



## 3<sup>rd</sup> International Public Health Conference

# KHYBER MEDICAL UNIVERSITY

Breaking the Manacles: NCDs control through  
Universal Health Coverage

21<sup>st</sup>  
Feb 2023

Pre-Conference workshops &  
Young Researchers Day  
Oral & Poster Presentations

Chief Guest

President of Pakistan

**Dr. ARIF ALVI**

Conference Day 1  
22<sup>nd</sup> Feb 2023

Talk and panel discussion on  
Health Systems UHC, CVD and  
Mental Health

Conference Day 2  
23<sup>rd</sup> Feb 2023

Multi morbidity, Diabetes and  
Social health protection

## Pre-Conference workshops

Statistical Analysis using Stata  
Statistical Analysis using SPSS  
Basics of R  
Qualitative Research Methods  
Basic Life Support (BLS)

Research Ethics  
Implementation Research  
Data Management in Health Research  
Referencing Software  
Health Care in Danger - ICRC

Talks by  
Prof. Zulfiqar Bhutta  
Prof. Zafar Mirza  
Prof. Abdul Basit  
Prof. Zia Ul Haq  
Prof. Zainab Samad  
Prof. Sameen Siddiqi  
Prof. Faisal Sultan



# **3<sup>rd</sup> International Public Health Conference**

## **at Khyber Medical University**

### **21<sup>st</sup> – 23<sup>rd</sup> February, 2023**

**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

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**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

**PROGRAM OUTLINE (Feb 21<sup>st</sup> – 23<sup>rd</sup>, 2023)**

**PRE-CONFERENCE WORKSHOPS (Feb 21<sup>st</sup>, 2023)**

<b>Pre-Conference Workshops (Feb 21<sup>st</sup>, 2023)</b>			
<b>Code</b>	<b>Time/Venue</b>	<b>Pre-Conference Workshops/Postgraduate Courses (PG)</b>	
WS 1	9:00 am to 12:30 pm MPH lecture hall 1 1 <sup>st</sup> floor IPHSS	Statistical analysis using Stata	Dr. Naveed Sadiq (Khyber Medical University)
WS 2	9:00 am to 12:30 pm PHD room Ground floor IPHSS	Statistical analysis using SPSS	Dr. Asif Rehman (Khyber Medical University)
WS 3	9:00 am to 12:30 pm BS room 1 <sup>st</sup> floor IPHSS	Basics of R	Muhammad Ibrahim (Khyber Medical University)
WS 4	9:00 am to 12:30 pm Community dentistry room 1 <sup>st</sup> floor IPHSS	Qualitative research methods	Dr. Fayaz Ahmed / Lisa (Khyber Medical University) (FAU, Germany)
WS 5	9:00 am to 12:30 pm Room clinical skills room 2 <sup>nd</sup> floor IPHSS	Basic Life Support (BLS)	Dr. Muhammad Jawad Dr. Kashif Ali (Khyber Medical University)
WS 6	9:00 am to 12:30 pm Committee Room Ground floor IPHSS	Health care and Research ethics	Dr. Abdul Jalil Khan Dr. Naveed Afzal (Khyber Medical University)
WS 7	9:00 am to 12:30 pm 2 <sup>nd</sup> floor, IPS Lecture hall	Implementation research	Sheraz Fazid (Khyber Medical University)
WS 8	9:00 am to 12:30 pm AHA room 2 <sup>nd</sup> floor IPHSS	Data management in health research	Dr. Saima Aleem (Khyber Medical University)
WS 9	9:00 am to 12:30 pm MPH lecture hall 2 1 <sup>st</sup> floor IPHSS	Referencing software	Farhad Ali (Khyber College of Dentistry)
WS 10	9:00 am to 12:30 pm ICRC room 2nd floor IPHSS	De-escalation of violence against health care professionals – ICRC	Dr. Abdul Jalil Khan Dr. Hassam Khan (Khyber Medical University)
WS11	9:00 am to 12:30 pm Senate hall	Public Health Nutrition Programs of Nutrition International at Khyber Pakhtunkhwa and Adolescent Anemia Course.	Darya Khan, Ahsan Shahzad, (Nutrition International) Shujaat Faqir

# 3<sup>rd</sup> International Public Health Conference at Khyber Medical University 21<sup>st</sup> – 23<sup>rd</sup> February, 2023

**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

<b>Young Research Forum (Feb 21<sup>st</sup>, 2023)</b>		
<b>(12:00 pm to 01:15 pm)</b>		
<b>Oral Presentations (A) - <i>Infectious diseases</i></b>		
<b>Judges: Dr. Iftikhar Uddin &amp; Dr. Nauman Arif</b>		
<b>Time &amp; Venue</b>	<b>Name of presenter</b>	<b>Title of presentation</b>
OP1	Waleed Ahmad	Factors associated with Dengue in tertiary care hospitals in Peshawar during 2022. A case control study
OP2	Dr. Fatima Khalid Qazi	Lived experiences of COVID-19 patients admitted in Isolation wards of Healthcare Centers in Peshawar, Pakistan: A Phenomenological Perspective
OP3	Irfan Ullah	Knowledge, attitudes, and practices of the general population of Pakistan regarding Typhoid Conjugate Vaccine: Findings of a cross-sectional study
OP4	Hina Sharif	Respiratory Diseases' Burden in children and adolescents of marginalized population: A retrospective study in slum area of Karachi, Pakistan
OP5	Irfan Ullah	Prevalence of HIV among incarcerated drug users: a systematic review and meta-analysis of Asian countries
OP6	Majid Khan	Hospitalization Due To Comiogenic Diseases In Tertiary Care Hospital Peshawar Pakistan
OP7	Dr Imran Ullah Specialist Registrar Medical ICU MMM TH MTI Dera Ismail Khan	Prevalence, Distribution and Determinants Of Intestinal Tuberculosis In Adult Indoor Patients With Acute Small Intestinal Obstruction In Population Of Peshawar Division, Pakistan
OP8	Fizra Khan	A systematic expansion of the Obstructive Lung Disease (OLD) Program in Pakistan
OP9	Waleed Ahmad	Factors associated with Dengue in tertiary care hospitals in Peshawar during 2022. A case control study
OP10	Farhad Ali Khattak	GENETIC CHARACTERIZATION OF THE DEFECTS IN IL-12 AND IFN-gamma axis among recurrent leishmaniasis patients in Khyber Pakhtunkhwa

<b>Oral Presentations (B)</b>		
<b>Diabetes &amp; Nutrition</b>		
<b>Judges: Dr. Abdul Jalil khan &amp; Dr. Babar Ahad</b>		
OP1	Dr Kalsoom Tariq	The short-term impact of high energy nutritional supplements on energy balance in underweight primi-gravidae; a randomized controlled trial
OP2	Dr Nabila Sher	Effects of lipid based Multiple Micronutrients Supplement on the birth outcome of underweight pre-eclamptic women: A randomized clinical trial
OP3	Dr. Yozan Shahid	What does it take to deliver in-school adolescent girls' nutrition intervention during the challenges of COVID-19? Lessons from a pilot WIFAS project in Punjab Province, Pakistan.
OP4	Hessam Ul Haq	Issues Faced By Patients With Diabetes During Covid-19 Pandemic Visiting Diabetes Hospital And Research Center, Peshawar: A Phenomenological Qualitative Study

## Factors associated with Dengue in tertiary care hospitals in Peshawar during 2022. A case control study

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### Abstract

**Objective:** To identify the clinical, and socioeconomic risk factors associated with dengue in order to provide an early diagnosis and preventive therapy.

**Material & Methods:** A case-control study was designed during December 2022. A total of 89 dengue cases and 181 controls participated in this investigation. Cases and controls were matched for sex, age, and socioeconomic status in a ratio of 1:2. Clinical, and socioeconomic risk factors such as chronic disease history, previous dengue diagnosis, type of transport, presence of collected water near residence, use of mosquito nets, covering of containers, use of ac and ventilation were inquired. Data analysis was performed through SPSS version 26 to estimate the association between clinical and socioeconomic risk factors and the presence of dengue.

**Result:** Of the 270 patients, 89 (32.96%) were clinically diagnosed with dengue of which, 54 (60.7%) were male and 35 (39.3%) were female. Urban location ( $P = 0.014$ ), presence of dengue patients within the neighbourhood ( $P < 0.001$ ), outdoor activities ( $P = 0.006$ ) travelling in a car ( $P = 0.034$ ), presence of swampy water near residence ( $P = 0.005$ ) and poor sewage system ( $P = 0.014$ ) were associated with dengue.

**Conclusion:** Urban location and outdoor activities are important risk factors for dengue. Travelling in a car, presence of swampy water near an individual place of residence, improper sewage system and neighbors suffering from dengue may increase a risk for this entity. Targeting dengue awareness, a cleaner environment and effective preventive measures may be promising in dengue prevention.

**Keywords:** Factors, dengue, case control

## PHCKMU2023-Infection-OP(A)02

### Lived experiences of COVID-19 patients admitted in Isolation wards of Healthcare Centers in Peshawar, Pakistan: A Phenomenological Perspective

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#### Abstract

#### **Objective:**

Covid-19 emerged as a threat to the well-being of humans across the globe with physical life devastated and mental health deteriorating. The lived experiences of patients hold a paramount position to explore and understand their perception of care which can ultimately strengthen the health system's delivery domain. For this reason, we conducted this study to explore the lived experiences of patients in the Covid isolation ward, their recovery, and the quality of care being provided in the hospital and its effects on their psychological health.

