were utilized by 34.17% (n=68) while rest had taken different combination in tablets/syrups form. In mega-doses, 600,000 (44.1%, n=30) and 200,000 units (45.5%, n=31). Vitamin D injections were commonly prescribed. The main indications for prescribing were aches/pains (25.8%, n=51), developmental delay (25.3%, n=50), and vitamin D deficiency (24.8%, n=49). The main symptoms of hypervitaminosis D or toxicity were abdominal pain (13.7%), and constipation (15.7%).

Conclusions:

Vitamin D supplementation should be done cautiously in children, as toxicity though rare may happen and cause serious effects specially with frequent mega doses and prolonged supplementation.

Pre-admission Testing for SARS COV-2 as a Screening Strategy for COVID-19: A retrospective Chart Review of Patients Admitted at Aga Khan University Hospital Nairobi

D Odada, R Shah, J Ndai, J Kimeu, J Shah

Author and co-investigators are all affiliated with Aga Khan University Hospital Nairobi Kenya

Introduction:

Coronavirus disease 2019 (COVID-19) was declared a pandemic in March 2020. Hospitals and patient care facilities have faced challenges on how to protect healthcare workers and patients from being exposed to the infection. The main challenge has been how exposure to COVID-19 can be controlled when the infection can be transmitted by persons without symptoms for COVID-19. This study aims to evaluate pre-admission testing of COVID-19 in patients at Aga Khan University hospital as a screening strategy for understanding, preventing and controlling exposure to COVID-19.

Methodology:

This study was a descriptive retrospective chart review, that analyzed the incidence of COVID-19, incidental detection of laboratory-confirmed COVID-19 and effects on plan of care in patients prior to admission in Aga Khan University Hospital from March 20 to December 31 2020. Demographic data, clinical characteristics, SARS COV-2 test report and plan of care were retrieved from patients records review. Descriptive analyses of frequencies proportions, counts, percentages, mean and standard deviation were used for various categories. And binominal tests and paired t-test was used for statistical analysis to identify relationships between variables.

Results:

A total of 961 patients (10.9%) tested positive for COVID-19 from the mandatory pre-admission testing. Incidental positive tests accounted for 1% of the total pre-admission tests and 14% of positive pre-admission tests. Plan of care was affected in 30 (21.7%) patients whose COVID-19 positive tests were incidental. Care diagnostics and interventions were delayed in 1 (0.7%) and 20 (14.5%) of patients that were asymptomatic for COVID-19 respectively; while, hospital stay shortened or prolonged in 6 (4.3%) and 2 (1.4%) respectively.

Conclusion:

Mandatory testing of COVID-19 in hospital facilities is an important admission requirement in controlling asymptomatic transmission of the infection. Policy should be reviewed to have COVID-19 pre-admission tests mandatory in healthcare facilities to reduce the risk of infection transmission.

Session 2

Nursing, Quality and Patient safety

Ensure patient safety through effective communication among healthcare professionals

Marufa Muradi, Wais Mohammad Qarani, Dr Bashir Nazari, Dr Reshad Ahmad, Ms Sanawbar, Mr Dawood Habibullah

Background:

Effective communication among healthcare professionals in the hospital is imperative. Accurate and efficient interdisciplinary communication is a critical pre-requisite for high-quality care. Nurses, physicians and other healthcare professionals are highly important members of the healthcare system workforce. Thus, identifying strategies that would improve communication among healthcare professionals can provide evidence for practical improvement in the hospital, which will ultimately improve patient outcomes. Effective communication can improve patient safety. Effective communication is the second goal of IPSG. In the hospital, it is important to follow certain standards while communicating; verbal and telephonic orders, critical/panic test results and during patient handover using SBAR tool.

Purpose:

The purpose of this study was to identify gaps in practice and improve communication among health care provider in the hospital through improving their knowledge and compliance to the hospital policy.

Methodology:

Data from numerous sources were extracted to identify the gap in knowledge and practice of staff on IPSG-2 International Patient Safety Goal No-2. The 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, a pre-test and post-test was implied to determine staff knowledge on the subject. The pre-test and post-test questionnaire was derived from three policies which include; verbal and telephonic order, patient handover, and critical/panic test results. Staff were given training on these policies after pre-test and then post-test was conducted accordingly. This project was initiated in 2020 which covered 136 (33.25%) staff. The project continued during 2021 and covered 329 (97.29%) additional staff aiming to 100% coverage by December 2021. MS Excel is used to analyze the data using descriptive statistics. Verbal consents were taken from the staff, and measures were in place to ensure confidentiality of the test results and ensure staff comfort.

Results:

The audit results conducted through QIPS shows 93% in 2020 and 99.53% during 2021 until September. The document review indicated that new policies on Critical/Panic test results were required to be developed. Two new policies were developed; and three are revised to incorporate new changes as per the JCIA 7th edition requirement. These documents were reviewed or developed, and a dedicated person was assigned to review patient records for the completeness of the critical/panic test results.

The overall pre-test result shows that staff have 62.52% knowledge of the hospital policies. While it increased to 96% in post-test which shows 33.48% increase in their knowledge. The knowledge gap was more among allied health professionals as compared to nurses then doctors. Doctors rated highest 99% than other professionals in post-test. Similarly, the knowledge gap was higher in those who were working in the ambulatory services as compare to those who were working in general wards and critical care areas.

Conclusion/recommendation:

Patient safety is important. Effective communication which is timely, accurate, complete, unambiguous and understood by the recipient reduces error and results in improved patient safety. Strategies to improve effective communication have to be in place to ensure patient safety.

Reduce Operational Cost in the Operating Room to Improve Patient Experience

Zakia Hassani , Wais Mohammad Qarani, Dr Hashmat Zia, Rahmali Alamyar, Dr Amena Shaheer, Shabnam Azad, Abbas Bakhshi

Background:

Operating Rooms are considered a significant revenue source, as well as the area where expenditure is highest among the hospital's departments. Any cost savings in operating rooms will have a broad financial impact. The cost saving strategies will ultimately reduce the burden on the patient bills ensuring patient satisfaction in resource limited contexts.

Purpose:

The purpose of this project was to identify gaps in operational management of the operating room and design strategies to overcome these gaps with aim to reduce cost.

Methodology:

This project was conducted based on the complains both verbal and written received from the patients directly or indirectly from the hospital Patient Billing Services Department (PBSD) on high charges especially medical surgical items. Secondly, in order to identify the shortfalls, a checklist focusing on eleven key areas of the operating room management was developed to collect the data. The data was collected through reviewing and observing 298 patients during three months using the given checklist. Frequencies were calculated using Microsoft Excel to report the results.

For this reason, we made a checklist for each case and handed it to team member for data collection. Which help us to know that some extra items are been opened mistakenly, some non-sterile items are charged at cost of sterile items and in some cases there are more than four people scrubbed.

Results:

The issues were noted in five areas of the concern. The most frequent issue was found (16.78%) that surgical packs were opened for patients but, not used. Then, missing items from the surgical packs (4.36%); incorrect procedure name on the list (3.02%); misuse of items (1.36); and more than four staff scrubbed for a patient (0.67%). As part of the interventions to address these shortfalls; a policy was developed and enacted to put control on use of medical surgical items. The basket system was incorporated for the anesthesia supplies; the CCM dictionary was revised to correct the names and also add missing procedures; and over 100 surgeon preference cards are developed for reference.

Conclusion/recommendation:

Cost control strategies in hospitals could be viewed as an essential component of hospital administration; and is one of the most important source of patient satisfaction. Compliance to the set standards and protocols and continuous monitoring is key for sustaining the gains.

Reduce the risk of patient harm resulting from falls in the hospital

Munira Ramzi, Wais Mohammad Qarani Dr Bashir Ahmad Nazari, Ahmad Jawad Fardin, Mohammad Moein Omardad, Parwana Poya Rajabi

Introduction:

Falls are among the most common, yet potentially preventable, adverse events experienced by patients in hospitals. Serious physical and emotional injury, increased dependence, admission to a long-term care facility, and poor quality of life can be resulted from falls. Adverse outcomes from fall can range from minor injuries such as skin tears to significant injuries such as intracranial haemorrhages and fractures which can ultimately result in permanent disability or death. Most hospitals have fall prevention programs for preventing inpatient falls; however, despite these resources many preventable falls continue to occur in hospitals. These protocols are being in practice in inpatient areas at FMIC since inception. However, strict compliance and execution of these protocols in outpatient facilities were required to improve further.

Purpose:

The purpose of this project was to identify gaps in practice and reduce the risk of patient harm resulting from fall in the hospital through improving staff knowledge and their compliance to protocols.

Methods:

Data from numerous sources were extracted to identify the gap in knowledge and practice of staff on International Patient Safety Goal No-6 (IPSG-6). The 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, a pre-test and post-test was implied to determine staff knowledge on the subject. The pre-test and post-test questionnaire was derived from the hospital policies. Staff were given training on these policies after pre-test and then post-test was conducted accordingly. The scope of this project was, the entire hospital with 100% staff coverage during 2021. However, in this paper, the outcome of 125 participants is presented which will be followed with the remaining staff until first quarter 2022. MS Excel was used to analyze the data using descriptive statistics. Verbal consents were taken from the staff, and measures were in place to ensure confidentiality of the test results and staff comfort.

Results:

The audit results conducted through QIPS shows 72.2% in 2020; and 95.67% during 2021 until September. The document reviewed showed that 3 falls were reported during 2020 and 2 was reported during 2021. As part of the improvement strategies; the policy on Fall assessment and prevention was revised; and the new changes as per the JCIA 7th edition requirement were incorporated. The other strategies include; development of a patient family education brochure on fall prevention, contextualization and modification of doors, extension of side rails for the patient beds, and installation of safety rails where required. On the staff knowledge area, the overall pre-test result showed 66.67%; while it increased to 94% in post-test which shows 27.33% increase in staff knowledge. The knowledge gap was more among allied health professionals as compared to nurses then doctors. Doctors rated highest 96% than other professionals in post-test. Similarly, the knowledge gap was higher in those who were working in the Allied Health services as compared to those who were working in general wards and critical care areas.

Conclusions and recommendation:

Fall is one of the most frequent happenings in the hospital that affect patients and their families. Hospitals must have strategies in place to reduce the risk of patient harm resulting from falls. Continues staff education and monitoring is required to ensure compliance. It is recommended that this project should cover 100% of staff until first quarter of 2022.

Ensure Safe Surgery/procedure through a Standardized and Consistent Approach to Save Life

Parwana Poya Rajab, Wais Mohammad Qarani, Dr Milad Waziry, Gulpari Nazari

Introduction:

Safe surgery is vital for patient safety. Significant patient injury and adverse and sentinel events resulting from wrong-site, wrong-procedure, and wrong-patient surgery are ongoing concerns for hospitals. Such events can result from ineffective or inadequate communication between members of the team conducting the surgical/invasive procedure, lack of a process for marking the procedure site, and lack of patient involvement in the site marking. Safe surgery is the fourth goal of IPSG. In the hospital, it is important to follow certain standards where surgeries and other invasive procedures are performed.

Purpose:

The purpose of this study was to identify gaps in knowledge and practice among health care provider in the hospital, and implement a uniform approach to ensure safe surgery.

Methods:

Data from numerous sources were extracted to identify the gap in knowledge and practice of staff on International Patient Safety Goal No-4. The monthly audit results and also JCIA external mock audit results which are being conducted through QPSD- Quality Improvement and Patient Safety Department were considered a base for this study 2020. Besides that, a pre-test and post-test was implied to determine staff knowledge on the subject. The pre-test and post-test questionnaire was derived from two policies which include; surgical site marking and pre-operative verification and time out. Staff were given training on these policies after pre-test and then post-test was conducted accordingly. The scope of this study was the entire hospital with 100% staff coverage. During 2020, we were able to cover 153 staff; and 263 staff during 2021. MS Excel was used to analyze the data using descriptive statistics. Verbal consents were taken from the staff, and measures were in place to ensure confidentiality of the test results staff comfort.

Results:

The document review indicated that these policies were not followed in few out-patient departments and was weak in in-patient areas. Detail orientation is given to the management of these areas and compliance to these policies are ensured. The audit results, conducted through QIPS shows 91.9% compliance during the first two quarters of 2021 and 91% compliance during the third quarters of 2021 which shows a decline. On the other hand, the overall pre-test result shows that staff had 76% knowledge of the hospital policies on IPSG-4; while it increased to 97% in post-test which shows 21% increase in their knowledge. The knowledge gap was almost equal among all including allied health professionals, nurses and doctors.

