



Government of Pakistan
Ministry of National Health Services,
Regulations & Coordination
HEALTH SERVICES ACADEMY



**CONTEMPORARY MEDICINES, HEALTH TECHNOLOGIES
AND VACCINES FOR EMERGING PUBLIC HEALTH RISKS**

11th Annual Public Health Conference

23rd & 24th September-2021



Summary Report

Annual Public Health Conference

Health Services Academy

Session Title

Ensuring Quality of Care, Quality of Care and Innovation in Healthcare Interface

Background: Through its National Health Vision 2025, Pakistan is committed to achieving health for all with the aims to improve quality and reducing inequities. This is the right time to review of what has been accomplished and identify directions and solutions to “scale up” and meet national and global public health priorities. UNICEF, MoNHSRC, and Health Services Academy collaborated to host a panel session on Quality of Care for RMNCAH and nutrition at the 11th Public Health Conference held on 23rd and 24th September 2021. This conference session provided the opportunity to draw upon the recent developments and local research to chalk the way forward for ensuring the quality of care. Specific objectives of the session were to - understand the implications of advances in contemporary medicines, medical technologies, and vaccines for the provision of quality maternal and newborn health care - Share highlights of the draft National Strategic Framework on the Quality of Care for RMNCAH and discuss the implications of emerging health risks and their impact on the delivery of quality RMNCAH services.

The session recommend priority actions and the way forward with a focus on developing health system and community level preparedness and resilience.

Session Panel

- Chair: Dr. Sabina Durrani, Federal DG Population, MoNHSR&C
- Chair: Dr. Quaid Saeed, CEO Islamabad Health Regulatory Authority
- Co-chair: Dr. Razia Safdar, MoNHSR&C.
- Chair: Dr. Babar Tasneem Sheikh,
- Keynote Speaker: Dr. Hari Krishna Banskota, Chief Health UNICEF
- Discussant: Dr. Samia Rizwan, UNICEF

Session Presenters

- DG MoNHSR&C (Welcome and Introduction)
- Dr. Samia Rizwan, Health Specialist UNICEF
- Dr. Nabila Zaka, Director ORIC HSA
- Dr. Razia Safdar, MoNHSR&C
- Dr. Sheh Mureed, Planning Commission
- Ms. Nousheen Pradhan, AKU

Proceedings of the Session:

Dr. Samia Rizwan, presented the situation analysis of Pakistan in which slow improvements in reduction of Neonatal Mortality Rate (NMR) were observed. Along with high NMR, Pakistan witnessed high stillbirth rate, linked closely with poor quality of care in health services. She discussed National Health Vision (2016–2025) in which such issues are addressed. The participants in the session recommended to develop a national framework of action, increase investment in resources by increasing inputs of the health system, and increasing community participation of women in decision making for improving the quality of care, especially during the time around birth.

Dr. Razia Safdar, discussed the gaps in WASH and Health, ensuring compliance to the 2030 agenda. She highlighted the need for gender-inclusive WASH in healthcare facilities, considering the vulnerabilities of women.

Dr. Nabila Zaka, presented the strategies and an accountability framework to improve the quality of care in Pakistan. She talked about the roles of different stakeholders and improvement methods and interventions, such as the establishment of national and provincial plans, focusing on small and sick newborn care, capacity building through clinical mentorship and bringing telemedicine into action.

Dr. Sheh Mureed detailed the main features of PoCQI Model for capacity building and teamwork. He talked about training packages and the maternal care fishbone discussion method, using PDSA cycle. The lessons learned included enabling context, effective implementation, and effective innovation.

Dr. Nousheen Pradhan discussed a cross-sectional study sponsored by UNICEF about in-patient care of small and sick babies. The recommendations highlighted were strengthening facility management and quality of care practices.

Questions were taken from the audience after all the presentations. These included the integration and regulation of the private sector in improving quality of care and the actions in process for WASH.

Dr. Nabila responded by proposing a strategy in which private hospitals compliance with high standards of health is necessary for healthcare. She quoted that the Sehat Sahulat Programme has empaneled private hospitals, an opportunity to regulate and promote standardized practices.