#### **Research Questions**

The study was designed to investigate the following research questions:

1. Demographics of each participant?
2. What are patients' experiences of recovery during their treatment in COVID-19 Isolation Wards of Healthcare Centers?
3. What are patients' perceptions of environment and quality of care provided in COVID-19 Isolation Wards of Healthcare Centers?
4. What is patients' understanding of their feelings during the recovery process and how it influenced their psychological health and recovery from COVID-19?

#### **Methods**

By using the phenomenological approach, we conducted 11 in-depth interviews of Covid-19 patients admitted to the isolation ward of the public hospitals of Peshawar, KPK, Pakistan. The recorded interviews were transcribed verbatim, and analysis was conducted using NVivo qualitative analysis software. Using the inductive analysis pattern, codes were created from transcriptions which were arranged into categories, and finally, five themes were generated.

#### **Result:**

Study participants' lived experiences generated the five themes: Heading towards hospital, Health Care Quality, Impact on Mental Health, Recovering from Covid-19, and Back on one's feet. Amalgamated within these themes, all the positive and negative lived experiences of the participants in the isolation ward were examined. The socio-environmental factors, along with their experiences of the disease itself and with the healthcare providers guided their reaction which was important conciliators in their experiences with the pandemic.

#### **Conclusions**

Based on the findings, the environment of isolation wards had a major impact on the mental health of the participants. The Covid-19 isolation ward admitted patients' standpoint of the isolation ward environment, their lived experience, and quality of care offers an opportunity to improve the overall quality of care provided at all health facilities during the current pandemic.

**Keywords:** COVID-19, Lived experiences, Phenomenological, Isolation wards

**Respiratory Diseases' Burden in children and adolescents of marginalized population: A retrospective study in slum area of Karachi, Pakistan**

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**Abstract**

**Objective:**

the aim of the present study was to evaluate the respiratory disease burden in marginalized slum populations, the factors that cause an increase in this burden, the seasonal exacerbation of the commonest respiratory diseases, and the genders and ethnicities highly affected by this burden.

**Methodology:**

This is a cross-sectional observational study of a marginalized population in Karachi, Pakistan. We collected and analyzed secondary data from SINA Health, Education & Welfare Trust (SINA) clinics. SINA is a privately funded non-profit organization serving slum communities since 1998 through a network of 38 clinic sites, including three mobile vans in slum areas. Together, these clinics serve approximately 1 million people annually. SINA clinics are spread throughout Karachi City, Pakistan. Therefore, we regarded it as a representative study setting. SINA has medical records under the Hospital Management Information System (HIMS), which maintains the data of every patient and disease in detail in the form of an electronic medical record (EMR) system. The retrospective data of the five common respiratory diseases (TB, pneumonia, asthma, bronchitis, and bronchiolitis) for 3 years (August 2019 to July 2022) were acquired on request. The descriptive statistics of the sociodemographic variables were computed as frequencies with percentages. A chi-square test of significance was conducted in order to assess the difference in the frequency significance by their p-values, with  $p \leq 0.05$  or less considered to be significant. All statistical analyses were performed using SPSS Statistics version 27.

**Result:** In total, 88,693 records of children and adolescents were analyzed for the given study period, among which 28,418 (32.0%) were boys and 60,275 (67.9%) were girls. Among the studied diseases, pneumonia was more prevalent among girls (39,864, 44.9%) compared to boys (19,006, 21.4%). Most of the children (59,988, 67.6%) were aged 1–5 years. In addition, of those diagnosed with pneumonia, 50,348 (56.8%) were from the same age group. Furthermore, bronchiolitis was found among 10,830 (12.2%) children aged 5–9 years. The majority of the study population (46,906, 52.9%) belonged to the Pathan ethnicity, followed by Sindhi (21,522, 24.2%); most of them (84,330, 95.1%) were of a lower socioeconomic status. It has been found that pneumonia was most prevalent in the winters of 2019 (448 per 10,000 population) and 2021 (4.91 per 10,000 population), while bronchiolitis was more prevalent in the summers of 2021 (3.13 per 10,000 population), and 2022 (5.74 per 10,000 population). Moreover, bronchitis was more prevalent in the monsoon season of 2021 (5.74 per 10,000 population).

It has been found that all variable ages, regional differences, ethnic variations, and seasonal patterns influence the development of the disease within the studied population, and the association was statistically significant with a p-value  $< 0.05$  at a 95% confidence interval.

**Conclusion:**

Pneumonia is a common childhood illness in low-income nations such as Pakistan, with risk factors including age under 5 years, ethnicity, regional differences, seasonal variation, and lower socioeconomic status, which is a situation typically seen in urban slums. Effective community-based interventions, such as health education and raising awareness among slum dwellers, may significantly reduce the risk.

**Keywords:** Pneumonia, Respiratory Diseases, slums

## Prevalence of HIV among incarcerated drug users: a systematic review and meta-analysis of Asian countries

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### Abstract

#### **Background & Objective:**

Human Immunodeficiency Virus (HIV) constitutes a huge burden of infectious diseases worldwide. Imprisonment is a significant risk factor for contracting HIV infection, especially among those injecting drugs. Prisons accommodate around 10.2 million people worldwide, making prisons a potential space for HIV transmission and improving targeted HIV prevention plans. This systematic review summarizes the available data on the prevalence of HIV among the incarcerated people who inject drug users (PWIDs) which may support efficient implications of preventive and treatment measures.

#### **Methodology:**

We electronically examined published studies from inception to May 12, 2022, aiming to find articles that investigated the prevalence of HIV in imprisoned PWIDs. PubMed, Google Scholar, ERIC, and Cochrane Central were searched comprehensively with no restriction on language or time. All the observational studies investigating the prevalence of HIV in Asian prisoners with a control group of non-injecting drug users and an experimental group of PWIDs were included. The New-castle Ottawa scale was used for the quality assessment of the included studies.

#### **Result**

The literature search yielded 43,309 potential studies out of which 10 observational studies with a total number of 17,333 participants were enlisted to be analyzed in this meta-analysis. All the included studies had a low or moderate risk of bias except the case-control study which had a very high risk of bias. The pooled analysis showed a strong association between PWIDs and the risk of developing HIV [Odds Ratio (OR) = 14.51; 95% Confidence Interval (CI) = 6.66-31.64;  $p < 0.00001$ ]. Sensitivity analysis was performed by removing three studies, which resulted in a significant change in the result (OR = 6.40; 95% CI = 3.89-10.52;  $p < 0.00001$ ) and revealed a moderate heterogeneity of the included studies ( $I^2 = 53\%$ ,  $p = 0.05$ )

#### **Conclusion:**

This study concludes a strong association between incarceration intra-drug usage and the rate of HIV transmission. Results of this meta-analysis support the need for better implementation of harm reduction and HIV prevention and treatment programs in high-risk environments such as prisons. It also highlights the importance of conducting more studies in other regions of Asia to better understand the attitudes and risk factors associated with PWIDs/IDUs and HIV infection.

**Keywords:** HIV, Incarcerated, Drug Users, Asian



**PHCKMU2023-Infection-OP(A)06**  
**HOSPITALIZATION DUE TO COMIOGENIC DISEASES IN TERTIARY CARE**  
**HOSPITAL PESHAWAR PAKISTAN**

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**Abstract**

**Objective:** this study was conducted in order to evaluate the admissions due to cosmogenesis that affect the patient quality of life. The identification of comiogenic admissions and their possible solutions to achieve the optimal therapeutic outcomes of the patients.

**Material & Methods:** In this study the 32 days concurrent prescriptions was evaluated in Endocrinology department in Tertiary Care Hospital, Peshawar Pakistan. All of the patients with various diseases like diabetes mellitus, thyroid and Cushing syndrome were included and mostly focused on iatrogenic admissions. None of the discharged patients were excluded. Data collection and sample size The total number of 202 patients case histories were collected by WHO Nairobi 1985â€ recommended 30 prescriptions for sample per facility. The duration of data collection was from January-March 2019. The data was collected on official permission of hospital director and manager of pharmacy. In this study 3.36 prescriptions per day were collected. Every prescription was analyzed using WHO indicators as a standard for prescription review. The collected data documented by Microsoft word and analyzed and tabulated by Graph Pad Prism and Microsoft Excel. All the information collected with the consent of the concerned patient and were kept confidentially to avoid any loss or spread of information.

**Result:** The total numbers of 202 case histories were evaluated, at ward level in Endocrinology Department. The data contains both male 121 (59.9%) and female patients 81 (40%), (Fig 2). After reading their case histories (n=202), we found that 35 (17.3%) patients were hospitalized due to iatrogenic/comiogenic diseases, which were categorized into drug induced 24 (68.5%), instrumental (0) and parenteral induced 11 (31.4%). The comiogenic illness due to irrational/improper use of drugs were Cushing syndrome, Neutropenia, and Hypothyroidism. Lipodystrophy and parenteral lipodystrophy were observed due to subcutaneous use of insulin due to steroids.

**Conclusion:** In conclusive remarks, we would say that comiogenic illnesses are at peak due to self-medication, quackery practices and lack of qualified personals (pharmacist) in health care system especially in Pakistan. The health care system should be improved by selective competent personals for the concerned job, time to time training may be arranged to these health care providers.