Conclusion:

To avoid wrong patient, wrong procedure, wrong site, and wrong surgery, strategies need to be in place to ensure patient safety. Staff knowledge is vital to ensure compliance to these strategies.

Acknowledgement: Dr Tariq Rahimi, Dr Nooria Alokozai, Dr Najibullah Barmak, Mr Moein Mujatba and Mr Daud Habibullah.

Impact of Accreditation on Institutional improvement of quality and patient safety

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Objective:

To evaluate the impact of accreditation on improvement of quality and patient safety.

Methodology:

A comparative review of quality and patient safety related processes before and after accreditation was carried out to evaluate how participation of AKUH, N in Quality accreditation has impacted quality and patient safety. AKUH, N has deliberately pursued quality and patient safety accreditation standards over the last eight years, based on ISO, SANAS, JCI, CAP and CCPC standards. Quality and Patient safety has become a strategic priority and its implementation weaved into all planning and operational activities of the hospital. Accreditation standards are carefully selected by leadership and approved by governance before implementation. Investment in all facets of the hospital operations has been made to support quality and patient safety improvement activities. Organization-wide monitoring and evaluation is continually implemented. The quality continuum is validated through regular accreditation surveys.

Results:

Planning for Quality and patient safety has become an integral part of service delivery across the hospital. Key performance indicators are selected as appropriate in all departments of the organization. These are implemented and tracked through data. Such data is regularly reviewed at all levels of the organization, opportunities for improvement identified and new goals set through a data driven process. This has enhanced the quality continuum.

This accreditation driven process has resulted in improvements in quality of patient care, reduced safety events, led to improved risk-based management of processes, staff competency and engagement, medical professional training, research program and sustainable financial outcomes.

This is a huge departure from how the situation was prior to adopting accreditation standards.

Conclusion:

Institutional commitment to and implementation of accreditation standards has had a positive impact on quality and patient safety. At AKUH, N, it has resulted in improvements in hospital operational processes and led to incremental and sustainable improvement in quality of care and patient safety. It is recommended that healthcare institution adopt contextually relevant accreditation standards as useful tools to drive quality and patient safety.

Feasibility of using a Virtual Learning Environment for Dried Blood Spot Specimen Collection Training

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Introduction:

The newborn screening (NBS) results are as good as the quality of the dried blood spot (DBS) specimen. We developed a virtual training module on Moodle, a virtual platform for training the allied health professional (AHPs) on collecting DBS specimen. This study aimed to assess and evaluate the acceptability and feasibility of the VLE as a training tool for DBS specimen collection.

Methods:

This project was initiated at the Biochemical Genetics Laboratory (BGL), Department of Pathology and Laboratory Medicine. The project team included faculty, BGL coordinator, information technology (IT), and a nurse manager. Module was created in Moodle, content & assessment developed, uploaded on to Moodle, piloted by two team members. AHPs were enrolled to participate in a certificate-based “DBS specimen collection training module”. This module was designed to focus on scientific knowledge (SK), and assessing skills, implemented from Jan-Jun 2020. Assessment of knowledge and skills was done using a quiz and direct observation of procedure. Data (number of participants enrolled, participants who cleared assessments and inadequate samples collected from March 2019 to June 2020) was analyzed.

Results:

During six months, 130 AHPs were enrolled and 116 of them completed the modules and received certificates. Total attempts before intervention total 5075 DBS specimen were collected and out of these 43 (0.85%) were inadequate specimen. While after the DBS collection training via Moodle, 2357 DBS specimen were collected and 15 (0.5%) inadequate specimens were recorded.

Conclusion:

This study provides evidence that AHPs can be trained for DBS specimen collection via VLE.

Experiences of using Digital Technologies in a Multi-country Research on eLearning in Healthcare settings

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Background:

Continuous Professional Development (CPD) for health care professionals through eLearning can provide easy access to new knowledge, which could enhance quality of healthcare. To increase the capacity of healthcare professionals in Afghanistan and Tajikistan, as part of the Central Asia Health System Strengthening (CAHSS) Project, eLearning sessions on Maternal and Newborn Child Health (MNCH) were offered in 2016.

Purpose:

A research study was conducted in collaboration with researchers from AKU, AKDN eHRC, AKHSA, Dalhousie University, and Notre Dame Institute of Education, to study the effectiveness of the eLearning programme in improving participants' knowledge and skills related to MNCH.

Methods:

The study adopted a mixed-methods design, whereby data about the efficacy and utility of the eLearning programme was collected using a variety of qualitative (semi-structured interviews) and quantitative tools (pre/post-tests, questionnaire, observation). Since the research team and participants were located in different geographical locations (i.e., Kabul, Karachi, Khorog, Kandahar, Bamyan), several digital tools were designed and used for data collection, study data analysis, research related communication and collaboration. For instance, mobile apps were developed and implemented to conduct the study and collect data for pre/post and delayed post-tests, pre-and delayed post-observations, and questionnaires. Evaluation tests by the trainees were monitored by the team remotely via cameras and Zoom. Finally, semi-structured interviews with the trainees and the on-site coordinators were conducted via Skype to gauge their assessment of the eLearning programme. The data collectors and research team members were trained on using the apps for data collection. Quantitative and qualitative data were analysed using SPSS and Nvivo, respectively.

Findings:

The paper highlights the challenges and opportunities inherent in the use of digital health technology to conduct healthcare research in challenging contexts. The main findings include; the discovery of mainly operational challenges, such as limited access to and availability of appropriate data collection technologies, unreliable internet connectivity for remote monitoring, use of written computer surveys in non-English speaking contexts, and digital readiness of data collection teams.

Conclusion:

The use of digital health technologies for data collection in challenging healthcare contexts is practical and has shown potential for growth and sustainability.

Session 3

Non-communicable Disease

Urinary metabolomics of autistic versus non-autistic children by Gas Chromatography–Mass Spectrometry (GC-MS)

Dr Zaib un Nisa, Dr Prem Chand, Dr Hafsa Majid, Dr Sibtain Ahmed, Dr Aysha Habib Khan, Azeema Jamil, Saba Ejaz, Ambreen Wasim, and Dr Lena Jafri

Background:

Diagnosis of Autism Spectrum Disorder (ASD) is made phenotypically and search for ASD-biomarkers continues. The purpose of this study was to compare urine organic acids profiles of ASD versus Typically Developing (TD) children to identify potential biomarkers for diagnosis and evaluation of ASD etiology.

Methods:

This cross-sectional study was performed in the Section of Chemical Pathology Section, Department of Pathology and Laboratory Medicine in collaboration with Department of Pediatrics and Child Health, Aga Khan University, Pakistan. Random urine samples were collected from children with ASD diagnosed by Pediatric neurologist based on DSM-V criteria and TD healthy controls from August 2019 to June 2021. The urine organic acids were analyzed by GC-MS.

Results:

A total of 85 subjects were enrolled in the current study, including ASD (n=65) and TD group (n=20). The mean age of the ASD and TD groups were 4.5 ± 2.3 and 6.4 ± 2.2 years respectively. Among the ASD group, 72.3% (n=47) were male and in TD group, 50% (n=10) were male. Parental consanguinity was 47.7% (n=31) and 30% (n=6) in ASD and TD groups, respectively. In ASD the common clinical signs noted were developmental delay (70.8%), followed by delayed language skills (66.2%) and inability to articulate sentences (56.9%). Discriminant analysis showed that 3-hydroxyisovaleric acid, homovanillic acid, adipic acid, suberic acid and indole acetic were significantly different between ASD and TD groups. The biochemical classification results reveal that 88.2% of respondents were classified correctly into 'ASD' or 'TD' groups based on the urine organic acid profiles.

Conclusion:

Urine organic acids detection with GC-MS represent a non-invasive and accurate strategy for diagnosis of autism. The discovered potential biomarkers could be valuable for future research on the ASD and have a variety of clinical applications.

Comparison of anti-microbial efficacy of Calcipex and Metapex in endodontic treatment of chronic apical periodontitis- A Randomized Clinical Trial

Momina Motiwala

Objective:

To compare the anti-microbial effect of calcipex and metapex in endodontic treatment of teeth diagnosed with chronic apical periodontitis in reducing the microbial load (CFU/ml).

Methodology:

A Randomized controlled trial was conducted at the dental clinics of Aga Khan University Hospital, Karachi, Pakistan from Aug 2019- March 2021. 60 patients were included, aged 16 years and above, diagnosed with chronic apical periodontitis. Endodontic treatment was initiated and patients randomized into one of the two study groups; Calcipex or Metapex. Microbial samples were obtained before intracanal medicament placement (S1) and after medicament removal on 7th day (S2). Microbial culture was done in lab and CFU/ml reported. Paired t-test was used to assess difference between antimicrobial effects within groups of medicaments. Independent sample t-test was used to assess antimicrobial effect between groups.

Results:

There was no statistically significant difference between Calcipex and Metapex at S1 in terms of mean Colony Forming Units/ml ($p=0.98$). Similarly, there was no statistically significant difference among the two, post medicament at S2. ($p=0.30$). Intra-group comparison of bacterial count reduction in both the groups was statistically significant after the intervention, (Group A: p value=0.05, Group B: p value=0.02).

Conclusion:

It has been found that Both Calcipex and Metapex are equally effective in reducing the microbial load in cases of chronic apical periodontitis.

Keywords:

Chronic apical periodontitis; calcium hydroxide; microbial count; bacterial culture; iodoform

Determining the Relevance of HLA/KIR Matching/Mismatching on Kidney and Liver Transplantation Rejection: A Meta-analysis

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Objective:

Kidney and liver are important organs transplanted for solid organ transplantation (SOT). However, there are cases wherein graft rejection occurs due to foreign Human Leukocyte Antigen (HLA) proteins. The function of Natural Killer (NK) cells and its receptors, furthermore, in SOT is not yet fully elucidated. This study aims to determine the relevance of matching HLA/KIR with the outcome of kidney and liver transplantation.

Methodology:

Articles were screened according to the inclusion and exclusion criteria provided which garnered eight final studies. Next, data were tabulated using a standardized extraction form. A meta-analysis was conducted to formulate conclusions regarding significance of HLA/KIR matching and mismatching in kidney and liver transplantations. Fixed- and random- effects models were utilized to compute and establish 95% CI and pooled ORs wherein p-value of less than 0.05 is significant. Combination of Chi-square based Q test and I² statistics were used to identify presence of heterogeneity which was resolved with a funnel plot.

Results:

In this meta-analysis, only the HLA-Bw4/KIR3DL1 combination was found significant to lower risk of allograft rejection (OR=0.73; PA=0.009; PH=0.42). Other combinations which include HLA-C1 and KIR2DL2/3, HLA-C1 and KIR2DS2/3, HLA-C2 and KIR2DL1/DS2, and HLA-Bw4/KIR3DS1 were found to be insignificant; hence, these do not influence the allograft rejections.

Conclusion:

The role of HLA/KIR combinations on SOT rejection is only significant in HLA-Bw4/KIR3DL1 interaction which is correlated with decreased odds of allograft rejection. Factors including KIR allele variations, insufficient data and journals related to the topic, and unestablished association of HLA/KIR in other organ transplantations affected the results of this meta-analysis; thus, these are recommended to be considered in future studies.

Keywords: liver, kidney, solid organ transplantation, graft rejection, NK cells, HLA, KIR, HLA/KIR matching

Complications of Transpedicul Spine Fixation in Afghanistan

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Background:

Transpedicular screws are commonly used for posterior fixation in spinal instability through surgery; however, the insertion of these screws remain challenging. There are always failure chance or misplacement which result to the patients' readmission. This study aimed to present patient outcome who visited the Aliabad Department of Neurosurgery due to complications from transpedicular fixation.

Methods:

All patients who were operated abroad and in Afghanistan for the spinal pathologies and came to Aliabad Neurosurgery Department with complications of transpedicular fixation were included in the study. Patients were evaluated for the type of complications.

Results:

Along with the clinical judgment, Radiography and CT scan were used to identify the complications. Both genders male and female were affected by complications. Complications include early and late and mainly due to instrumentations. These complications included mainly; misplaced transpedicular screws, infection, rejection of instruments, broken screws.

Conclusion:

The complications are preventable and more than half complications are belong to instruments (bad quality).

Keywords: complications of Transpedicular fixation; Bone screws

Acute Myeloid Leukaemia with inv (16) in a 2-year-old Boy: A Diagnostic Dilemma

Ahmad Maseh Haidary

Background:

In the past three decades, there has been significant improvements in the diagnosis and management of acute myeloid leukaemia. Cytogenetic and molecular genetic studies now play an important role in diagnosis, as well as management of clonal disorders, including acute leukaemias. Cytogenetic and molecular genetic modalities have now enabled physicians to identify and plan appropriate management protocols for patients according to genetic profile.