Professional Associations can build up peer pressure for ethical and evidence-based practice. Health Care Commissions have the mandate to review the complaints received and take legal action

independently. Dr. Razia addressed the WASH query by identifying work in progress on the regulation of standards. The discussant (Dr. Samia Rizwan) concluded by highlighting that minor improvements collectively make big differences. She endorsed the suggestions by Dr. Nabila Zaka and recommended the recruitment of neonatal specialists and nurses. She also added the importance of having a system for equipment maintenance and strengthening pre-service and in-service training.

Session Title

Pharmacovigilance System in Pakistan and Policy of Regulatory Body in Line with Antimicrobial Resistance

Background: Mortality rate because of Adverse Medication Reactions (ADRs) is on the increase across the world. Hence, it is very important to find out the fundamental factors for ADRs. Countries across the world like the UK, US, Canada, India and Pakistan need to understand Pharmacovigilance. WHO characterizes "Pharmacovigilance (PV) as the science and exercise of identifying with the discovery, appraisal, comprehension, and aversion of unfriendly impacts or other medication-related issues. Pakistan ranks 6th among the most populous country and has a population of more than 200 million. In 2003, Pakistan's National Drugs Policy of Pakistan aspired to establish a drug monitoring and surveillance system. At the instruction of the Supreme Court of Pakistan, an independent Drug Regulatory Authority was established in 2012. DRAP formulated guidelines for pharmacovigilance activities and the provincial drug control units regularly publish drug safety alerts based on the evidence provided through the post-marketing surveillance. Considering the importance, an entire session on Pharmacovigilance was organized at the 11th Public Health Conference.



Session Panel

- Chair: Prof. Dr. Azhar Hussain, Director General Dean Faculty of Pharmacy, Hamdard University
- Keynote Speaker: Dr Abdur Rasheed, Drug Regulatory Authority Pakistan
- Discussant: Dr. Akhtar Abbas, Drug Regulatory Authority Pakistan
- Moderator: Dr. Ahmad Hussien Tareq

Session Presenters

- Dr Muhammad Atif-Professor: Islamia University Bahawalpur
- Dr. Abdur Rashid: Head, National PV Centre, DRAP, Islamabad
- Dr Mumtaz A Khan: Senior Scientific Officer National Institute of Health, Islamabad.
- Dr. Amiad Khan: Ouaid-i-Azam University. Islamabad

Proceedings of the Session:

Professor Dr. M. Atif presented antibiotic consumption and surveillance data about healthcare facilities of South Punjab in Pakistan. He mentioned that Pakistan is the 3rd highest consumer of antibiotics based on the existing evidence. Dr. M. Atif presented a study that was conducted as per WHO criteria. The data were taken from tertiary care hospitals (Victoria Hospital-Bahawalpur). The results showed that the rational antibiotic index was 39.9%, for the private clinics, 48.9% for Primary Health Care and 51.5%. He concluded that the neonatal death rate increased to 21% and highlighted the reasons to curb irrational use of antibiotics due to lack of awareness.

Dr. Abdur Rasheed presented a comprehensive picture of the current scenario of pharmacovigilance in Pakistan. He highlighted that around thirty million medical devices and medicated cosmetics exit in Pakistan. He pointed that patient safety is associated with the medication, but the patient suffers from many diseases due to medication errors. He informed about the virtual training programs all over Pakistan to raise awareness regarding pharmacovigilance.

Dr. Mumtaz informed about the guidelines for IPC that have been formulated and talked about the IPC structure that is deficient at the district levels and in the public and private hospitals.

Dr. Amjad Ali talked about healthcare products, pharmacovigilance and pharmacoeconomics for evidence-based selection. He informed that newer generation stents have presented a novel solution to the problems of 2nd generation stents.

Professor Azhar emphasized the importance of raising awareness among people about the rational use of medicines. He emphasized on strengthening infection prevention and control mechanisms and that every hospital/institute should follow IPC guidelines. He stated that there should be proper law enforcement and regulatory checks at every level. His emphasis was on IPC awareness and standardization. He showed concern about the data unavailability for the pharmacovigilance and requested healthcare professionals to help detect the problem by sharing necessary data. He focused on the cost-effective use of medical devices and stressed the need for awareness. The sessions was concluded with recommendations to focus on core issues and gaps in pharmacovigilance and the need for assessing the systems, identifying issues, and providing remedies to the problems.