**Key words:** Hospitalization, Comiogenic, Tertiary Care Hospital

**PHCKMU2023-Infection-OP(A)07**  
**PREVALENCE, DISTRIBUTION AND DETERMINANTS OF INTESTINAL  
TUBERCULOSIS IN ADULT INDOOR PATIENTS WITH ACUTE SMALL  
INTESTINAL OBSTRUCTION IN POPULATION OF PESHAWR DIVISION,  
PAKISTAN**

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**Abstarct**

**Objective:**RO-1: prevalence of intestinal TB in adult indoor ASIO population of Peshawar Division, Pakistan. RO 2-3: distribution of intestinal TB across the sex and age groups in adult indoor ASIO population of Peshawar Division, Pakistan. RO 4-5: association between intestinal TB and sex and age group in adult indoor ASIO population of Peshawar Division, Pakistan.**Material & Methods:** This cross-sectional study was conducted at Department of Surgery Peshawar Medical College, Peshawar, Pakistan from January 2019 to June 2020. The data was collected from its three affiliated hospitals; Mercy Teaching Hospital, Kuwait Teaching Hospital & Prime Teaching Hospital, Peshawar. 207 ASIO subjects were selected from population at risk consecutively. Sex, age groups and presence of ITB were variables. Prevalence and distribution were described by count, percentage and confidence intervals for proportion for population. Hypotheses for distribution were tested by chi-square goodness of fit and of association by chi-square test of association. **Result:** Out of 207 patients with ASIO, 128 (61.84%) were men and 79 (38.16%) women, 87 (42.03%) were in age group 18-40 and 120 (57.97%) in 41-60 years. Out of 207 patients with ASIO, 41 (19.81%) had ITB, while 166 (80.19%) had no ITB. Out of 41 ITB patients, 25 (12.08%) were men and 16 (7.73%) women, 17 (8.21%) in age group 18-40 and 24 (11.60%) in 41-60 years. The prevalence of ITB was similar to expected ( $p=.5695$ ). The distribution across sex ( $p=.00001$ ) was different and across age groups ( $p=.12501$ ) was similar to expected. Presence of ITB was not associated to sex ( $p=.8992$ ) and age groups ( $p=.9347$ ).**Conclusion:** Prevalence of intestinal TB in adult indoor acute small intestinal obstruction (ASIO) population of Peshawar Division, Pakistan was 19.81%. Prevalence was higher in men than women and higher in 41-60 years than 18-40 years age group population. Overall prevalence of intestinal TB was similar to expected. Observed distribution across sex was different and across age groups was similar to expected. Presence of intestinal TB was not associated to sex and age groups respectively.

**Keywords:** Prevalence, Distribution, Intestinal Tuberculosis

## PHCKMU2023-Infection-OP(A)8

### A systematic expansion of the Obstructive Lung Disease (OLD) Program in Pakistan

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### Abstract

**Objective:** To review the uptake and utilization of expanded OLD Program and identify challenges for future scale-up efforts.

**Material & Methods:** The expansion of OLD program was carried out in three steps; site assessment, equipment procurement and capacity building. Potential sites were visited in person to prime existing staff about the intervention and ensure a well-ventilated space for spirometry. Human resources (registered nurse) and equipment (hand-held spirometer, single-use spirettes, adequately ventilated rooms, and computer desktop facilities) were then secured. Training of the doctors for evidence-based diagnosis and management of OLD was done through e-learning modules including pre and post testing. OLD nurses were given online and hands-on training to perform and advise on spirometry. Nurses were also trained to provide inhaler education for home management of the disease and conduct PROMs questionnaires such as Asthma Control Test (ACT), COPD Assessment Test (CAT), and Modified Medical Research Council (mMRC) Dyspnea scale.

**Results:** The first site in OLD expansion plan was set-up in August, 2021 at Gurmani followed by Muzaffargarh in November, 2021. The other two sites, Lahore and Bhong, became operational in October, 2022. Since then, 35 doctors have been trained on asthma, COPD and inhalers online courses while 5 nurses received practical spirometry training. 2,063 patients have utilized program services in these areas including spirometry tests with 51% and 22% diagnosed with asthma and COPD respectively. 54% were prescribed inhaled medication by the doctor. 59% received inhaler education and PROMs were carried out in all patients. Moreover, 212 patients followed up as per their management plan. Follow-up rate in all four areas, where free medication is offered, was high. Challenges identified during the expansion process included; difficulty in recruitment of local staff in rural areas and acquisition of spirometers due to long procurement processes.

**Conclusion:** The OLD Program at IHHN was expanded using a three-step process and earned a positive uptake and utilization in underprivileged communities. We envision to replicate this approach to establish more sites throughout Pakistan, and positively impact current healthcare system in the country.

**Keywords:** Systematic Expansion, Obstructive Lung Disease, Challenges

## GENETIC CHARACTERIZATION OF THE DEFICIENCY IN IL-12 and IFN- $\gamma$ AXIS AMONG RECURRENT LEISHMANIASIS PATIENTS IN KPK

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### Abstarct

**Introduction:** Activation of macrophage and the communication between innate and adaptive immunity is mediated by IFN- $\gamma$  and IL-12 is important role in the control of intra cellular infections. The existence of mutations or deficiencies in the axis or congenic cause the primary immunodeficiency, leading to susceptibility of intracellular pathogens. **Objective:** To characterize the genetic deficiency in IL-12 and IFN- $\gamma$  among recurrent leishmania cases **Material and Methods:** For morphological characterization of parasite Giemsa stained smears were processed for the presence of amastigotes among both cases and controls while for molecular identification of pathogen, its DNA was analyzed by PCR and Gel Electrophoresis. The cytokine measurement of IL-12 was analyzed in response to BCG+INF- $\gamma$  by ELISA while surface expression and genetic analysis of IL12R $\beta$ 1 was evaluated by flow cytometry and DNA sequencing. For pathogenic analysis, Mutation Taster, PolyPhen-2 were used as pathogenicity prediction tools for the pathogenic prediction of the novel mutations. Data was analysis using SPSS version 22. **Result:** Out of total 48 patients, Genus specific kDNA and ssu Ribosomal PCR confirmed the presences of leishmaniasis in 24 patients. Investigation of IL-12R $\beta$ 1/IFN- $\gamma$  axis demonstrated no production of IFN- $\gamma$  by patients (P1-P4) whole blood cells when stimulated with BCG+IL-12. Surface expression of IL-12 gene confirmed the abnormality in gene. Four Patients with no demonstration of INF-  $\gamma$  production and abolished surface expression were analyze for IL12R $\beta$ 1gene by Sanger sequencing. The low production of IFN- $\gamma$  and IL-12R $\beta$ 1 surface expression, consequently led us to genetic analysis of IL12R $\beta$ 1gene. The genomic DNA of IL12RB1 of the 4 patients were subjected to genetic analysis by Sanger sequencing. In patient 1, nonsense mutation c.198T>G was observed in exon 4 of IL12R $\beta$ 1 gene. c.198T>G mutation causes a single amino acid change from Tyrosine (Y) to stop codon in IL12R $\beta$ 1 at position 66 (p.Y66\*). Similarly In patient 2, substitution mutation was observed in exon 6. c.485C>T mutation causes a single amino acid change from Proline (P) to Leucine (L) in IL12R $\beta$ 1 at position 162 (p.P162L). In patient 3, nonsense mutation c.805G>T was observed in exon 10 of IL12R $\beta$ 1 gene. c.805G>T mutation causes a single amino acid change from Glutamic acid (E) to stop codon in IL12R $\beta$ 1 269 (p.E269\*) while in patient 4, nonsense mutation c.805G>T was observed exon 10 of IL12R $\beta$ 1 gene. c.805G>T mutation causes a single amino acid change from Glutamic acid (E) to stop codon in IL12R $\beta$ 1 at 269 (p.E269\*). Mutation variants were not found in ExAC and 1000G which confirmed the novelty of these mutations. **Conclusion:** Our data expands the clinical and genetic spectrum associated with IL12RB1/ IFN- $\gamma$  deficiency. It concluded that recurrent infections may exist due to defaective IL-12R $\beta$ 1/IFN- $\gamma$  axis which not only effect the quality of patient care but also increase the chances of complications including infectious disease so a mandatory screening programme should be adopted to evaluate these pathway.

**Key words:** Genetic Defects, IL-12 , INF-  $\gamma$  Axis, Recurrent Leishmaniasis, Sequencing

**What does it take to deliver in-school adolescent girls nutrition intervention during the challenges of COVID-19?: Lessons from a pilot WIFAS project in Punjab Province, Pakistan.**

Asim Shehzad, Shabina Raza, Anjali Bhardwaj, Yozaan Shahid  
[yshahid@nutritionintl.org](mailto:yshahid@nutritionintl.org)

**Abstract**

**Introduction:**

According to the National Nutrition Survey Pakistan (2018), 56.6% of adolescent girls had anemia and 11.8% were underweight. Despite recent prioritization of adolescent nutrition in National Nutrition Policy and multisectoral nutrition strategies, no substantial nutrition programming is yet implemented. This abstract documents lessons learned from the implementation of a demonstration pilot project, especially in addressing challenges during COVID-19 pandemic.

**Material and Methods:**

A Knowledge Attitude Practice (KAP) survey conducted in 2019, showed that symptoms of anaemia were common but knowledge regarding anaemia was inadequate amongst adolescents, mothers, and teachers. Based on this, an operational framework for pilot project, including supplementation guidelines, supply chains, with monitoring & reporting system for WIFAS was developed and implemented in 2020.

**Results:**

200 health workers and 500 teachers trained on gender-sensitive WIFAS and BCI delivery, addressing queries from adolescents and reporting. 100 Peer Educators and influencers were trained to engage adolescents, dispel fears, and promote compliance. Program strategy included multi-sectoral collaborations, innovations, including religious leaders, and essay competitions among students. Activities supported by evidence-based BCI helped to sustain WIFAS as adolescents intermittently returned to exchange school assignments during the pandemic.