Case presentation:

A 2-year-old boy who initially presented to the hospital with features that were clinically and haematologically suggestive of juvenile myelomonocytic leukaemia (JMML). In contrast, the cytogenetic analysis revealed presence of inv(16)/t(16;16) (p13q22) (CBFB/MYH11), which is the recurrent cytogenetic abnormality associated with AML. A rare case that could be missed and end up with poor patient outcome.

Conclusion:

To our knowledge this was the first case of acute myeloid leukaemia with inv(16)/t(16;16) (p13q22) diagnosed in a two year old baby. In our patient, cytogenetic analysis helped with correct diagnosis.

Keywords: AML, inv(16), 2-Year-Old, Diagnostic, Dilemma

The Pattern and Proportion of Trigeminal Neuralgia among Patients between 30-80 years old in Stomatology Hospital, Kabul, Afghanistan

Dr. Nabila Naikpai, Dental Specialist, FMIC

Introduction:

Trigeminal neuralgia (TN) is defined as sudden, usually unilateral, severe, brief, stabbing, lancinating, paroxysmal, recurring pain in the distribution of one or more branches of 5th cranial nerve. This study aimed to determine the pattern and proportion of TN among patients aged 30-80 years who visited the stomatology hospital in Kabul, Afghanistan.

Methods:

A descriptive case-series study design was used. Patients who visited the hospital during October 2020 to March 2021 were included in the study. The hospital patient file records were used for data collection and study participants' age, sex, side and nerve division were collected, data was entered and analyzed using SPSS version 22. Proportions and frequencies were presented for categorical variable, means and SD were calculated for continues variables.

Results:

Total of 50 patients were visited with the Trigeminal Neuralgia visited the hospital. 34 (68%) patients were between 30-40, 12 (24%) patients were between 51-70 and 4 (8%) patients were between 71-80 years of age. Among them, 31 (62%) patients were male and 19 (38%) patients were female. According to the side of involvement 38 (76%) patients had right side and 12 (24%) patients had lift side Trigeminal Neuralgia. With regards to the nerve division 30 (60%) patients had mandibular nerve division, 16 (32%) maxillary nerve division and 4 (8%) patients had ophthalmic nerve division involvement. Dental etiology, nerve decompression and post traumatic neuralgia were common factors observed among the study participants.

Conclusion:

The study found that most of patients with TN were between third and fifth decade of their life. Male were more affected than female. Right side of face with mandibular nerve division was more prone than others. Appropriate intervention focusing on Medical and surgical treatment of TN among patients is recommended.

Successful surgical separation of abdominal conjoined twins: A case report from Afghanistan

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Paediatric Surgery Department, FMIC*

Background:

The incidence of conjoined twins is rare. If the split happens after embryonic disk formation (after 12th days of conception), and the division is incomplete, it leads to conjoined twins formation. This situation happens in 1 percent of monozygotic twin pregnancy, with the incidence of 1.5/50000 to 1/500000 births with 3:1 male to female ratio. Management of and separation of the conjoined twins in Afghanistan being a resource-limited country is considered challenging and also novel.

Case presentation:

The omphalopagus conjoined twins were 9 days old when they were brought to children hospital and their combined weight was 4 kg. Abdominal X-ray, Abdominal CT of conjoined twins showed that livers were not clearly separable and a vessel seen coming from hepatic region of baby A to baby B likely portal vein branch and a separate biliary duct drainage system was seen. After evaluation, a multidisciplinary team approach was taken and surgery was performed successfully with no perioperative complications.

Conclusion:

While, many people from Afghanistan travel abroad to seek medical and surgical care; the Afghan team are able to perform complex surgeries. FMIC is a private not-for-profit tertiary care hospital able to provide high quality healthcare in the country.

Surgical Management of Coxa Vara in Cleidocranial Dysostosis (*Scheuthauer-Marie-Sainton Syndrome*): Case Report at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan

Shekaib Rahman Behroz, Department of Orthopedic Surgery, French Medical Institute for Mothers and Children

Background:

Cleidocranial dysplasia (CCD) is an unusual but well-known autosomal dominant inherited disorder and the determinant gene is localized at chromosome 6p21. Cleidocranial dysostosis was first described by Marie and Sainton in 1898. It is also known as Marie and Sainton disease. Patients may have excessive movement and motion of the shoulder as clavicles are not developed fully. Late closure of the fontanels, open skull sutures and multiple wormian bones are the other finding. The incidence rate is 1/1000000.

Objective:

The aim of this paper is to describe the outcomes of surgical treatment of *Coxa Vara* for a child with the *Cleidocranial dysostosis* at FMIC, Kabul, Afghanistan.

Case Report:

A 9-year-old boy presented to the orthopedic clinic of FMIC with chief complain of abnormal gait, both shoulder, hands and foot deformity. On clinical examination, patient had laurching gait, both hip abduction and internal rotation was limited. *The approximation of humeral head and hypermobility of shoulders was noticed. The patient had short stature abnormal dental findings, typical facial and skeletal anomalies of the skull and clavicle. Radiographic evaluation of pelvic shows both side increased Hilgenreiner-epiphyseal angle (more than 60 degrees), decreased femoral neck - shaft and femoral head-shaft angles (bilateral coxa vara), and a combination of delayed ossifcation of the ischium and pubis, all of these findings are pathognomic of Cleidocranial dysplasia and the diagnosis of CCD was established.*

Under caudal anesthesia and guide of fluoroscopy, Intertrochanteric Valgization Osteotomy has been done for both side hip and fixed with five-hole plate.

Conclusion:

In order to make a diagnosis for CCD the finding of the characteristic facial, cranial and clavicular deformities are necessary. It is essential to timely recognize hip abnormality, especially bilateral coxa vara, in order to avoid deformity and delay in surgical management. *We report the surgical management of coxa vara for a case of Cleidocranial dysplasia because of its rarity.*

Outcomes of One-stage open reduction and salter's osteotomy with or without associated femoral shortening for bilateral developmental dysplasia of the hip (DDH) at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan

Shekaib Rahman Behroz and Salahuddin Siraj

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Background:

Developmental dysplasia of the hip (DDH) generally includes subluxation or dislocation of femoral head from acetabulum and acetabular dysplasia. Different factors such as ligamentous laxity, difficult delivery and postnatal positioning caused DDH. Estimated incidence rate for DDH is about 1-3 per 1000 live births. The aim of this study was to determine the outcomes of *one-stage open reduction and salter's osteotomy with or without femoral shortening* for Bilateral DDH among children at FMIC, Kabul, Afghanistan.

Methodology:

A retrospective case series study design was employed. The data was collected from the available records of 36 participants with Bilateral DDH for whom one-stage open reduction, salter's osteotomy and the others for whom one-stage open reduction, salter's osteotomy and femoral shortening procedure had been done at FMIC in the period of 2017 to 2020.

Result:

The records of 36 children (72 hip) with Bilateral DDH who were treated at FMIC during the period of 2017-2020 were included in analysis. 34 (47%) hip of participants was recruited for one-stage open reduction, salter's osteotomy and femur shorting and 38(53%) hip of participants were recruited for one-stage open reduction and salter's osteotomy. Majority 27 (75%) of the participants were female and 9(25%) participants were male. Post operation follow up was 8-24 months. We observed excellent outcomes in 26(72%), good in 6(16.7%) fair in 3(8.3%) and poor result in 1(3%) patients.

The mean difference of pre-operation and post-operation acetabular index was 13.77 ± 3.5 for right side hips and 17.28 ± 5 for left side, this was statistically significant as evident by P-value of <0.001 .

Conclusion:

One-stage open reduction and salter's osteotomy with or without femoral shortening was one of the best and effective treatment method for bilateral developmental dysplasia of the hip (DDH) after walking age. We strongly support the use of these procedures for treatment of DDH at the age of 1.5 to 4.6 years.

Poster Presentation

Abstracts

No	Presentation
1	Incidence of Congenital Hypothyroidism among Newborn at French Medical Institute for Mothers and Children "FMIC" Kabul, Afghanistan
2	The association between maternal health literacy on prenatal care in pregnant women who referred to Char Ghalas clinic in Kabul- Afghanistan
3	Management of Childhood obesity to aim healthier adulthood
4	Rare case of Mediastinal Myeloid Sarcoma
5	COVID 19 Fears in Pregnant Women: A Cross-sectional Study from Pakistan
6	Incidence and determinants of Self Extubation in a tertiary care surgical intensive care unit of Pakistan. Retrospective Analysis
7	Comparison of the transmission and detection potential of COVID-19 virus and other viruses in tear fluids
8	Exploring the Educational and Psychosocial Support for Families and Patients with Newly Diagnosed Pediatric Cancers
9	Experiences of using Digital Technologies in a Multicountry Research on eLearning in Healthcare settings
10	Key Findings of the National Health Accounts (NHA)-2018
11	FISH versus real-time quantitative PCR for monitoring of minimal residual disease in chronic myeloid leukaemia patients on tyrosine kinase inhibitor therapy
12	Acute motor-sensory axonal polyneuropathy variant of Guillain-Barre syndrome complicating the recovery phase of coronavirus disease 2019 infection: a case report
13	Philadelphia chromosome positive chronic myeloid leukemia with 5q deletion at diagnosis
14	Complex cytogenetic abnormalities in chronic myeloid leukemia resulting in early progression to blast crisis: a case report
15	Karyotypic profile in chronic myeloid leukaemia patients diagnosed at tertiary level in Kabul Afghanistan
16	Innovation of Dashboard Using Spreadsheets in Monitoring of
17	Ensure patient safety through safe use of high alert medications at FMIC
18	Adverse effect following COVID-19 immunization in Sarepul Province-Afghanistan, 2021
19	Perception, Willingness, And Barriers Towards COVID-19 Vaccine in Pakistan: A Developing Country's Perspective
20	Parents Perception of Newborn Education Services at a Tertiary Care Hospital in Karachi, Pakistan
21	Evaluation of routine immunization coverage in 12-23 months children in Sarepol province 2018: a descriptive cross-sectional study
22	Accuracy of Rapid Diagnostic Antigen Test among asymptomatic close contacts with Confirmed SARS-COV 2 infections, in Herat province, Afghanistan, in 2021: A cross-sectional Study
23	Factors influencing blood donation in Kabul Afghanistan, in 2021: A comparative cross-sectional study
24	Frequency of cesarean section delivery and its causes
25	The COVID-19 Innovation and Research Project (CIRP): Exploring the Role of Digital Health Interventions in Addressing Gaps and Strengthening Health Systems
26	Knowledge, Attitude and Practice of COVID 19 in Baghlan Afghanistan, in 2021: A descriptive cross-sectional study

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Incidence of Congenital Hypothyroidism among Newborn at French Medical Institute for Mothers and Children “FMIC” Kabul, Afghanistan

Dr. Ahmad Farid Faqiri, Dr. Naim shafaq, Dr. Sohil Karim

Background:

Congenital hypothyroidism (CH) is the most common congenital metabolic disorder seen in the newborn (1 in 4,000 births). It causes irreversible mental and physical disability if remains undetected and/or untreated.

Objective:

To detect the incidence of congenital hypothyroidism among the newborn at French medical institute for mothers and children.

Methodology:

All living newborn who were delivered or admitted to FMIC between January 2017 to December 2019. which is blood sample for TSH were sent after 48h of live.

Results:

After discarding unsatisfactory samples, 1550 samples were assayed for TSH. Male to female ratio was 1.4:1. TSH above 10 mIU/L were found in 35 babies. Thus incidence of congenital hypothyroidism was 1.7 per thousand living newborn among the studied cases.

Key words: Congenital hypothyroidism, neonatal screening, mental retardation

The association between maternal health literacy on prenatal care in pregnant women who referred to Char Ghalas clinic in Kabul- Afghanistan

Zainab Ezadi¹, Husnia Haidari², Nesa Mohammadi³

Background:

Maternal health literacy is a key and key factor in ensuring prenatal care, prenatal health, and the successful outcomes of this period. The current study was done to evaluate the relationship between maternal health literacy and prenatal care in pregnant women due to the significant relevance of health literacy during pregnancy and its direct influence on the fetus.

Methods:

This descriptive-analytical and cross-sectional study was performed in 2020 on 200 pregnant women referred to Char Ghala clinic of Kabul city to perform prenatal care. The sample was selected by a convenient method. Data was collected by using Maternal Health Literacy and Pregnancy Outcome Questionnaire (MHLAPQ). Data were analyzed by SPSS software (version 21) and inferential statistics, independent t-test, ANOVA, and Pearson correlation.