Session Title

GIZ Support to Social Protection – Social Health Protection (SP-SHP)

Background: The Sehat Sahulat Program (SSP) is a flagship initiative of the Government of Pakistan. It started in 2015 at the federal and provincial levels to provide free of cost indoor health care services to the poorest segment of the population. In recent times, federal and provincial governments planned to extend the coverage to every citizen through wider enrolment. To capture this exciting journey that SSP has set to meet its goal, the session aimed to impart awareness about program's future plans. A session was conducted about Social Health Protection to discuss social health protection mechanisms and issues.



Session Panel

- Chair: Mr. Muhammad Arshad, Director Technical, Federal Sehat Sahulat Program
- Co-chairs: Dr. Ali Razzaq, Punjab Health Initiative Management Company and, Dr. Riaz Tanoli, Director, Sehat Card Plus, Khyber Pakhtunkhwa
- Keynote Speaker: Dr. Franz Von Roenne, Project Head, GIZ SP – SHP Pakistan
- Discssant: Mr. Ishtiyah Hussain Rizvi- Project Director,Sehat Tahafuz Gilgit Baltistan

Session Presenters

- Mr. Muhammad Arshad, Director Technical, Federal Sehat Sahulat Program
- Dr. Riaz Tanoli, Director, Sehat Card Plus, Khyber Pakhtunkhwa
- Mr. Muhammad Ashar, Project Health, State Life Insur
- Mr. Haseeb Anwar, Health Actuary
- Dr. Javed Iqbal, Mr. Zafar Habib, Dr. Zafar Zaheer, Institute of Management Sciences, Peshawar
- Dr. Sheraz Khan UHC consultant, GIZ.

Proceedings of the Session:

Dr. Franz Von Roenne highlighted the key aspects of collaboration with GIZ for Social Health Protection Programs and challenges. He talked about the importance of healthcare for the very poor and why universal health coverage is required for social health protection. He highlighted the challenges faced during the process of project implementation including insufficient capacities of service purchasers and providers, regulators, problems in institutionalization, evidence-based decisions and communication with the public and the poor.

Mr. Muhammad Arshad talked about Sehat Sahulat Program: Journey towards Indoor Universal Health Coverage. He gave an overview of the program as a national health vision that is a Social Health Protection initiative for the federal and participating provincial governments, to provide financial health protection to the targeted families against catastrophic health care expenditure that require hospitalization. He mentioned salient features of the program about coverage, covered population, future coverage, and insurance companies. He shared the existing benefit package and provided details of the indoor benefit package and gave details of health facilities on the panel. He mentioned a long term vision of including primary health care and outpatient services and highlighted the expected outcomes for improved access to health services and contribution to ending poverty in Pakistan.

Dr. Riaz Tanoli, talked about “Social Health Protection Initiative (SHPI) in Khyber Pakhtunkhwa” and highlighted efforts to improve the health of all, particularly women and children by providing universal access to affordable, quality, essential health services through a responsive health system. He shared with the audience the brand name of program “Sehat Card Plus” and slogan which is “Tahaffuz, Sehat, Khushhali”. He also mentioned that the program has been implemented in all district of the KP province.

Mr. Haseeb Anwar, talked about “Social Health Protection Pricing” and explained the concept of ‘Insurance’ which is an arrangement by which a state or a company provides a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a specified premium. He explained the key aspects which can be insured such as life, sickness, disability, car, house and the process of pricing and pricing consideration context that can affect the outcomes: minimization of risk and financial sustainability in the long run.

Mr. Muhammad Ashar talked about implementation of micro-health insurance model across Pakistan in which he claimed 100 million population is covered so far by the State life Health Insurance Company. He also mentioned the distribution of State life coverage across different districts.

Dr. Zafar Zaheer discussed KAP Survey for communication strategy of Sehat Sahulat Program where he mentioned the findings of the survey and discussed issues and challenges. The session was concluded with a note that the Social Security Health Program was adding value to Universal Health Coverage in Pakistan.