During the first round (February-May 2021), 6988 girls, 99%, from 50 schools received Iron Folic Acid (IFA) tablets as per WHO recommendations. Periodic reviews with stakeholders demonstrated both government and community commitment to continue and expand this program.

**Conclusion:**

Although initiated in a difficult pandemic period, the pilot project demonstrates that multisectoral collaboration is a pre-requisite for successful adolescent nutrition interventions. Based on findings, the WIFAS supplementation strategy has been endorsed by the government, and plans to scale up after the completion of the pilot is underway.

**Keywords:** School. Adolescent Girls. Nutrition Intervention, COVID-19

**ISSUES FACED BY PATIENTS WITH DIABETES DURING COVID-19 PANDEMIC  
VISITING DIABETES HOSPITAL AND RESEARCH CENTER, PESHAWAR: A  
PHENOMENOLOGICAL QUALITATIVE STUDY**

Hessam Ul Haq, Safat Ullah, Fayaz Ahmad, Khalid Rehman

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**Abstract**

**Objective:** To explore the issues faced by patients with diabetes during the COVID-19 pandemic visiting diabetes hospital and research center, Peshawar.

**Materials and Methods:**

Design: Phenomenological qualitative study

Settings: Diabetes Hospital and Research center, Peshawar

Study Population: Diabetic patients who have been diagnosed before 2020

Sample size: 14 in-depth interviews (30-35 minutes. Data saturation was noticed at 12th IDI)

Sampling Strategy: Purposive sampling technique with maximum variation

Study Tool: Topic Guide developed and piloted prior to interviews

Ethical approval: Taken from the Khyber Medical University, Ethics review board

Permission: Taken from Director of Diabetes hospital and Research center

Informed Consent: Taken from the participants for inducting into the study and audio recording of the interviews, Interviews were audio recorded and transcribed as verbatim.

**Results:** UNCERTAINTY IN RECEIVING HEALTH NEEDS (BEWILDERED HEALTH SYSTEM): People living in villages tried to avoid going to the cities during COVID-19 because of fear of being infected from COVID in crowded areas. During COVID-19 people could not access the hospitals easily because there was limited transportation due to lockdown. Due to closure of Afghan border, Afghan people faced problems in getting treatment during COVID-19 because the border was closed, and they could not access the hospital. KNOWLEDGE OF DIABETIC PATIENTS ABOUT COVID-19: People were aware of the COVID-19 symptoms, preventive measures and risks. These patients received information through different sources including news, social media and call ringtones, DIABETES AND COVID-19: facts and perceptions: Participants were confined to homes due to lockdown because they were not allowed to go outside except for some urgent work and everything was closed. Some participants could not do their job during COVID-19 due to which they faced financial problems. That's why they could not pay their house rents and children's school fees. Some people struggled to buy medicines for their illness (diabetes).

**Conclusion:** The results of this study showed that COVID-19 had an impact on daily life. Diabetes patients were aware of the associated risk for being more prone to COVID-19 infection. They received information regarding risk and preventive measures, through social and electronic media.

**Keywords:** Issues, Diabetes, Covid-19 Pandemic

**PHCKMU2023- Diabetes & Nutrition-OP(B)01**  
**The short-term impact of high energy nutritional supplements on energy balance in  
underweight primi-gravidae; a randomized controlled trial**

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**Abstract**

**Objective:** To determine the impact of high energy nutritional supplements on appetite, appetite regulators, energy intake and macronutrients level among underweight primi gravidae.

**Material and methods:** This study was a single blinded randomized controlled trial that included 37 underweight primigravida. The participants were randomly allocated to receive either high energy nutritional supplement (HENS) or Placebo. They were requested to come for the main trial in the fasting state. Appetite questionnaires were filled & blood samples were obtained in the fasted state, at 30, 60, 120, 210 and 270 minutes to measure blood glucose, Insulin, Peptide YY and Cholecystikinin. Breakfast and lunch was served at 30 minutes and 210 minutes after supplementation respectively.

**Results:** Energy intake after taking HENS was significantly higher than Placebo (HENS: 283.25+102.650kc, Placebo: 97.65+62.291kc, p=0.000). The mean protein (HENS: 7.23+2.89g, Placebo: 1.79+0.88g; p=0.00) and fats intake (HENS: 17.92+4.79g, Placebo: 0.36+0.16g; p=0.00) was significantly higher in HENS group after supplementation. The subjective appetite perceptions for hunger and desire to eat were significantly lower (calculated as AUC, p=0.000) before lunch in the HENS group. The plasma concentrations of appetite hormones corresponded to the appetite perceptions & were significantly higher after supplementation (HENS: 44.68+10.16pg/ml, Placebo: 32.83+5.95pg/ml; p=0.00), breakfast (HENS: 67.00+9.53pg/ml, Placebo: 54.05+7.90pg/ml; p=0.00) & lunch (HENS: 104.84+13.05pg/ml, Placebo: 90.66+9.72 pg/ml; p=0.001) for PYY while CCK (HENS: 5.40+2.90 ng/L, Placebo: 3.62+1.40 ng/L; p=0.025) & Insulin (HENS: 9.64+5.18 uU/ml, Placebo: 5.04+1.93uU/ml ; p=0.001) in the post supplementation period only.

**Conclusion:**

We conclude that high energy nutritional supplement have short-term suppressive effect on energy intake and appetite.

**Keywords:** short-term, high energy nutritional supplements, underweight, primi-gravidae

**Effects of lipid based Multiple Micronutrients Supplement on the birth outcome of underweight pre-eclamptic women: A randomized clinical trial**

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**Introduction:**

Maternal under nutrition and low birth weight babies are among the common tragedies of developing countries like Pakistan. Preeclampsia and its significant association with fetal growth restriction due to spiral arteries remodeling and trophoblastic invasion decreases nutritional supply to growing fetus added by maternal under nutrition. This study was designed to see the effects of lipid based nutritional supplements for pregnant and lactating women LNS-PLW on maternal and fetal outcome of pre-eclampsia.

**Material and Methods**

Sixty underweight pre-eclamptic women were randomly assigned into two study Groups from April 2018 to December 2019 at the antenatal units of the tertiary Health care facilities of Lady Reading Hospital, Hayatabad Medical Complex Peshawar and Civil Hospital Matta Swat, KPK Pakistan in a randomized clinical trial. Participants were on routine drugs for pre-eclampsia and Iron and Folic Acid (60mg, 400  $\hat{I}$ ¼g) daily, while participant of Group-2 (n=30) received one sachet of Lipid based nutritional supplement for pregnant and lactating women LNS-PLW in addition daily till delivery. The birth weight, gestational age, head-circumference, and birth length of babies were measured.

**Results**

The significant improvement found in the birth weight (p-value 0.003), gestational age (p-value 0.006), head circumference (P-value of 0.0006) and birth length (P-value of 0.0017) of babies of Group-2 women. We observed that addition of Lipid based nutritional supplement for pregnant and lactating women LNS-LPW improved the birth outcome in underweight women of pre-eclampsia.

**Conclusion**

The Prenatal supplementation of Lipid based nutritional supplement for pregnant and lactating women LNS-PLW can improve birth weight, gestational age, length and head circumference of babies of underweight preeclamptic women.

**Keywords:** Lipid, Multiple Micronutrients Supplement. Birth Outcome, Underweight Pre-Eclamptic Women



# 3<sup>rd</sup> International Public Health Conference

## at Khyber Medical University

### 21<sup>st</sup> – 23<sup>rd</sup> February, 2023

**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

<b>Day 1 – (Feb 22<sup>nd</sup>, 2023)</b>		
<b>08:00am to 09:00am</b>	<b>REGISTRATION</b>	
<b>1st Plenary Session (09:00 am to 13:00 pm)</b>		
<b>Moderator: Dr. Syeda Fatima Jamal &amp; Dr. Muhamad Fayaz</b>		
<b>Recitation from Holy Quran</b>		
09:00 am to 09:30 am	Opening of the conference	Prof Zia Ul Haq Vice Chancellor KMU
	Introduction to the conference	Dr. Saima Afaq Director IPH&SS, KMU
<b>Non Communicable Diseases (Diabetes, Mental health, Respiratory &amp; CVD)</b>		
09:30 am to 9:50 am	NCDs in children and adolescents, a global challenge	Keynote speaker 1 Prof. Zulfiqar Bhutta (online)
9:50 am to 10:10 am	NCDs in the context of UHC in Pakistan	Key note speaker 2 Zafar Mirza Prof at shifa and EX advisor for health/ Ex Director WHO
10:10am to 10:30 am	Early Life prevention of NCDs and Use of SIAs in data collection for NCDs.	Dr. Bilal Imtiaz UNICEF HQ New York
10:30 am to 11:00 am	<b>Tea Break (Poster viewing, outside the hall)</b>	
11:00 am to 11:20am	Leveraging available infrastructure to control CVD risk factors	Dr. Zainab Samad Prof and chair department of Medicine at Agha Khan University.
11:20 am to 12:00 pm	Panel discussion CVD	Dr. Ali Raza, (moderator) Dr. Zainab Samad Prof. Dr. Hafeezulah Dr. Amber Ashraf Dr. Shahkar Dr. Abdul Jalil Khan
12:00 pm to 12:30 pm	Question answer session	
12:30 pm to 1:30 pm	Lunch and prayers break	
<b>2<sup>nd</sup> Plenary Session (14:00 pm to 16:00 pm)</b>		
<b>Moderator: Dr. Kashif Sameen</b>		
<b>Non-Communicable Diseases</b>		
1:30 pm to 1:45 pm	Public health interventions to combat Multimorbidity in mental health	Prof. Dr. Saeed Farooq (Keele University. UK)
1:45 pm to 2:10 pm	Panel discussion Mental health	Dr. Firaz (Moderator) Prof. Dr. Saeed Farooq Dr. Mukhtar ul Haq (LRH) Dr. Wajid Ali Akhonzada (HMC) Dr. Muhammad Imran Khan (KTH) Dr. Mirrat gul Dr. Aftab Alam (mental health)