Results:

The mean score of maternal health literacy was 43.97 ± 3.23 . There was significant relationship between maternal health literacy and educational level, job, income, data source ($P < 0.05$) Pearson correlation coefficient showed significantly positive relation between health literacy with prenatal cares and pregnancy outcomes ($P < 0.001$)

Conclusion:

Considering the importance of health literacy in the health of mothers and infants and to promote health literacy and consequently improve prenatal care and pregnancy outcomes, it is necessary to develop educational programs to promote health literacy and empowerment of this group.

An assessment of perioperative mortality rate in Aliabad Teaching Hospital, Kabul, Afghanistan

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Introduction:

Non-communicable diseases, including trauma and cancer as a result of inadequacy of surgery increasingly contribute to surgical burden, the absence of surgery and safe anesthesia in low and middle income countries is increased. Trauma, a main cause of death in low and middle income countries, depends on surgical interference to avoid disability and mortality. There are two million potentially avoidable deaths among the 5 million annual deaths due to injury, and many more among the growing burden of non-communicable diseases. This study seeks to determine perioperative mortality rate in the surgical wards of Aliabad Teaching Hospital, Kabul, Afghanistan.

Method:

The cross-sectional study was conducted in Aliabad Teaching Hospital from March 2018 to March 2019. Data elements potentially available from logbooks include: registration number, age, gender, date of operation, postoperative diagnosis, type of operation, systematic diseases of the patients and urgency of operation. Data were initially entered into an excel data sheet, and then exported to SPSS Statistics version 22 for further analysis. Results: From a total of 2856 patient records, 2093 were males and 763 females. The mean age of the subjects was 39.16 ± 16.995 years. Majority of the patients (43.2%) admitted to the general surgery ward of the Aliabad Teaching Hospital. The perioperative mortality rate was found to be 4.3 % among the study participants. Trauma was the first leading cause of perioperative mortalities. General anesthesia, age category of 17-29 years, male, emergency procedures were associated with perioperative mortality.

Conclusion:

Trauma was first leading causes of perioperative mortalities. The higher perioperative mortality rates identified among 17- 29 years old age category. Key words: Non-communicable diseases, Perioperative mortality, Trauma, Avoidable deaths

Rare case of Mediastinal Myeloid Sarcoma

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Myeloid sarcoma is a rare tumor mass with extra medullary growth pattern, composed of myeloblast or immature myeloid cells. Myeloid sarcoma (MS) is a distinct clinical presentation of acute myeloid leukemia (AML), less than 1% of patients can present with prominent extramedullary disease and most commonly involve the bone, skin, lymph node, soft tissues, gastrointestinal tract or testes and the recommended treatment regimen in isolated myeloid sarcoma or with bone marrow involvement is upfront systemic chemotherapy i.e., same as for AML. We are discussing a rare presentation of myeloid sarcoma with isolated anterior mediastinal mass and chemo refractory disease but had excellent response to radiation. This case report showed atypical presentation which was challenging for diagnosis and for treatment as well.

COVID 19 Fears in Pregnant Women: A Cross-sectional Study from Pakistan

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Aga Khan University Karachi Pakistan*

Objectives:

To explore the fears faced by pregnant women related to COVID-19 Pandemic.

Background :

Emergence of COVID-19 and its pandemic nature has exacerbated fears worldwide. Pregnant women are considered as a vulnerable group during Covid Pandemic, because the physiological changes makes them more susceptible to infections. pregnant women are found expressing much of the fear related to their course of pregnancy, in-utero transmission of the disease, and questions related to infection control in healthcare settings.

Methods:

It is a cross sectional survey among 201 pregnant women attending antenatal clinics of Aga Khan University Hospital. Survey tool contains demographic variables and a 7-item scale of "Fear in COVID" which is pre tested in Irani population. The survey form was made on google drive and sent to pregnant females on whats app.

Results:

201 pregnant women mostly belonging to middle and low socioeconomic class were enrolled. Majority (80%) of women were less than 30 years of age. Only 26 (12.9%) were primigravidas, remaining were multigravidas of different order of pregnancy . 60% of our study population showed high fear scores (27-35) from corona virus whereas another 30% had moderate fear. No association of study variables were found with fear scores.

Conclusion:

We found a high level of fear of Covid 19 among pregnant population with higher level of anxiety and stress related symptoms. The amount of fear and stress is independent of trimester or order of pregnancy.

Incidence and determinants of Self Extubation in a tertiary care surgical intensive care unit of Pakistan. Retrospective Analysis

Background:

Self extubation is reported as one of the most common event in the adults intensive care units world wide. It is very difficult for an intensivist to maintain a balance between sedation and self extubation. **Aim:** The aim of our study is to find out the incidence and determinants of self extubation in a tertiary care surgical intensive care unit.

Methods:

A retrospective analysis was done from the hospital database, who were self extubated in surgical intensive care unit during six calendar years inclusive of January 1st 2010 through December 31st 2016. A data collection form was used to collect personal details, drugs used for sedation, sedation agitation score, pain score, nurse ratio and used of restrained at a time of extubation were been noted.

Results:

A total of 618 patients were admitted to the SICU who required mechanical ventilation during the six calendar years. An overall 2.1% incidence of self extubation was calculated with a documented thirteen self extubation episodes. The mean age of patients was 38.46 ± 16.97 years with majority of them being males. Most of the patients at the time of self extubation were not restrained 9(69.2%). Nurse to patient ratio was also found to be 1:1. The majority of the patients 7(53.8%) were not on any sedative drug infusion and the mean sedation agitation score at that time was 4.46 ± 2.02 while mean pain score was 5.31 ± 2.72 . Reintubation was performed in most patients 10 (76.9%) who had self extubation.

Conclusion:

Our study revealed a lower incidence of self extubation and found no relation between the incidence of self extubation and the drugs used for sedation.

Key Words: Self extubation, Sedation, Reintubation, Surgical intensive care unit.

Comparison of the transmission and detection potential of COVID-19 virus and other viruses in tear fluids

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Objective:

the COVID-19 virus is a subgroup of zoonotic viruses. The more terrible problem started when the number of infected patients with acute respiratory syndrome quickly spread around the world, which made it as a global pandemic. This novel virus could be transmitted from person to person via infected droplet entering the respiratory system whether nasal or oral cavity. Clinical signs of the COVID-19 infection have mentioned the presence of some ocular findings such as conjunctival congestion, conjunctivitis and even corneal injury associated with the classical COVID-19 infection.

Methodology:

in this article we used the systematic literature review with recent articles which showed the results of virus detection in tear fluids.

Result: in this review study, we showed that different viruses could be and be transmitted by tear fluid which encourages us to search regarding this potential in COVID-19 virus.

Conclusion: analyses of other viruses' transmission potential through tear fluid showed that there is a great way to detect and transfer of viruses by tear fluids, but regarding COVID-19, there was no confirmed and strong results that showed and make sure the potential of tear fluids to detect COVID-19.

Keywords:

transmission, detection, COVID-19, tear, virus.

Exploring the Educational and Psychosocial Support for Families and Patients with Newly Diagnosed Pediatric Cancers

Introduction:

Cancer is the second-highest leading cause of death among children of age 5-14 years. The initial phase of diagnosis of the cancer is the most critical one and it is crucial to recognize educational and psychosocial support among patients and caregivers to provide them with intensive supportive care in the initial phase and equipping them to deliver specialized attention to the child health.

Method:

The A qualitative exploratory study design was conducted at a Private-Tertiary Care Hospital in Karachi. Through purposive sampling, participants ($N=10$) were selected to conduct in-depth interviews and key informant interviews. The sample for the study consisted of patients, parents, staff, and oncology fellow and nurse manager. The data was collected through telephonic medium, and the data was analyzed via Qualitative content analysis method manually and on (NVIVO 11 software) as well. The interviews were transcribed manually to identify essential codes. The themes were constructed from the categories emerged from the data codes.

Result:

The result of the study signifies four themes, including severe mental distress in the family and children with newly diagnosed Pediatric Cancers, the necessity of a multidisciplinary team for support provision, limited access to resources leading to inadequate educational support, and insufficient psychosocial support system.

Conclusion:

The initial phase of childhood cancer demands appropriate individualized education, psychological assistance to improve coping responses, and increased exposure of social support groups in assisting patients and families to overcome the impact of cancer. Formulating new policies, need-focused services, psycho education, and future research in the field of education and support are needed.

Experiences of using Digital Technologies in a Multicountry Research on eLearning in Healthcare settings

Azra Naseem, Kiran Qasim Ali, Afroz Sajwani, Audrey Juma, Saleem Sayani & Syed Sibte Raza Abidi

Background:

Continuous Professional Development (CPD) for health care professionals through eLearning can provide easy access to new knowledge, which could enhance quality for healthcare. To increase the capacity of healthcare professionals in Afghanistan and Tajikistan, as part of the Central Asia Health System Strengthening (CAHSS) Project, eLearning sessions on Maternal and Newborn Child Health (MNCH) were offered in 2016.

Purpose:

A research study was conducted in collaboration with researchers from AKU, AKDN eHRC, AKHSA, Dalhousie University, and Notre Dame Institute of Education, to study the effectiveness of the eLearning programme in improving participants' knowledge and skills related to MNCH.

Methods:

The study adopted a mixed-methods design, whereby data about the efficacy and utility of the eLearning programme was collected using a variety of qualitative (semi-structured interviews) and quantitative tools (pre/post-tests, questionnaire, observation). Since the research team and participants were located in different geographical locations (i.e., Kabul, Karachi, Khorog, Kandahar, Bamyan), several digital tools were designed and used for data collection, study data analysis, research related communication and collaboration. For instance, mobile apps were developed and implemented to conduct the study and collect data for pre/post and delayed post-tests, pre-and delayed post-observations, and questionnaires. Evaluation tests by the trainees were monitored by the team remotely via cameras and Zoom. Finally, semi-structured interviews with the trainees and the on-site coordinators were conducted via Skype to gauge their assessment of the eLearning programme. The data collectors and research team members were trained on using the apps for data collection. Quantitative and qualitative data were analysed using SPSS and Nvivo, respectively.

Findings:

The paper will highlight the challenges and opportunities inherent in the use of digital health technology to conduct healthcare research in challenging contexts. Our study's finding is the discovery of mainly operational challenges, such as limited access to and availability of appropriate data collection technologies, unreliable internet connectivity for remote monitoring, use of written computer surveys in non-English speaking contexts, and digital readiness of data collection teams.

Conclusion:

The use of digital health technologies for data collection in challenging healthcare contexts is practical and has shown potential for growth and sustainability.

Key Findings of the National Health Accounts (NHA)-2018

Objective:

(i) To look at the health expenditure in Afghanistan for a specific period of time (e.g. one fiscal year) including public, private and donor contributions, (ii) To generate a standard set of tables that organizes information on health expenditure in an inclusive and systematic manner.

Methods:

NHA provides a comprehensive financial picture of countries' health sector. NHA uses a standard approach to capture health expenditure flows from financing schemes, expenditure by providers, and functions. Afghanistan NHA-2018 was conducted following the SHA 2011 produced by OECD. Both primary and secondary data was used to produce NHA. The data was analyzed using the NHA Production Tool.

Results:

- Total Health Expenditure (THE) and Current Health Expenditure (CHE), which excludes the capital expenditure from THE, in Afghanistan in 2018 are estimated at USD 2,674,758,935.1 and 2,601,982,855.1, respectively.
- Per capita total health expenditure on health in Afghanistan in 2018 is estimated at USD 84.7 and current health expenditure per capita is USD 82.4
- The donor's expenditure on health in 2018 is estimated at USD 513,487,167.63 (19.7% of CHE).
- Household out-of-pocket expenditure in 2018 is estimated at USD 1,987,335,688.9 (76.4% of CHE).
- Expenditure on retail sale and other providers of medical goods is estimated at USD 946,029,657.7 (36.4% of CHE)
- Expenditure on hospitals is estimated at USD 446,660,835.9 (17.2% of CHE).
- Expenditure on providers of ambulatory health services is estimated at USD 219,077,036.9 (8.4% of CHE).
- Expenditure on curative both inpatient and outpatient are estimated at USD 235,381,761.6 (9% of CHE) and USD 363,695,990.9 (14% of CHE), respectively.
- Expenditure on prevention and public health services is estimated at USD 256,022,291.3 (9.8% of CHE).