Session Title

Traditional and Alternative Medicine in Healthcare

Background: To explore ways on how to integrate the alternative medicines in the contemporary medicines, a session was conducted to discuss different types of alternative medicines being used worldwide like herbal medicine, spiritual healing/prayer, massage-therapy, acupuncture, hypnosis, meditation, Traditional Chinese Medicine, Reflexology and homeopathy.



As a vast majority of people believe in the effectiveness of these treatment options, it is important to develop a policy to integrate TAM into the contemporary health system of Pakistan. In this background Health Service Academy arranged a scientific session on traditional and alternative medicine for policy recommendations, formulation, accessibility and affordability of TAM.

Session Panel

- Chair: Prof. Dr. Azra Yasmin, Department of Biotechnology Fatima Jinnah Women University, Rawalpindi
- O-hairs: rof. Dr. Muhammad Javaid Asad, PMAS, Arid Agriculture University, Rawalpindi
- Keynote Speaker: Prof. Dr. Anwar-ul-Hassan Gilani, VC- Hazara University
- Discussant: Dr. Adeela Rehman, Fatima Jinnah Women University

Session Presenters

- Colonel Rtd Khalid Mehmood. Hakeem, KSF Herbal Clinic.
- Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry and Biotechnology.
- Dr. Naila Safdar, Assistant Professor. Department of Bio-technology, Fatima Jinnah Women University, Rawalpindi

Proceedings of the Session:

Dr. Anwar-ul-Hassan discussed the global trends in traditional, complementary and alternate medicine and integration of traditional and modern medicine for better healthcare in Pakistan. He explained how TM/CAM existed in one way or another in different cultures/civilizations, such as Egyptians, Western, Chinese, Kampo Japan, South Asia. The modern physicians are now beginning to accept the use of botanicals/dietary supplements once they are scientifically validated. Ispaghol, Garlic, Ginkgo, St. John's Wart, Ginseng, Hawthorn and Saw Palmetto are a few examples of botanicals which are gaining popularity amongst the modern era physicians. Other alternate practices, such as acupuncture, homeopathy, hypnotherapy, chiropractic, yoga, diet therapy are also gaining popularity partly because of high cost of patented chemical drugs and changing disease pattern, where lifestyle and dietary modification are warranted.

Colonel Dr. Khalid Mehmood discussed herbs are very important and beneficial and herbs can cure. He gave reference to a book that discusses about symptoms of fever and cold and treatments. He also talked about the treatment development by KSF Herbal Clinic and shared how herbal medication turned out to be useful for treatment of Corona.

Dr. Naila Safdar talked about Medicinal Phytoconstituents in Healthcare. She described all the pros and cons such as: resurgence of public in herbal remedies, medicinal plants of Pakistan, metabolism of plants, secondary metabolites, Covid-19 and medicinal plants, limitations and future of medical Phytoconstituents.

Dr. Tayyaba Zainab described the role of Biotechnology in plant's bioactive compound herbal medicine preparation and disease management. She explained how first ever medicines have been plants or plant based. In ancient times, "medical" care mainly involved using plants as medicines. Throughout history, people all over the world have used herbs to maintain and improve health into

the art of healing. A constant process of searching, testing, and verifying in all cultures across the globe resulted in the development of an empirical science. With today's biotechnology, traditional medications have improved significantly with reduced risks and provide cost-effective alternatives. Through great strides in biotechnology, millions of patients worldwide continue to have a better chance at getting cured by using biological medicines developed by companies that are discovering, developing, and delivering innovative medicines to treat all types of illnesses.

Dr. Adeela Rehman highlighted the practices and regulations of homeopathic system in Pakistan. She addressed homeopathy is widely used in all WHO Regions. Homeopathy is not only a system of alternate medicine but also a principle and without understanding its philosophy and principles, success in treatment could not be attained. The National Council for Homeopathy is now responsible for conducting examinations, approving new homeopathic colleges, and registering practitioners. To promote homeopathic system in Pakistan, there is need to promote clinical research by opening up hospital services for homeopathic clinical practice. She recommended to adopt a holistic approach in healthcare treatment. The traditional medicine sector has developed as an important sector, especially in rural and tribal areas of the country due to a number of factors such as vicinity, affordable fee, availability, family pressure and the resilient beliefs of the community.