# 3<sup>rd</sup> International Public Health Conference

## at Khyber Medical University

### 21<sup>st</sup> – 23<sup>rd</sup> February, 2023

**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

2:10 pm to 2:20 pm	Question answer session	
2:20 pm to 3:00 pm	<b>Khyber Medical University ongoing public health projects – 6 mins each</b> <ol style="list-style-type: none"> <li>1. Dr. Abdul Jalil Khan (HOPE)</li> <li>2. Lisa (SHPI)</li> <li>3. Dr. Saima Afaq (GCF) / DiaDem</li> <li>4. Dr. Zohaib (control)</li> <li>5. Dr. Khalid Rehman (EMPATHI)</li> <li>6. Dr. Zia Ul haq (Stunting)</li> <li>7. Summary (Zainab Samad)</li> </ol>	
19:00 pm to 21:00 pm	Launch of HOPE research project	

<b>Poster Presentations 10:00 am to 2:30 pm</b>		
<b>Poster Presentations (A) 10:00 am to 2:30 pm</b>		
<b>Judges: Dr. Tauseef Aman &amp; Dr. Babar Ahad</b>		
PP A1	Israr Khan	Role of acute kidney injury prevention checklist in reducing the vancomycin induced acute kidney injury (AKI)
PP A2	Ihsanur Rahman	Association Between Use Of Smokeless Tobacco (Naswar) And Coronary Artery Disease: Case Control Study
PP A3	Salman Zahir	Assessment Of Splenic Function Among Transfusion Dependent Thalassemia Patients
PP A4	Salman Zahir	Assessment Of Splenic Function Among Transfusion Dependent Thalassemia Patients
PP A5	Isra Irfan	Antibiotics Prescription Practices by Dentists lead to Anti-Microbial Resistance
PP A6	Sareer Haider	The Effects of Atypical Uterine Bleeding on the Patients
<b>Poster Presentations (B) 10:00 am to 2:30 pm</b>		
<b>Judges: Dr. Sami Saleh &amp; Dr. Iftikhar Uddin</b>		
PP B1	Zahid Sarfaraz	Effects Of Cannabis Sativa Extract And Its Combination With Vitamin-C Administration On Histomorphological Changes In The Testicular Tissue Of Male Mice
PP B2	Darya Khan	Blood Hemoglobin Level In Association With The Consumption Of Fortified Wheat Flour Among Adolescent Girls In District Nowshera
PP B3	Ihtesham ul haq	Exploring The Views Of Dental Support Staff On Tobacco Cessation And Related Services In Pakistan-A Qualitative Study
PP B4	Dr Imran Ullah	Distribution of Deliberate Self-Poisoning By Socio-Demographic Factors, Precipitating Events, Type Of Substance And Mortality In Population Of Hazara Division, Pakistan
PP B5	Urooj Aftab	Patient Satisfaction With Health Care Services At Secondary Health Care Hospitals Of Khyber Pakhtunkhwa (KP)
PP B6	Israr Khan	Evaluating the Compliance of Vancomycin Therapeutic Drug Monitoring Protocol in Adults: Retrospective Study in a Tertiary Healthcare Facility in Pakistan
<b>Poster Presentations (C) 10:00 am to 2:30 pm</b>		
<b>Judges: Dr. Sofia Kabeer &amp; Dr. Nadia Khaleeq</b>		
PP C1	Rabeea Sadaf	Effectiveness Of Nifedipine In Treatment Of Spontaneous Preterm Labour
PP C2	Maryiam Rahim	Mixed-methods E-health readiness assessment of healthcare providers in Khyber Pakhtunkhwa.

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**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

PP C3	Yousaf Jamal Mahsood	Subspecialty Interests Among the Ophthalmology Residents: A Mixed-Methods Study
PP C4	Dr Mamoon Rafi	Oral-Systemic connection
PP C5	Kinza Zeeshan	Advocacy on Tobacco control via Community Engagement
PP C6	Sabah	Appraisal of knowledge, attitude and practices regarding COVID-19 prevention among Students of Allied Health Professionals
<b>Poster Presentations (D) 10:00 am to 2:30 pm</b> <b>Judges: Dr. Naveed Sadiq &amp; Dr. Bushra Iftikhar</b>		
PP D1	Shujat Faqir	Acceptability Of Ready To Use Supplementary Food Among 6-23 Months Of Age Children In Upper Kurram, Khyber Pukhtunkhwa
PP D2	Dr. Yozan Shahid	What does it take to deliver in-school adolescent girls nutrition intervention during the challenges of COVID-19?: Lessons from a pilot WIFAS project in Punjab Province, Pakistan.
PP D3	Aliya Ayub	Clinical patterns of different variants of COVID-19 in Khyber Pakhtunkhwa: A cross Sectional Survey
PP D4	DR AZIZA ALAM	Burnout Syndrome Among The Health Care Professionals In Medical And Surgical Ward In Covid-19 Pandemic; A Cross-Sectional Study Of Peshawar
PP D5	Nasreen Kishwar	Sublingual Misoprostol: A rational option for Medical management of miscarriage as outpatient.
<b>Poster Presentations (E) 10:00 am to 2:30 pm</b> <b>Judges: Dr. Shaista Noreen &amp; Mr. Muhammad Ibrahim</b>		
PP E1	Yasir Rehman Khattak	Evaluation of pain after extraction of impacted mandibular third molar with the use of intravenous nalbuphine before surgery: a randomized control trial
PP E2	Dr. Muhammad Mushtaq	"Satisfaction of admitted patients and associated factors in government medical teaching institutes Peshawar Khyber Pakhtunkhwa, Pakistan: a cross-sectional analytical study"
PP E3	Irfan Ullah	Self-reported anxiety, distress, depression, and suicide ideation among adults during the COVID-19 lockdown in Pakistan
PP E4	Saeeda Akbar	A Comparative Study on Quality of Nurses Work Life at Public and Private Sector Tertiary Care Hospitals of Peshawar
PP E5	Sheh Noor	Assesing Fear Of Missing Out And Its Association With Social Media Addiction Among Pakistani Youth; Cross Sectional Study Abstract
<b>Poster Presentations (F) 10:00 am to 2:30 pm</b> <b>Judges: Dr. Sajid &amp; Dr. Sheraz Fazid</b>		
PP F1	Muhammad Hamad khan	Prevalence of hypertension and perceived stress among employed and unemployed women of Khyber Pakhtunkhwa (KP), Pakistan
PP F2	Hamzullah khan	Severity Of Inflammation In Covid-19 Patients With Diabetic Co-Morbidities In A Hospital Based Study
PP F3	Dr Mehdi Maqsood	COVID 19 vaccine acceptability among pregnant women in Peshawar; A Cross-Sectional study.
PP F4	Muhammad Hamad khan	Prevalence of hypertension and perceived stress among employed and unemployed women of Khyber Pakhtunkhwa (KP), Pakistan
PP F5	Qurratul Ain Jamil	Machine Learning Based Fast Screening Approach for Thyroid Diagnosis

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**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

# 3<sup>rd</sup> International Public Health Conference at Khyber Medical University 21<sup>st</sup> – 23<sup>rd</sup> February, 2023

**“Breaking the Manacles: NCDs control through Universal Health Coverage”**

<b>Day 2 – Conference Day (Feb 23<sup>rd</sup>, 2023)</b>		
<b>Plenary Session: Innovations in Health Systems for UHC in NCDs Control (09:00 am to 11:20 pm) Moderator Dr. Zohaib Khan &amp; Dr. Saima Aleem</b>		
Time	Presentation title	Presenter
08:55 am to 09:00 am	Opening	Dr. Saima Aleem
09:00 to 9:20	Social Health Protection Initiative journey in Khyber Pakhtunkhwa	Dr. Riaz Tanoli (Director SHPI) Dr. Erum Shiekh (m4h)
9:20 to 9:40	How uncontrolled infectious diseases are responsible for increased disease burden of chronic diseases	Dr. Rana Jawad Epidemiologist and international expert on International health regulations
9:40 to 10:00	Multi-morbidity, the PHC perspective	Dr. Abdul Jalil Khan Family physician consultant
10:00 to 10:40	Panel discussion: Multi-morbidity	Prof. Akhter Sherin (moderator) Dr. Abdul Jalil Khan Prof. Arshad Javaid Prof. Rana Jawad Dr. Sameen Siddiqi Dr. Saima Afaq Dr. Irum Shaikh
10:40 to 11:00	Questions Answer	
11:00 to 11:20	<b>Break</b>	
<b>Session of the President of Pakistan Dr. Arif Alvi Moderator: Dr. Zohaib Khan</b>		
11:30 to 11:32	Arrival of the chief guest	
11:32 to 11:35	National Anthem	
11:35 to 11:38	Tilawat	Qari Abdur Rauf Madani
11:38 to 11:43	Welcome remarks	Prof. Dr. Zia Ul Haq (VC KMU)
11:43 to 11:55	Current status of diabetes care in Pakistan	Prof. Abdul Basit
11:55 to 12:07	Systems Approach to Tackling the Burden of NCDs in Pakistan	Prof. Sameen Siddiqi
12:07 to 12:08	Launch of Institute of mental health and well being	H.E Dr. Arif Alvi (President of Pakistan) Haji Ghulam Ali Governor Khyber Pakhtunkhwa Muhammad Azam Khan Chief Minister Khyber Pakhtunkhwa Prof. Dr. Zia Ul Haq (Vice Chancellor KMU)
12:08 to 12:28	Remarks from the Chief Guest	H.E. Dr. Arif Alvi (President of Pakistan)
12:28 to 12:30	Group photo outside the hall	
	<b>Lunch and prayer break till 1:30</b>	