Conclusion:

The results showed the OOP is increasing steadily and there is an urgent need for increasing government investment in health and implementing context customized financial risk protection schemes such as health insurance. In addition, the investment on preventive health care should be improved. The main driver of OOP is pharmaceuticals, which required appropriate approaches to cover the pharmaceutical cost, in order to reduce high OOP effectively.

FISH versus real-time quantitative PCR for monitoring of minimal residual disease in chronic myeloid leukaemia patients on tyrosine kinase inhibitor therapy

Introduction:

BCR-ABL fusion gene, the oncogenic driver of CML, results from a translocation between short arms of chromosome 9 and 22. Monitoring of CML patients during treatment is essential, not only for tailoring the treatment but also to detect early relapse to enable timely intervention. Commonly used methods for detection of residual disease are conventional karyotyping, FISH and molecular methods. In this study, we compared FISH with QRT-PCR for detection of residual disease in CML.

Materials and Methods:

CML patients on tyrosine kinase inhibitor (TKI) therapy and on regular follow up at University Kebangsaan Malaysia Medical Center (UKMMC) were selected. A comparative study was conducted between FISH and QRT-PCR for BCR-ABL transcripts at diagnosis and during follow-up.

Results:

There was good correlation between FISH and QRT-PCR for BCR-ABL. At 6th month of follow-up post diagnosis, FISH had a sensitivity of 83.3% and specificity of 65.2% ($k > 0.339$, $p < 0.033$). At 12th month, the sensitivity of FISH was 83% and the specificity was 59.1% ($k > 0.286$, $p < 0.065$). Similarly, at the 24th month, FISH had a sensitivity of 100% and specificity of 68.8% ($k > 0.642$, $p < 0.000$).

Discussion:

Early achievement of major molecular response (MMR) and complete cytogenetic remission (CCyR) were reliable predictors of long-term maintenance of molecular remission.

Keywords:

QRT-PCR, chronic myeloid leukaemia, FISH, BCR-ABL, MMR.

Acute motor-sensory axonal polyneuropathy variant of Guillain–Barre syndrome complicating the recovery phase of coronavirus disease 2019 infection: a case report

Introduction:

The novel coronavirus, since its first identification in China, in December 2019, has shown remarkable heterogeneity in its clinical behavior. It has affected humans on every continent. Clinically, it has affected every organ system. The outcome has also been variable, with most of the older patients showing grave outcomes as compared with the younger individuals. Here we present a rare and severe variant of Guillain–Barre syndrome that complicated the disease in recovery phase.

Case presentation:

A 60-year-old Afghan man, who had been recovering from symptoms related to novel coronavirus associated disease, presented with sudden onset of progressive muscle weakness and oxygen desaturation. Electrophysiological workup confirmed the diagnosis of Guillain–Barre syndrome, and early institution of intravenous immunoglobulin resulted in complete resolution.

Conclusion:

Guillain–Barre syndrome has recently been reported in many patients diagnosed with novel coronavirus associated disease. While clinical suspicion is mandatory to guide towards an effective diagnostic workup, early diagnosis of this complication and timely institution of therapeutic interventions are indispensable and lifesaving.

Keywords:

AMSAN, GBS, Recovery phase, COVID-19

Philadelphia chromosome positive chronic myeloid leukemia with 5q deletion at diagnosis

Background:

Although, molecular genetic analyses became more and more important to guide therapy decisions in leukemia, banding cytogenetic analysis has retained its vital role in diagnosis and monitoring of chronic myeloid leukemia (CML), by quick and easy enabling identification of pathognomonic Philadelphia chromosome (Ph).

Case presentation:

A 45-year-old female presented with characteristic hematological features of CML in chronic phase; cytogenetic studies revealed the presence of the typical Ph and a deletion of almost entire long arm of a chromosome 5.

Conclusion:

5q deletions have rarely been reported in CML. Those seen yet were either associated with tyrosine kinase inhibitor therapy or detected post allogeneic stem cell transplantation. To our knowledge, this is the first case of Ph positive CML accompanied by a 5q deletion.

Keywords:

Philadelphia chromosome (Ph), Chronic myelogenous leukemia (CML), 5q deletion

Complex cytogenetic abnormalities in chronic myeloid leukemia resulting in early progression to blast crisis: a case report

Introduction:

BCR-ABL1, resulting from t(9;22), is the oncogenic driver of chronic myeloid leukemia and the therapeutic target of the disease. Molecular studies have been the gold standard modality for patient assessment since the advent of tyrosine kinase inhibitor therapy. In spite of that, there are cytogenetic abnormalities that can render the disease unresponsive to conventional therapy, thus making cytogenetics an important component of patient management guidelines.

Case presentation:

We present a case of a Tajik, Afghan patient with chronic myeloid leukemia with del(6)(q23.3q27), t(9;22)(q34;q11.2), monosomy 11, monosomy 12, and marker chromosome who, despite having typical clinical and hematological disease with initial response to therapy, progressed to blast crisis very early and thus required special interventions.

Conclusion:

Cytogenetic monitoring is an important pillar in the management of patients with chronic myeloid leukemia that cannot be ignored. It should therefore be a part of patient management not only during diagnosis but also during management. We present an unusual cytogenetic abnormality in a patient with chronic myeloid leukemia that resulted in early disease progression.

Keywords:

CML, Complex cytogenetic abnormalities, Early progression, Nonresponsive to therapy

Karyotypic profile in chronic myeloid leukaemia patients diagnosed at tertiary level in Kabul Afghanistan

Introduction:

Current guidelines for chronic myeloid leukaemia management include utilization of both conventional cytogenetics as well as advance molecular analysis at diagnosis and while monitoring the therapy. The reason being the fact that karyotype analysis is one of the indispensable tools for identification of additional chromosomal abnormalities of prognostic significance.

Methodology:

A descriptive case-series study of 33 patients was conducted to demonstrate the profile of karyotype abnormalities in chronic myeloid leukaemia.

Results:

78.8% of patients had a single Philadelphia chromosome, while in addition to Philadelphia chromosome, one patient had 13q del, one patient had t(11;17), one patient had t(7;14), one patient had 5q deletion, one patient had double Philadelphia and one patient had a complex karyotype with 6q deletion, monosomy 11, monosomy 12 and marker chromosome. Two patients with pathognomonic feature of chronic myeloid leukaemia had normal karyotype and thus were advised to proceed with further molecular studies, since they showed significant clinical improvement with tyrosine kinase inhibitor therapy.

Conclusion:

Detection of additional chromosomal abnormalities in chronic myeloid leukaemia patients is a key to identification of patients requiring advance therapeutic modalities other than the conventional tyrosine kinase targeting agents. This is true both at diagnosis as well as during the tyrosine kinase inhibitor therapy. Conventional Karyotyping, a simple, yet is very useful investigation for evaluation of chronic myeloid leukaemia patients, especially at diagnosis or during transformation, where there are numerous immature cells, allowing to capture sufficient number of metaphases for assessment.

Keywords:

Karyotypic, chronic myeloid leukaemia, tertiary level, Afghanistan.

Innovation of Dashboard Using Spreadsheets in Monitoring of Indicators

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Objective:

To develop a dashboard to monitor Key Performance Indicators using linked excel spreadsheets.

Methodology:

To facilitate visibility of data related to Key performance indicators, there was a need to develop dashboards to aggregate key performance indicator-related data. This would help in tracking trends of performance monthly and quarterly. Key Performance Indicators were documented with a definition, numerator, denominator, and a target or Benchmark. In the absence of appropriate pre-existing off-the-shelf dashboards to adopt, linked Excel sheets were chosen as appropriate tools for in-house dashboard development. The authors and colleagues set out to create a comprehensive excel-based dashboard system. Once data is collected at the units, it is entered into daily excel data entry sheets linked to the unit dashboard. Unit KPI dashboards are linked to form departmental dashboards, which are linked to create the institutional dashboard. These dashboards have been christened Quality Variance Reports (QVR). Traffic lights colour codes are used in the dashboards to show the trends and the performance monthly, where red represents below target, amber indicates an improvement and green shows performance that met the target.

Results:

The use of dashboards has benefits at units, departmental and institutional levels. Through these tools, data entry is easy, and all KPI data is available to users in an easy-to-use format that captures trends. Data is trended y month and quarter of the year. The outcome of this innovation has been an increasing adoption of performance measurement across the hospital, the utilization of data in decision-making and process improvement. The data available in dashboards has been central to maintaining accreditation to ISO, CAP and JCI. The overall impact has been an improvement in quality and patient safety.

An illustration of the dashboard is appended below:

Indicator	2021	Target/	2020	Month												Quarters				Trends
	Measure	Benchmark		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Qtr1	Qtr2	Qtr3	Qtr4	
		100%	96%	100%	100%	100%	100%	80%	100%	85%	100%					100%	93%	93%		
		90%	93%	84%	94%	94%	88%	90%	93%	94%	87%					91%	91%	90%		

Conclusion:

The use of an excel formula-based dashboard has been effective in situations where sophisticated software is not fully implemented in monitoring and evaluation. In conclusion, we recommend the use of linked excel sheets dashboards to monitor the Quality improvement of an institution.

Ensure patient safety through safe use of high alert medications at FMIC

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Background:

High alert Medication are those medications involve in high percentage of errors and or sentinel event, as well as medication that carry a higher risk for abuse or other adverse outcome. Improve Safety of High Alert Medication is the third goal of IPSG. In the hospital, it is important to follow certain standards while prescribing, dispensing, storing and administering the High Alert Medication.

Purpose:

The purpose of this study was to identify gaps and improve prescribing, dispensing, storing and administering of High Alert Medication through improving their knowledge and compliance to the hospital policies and protocols regarding High Alert Medication.

Methodology:

Data from numerous sources were extracted to identify the gap in knowledge and practice of staff on IPSG-3 International Patient Safety Goal No-3. The 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, a pre-test and post-test was implied to determine staff knowledge on the subject. The pre-test and post-test questionnaire was derived from three policies which include; safe use of High Alert Medication, Concentrated IV Electrolyte Guideline and Preventing Error with Look-Alike and Sound-Alike (LASA) Medication. Staff were given training on these policies after pre-test and then post-test was conducted accordingly. MS Excel is used to analyze the data using descriptive statistics. Verbal consents were taken from the staff, and measures were in place to ensure confidentiality of the test results and ensure staff comfort.

Results:

The audit results conducted through QIPS shows 95% in 2020 and 00% during 2021 until September. The document review and JCIA 7th edition indicated that new policies and protocols on Safety of High Alert Medications were required to be developed. Two new policies and three standard protocols for Hyponatremia, hypokalemia and hypophosphatemia for Neonate, pediatric and adult patient were developed; and one policy revised to incorporate new changes as per the JCIA 7th edition requirement.

The overall pre-test result shows that staff have (...) knowledge of the hospital policies. While it increased to (...) in post-test which shows (...) increase in their knowledge.

Conclusion/recommendation:

Patient safety is important. Safety of High Alert Medications for accurate prescribing, dispensing, storing and administering reduces error and resulting in improved patient safety. Strategies to improve safety of high alert mediation have to be in place to ensure patient safety.

Adverse effect following COVID-19 immunization in Sarepul Province-Afghanistan, 2021

Abdul Shakour Karimi- BSPH-AFETP graduated 2020 - Provincial EPI manager-Sarepul provincial health department-Afghanistan

Introduction:

Hesitancy, refusal and adverse event for COVID-19 vaccine has been a challenge in Afghanistan. Providing safety information will improve acceptance. This study aims to describe the adverse effect of immunization following vaccination with COVID-19 vaccine.

Methodology:

Afghanistan started vaccination for COVID-19 using AstraZeneca vaccine (COVISHILED) in February, 2021. A cross sectional study was conducted in Sarepul province of Afghanistan in March, 2021 to collect data regarding adverse effect of vaccination. Data were collected using a questionnaire from those coming for 2nd dose to vaccination centers. Demographic, history of diseases and proportion of adverse effects were calculated using Epi Info v.7.

Results:

Totally 470 people were interviewed who already received 1st doses of COVISHILED during Feb-March, 2021. Of them 83% were males with overall mean age of 35 ± 11 years. Recipients were health workers (39.2%), teachers (37%), government staffs (9.6%) and prisoners (6%). Almost 34% have not gotten the COVID-19 before vaccination. The most frequent adverse effects were injection site pain (62.8%), headache (62%), fever (58.1%), myalgia (55.6%), fatigue (54.5%), arthralgia (51.9%), chills (46%), malaise (32%), injection site tenderness (27%) and nausea (21.3%). Only 4.7% had chronic diseases such as high blood pressure and cardiovascular disease. Overall, 87% responders had at least one of side effects following vaccination. Approximately 29% of reactions resolved within 24 hours and the rest within 48-72 hours. By day 7 there was 0.21% with local or systemic reaction. The reactions were milder and less frequent in older ages (≥ 50) and no sex difference.