Dr. Javaid Asad said that that herbal medication is very beneficial in these pandemic days.

Dr. Azra Yasmin highlighted the importance of biotechnology which is the need of time for producing more products from plants most effective for public health. She emphasized the need to develop a policy to integrate the traditional and alternative medicines into the contemporary health system of Pakistan. Policy recommendation were to integrate the commentary and alternative medicines into the modern medicines; to establish public hospitals for the practices by homeopathic physicians and hakeems; to increase the number of seats on BPS for Homeopathic and Tib practitioners; to introduce short courses on Homeopathic, herbal medicines and biotechnology related subjects at school, college and university level; to enhance research and capacity building of the institutions to publish books and awareness messages in local languages.

Session Title

Ensuring Quality of Care, Quality of Care and Innovation in Healthcare

Background: Through its National Health Vision 2025, Pakistan is committed to achieving health for all with quality and reducing inequities. Now is the time to take stock of what has been accomplished and identify promising directions and solutions to “scale up” and meet national and global public health priorities. UNICEF and Health Services Academy collaborated to host a panel session on Quality of Care for RMNCAH and nutrition in the 11th Public Health Conference on 23rd and 24th September. This conference sessions provided the opportunity to draw upon the recent developments and local research to chalk the way forward. Specific objectives of the session were to

- Understand the implications of advances in contemporary medicines, medical technologies, and vaccines to provide quality maternal and new-born health care.
- Disseminate the National Strategic Framework on Quality of Care for RMNCAH+N.
- Discuss the implications of emerging health risks and their impact on the delivery of quality RMNCAH services.
- Recommend priority actions and way forward with a focus on developing health system and community level preparedness.

Session Panel

- Chair: Dr. Sabina Durrani, Federal Director General Population (RMNCAH, Population Welfare & Medical Tourism)
- Chair: Dr. Quaid Saeed, CEO Islamabad Health Regulatory Authority
- Co-Chairs: Dr. Razia Safdar, Ministry of National Health Services, Regulation and Coordination and Dr. Babar Tasneem Sheikh,
- Keynote Speaker: Dr. Hari Krishna Banskota, Chief Health UNICEF
- Discussant: Dr. Samia Rizwan, Health Specialist, Maternal Newborn and Child Health, UNICEF

Session Presenters

- Dr. Samia Rizwan Health Specialist UNICEF: Achievements and lessons learnt on implementing Quality of Care vision
- Dr. Nabila Zaka- Director ORIC HSA (Quality of Care Strategic Framework for RMNCAH and Nutrition- ensuring health system preparedness and resilience)
- Dr. Razia Safdar, MoNHSRC, (Scoping review of WASH in Health Care Facilities- Key findings and recommendations)
- Dr. Sheh Mureed, Planning Commission (Lessons learnt on implementing Point of Care Quality Improvement)
- Dr. Nousheen Pradhan, AKU (Quality of inpatient care of small and sick newborn in Pakistan-Key findings from a National survey)

Proceedings of the Session:

Dr. Sabina Durrani, Federal Director General Population (RMNCAH, Population Welfare & Medical Tourism applauded the organizers' efforts to focus on an important topic.

Dr. Samia Rizwan presented a situation analysis of Pakistan in which a slow improvement in the reduction of NMR was observed. Along with high NMR, Pakistan also has a high stillbirth rate due to lack of quality of care. The government of Pakistan has taken initiatives, including the National Health Vision (2016–2025). The policy recommendations to improve the current situation include the development of a national framework, investment in resources by increasing inputs of the health system, and increasing community participation of women. Pakistan has already invested a lot in maternal and newborn health initiatives. However, it was discussed that training alone is not sufficient, therefore improving the quality of care, especially during the pre-

Dr. Razia Safdar talked about the gaps in WASH and Health, ensuring compliance to the 2030 agenda. She highlighted the need for gender-inclusive WASH in a healthcare facility, considering the vulnerabilities of Pakistani women.