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<b>Diabetes Plenary session (1:30 to 3:10)</b>		
<b>Moderator: Dr. Kashif Ali Sameen</b>		
1:30 to 2:00	Plenary Diabetes Mellitus	Dr. Abdul Jalil Khan (moderator) Prof. Dr. Abdul Basit Dr. Muhammad Abrar (LRH) Dr. Arshad Hussain Dr. Hina Jawaid (UHS)
2:00 to 2:10	Questions Answer	
2:10 to 2:40	Safeguarding Healthcare in Khyber Pakhtunkhwa	Dr. Shaheen Afridi (Chief HSRU) Dr. Mirwais Khan (ICRC) Dr. Ataullah (HSRU, KP) Dr. Shiraz Sheikh (JSMU)
2:40 to 2:50	Questions Answer	
2:50 to 3:10	<b>Prize distribution and Closing ceremony</b>	Prof Zia Ul Haq Vice Chancellor, KMU

# 3<sup>rd</sup> International Public Health Conference at Khyber Medical University 21<sup>st</sup> – 23<sup>rd</sup> February, 2023

“Breaking the Manacles: NCDs control through Universal Health Coverage”

Organizations supporting the conference

## International Medical Corps

### *From Relief to Self-Reliance*



International Medical Corps is a global, humanitarian, non-profit organization dedicated to saving lives and relieving suffering through healthcare training and relief and development programs. Established in 1984 by volunteer doctors and nurses, International Medical Corps is a private, voluntary, non-political, and non-sectarian organization.

Our mission is to improve the quality of life through health interventions and related activities that strengthen underserved communities, based on the vision of providing relief, rebuilding communities, and enabling self-reliance.

We deliver emergency medical and related services to those affected by conflict, disaster and disease, no matter where they are, no matter what the conditions. We also train people in their communities, providing them with the skills they need to recover, chart their own path to self-reliance and become effective first responders themselves.

International Medical Corps has been at the forefront of response to all major emergencies in Pakistan including 2005 earthquake in KPK; the conflict affected IDPs in 2008-14, devastating floods in 2010, 2011 & 2012, earthquake in 2014, COVID-19 response in 2020-21 and ongoing response to the recent floods in 2022 in Khyber Pakhtunkhwa, Sindh, and Baluchistan.

We have been addressing gender-based violence (GBV) in Pakistan since 2008 and was the first organization to fight GBV with a comprehensive, community-based strategy in refugee villages in Khyber Pakhtunkhwa (KP) province. Our GBV program provides services to more than 100,000 people and is integrated with mental health and psychosocial support (MHPSS) interventions.

In addition, our teams helped form male and female gender-support groups in nine Afghan refugee villages, which educate community members about how to identify and prevent GBV and provide basic counseling and referral services to survivors.

As a first emergency responder organization, we also dealt with Covid-19 pandemic through launching our programme in Peshawar where we vaccinated 11,442 people against COVID-19 throughout the district in 2021. In addition to two vaccination centers, 12 mobile vaccination teams traveled to villages, schools, colleges, and universities.



*A doctor of International Medical Corps giving medicine to a woman in a flood affected community of district Charsadda, Khyber Pakhtunkhwa province, Pakistan.*

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## “Breaking the Manacles: NCDs control through Universal Health Coverage”

We helped our partners establish high-dependency units and equipped intensive care units (ICUs) with essential medical equipment in more than 300 health facilities dealing with outbreaks of infectious disease and an average daily turnover of 2,500 patients. We also distributed PPE, disinfectants, and medical equipment, including non-medical items, to provide protection against the spread of the virus and enable normal operations of other essential services, such as outpatient consultations and other essential primary care level services, to improve the response capacity of frontline and multidisciplinary responders.

Currently, we are responding to the Pakistan 2022 floods through supporting the Department of Health in Khyber Pakhtunkhwa and Sindh provinces. Our response is based on the deployment of 11 mobile medical teams. These teams provide medical assistance through consultations and essential medicines for a variety of conditions, including diarrhea, acute respiratory infections, malaria, skin and eye infections, snake bites and typhoid. We are also supporting the public health sector for system strengthening through provision of medical supplies.

We have also begun gender-based violence (GBV) and mental health and psychosocial support (MHPSS) services in affected communities in Balochistan and Sindh. The aim is to help them cope and recover from the affects of floods.

In the Dadu and Mirpur Khas districts of Sindh, we are collaborating with our local partner, the Association for Water, Education and Renewable Energy, to carry out Water, Sanitation and Hygiene (WASH) initiatives including provision of clean drinking water, construction of pit latrines and awareness raising.



*A beneficiary getting vaccinated against Covid-19 by our health staff in Peshawar*



*Our dispenser gives away medicine to an individual in flood-affected community of Mirpurkhas district, Sindh province*

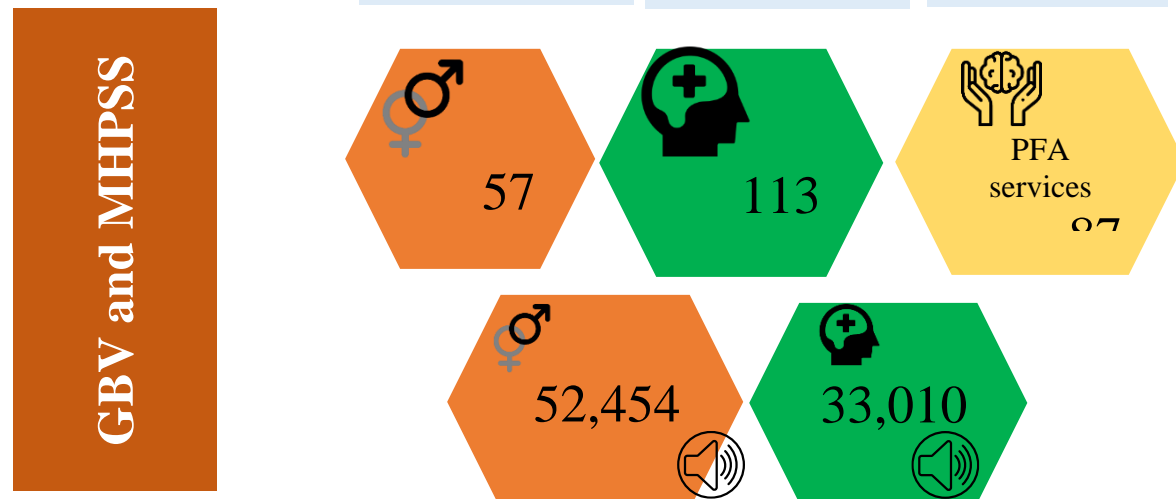
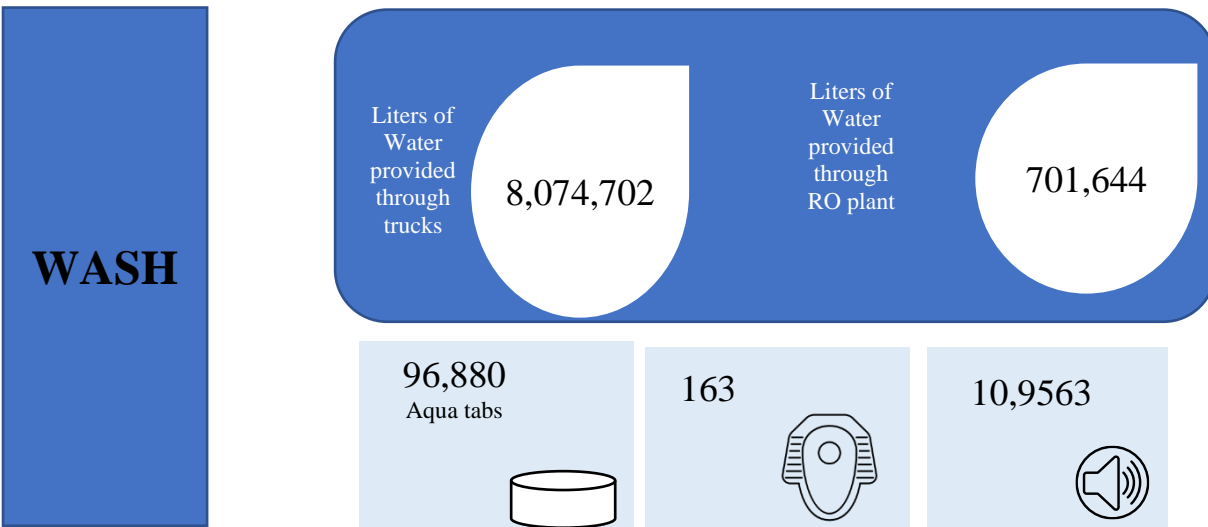
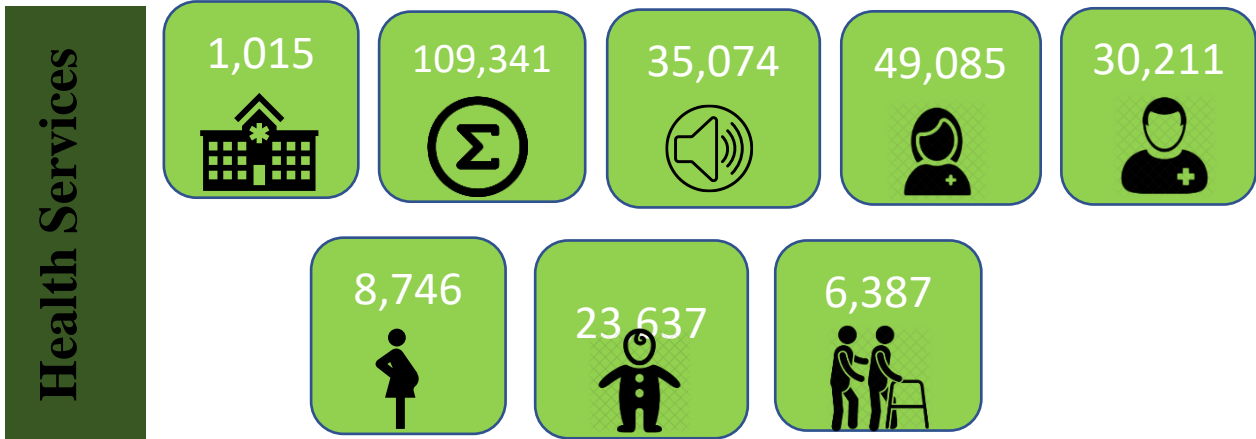
International Medical Corps will continue to support the affected communities for their rehabilitation and resilience through provision of healthcare, WASH and GBV as well as MHPSS services while working in close collaboration with public and private sectors.