Conclusion:

Vaccination is the inexpensive way to control mortality and morbidity of COVID-19 during pandemic. AstraZeneca vaccine is safe with common side effects and not threatening life of persons. Health authorities should encourage all to get vaccinated based on priorities.

Key word:

Immunization, Adverse effect, COVID-19 vaccine, Afghanistan

Perception, Willingness, and Barriers Towards COVID-19 Vaccine in Pakistan: A Developing Country's Perspective

Jawad Ahmed (Internal Medicine, Dow University of Health Sciences, Pakistan)

Background:

Vaccine hesitancy has been a huge challenge in controlling preventable diseases. With the emergence of COVID-19 vaccines, it is vital to know their acceptance rates among the masses. No data is available on the current subject from Pakistan yet. Therefore, this study aimed to evaluate the acceptance of a potential COVID-19 vaccine among the people of Pakistan, along with their perceptions and barriers to acceptance. This may help to develop strategic immunization programs and effective vaccination messaging in order to control the pandemic.

Methods:

A cross-sectional study was carried out in Pakistan using convenience sampling. An online self-administered questionnaire was distributed after informed consent. All analysis was done using Statistical Package for Social Science v.23.0 (IBM Corp., Armonk, NY).

Results:

Of the respondents (n=196 general population and n=208 healthcare workers), 73.5% were willing to get a proven, safe, and effective COVID-19 vaccine if it was free of cost. This was reduced to only 64.3% if a certain amount is attached to the vaccine. A total of 168 (41.6%) participants agreed to get vaccinated immediately, while 149 (36.9%) participants concurred to get it on a delayed basis. Eighty-seven (21.5%) participants refused to receive the COVID-19 vaccine, amongst which a significant majority ($p < 0.001$) of the participants were from the general population. Doctors or scientists/scholarly journals were found to be the most trusted source of information (67.6%; n=273), while fear of unknown side-effects (45.5%; n=184) was found to be the most common barrier towards COVID-19 vaccination. More than half (53.5%) participants believed that the vaccine is safe, effective, and has minimal side-effects, amongst which a significantly large fraction ($p < 0.001$) belonged to the healthcare workers.⁴⁰⁴

Conclusion:

The acceptance rate of a safe, effective, and proven COVID-19 vaccine in Pakistan was satisfactory. The fear of unknown side effects was the most common barrier to COVID-19 vaccine uptake. Adequate measures should be taken to educate the masses about the COVID-19 vaccine and its safety.

Keywords:

COVID-19 vaccine, Pakistan, Perceptions, Barriers, SARS-CoV-2, Pandemic, Prevention, Vaccine acceptance

Parents Perception of Newborn Education Services at a Tertiary Care Hospital in Karachi, Pakistan

Shelina Bhamani, Lumaan Sheikh, Mohsina Hussain, Fatima Shafiq, Hijaan Mitha, Alyza Muhammad Ali, Ramla Hashmi

Aga Khan University The first 1010 days are the most important period in the evolution of human lifetime. It is in the early stages of life that the holistic development of children attains its optimal level. Children who receive nurturing during these early years tend to have better personal and academic outcomes in the future. It is essential that all sectors invest in early childhood development to ensure good health, nutrition, learning and stimulation, security and protection, and the delivery of appropriate care. Given the important responsiveness of parents and caregivers, we developed and implemented a newborn education program at a tertiary care hospital in Karachi, Pakistan.

Objectives:

This study sought to explore the perceptions of participating families about the usefulness of the newborn parenting education session.

Design:

A mixed method study design was planned. Simple random and convenient sampling was applied and everyone who consented to participate and were part of our newborn parenting packages were approached. The data was collected from February 2021 to July 2021. For the quantitative data collection, self designed simple 5 item program usefulness form was designed and the qualitative data was sought using a semi structured interview guide.

Results:

Most parents liked the level of engagement and found the content appealing. The majority of parents also indicated that they have acquired new knowledge about the provision of responsive care. Almost all parents found the materials helpful and evaluated their overall high satisfaction. Qualitative themes have also shown that parents want to learn more about neonatal care skills and believe that hospitals should have more programs like this.

Conclusion:

The results highlight the scale-up of these infant education programs at the community, national and regional levels. It also shares the need for efficient use of hospital and health care environments to promote health care for the development of young children and their families.

Keywords:

Caregiving, Early childhood, Nurturing Care, Parenting, Responsive caregiving

Evaluation of routine immunization coverage in 12-23 months' children in Sarepol province 2018: a descriptive cross-sectional study

Abdul Shakour Karimi, Mir Islam Saeed,

1Bachelor in Public Health from Qazvin Medical University, Diploma in field Epidemiology from ANPHI, Provincial Immunization supervisor/department of public health Sarepol province

2MD (KMU), MSc (AKU), FETP Alumni, AFETP Technical Advisor, ANPHI, MoPH

Background/Objective:

Afghanistan has the lowest routine coverage, according to WHO-UNICEF reports. The coverage rate of Penta3 in Iran, India, Pakistan, and Afghanistan are estimated 99%, 89%, 75%, and 66% respectively. This study aims to find real coverage in urban area and related factors to vaccinated and un-vaccinated for 12-23 months children 2018 in Sarepol province.

Methodology:

A descriptive cross-section study with probability-proportional-to-size (PPS) cluster sampling was conducted and modified for application to surveys of immunization coverage. We selected 30 clusters and randomly 7 households visited from each cluster in urban setting of Sarepol province. Children's ages were calculated, in months, with respect to the 1st day of the survey. We designed a comprehensive questionnaire of which 210 were filled. Data were managed and analyzed in Epi Info v.7.

Results:

This survey shows EPI routine coverage for 12-23 months children for BCG, Meales-1, Penta-1 and Penta3 were 97.14%, 77.14%, 93.81% and 83.81% respectively. Full immunized coverage by gender, 80.18% for girls and 71.15% for boys reported. Dropout rate of vaccine among penta-1, penta-3 and BCG, Measles-1 was 9.27% and 18.90% respectively. 2.86% of 12-23 months children still not received any vaccine in urban areas. The child being sick, immigration, health facilities was far and gaps between vaccine more reported by respondents as reasons for incomplete and no vaccination. Valid doses for BCG, Measles and Penat3 calculated 93.80%, 71.43% and 80% respectively.

Conclusion:

It is observed that access and utilization of immunization services in urban areas have improved because full immunization was 75% versus AHS-2018 survey 61%. But, still there is a lot of children who did not receive any vaccine. High immunization drop-out rates could be overcome by creating awareness of the program and of the relevance of second and third doses of Penta, polio and measles vaccines. Measles coverage is very low and we are expecting more outbreak in urban areas. We recommend to MOPH to better enhance awareness and implement measles campaigns.

Key Word:

Immunization survey, Sarepol, EPI

Evaluation of routine immunization coverage in 12-23 months children in Sar-e-pol province 2018: a descriptive cross-sectional study

Abdul Shakour Karimi¹, Mir Islam Saeed²

1Bachelor in Public Health from Qazvin Medical University, Diploma in field Epidemiology from ANPHI, Provincial Immunization supervisor/department of public health

2MD (KMU), MSc (AKU), FETP Alumni, AFETP Technical Advisor, ANPHI, MoPH

Background/Objective:

Afghanistan has the lowest routine coverage, according to WHO-UNICEF reports. The coverage rate of Penta3 in Iran, India, Pakistan, and Afghanistan are estimated 99%, 89%, 75%, and 66% respectively. This study aims to find real coverage in urban area and related factors to vaccinated and un-vaccinated for 12-23 months children 2018 in Sarepol province.

Methodology:

A descriptive cross-section study with probability-proportional-to-size (PPS) cluster sampling was conducted and modified for application to surveys of immunization coverage. We selected 30 clusters and randomly 7 households visited from each cluster in urban setting of Sarepol province. Children's ages were calculated, in months, with respect to the 1st day of the survey. We designed a comprehensive questionnaires of which 210 were filled. Data were managed and analyzed in Epi Info v.7.

Results:

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Conclusion:

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Key Word:

Immunization survey, Sarepol, EPI

Accuracy of Rapid Diagnostic Antigen Test among asymptomatic close contacts with Confirmed SARS-COV 2 infections, in Herat province, Afghanistan, in 2021: A cross-sectional Study

Dr Ahmad Amirnadjad, Dr.M.Hafiz Rasooly

Afghanistan Field Epidemiology Training Program (AFETP) , 3rd Cohort Candidate

Background:

Early detection and isolation are the key strategies for the containment of the COVID 19 pandemic in low resources settings including Afghanistan where access to the vaccine is limited. These strategies could reduce the burden on the health care system which is already weak due to conflicts and war. Both RT-PCR. The first COVID 19 case was detected in the country in Herat province close to Iran. Currently, rapid antigen tests and RT-PCR have been used for detections of COVID 19 cases in Herat province.

Objective:

To assess the accuracy of the rapid antigen test among asymptomatic close contacts of individuals confirmed for covid 19 in Herat province.

Methodology:

This was a cross-sectional study conducted by the surveillance contact tracing teams in Herat province. The teams line listed 200 asymptomatic close contacts, and two separate nasopharyngeal specimens were collected. We used the rapid antigen test (Biosensor) on the 4th-7th days of the contact, and the 2nd specimen was sent to the reference lab for RT-PCR testing. Descriptive statistics were conducted. The sensitivity and specificity of the rapid antigen tests were compared with RT-PCR test results.

Results:

The median age of the contacts was 35 (ranged 11-90), and 138(70%) of the contacts were female. Out of 196 contacts tested with the RT-PCR, 105(53%) were confirmed for SARS-COV-2 infection, while only 30(15%) were confirmed by rapid antigen test. It indicates a sensitivity of 20.1%. However, the specificity of the rapid antigen test was high (90%).

Conclusion:

The sensitivity of the rapid antigen tests was quite low to confirm covid 19 cases among asymptomatic close contacts. Therefore, if resources allow, RT-PCR is still the best choice with a high sensitivity rate for early detection of the covid 19 asymptomatic close contacts. Further study with a large sample size should be considered.

Keywords:

Rapid, Antigen, test, SARS-COV 2, Diagnostics, close contacts

Factors influencing blood donation in Kabul Afghanistan, in 2021: A comparative cross-sectional study

*Dr Khalid Arian, Waqar Mohmand, Dr Enayatullah Hashimi, Abdul Wadood Stanikzai, M.Hafiz Rasooly, Islam Saeed
Afghanistan Field Epidemiology Training Program (AFETP)*

Background:

Blood transfusion service is an important part of any health care system and should be accessible and available for any patient who needs a blood transfusion. However, this is still a major challenge in developing countries including Afghanistan where the gap between blood demand and supply is high. Given the high maternal mortality associated with postpartum hemorrhage and injury-related mortality, there is an extensive need for a sufficient and safe blood supply in Afghanistan. Of all blood donations in Central Blood Bank Kabul, 42 % was voluntary.

Objective:

To explore the factors influencing blood donation in Kabul, Afghanistan.

Methodology:

This was a comparative cross-sectional study at the Central Blood Bank and Polyclinic in Kabul city. Both blood donors (those donated at least once their blood) and non-donors were included in the study. The structured questionnaire was developed in two sections for both donors and non-donors. The sample size was 492, and descriptive statistics followed by inferential statistics (Chi-Square and t-test) was performed.

Results:

We were able to investigate 495 donors and non-donors in this study. Blood donation was more prevalent among males than females (84% versus 16%; $P < 0.001$). Most donors were married 188 (77%; $P < 0.001$) and had the willingness to donate blood in the future than non-donors (98 % versus 77%). Among the donors, the main motivating factors for blood donation were willingness of Allah 171 (70%) and donation for own relatives 97 (39%). The main barriers for blood donation perceived by non-donors was health risks of blood donation 120(48%) followed by lack of time 19 (7.5%) and low awareness 14 (6%).

Conclusion:

willingness of Allah was the main influential factor of blood donation in Kabul, and self-perception of health risks was a major barrier to donating blood. Raising the awareness of blood donation and the involvement of religious leaders can be considered.

Keywords:

Blood donation, donors, non-donors, Afghanistan.

Frequency of cesarean section delivery and its causes

Zainab Ezadi¹, Zahra Taheri², Nesa Mohammadi³

Background:

Today, cesarean section is performed as a normal operation and in addition to the fact that many hospital equipment and beds and experienced people are involved in it, the mortality rate and complications in mothers who have a cesarean section are higher than normal delivery. In this study, the frequency of cesarean section and its causes in Kabul province have been investigated.

Method:

This descriptive cross-sectional study was conducted in Kabul province from April to July 1400. Using a researcher-made questionnaire, all deliveries and cesarean section indications were reviewed and the data were analyzed using SPSS software.

Results:

The results showed that the total number of deliveries during this period in Esteqlal Hospital was 5850 births, of which 84.61% of these deliveries were normal and 15.38% of these deliveries were cesarean section. In this study, the most common cause of cesarean section was previous cesarean section 31.3%, abnormal presentation 15.6% and lack of progress in delivery 12.5%.

Conclusion:

The prevalence of cesarean section in Kabul province is lower than international statistics. Considering that the most common cause is cesarean section, and many researchers consider the increase in vaginal delivery after cesarean section to be safe, it can be hoped that with public education to promote delivery Natural shrink. 1 Midwifery Faculty, Khatam Al Nabieen University, Kabul, Afghanistan. 2 Bachelor student in Midwifery Faculty, Khatam Al Nabieen University, Kabul, Afghanistan 3 Head of Midwifery Faculty, Khatam Al Nabieen University, Kabul, Afghanistan.

The COVID-19 Innovation and Research Project (CIRP): Exploring the Role of Digital Health Interventions in Addressing Gaps and Strengthening Health Systems

Saleem Sayani; Amna Khan; Momina Muzammil.

Objective:

Despite advances in health service delivery across LMICs, crises such as the COVID-19 pandemic continue to disproportionately affect their health systems, due to gaps in preparedness and response; overburdened workforces and poorly integrated health information systems.. CIRP aims to explore the effectiveness of three mobile applications in high risk populations by strengthening health systems through (1) early detection of illness and positively influencing health-seeking behaviors; (2) improving access to care for hard-to-reach populations via teleconsultation, (3) changing awareness and behavior of health care providers, and (4) integrating the applications within existing health systems .

Methodology:

CIRP employs a mixed methods approach. Quantitative measures include data collected through each application using convenience sampling to evaluate the effectiveness of each application in targeted countries (i.e. Afghanistan, Pakistan, Tajikistan, Syria, Kenya, and Tanzania), their effectiveness across multiple settings, and the perceived knowledge and behavior change resulting from their use. Qualitative feedback from policy-makers and government stakeholders regarding the design, feasibility, usability and integrations of these innovations is anticipated to lead to their long-term sustainability. Data will be collected from 385 users in each country between July, 2021 to July 2022.

Results:

Pending results will be useful in understanding the demand for and use of digital health solutions across targeted geographies. Results are expected to guide future policymaking and investment in health information systems. Through close coordination and feedback from multiple health system tiers (e.g. policymakers, healthcare workers and consumers) we aim to design applications that fulfil the needs of each segment, strengthen public-private partnerships and ensure the availability of routine services during crisis.

Conclusion:

CIRP aims to provide a holistic solution to multilevel health system challenges and constraints within the pandemic. It will generate evidence on the effectiveness and scaling of innovative digital health solutions, leading to health systems strengthening at local, national, and global levels; and the challenges that arise while addressing immediate gaps in preparedness and early response across vulnerable geographies.

Knowledge, Attitude and Practice of COVID 19 in Baghlan Afghanistan, in 2021: A descriptive cross-sectional study

Dr Siawash ziahi , M.Hafiz Rasooly, Islam Saeed

Afghanistan Field Epidemiology Training Program (AFETP)

Background:

The first case of CoVID-19 in Feb 2020 in soon spread nationally and this was an imported case from Iran. Knowledge, attitudes, and practices of (KAP) of communities toward COVID-19 is affecting government policies to develop intervention. However, such information is unavailable in Baghlan province.

Objective:

To explore the knowledge, attitudes, and practices of citizens in Baghlan city, Afghanistan.

Methodology:

A cross sectional study conducted in Baghlan city during June-July, 2021 regarding knowledge, attitude and practices of citizens toward COVID-19 using a structured questionnaire and face to face interview. The adult citizens were targeted randomly. Data entry and analysis was done using Epi Info v.7. Descriptive statistics such as proportions, rates and ratios were calculated and reported.

Results:

We were able to interview 269 people. The mean age of the study participant was 39.3 years $\pm$ 14.5 and 148(54.8%) were males. Of all, 145(60%) were illiterate and 120(45.7%) jobless. Access to mobile phone, TV, radio, and internet were 88.3%, 74.1%, 26.2% and 21.6% respectively. While majority heard about COVID 19 258(96.6%), stay at the same room was considered by 67% participants as the way of COVID 19 spread. 86(32.2%) thought that all people with COVID 19 will develop severe disease, and 122 (45.4%) intended to wear mask in case of sickness. Though majority of the study participant (83.3%) know about COVID 19 vaccine, 52 (19.3%) got the vaccine. The main reasons for not vaccinated were unavailability (35.3%), being not interested (20.5%) and suspected on safety of the vaccine (11.5%).

Conclusion:

It seems Baghlan citizens have sufficient knowledge about COVID-19 while they are not practicing the measures. Policymakers should focus on interventions to fill the gap and control the current and the future spread of COVID-19 and other emerging infections.

Keywords:

Knowledge, Attitude, Practice, COVID 10, Baghlan, Afghanistan

Descriptive Epidemiology of Acute Flaccid Paralysis cases in Afghanistan, 2015-2018

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Background:

Polio is on the verge of eradication, while Afghanistan and Pakistan are the only endemic countries remaining where polio is still prevalent. Surveillance for Acute Flaccid Paralysis (AFP) is one of the four cornerstone strategies of the Polio Eradication Initiative.

Objectives:

This study aims to describe the epidemiology of AFP cases in terms of time, place and person.

Methods:

It is a descriptive study whereby we analyzed the secondary data reported by AFP surveillance in Afghanistan. We accessed and used line-lists from 2015-2018 to describe the epidemiological status of AFP cases in the country. With the use of Epi Info 7 and Microsoft Excel, we calculated descriptive measures including frequencies, mean, median, standard deviation, generated proportions, tables, and graphs.

Results:

Overall, 11513 cases were reported in the last four years (2015-2018) by AFP surveillance, ministry of public health. Majority of the cases (29%) were reported in 2018 while 2088 (18%) cases were reported in 2015. The trend of OPV vaccination has increased from 2015 to 2018 (57%, 64%, 63% and 68%) respectively. Most of the cases were reported from southern and western regions, 57% of which was comprised of male cases. The highest (38%) proportions of cases were less than 30 months' age. Guillain-Barre syndrome (GBS) was 38% of all categories. The samples were collected using appropriate procedures. However, the numbers of confirmed cases were increased from 13 in 2016 to 14 in 2017, 20 in 2018 and 22 in 2019.

Conclusion:

The AFP surveillance system is well-established in the country. Nevertheless, with the increase in the trend of OPV coverage there is also increase in number of confirmed polio cases. Hence, the system should be sustained and strategies should be strengthened to focus on southern region as being the main engine of polio in the country.

keywords:

Epidemiology, Acute Flaccid Paralysis, Poliomyelitis, Afghanistan

Verification of Reported Data of Routine Immunization in Afghanistan, 2020

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¹National EPI data officer, Kabul . 2nd Cohort FETP program

²AFETP, Afghanistan National Public Health Institute (ANPHI), MoPH

Background:

In Afghanistan, there is discrepancy (15-20%) on reported of immunization coverages from difference sources. These discrepancies exist between different sources of data both at national and provincial level.

Objective:

This study aimed to verify and assess the accuracy and quality of data reported for routine immunization from field level to national level.

Methodology:

It is a descriptive combined study of primary data and desk review to observe the data quality at national and field level for measles and Penta-3 coverage. Overall, 2540 health facilities (10%) reporting coverage in 2020 were randomly selected using OpenEpi,. Routine immunization data collected for the last quarter of 2020. Primary data were collected both from health centers and from provincial teams for comparing with national data.

Results:

The accuracy ratio of Penta-3 and measles between register book and national level (DHIS2 system) data were 106% and 105% respectively for quarter 4 of 2020 at national level. It indicates under reporting of data at health facility. In addition, accuracy ratio between hard copies of monthly report and national level data was observed 104% for Penta-3 and Measles-1 at national level during the last quarter of 2020, which shows discrepancies and data entry errors at provincial level. The highest overreporting (78%) was found in Zabul province for Penta-3 in December 2020, while the lowest underreporting (513%) was found in Parwan for Penta-3 in November 2020. Similarly, the highest overreporting (75%) was recorded in Bamyan province for Measles-1 in December 2020 while the lowest underreporting (314%) was found in Farah for Measles-1 in December 2020.

Conclusion:

There is huge discrepancy of data from field to national level due to many reasons. Comparison of hard copies at provincial level with national shows both the accuracy and entry errors. MoPH should further investigate and find best solutions for it.

Key words:

Data, Quality, Immunization, Afghanistan, Measles, Penta-3

Understanding factors of loss of motivation and hesitation to work amongst front line health care providers during the Covid-19 pandemic

Introduction:

COVID-19, the disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has sparked a global public health crisis. It has, in turn, challenged and exhausted the health care system around the world. As per WHO's online statistics, on 29th May 2021, there have been 169+ million confirmed cases, including 3.5+ million deaths due to this pandemic (1). Several vaccines have been introduced for the public. However, due to the lack of availability in many parts of the globe and myths and false information spreading amongst the public, the standard operating procedures and vaccination system are not enough to combat this pandemic. In addition, the sudden increase in the workload of treating patients diagnosed with COVID-19, the increased risk of contracting the infection, and passing it to their families are reasons affecting the willingness to work in healthcare settings. Hence, surveying for loss of motivation and hesitation to work amongst the frontline HCWs during the pandemic must be assessed and addressed. This will enable the concerned parties to take the necessary steps to deal with mental health struggles, acute burnout and therefore improve healthcare delivery to the public.

Methods:

Study design: Questionnaire-based electronic survey

Setting: The study was conducted in the Aga Khan University Hospital Karachi.

Duration of study: 3 months for the completion of the whole study after approval from ERC.

Sample Size: All frontline healthcare of Aga Khan University Hospital Karachi who took care of COVID-19 patients. 80% response rate was considered significant.

Results:

A total of 239 participants were included in the analysis, amongst which 128 have worked in the COVID-19 ICU, ward, or OPD while 111 had were employed in emergency departments or OT. About one-third (29.7%) of participants reported being always anxious about getting infected with COVID-19, while almost half (49.8%) participants are always in fear of infecting their family. About 39.7% of participants felt that they were avoided by others. About 19.2% of participants reported that they never felt elevated mood working amidst COVID-19, 26.4% of participants reported being mentally exhausted, and 18.8% were always physically exhausted. The risk of getting infected was strongly reported by 180 participants, and it was associated with higher hesitation to work (aOR: 6.09 [2.55 - 14.59]). Fifty-one participants felt that lack of knowledge about prevention and protection was associated with lower motivation to work (OR: 0.66 [0.35- 1.25]). Sense of feeling protected by their hospitals was a motivating factor, and participants reported higher motivation to work (aOR: 2.60 [1.32- 5.14]). Participants were more likely to be hesitant to work if they felt anxious about being compensated in case of infection (aOR: 8.31 [4.12- 16.78]).

Hayat Strengthening Maternal, Newborn, and Child Health Provision in Health Systems of Pakistan and Afghanistan through a Digital Health Intervention

Saleem Sayani; Momina Muzammil; and Amna Khan

Objective:

Despite advances in health services and human health resource development in Afghanistan and Pakistan, most efforts are disjointed and short-lived, and routine immunization coverage and maternal, newborn, and child health (MNCH) outcomes remain poor. Health systems' reliance on paper-based systems also contributes to low transparency, accountability, ineffective monitoring, and low immunization rates. The primary objective of this study is to evaluate the effectiveness of Hayat, an Android-based mobile application and monitoring web-portal, in strengthening local health systems by enhancing accountability, transparency and monitoring processes, and in improving MNCH outcomes. This includes Hayat's role in allowing health administrators to digitally track health worker activities, monitor MNCH outcomes, and influence positive health behaviors in communities through evidence-based awareness videos.

Methodology:

Hayat used a mixed methods approach and quasi-experimental design, with difference-in-difference (DID) approach to evaluate changes in key MNCH indicators and account for the pandemic's disruption of services. The baseline survey (April 2019) and endline survey (October 2020-January 2021) collected data from 1200 eligible households, regarding key MNCH and immunization outcomes, and satisfaction with the services delivered by frontline health workers.