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## Flood Emergency Response Beneficiary Outreach



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## The International Committee of the Red Cross in Pakistan



# ICRC

The International Committee of the Red Cross (ICRC), is a private international organization found in 1863, is the world’s largest and oldest humanitarian organization with its headquarters in Geneva, Switzerland. It has been working in Pakistan since 1947, when it helped the government to establish refugee camps during the Partition.

At present, the ICRC is working in over 100 countries. Its humanitarian mandate stems from the Geneva Conventions of 1949 signed by 196 countries, including Pakistan. We help people around the world affected by armed conflict, other situations of violence and humanitarian emergencies by protecting their lives and dignity and to relieve their suffering, often with our Red Cross and Red Crescent partners. We also seek to prevent hardship by promoting and strengthening humanitarian law and championing universal humanitarian principles. The ICRC has been present in Peshawar since 1980 when it provided relief and medical assistance to the victims of Afghan war. The ICRC Headquarters Agreement with the Government of Pakistan was signed in 1994.

Currently in Pakistan, the ICRC is reaching out to people in need through developing local partnerships and work as a force multiplier, create communities of concern and teach best practice. In partnerships with credible national organizations, the ICRC is working to bring real and long-term sustainable change in the fields of reuniting separated family members, improving health-care services, implementing Physical Rehabilitation Program (PRP), collaborating with Pakistan Red Crescent Society (PRCS), community-based risk education, capacity building of law enforcement agencies, promoting International Humanitarian Law (IHL) and forensics.

The ICRC is collaborating with the Health Department Khyber Pakhtunkhwa to improve healthcare services in the province. This involves support to staff capacity building, infrastructural changes, provision of medical supplies, consumables, and equipment; establishment of medical guidelines and standard operating procedures, planning and preparedness for mass casualty, infection prevention and control measures. The supported hospitals include Lady Reading Hospital Peshawar, District Headquarter (DHQ) hospital Bajaur, DHQ hospital Parachinar, Civil Hospital Jamrud, and Basic Health Unit (BHU) Karamna, BHU Ajab Talib, BHU Burki, and BHU Teri Mengal. In partnership with the Department of Health Khyber Pakhtunkhwa the ICRC is striving to improve quality of healthcare services in the province in terms of capacity building, infrastructural modifications, provision of medical and non-medical equipment, and life-saving medications. Health Care in Danger is a global initiative of the ICRC aimed at affording better protection to health professionals and their patients. A research study on “Violence Against Health-Care Workers” was launched in 16 cities of Pakistan with the objective to determine types, magnitude, and factors of violence against healthcare workers, and in-practice policies for protection of healthcare workers. Promoting and strengthening IHL is an integral component of the ICRC’s mandate. The ICRC is working with the Khyber Pakhtunkhwa Police to raise capacity of the Police Officers in areas like public order management, First Aid, and safe handling of explosive. The ICRC in Khyber Pakhtunkhwa continued to purchase various food and non-food items and services from the local market to respond to global humanitarian needs in Afghanistan, Iraq, Syria, Jordan, Libya, Yemen, Kenya, Ivory Coast, Sudan, Ethiopia, Nigeria, Cameroon, UAE, Ukraine, and Russia. The ICRC provides financial and technical support to the provincial branch of PRCS Khyber Pakhtunkhwa in 16 district branches in Kohat, Bannu, Lower Dir, Dera Ismail Khan, Bajaur, Mohmand, Kurram, Chitral, Swat, Kohistan, Khyber, Mansehra, Hangu, Orakzai, South and North Waziristan for humanitarian response.

In the field of Physical Rehabilitation, the ICRC is working in close coordination with the Health Department Khyber Pakhtunkhwa and other local partners to support 11 physical rehabilitation centers across the province. Under this

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program, the ICRC provides a range of services to persons with physical disabilities to improve their mobility and ensure societal inclusivity through various interventions which includes physiotherapy sessions, provision of wheelchairs and postural support chairs, walking aids (crutches and walking frames), treatment for children with clubfoot and specialized trainings on various physical rehabilitation disciplines.

The ICRC signed a Memorandum of Understanding (MoU) with the Complex Emergency Wing (CEW) of the Provincial Disaster Management Authority with an aim to promote bilateral cooperation to address the needs of the civilian population affected by humanitarian emergencies in Newly Merged Districts of the Khyber Pakhtunkhwa as well as to aid capacity building of CEW and its partners in community risk education. Furthermore, the ICRC in close collaboration with national societies around the world, including the PRCS, is working to help trace people who have been separated from their families, exchange messages and reunite them whenever possible. Another important activity of the ICRC is Risk Awareness and Safer Behavior program which is aimed at reducing risk to civilians associated with unexploded ordnance and other explosive remnants through raising awareness, promoting safe behavior and technical support to the relevant local institutions. In Khyber Pakhtunkhwa, the ICRC implements the RA/SB program through PRCS in eight (08) districts.

The ICRC is coordinating with the Armed Forces of Pakistan by offering a wide range of dissemination activities to the Army, Navy and Air Force ranging from one-day seminars to certificate courses on IHL to trainings of the three services, including war colleges. MoUs were signed with the Centre for International Peace and Stability at National University of Science & Technology to work on the applicability of IHL to UN peacekeeping operations.

For more information visit our website: [www.icrc.org](http://www.icrc.org)

Follow the ICRC on [facebook.com/ICRCpk](https://www.facebook.com/ICRCpk)

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## Association for Community Development

ACD is a non-governmental humanitarian organization established in the year 2000, registered in Pakistan under the societies Act XXI of 1860 and with the Khyber Pakhtunkhwa Charity Commission, Government of Khyber Pakhtunkhwa.

ACD has a rich history of managing Public Health Projects in collaboration with provincial and national health programmes. Our core focus has been TB DOTS, MDR TB management, Malaria prevention, care and control and Harm Reduction for People Living with HIV/AIDS. Our interventions are coordinated with Public Sector Health Programmes and willing private health sector partners. All interventions are implemented as per National Health Guidelines of Government of Pakistan. We have worked in Khyber Pakhtunkhwa (KP), the Merged Tribal Districts of KP, Balochistan and Gilgit Baltistan.

### Area of Work

ACD has broad based objectives and expectations to get involved in multidisciplinary interventions for the benefit of its target communities; however, currently it, is working in the following areas of its interest.

### Ongoing Projects

ACD is



implementing the TB DOTs project for sensitive TB in 18 districts of KP by engaging 963 private healthcare providers, 31 private hospitals and 105 private laboratories. Multi-drugs Resistance TB project in being implemented in Five (05) tertiary care hospitals in KP province.

### Completed Projects

In the past, the organization implemented projects on TB, Malaria and HIV/AIDs in the province for host and refugee populations.

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## Collaboration and Partnerships

Organization has worked with the following government and non-government partners.



## Pictures of Different Events



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## Nutrition International



Nutrition International is a global nutrition organization headquartered in Ottawa, Canada. For 30 years, we have focused on delivering low-cost, high-impact, nutrition interventions to people in need. Working alongside governments as an expert ally, we combine deep technical expertise with a

flexible approach, increasing impact without increasing complexity or cost. In more than 60 countries, primarily in Asia and Africa, Nutrition International nourishes people to nourish life.

In Pakistan NI is working from past two decades, working closely with government in different programs.

**Maternal Newborn Child Adolescent Health and Nutrition (MNCAHN) Program:** NI is implementing MNCAHN program in all four provinces of Khyber Pakhtunkhwa. We are working in our core model districts in MNCAHN program focusing on Maternal Anemia, Adolescent Anemia, Preterm/Low Birth Weight Babies.

Advancing Maternal Malnutrition through NI is supporting government on updated evidence generation related to prevention of maternal anemia. **For prevention maternal anemia of Introduction of Multi Micronutrient Supplementations having 15 essential micronutrients and implementation research at District Swabi of Khyber Pakhtunkhwa.** NI signed a tripartite MoU with Department of Health Khyber Pakhtunkhwa and Nutrition Wing Ministry of Health. TWG also formed as core and extended one having representation from all provinces and key organizations.

**Weekly Iron Folic Acid Supplementation WIFAS** Pilot project is also being implemented under umbrella of MNCAHN program. In Pakistan more than 50% adolescent girls are anemic (NNS 2018), so in light of Pakistan Adolescent Supplementation Strategy we are working on piloting WIFAS program at three provinces of Pakistan. Nutrition Wing Ministry of Health, Provincial Health Departments and Education Departments are key stakeholders. Currently WIFAS program is being piloted at District Swabi Khyber Pakhtunkhwa.

**Maternal Newborn Health and Nutrition Program :** MNHN program is also being implemented at all four districts of Khyber Pakhtunkhwa. Maternal malnutrition and newborn mortalities and malnutrition is being addressed in this program. Kangaroo Mother Care for preterm and low birth weight babies to be provided at HF and community levels in light of Provincial and National Newborn Strategies and UHC document. NI has piloted KMC for preterm at District Swabi and now upscaling KMC services to all 34 Districts of Khyber Pakhtunkhwa.

**Universal Salt Iodization Program:** Protection of newborns against cognitive/mental impairments and improved iodine status in women of reproductive age. Advocacy with government for appropriate USI legislation at national & provincial levels. Technical support to national government for implementation of USI program. Technical & operational support to provincial govts for effective implementation of USI program.

Support Salt Processors for adequate iodization and internal QC with iodization equipment and lab support. Ensuring uninterrupted supply of Potassium Iodate to salt processors for producing iodized edible salt.

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**Vitamin A Supplementation VAS Program:** Nutrition International is supporting government in provision of VAS capsules since 2005 to children in immunization day. To improve the health and survival of the most vulnerable children by improving and sustaining vitamin A coverage above 90% among children 6-59 months. 1 billion VAS doses delivered and capacity building of all EPI coordinators.

**Zinc Low Osmolarity ORS Diarrhea management:** NI is also working for diarrhea management from last couple of years. Recently NI has planned to train all lady workers’ of the province on Diarrhea management and effectiveness of Zinc Low osmolarity ORS.

**Food Fortification Program (Wheat Flour and Edible Oil Fortification):** NI is working on large scale food fortification at Pakistan from last two decades. NI is supporting mill industries technically as well as also providing them micro feeders on which vitamin mineral premix is added in staple foods. In wheat flour iron, zinc, Vitamin B12 and folic acid is added and its proven intervention. While for edible oil/ghee fortification vitamin A and D is added providing same technical support to both industry and government of quality assurance. NI also supporting and advocating for fortification laws in the country.

Nutrition International Adolescent Anemia Course:

Adolescent nutrition is not addressed from past few years. NI has developed a training modules course with our technical experts and can be accessed through [www.nutritionintl.org/learning-resource/adolescent-nutrition-and-anaemia-course](http://www.nutritionintl.org/learning-resource/adolescent-nutrition-and-anaemia-course). Its free and give opportunity to public health professionals to explore and learn opportunities of work in adolescent nutrition.

NI has conducted a workshop during the pre-conference workshops on **“Public Health Nutrition Programs of Nutrition International at Pakistan and Adolescent Anemia”**.

**(Darya Khan**  
**Provincial Project Coordinator , Khyber Pakhtunkhwa)**  
**Nutrition International**  
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**Current public health projects of Khyber Medical University**

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## Operational Research on Stunting Prevention

We proposed Operational Research on prevention of chronic malnutrition in Upper Kurram (Khyber Pakhtunkhwa) which was initiated in January 2018 after competitive bidding across Pakistan. This was one of the largest community-based trials with a sample size of 7200 study participants (1760 Pregnant, 1760 Lactating, 1840 below 2 year children, 1840 two-5 year children) with a total cost of PKR-120 Million. Ready-to-use supplementary food was prepared locally in line with the international standards of supplementary foods for the targeted groups and given to the recruited participants. The study comprised of a total follow-up of 24 months and endline assessment was conducted in August-October 2020 to see the overall impact of the trial. The interim results showed that the RUSF increased the birthweight of the newborns by 200 grams. Industrial Linkages for mass production of the RUSF for the targeted groups which will benefit the marginalized groups with accessible and affordable food supplements in order to improve the malnutrition indicators on a large scale

## Khyber Pakhtunkhwa Integrated Population and Health Survey

A population-wide representative survey was conducted in 2016-17 to collect multi-dimensional information on the various aspects of population health and associated factors across all the 24 provinces of in the Khyber Pakhtunkhwa. This was the largest health survey to date conducted in the provinces with approaching 15,724 households and collected data from 22,000 individuals. The study covered demographic factors, communicable and non-communicable diseases, quality of life, mental health, dietary intake, tobacco use, self-medication and environmental health of the people of KP province. The study provides the baseline information for the above-mentioned major areas which has been used as an evidence to bring reforms in the health and population welfare policies

## Supervised treatment in outpatients for schizophrenia

DOTS strategy has been one of the most renowned and effective strategy for management of tuberculosis across the world. We incorporated the DOTS framework in a community-based trial for supervised treatment in management of schizophrenia in outpatient in order to come up with a more effective strategy for management of schizophrenia in Pakistan

## Mental Health and psychosocial support services at district and PHC level in KP

We interviewed the psychiatrists and physicians offering services to the mental health issues. WHO slogan is “There is no health without mental health”. On the basis of my findings the department of health has devised intervention on mental health management and provision of drugs

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## Response to COVID-19 pandemic In Khyber Pakhtunkhwa, Pakistan

Being a public health specialist and pioneer professor of public health in the province, I volunteered for providing a proactive response to COVID-19 pandemic in the province based on best of public health practices around globe. In this regard, I was nominated as chairman of corona testing and management centers across the province. I constituted a team of the public health experts around the province and facilitated Government of KP in establishment of first corona testing and management center in Shahi Bala, Peshawar. Alongside with this, I contributed towards building capacity of the province for COVID-19 testing by developing a network of public and private labs across the province (from 100 tests to 3000 tests per day). When the pandemic was on the peak and KP were reporting the high case fatality rate due to COVID-19 across the country, we conducted a research for making informed decisions for better management of COVID-19. This study involved almost all the tertiary care hospitals (both public and private) across the province and it was identified that old age, comorbid conditions, late presentation to the hospital and oxygen saturation below 90 were the associated risk factors with increased mortality due to COVID-19 across the province

## Capacity building of health care providers on communicable disease for surveillance and reporting, outbreak response and emergency preparedness in FATA

Conducted training of doctors and allied health staff responsible for dealing outbreak at the time of IDPS returning to their homes with little resources available and the health system had no capacity to respond. I trained more than 1000 staff from all agencies of FATA

## Capacity building of the FATA health professionals

Conducted two workshops, 1 week each to train the agency surgeons and directors of FATA health secretariat on data management. All of the agency surgeons participated and it had a direct impact on their service delivery

## Saving maternal and infant lives with affordable technology

we used mobile technology to access pregnant ladies for availing better antenatal and oist-natal care. This was a unique idea and we got some excellent results. We are in the process of analyzing the data

## Health profiling for the province of Khyber Pakhtukhwa, Pakistan

The health department approached me that we have no data of how many health workers (all cadres) are producing from colleges/universities and how many of them joined the Govt and private sector within KP. No data was available for the doctor and nurses' ratio for number of people. I conducted the survey and submitted the report to department of health KP and I believe it has already made a great impact on advertising and creating new positions for all health cadres

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## Training of Health Staff of IDP hosting districts at District Bannu on Disease Surveillance and control of Outbreak

trained 700 staff of all cadres on disease surveillance and outbreak response of district bannu. The district was hosting half a million idps from adjacent FATA. At the time of mass displacement there is always a risk of disease outbreaks and the trainings play a vital role

## Strengthening the Capacities of Health Managers of the Merged Areas of Khyber Pakhtunkhwa Pakistan

The purpose of this project was to train the healthcare staff of the New Merged Districts of Khyber Pakhtunkhwa province. In this regard, training was imparted on seven modules under the following objectives:

1. Provision of short-term trainings encompassing broader areas of Planning, Budgeting, Management, Implementation, Assessment, Community Engagement and Gender Equality to strengthen the capacities of Merged Areas Health Managers at Directorate, District & Health Facility levels.
2. Capacity Development of District Health Information System (DHIS) Merged Areas staff at directorate and district level on accurate, complete and timely reporting as per DHIS Quality Manual.
3. Capacity Development of District Health Officers and Planning Officers on development of PC-1 (development schemes) and inclusion of community needs in Annual Development Programmes (ADPs)

## iHealth-T2D study

We have been a part of the lifestyle intervention study in Lahore, Pakistan (in collaboration with the Imperial College London), the iHealth-T2D study. The study focuses on South Asian men and women living in India, Sri Lanka, Pakistan, and the United Kingdom. We set up the study in Lahore, Pakistan. Our findings will prove helpful in proposing guidelines for using lifestyle changes in the prevention and control of T2D, major global health problem.

## Family Medicine in collaboration with WHO & DoH KP

Family medicine is the answer to many health issues of the developing countries. I have started the discussion of establishing general physician system with the analogy of UK in the country. I on behalf of Khyber Medical University offered a platform in the 8<sup>th</sup> international Health Conference and invited secretary health, WHO country head, academicians and family physicians from all over the country and abroad. The process has begun and we started diploma in family medicine. I am also working with department of health KP to develop frameworks and roadmap for establishing a comprehensive GP system in the province