Results:

In addition to improvements in healthy behaviors, frequency of health worker visits, and satisfaction with services provided, unpublished results found significant ($p < 0.05$) improvements in a range of MNCH outcomes, including:

1. % of children with basic vaccinations;
2. % of mothers exclusively breastfeeding for 6 months;
3. % of pregnant women who received at least 4+ antenatal care visits;
4. % of women who received postnatal care; and
5. % of women delivered in presence of skilled birth attendant;

Conclusion:

Hayat has significantly improved MNCH outcomes, despite disruption of services due to the COVID-19 pandemic and political instability. The close-to-real time monitoring, availability of data, and the digital literacy of frontline health workers developed through the project, enabled policy-makers to make informed decisions and timely allocate within the COVID-19 pandemic.

Epidemiological and Clinical characteristics of Patients with Hemophilia in Kabul Afghanistan, 2020-2021

Razia Sultani , FETP 2020 graduate

Background:

Hemophilia is an inherited bleeding disorder in which the blood does not clot properly. There is scarcity of published information about hemophilia in Afghanistan while many cases are recorded in many centers.

Objective:

This study aims to describe the clinical and epidemiological characteristics of hemophilia patients registered in central blood bank, Afghanistan.

Methodology:

A descriptive retrospective study was conducted to review medical record of patients with hemophilia in central blood bank in Kabul, the only center in the country. The confirmed cases were defined as any recorded patients tested positive for factor VIII and IX. Data were collected using a checklist from patient's registers, Jan 2020 to June 2021. Epi info were used for data entry and Ms. Excel for data analysis.

Results:

Totally 505 patients with hemophilia were included in this study of whom 488 (96.25%) were males. The mean age of patients was 14.36 ± 10.43 years ranging from 1.5 months to 74 years. The Pashtuns (46%) and Tajiks (39.6%) were more affected. Out of all 422 (83.23%) had hemophilia A and 62 (12.23%) had hemophilia B. The patients were mostly (47.4%) from Kabul. The proportion of parents' marriage of first cousin were 162 (32.79%), double first cousin 4 (0.8%), uncle-niece 19 (3.84%) and alien 309 (62.55%). Of all affected, 135 (26.63%) were group A, 130 (25.64) group B and 115 (22.68) O positives. No one positive for HIV, however 13(2.56%) were positive for HBV 23(4.54%) were positive for HCV. Hemophilia B patients had more positive HBV (5%) than hemophilia A (2%).

Conclusion:

Hemophilia A was more common than B and males were the more affected. The most patients were residents of Kabul. The load of patients requires establishment of more centers across the country.

Keywords:

Afghanistan; Hemophilia; HBV; HCV; Blood Group; Marriage

Investigation of measles outbreak in Kabul central Prison (Puli Charkhi)- Kabul, Afghanistan

Nayeb NAYAB (1), Islam SAEED (2)

1. DG Preventive Medicine, Ministry of Public Health

2. AFETP, ANPHI, Ministry of Public Health

Introduction:

Measles is a vaccine preventable disease that still taking lives of children in developing countries like Afghanistan. Mostly the outbreaks occur in dense communities with poor hygiene and low vaccination coverage. The study aimed to investigate, control outbreak and describe the epidemiological characteristics of measles cases.

Methodology:

On 13 February 2020, in charge of Puli charkhi clinic reported cluster of measles cases in prison block living women and children. The team assigned and conducted outbreak investigation (descriptive study) to control the disease and illustrate pattern. The suspected case definition was developed as anyone having maculopapular rash with one of symptoms such as fever, cough, conjunctivitis and coryza. Five samples were collected and send to laboratory. Data were collected and line list were developed. Data management and analysis conducted using Epi Info v.7.

Result:

Totally 332 prisoners were imprisoned in outbreak area. Data were collected from 36 prisoners matching case definition. Male and female ratio was 1.8: 1 and age ranged 1-18 years, with mean age 5 years. Most affected age group was less than five years. Of them 35 (97%) had fever, 28 (78%) had cough, 25 (69%) had conjunctivitis, 14 (39%) had Kolpik spots, 9 (25%) skin rash and 19 (53%) had diarrhea and vomiting. The coverage of the measles vaccination was 11%. The children had close contact with each other as they were living in one block of the prison with poor hygiene. One patient was hospitalized due to complications. Out of 5 serum samples two were declared positive by laboratory.

Conclusion:

Measles outbreak is still occurring while free vaccination is available in the country. Low vaccination coverage, poor hygiene and close contacts are contributed to outbreak. The health authorities should strengthen immunization in congregated facilities and raise awareness. Health promotion measures are required.

Keywords:

Measles, Vaccination, Afghanistan, Kabul, Outbreak, Prison.

Knowledge, Attitude and Practices of nursing towards Hepatitis B and C in six provinces of Afghanistan, 2020

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Background:

Viral Hepatitis is an important public health problem among health workers. Evidence of exposure of health workers to hepatitis B virus is recorded in Afghanistan while majority is not vaccinated. Low knowledge and adverse practices concerning hepatitis are assumed among nurses in hospitals.

Objective:

The aim of this study is to determine nursing's knowledge, attitude and practices towards hepatitis B & C in six provinces of Afghanistan.

Methods:

Conducting a cross-sectional study, we collected data about knowledge, attitude and practices of nurses from Kabul, Sar-e-Pul, Kandahar, Farah, Kunar and Kunduz provinces in 2020. Totally 369 nurses enrolled and the data were collected using a structure questionnaire. Mean, standard deviation, frequency and proportion was calculated.

Results:

Out of 369 respondents 52% were male with half (49%) in age group of 19-30 years. Mean age was 33.4 ± 11.07 years; 55% had bachelor education; 53% had spent less than 10 years in current job. 88% had ever heard of hepatitis B and C while 81% had needles and sharps injuries. 81% correctly identified vaccination as a way of prevention. Surgeons 68% and dentists 65% were highly affected. 83% were aware of complications as cirrhosis. 56% were aware of the existence of vaccine; 47% knew that 2-3 doses are required for complete protection; 54% have ever received hepatitis B vaccine, 15% have not received any of vaccines, while 57% completed the vaccination schedule and 36% did not complete vaccination schedule.

Conclusion:

It seems the knowledge of the nurses in Afghanistan is sufficient with regard to both hepatitis B and C. The attitude of the nurses is better in regard to the vaccination against hepatitis B and C. However, there is a need to strengthen preventive practices and launch vaccination campaign for their protections.

Key Words: Afghanistan, Hepatitis B, Hepatitis C, Nursing, KAP survey

Epidemiology and clinical characteristics of the measles cases admitted in the tertiary care hospital, in Ghor, Afghanistan, in 2021: A descriptive cross-sectional study.

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Background:

Measles is a major public health problem particularly in countries with conflict and emergencies including Afghanistan with the highest measles outbreaks in the region. One of the provinces with a high incidence of measles is Ghor located in the central part of Afghanistan. The measles outbreaks frequently occurred over the last years in this province.

Objective:

To describe the epidemiology and clinical characteristics of the measles cases admitted in the Ghor provincial hospital during an outbreak that occurred in June 2021.

Methodology:

A descriptive cross-sectional study was conducted among the measles cases admitted in the Ghor provincial hospital in June 2021. We used WHO measles case definitions, and all clinical and lab-confirmed (ELISA) cases were line-listed. Anthropometric measurements and hemoglobin levels were also measured and recorded. Data were analyzed using Epi Info version 7.0. We considered HAZ <-2 for moderate or severe stunting and Hb <11 gr% was classified as anemia

Results:

We were able to investigate 150 measles clinically and laboratory-confirmed cases. The median age of the cases was 12 months (IQR 16months). While males and infants aged 2-18 months represented 84(56%) and 97(65%) of cases respectively, 39(26%) of the cases occurred among infants less than 9 months. Amongst the clinical features, fever (99.6%), rash (99.3%), diarrhea (88%), pneumonia (80%), and conjunctivitis (58%) were seen in the study population. Among 111 eligible cases, 59(55%) were not received measles vaccination. Of 150 cases, 54(36%; 95 % CI [28-44]) had moderate or severe stunting and 36 (24%; 95%CI [17-31]) had anemia. Overall, the case fatality rate was 6 (4 %).

Conclusion:

The low measles vaccine coverage rate leads the continuous measles outbreaks in Ghor province. Strategies to improve the coverage of measles vaccination and address malnutrition should be undertaken. Further studies are required to determine the risk factors and vaccine effectiveness in the province.

Keywords:

Measles, epidemiology, clinical, characteristics, Ghor, Afghanistan

Evaluation of Acute Flaccid Paralysis (AFP) Surveillance system in Afghanistan 2020: A Retrospective Secondary Data Analysis

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Background:

Afghanistan is one of the two Polio endemic countries in the World. Due to low immunization coverage and weak immunity, outbreaks of circulating Vaccine Derived Polio Virus (cVDPV), Ambiguous Vaccine Derived Polio Virus (aVDPV) and wild polio cases are prevalent. As part of the polio-eradication strategy, AFP surveillance has been established in Afghanistan since 1997. However, it has not been evaluated yet.

Objective:

To evaluate the AFP surveillance system focusing performance indicators.

Methodology:

The AFP surveillance system was evaluated at the national level in 2020. The standard WHO performance indicators were used. The data management and analysis were done using EPI info. Descriptive statistics were calculated and reported.

Results:

Totally 3972 AFP cases were reported; of them 2228(56%) were male, and 2835(71%) were children <5 . Of all, 56 were wild polio cases and half (n= 28, 50%) of them were reported among children aged 12-24 months. Two southern provinces, Kandahar, and Helmand reported 30 (54%) wild polio cases. The non-Polio AFP rate was 19/100,000 children <15. Almost 42(75%) of wild polio cases received zero OPV vaccine through routine immunization and 24(43%) through NID campaigns.

All indicators met the expected targets except two: 34 % of the cases investigated $\leq$ 48 hours of the report (WHO target >80%), and 8% of the specimens arrived at the national lab $\leq$ 3 days (WHO target is >80%). Data on the timeliness of reporting and specimen transportation, and lab results along with the cases follow FP were not available in the database.

Conclusion:

The AFP surveillance performs well. However, timely investigation of AFP cases and reaching the specimen to the lab should be improved. Additionally, as some the key performance indicators were missing, AFP surveillance is expected to cover all the indicators

Keywords:

AFP, Polio, Eradication, Surveillance, Evaluation.

Epidemiological Features and Clinical Profile of Patients with Thalassemia in Kabul Afghanistan, 2019

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Background:

Thalassemia is the common gene disorder globally. In Afghanistan, the number of patients is unclear; equipped centers with treatment facilities are inadequate. Furthermore, the epidemiology and clinical characteristics are not studied officially.

Objective:

This study aims to explore the epidemiological pattern and clinical profile of thalassemia registered in central blood bank, Kabul Afghanistan.

Methodology:

A mix descriptive study was conducted to fully review registers and do phone calls for follow up of all patients recorded in central blood bank during 2019 in Kabul. The confirmed case was any patient tested by fetal hemoglobin and blood film. Data were collected using a form matching the patients registers. Epi info v.7 were used for data entry and analysis. Descriptive measures calculated and reported.

Results:

Totally 413 patients with thalassemia were enrolled in analysis. Of them, 272 (65.85%) were males. The average age of patients was 6.89 ± 4.05 years (range=1-25). Ethnicity analysis showed that (63.68%) were Pashtuns, (31.13%) Tajiks, (1.46%) Hazara. Majority (87.13) were from Kabul. The proportion of parents' marriage of first cousin were 199 (48.19%), uncle-niece 19 (3.84%) and alien 213 (51.57%). Out of all, 112 (27.12%) were blood group A, 112 (27.12%) B, 103 (24.94%) O and 43 (10.41%) AB positives. Generally, 2 (0.48%) were positive for HBV, 88 (21.38%) for HCV while one positive for HIV and none for VDRL. 18 (4.36%) got surgical operations and one death reported. Of all, 63.2% responded to phone calls reporting that 49 (11.8%) had other children died due to thalassemia. Treatment facility was poorly available by center while 189 (45.76%) were unable to afford the treatment.

Conclusion:

Thalassaemias is common in Afghanistan and management facility is lacking. AB blood group was less affected while consanguineous marriage was more common. Establishment of more centers and full review of factors are recommended.

Keywords:

Afghanistan; Epidemiology, Thalassemia; Blood Group; Marriage