Dr. Nabila Zaka presented strategies and accountability framework to improve the quality of care. She talked about the improvement methods and interventions, such as establishing healthcare commissions, KMC units and bringing telemedicine into action.

Dr. Sheh Mureed's presentation discussed the PoCQI Model. The purpose of this model is to build capacity and enhance teamwork. He talked about training packages and the maternal care fishbone discussion method, explaining the PDSA cycle. The three lessons learned included enabling context, practical implementation, and effective innovation.

Ms. Nousheen Pradhanm discussed a cross-sectional study sponsored by UNICEF about in-patient care of small and sick babies. The recommendations highlighted were strengthening facility management and quality of care practices.

Dr. Khawaja Aftab Khan discussed ways to reaching the unreached. He highlighted the inequities and disparities among provinces. He talked about improving coverage in urban slums by utilizing the services of LHWs and a community-based workforce.

Dr. Shakeel Gondal's presentation conceptualized the health information system. He talked about the journey from Manual reporting to HMIS, then to DHIS, which has now been upgraded to DHIS-2. However, there are reporting compliance issues, which lead to fragmentation.

Dr. Khawaja Aftab said that around 20,000 CMWs are working in collaboration with polio workers.

Dr. Mohsin Saeed commented that we should focus on technology and that Pakistan needs to let go of the DHIS. He further added geospatial mapping in locating locust outbreaks as an example of the practical uses of technology. He said we cannot wait for 2030 to complete our health agendas; the government should focus on quality services and outsource the delivery.

Dr. Samia Rizwan concluded by highlighting that minor encroachments collectively make big differences. She recommended the recruitment of specialists, maintenance of equipment, and strengthening pre-service and in-service training.

Session Title

Antimicrobial Resistance Surveillance At Human, Animal, and Environment Interface

Background: As the world is geared to achieving the Sustainable Development Goals (SDGs) and targets for 2030, the rising AMR is posing a serious threat, especially when there is not even a single SDG indicator which is specific to AMR. The AMR contributes to about 700,000 deaths/year due to drug-resistant diseases, including 230,000 people who die from multidrug-resistant tuberculosis. Pakistan is committed to work on AMR through its endorsement of the AMR Global Action Plan at the 68th session of the World Health Assembly (2015). To bridge these existing gaps, the Fleming Fund grant from UK government is an effort to help government of Pakistan in its implementation of national action plan on AMR. This grant on AMR is intended to develop and implement a thorough plan on AMR involving the human health, animal health and other related stakeholders under One Health.



Session Panel

- Chair: Dr. Mohammad Salman, National Institute of Health, Islamabad
- Co-Chair: Dr. Ayesha Rashid, Team Lead Fleming Fund.
- Keynote Speaker: Dr. Mo. Salman
- Discussant: Dr. Nadeem Hassan, JSI

Session Presenters

- Dr Salman: National Institute of Health, Islamabad
- Nimesh Poudyal: International Vaccine Institute, Epidemiology, SNU Research Park)
- Dr Samuel Orubu: Boston University's Social Innovation on Drug Resistance program
- Sangeeta Rao: Colorado School of Public Health
- Dr. Mo Salman: Colorado State University, USA

Proceedings of the Session:

Dr. Salman gave an overview of AMR in the Health Sector (situation analysis, Challenges, and the way forward). He briefly addressed the situation of AMR in Pakistan, which includes the global health security, impact of the AMR on the economy, and integrated AMR surveillance network with a “One Health” approach. He pointed out the lack of coordination between government, private sector, pharmaceutical, food industry and other stakeholders involved in antibiotic use policy and prescription control. He mentioned that monitoring of antibiotics is not commonly practiced in the community. There are over-the-counter sales of antibiotics, lack of awareness in the general population, scientific community, and health care workers. There are major challenges faced for IPC infrastructure, weak IPC practices, limited AMU and AMC data, and poor R & D efforts. He highlighted the progress of AMR in Pakistan, including a national action plan in which AMR Containment is considered a national health priority.

Samuel Orubu talked about the Antibiotic Footprint Project updates in Pakistan, where Fleming Fund builds global partnerships to Improve AMR surveillance and enable countries to improve the collection and use of AMR data in line with their National Action Plans, policy-making and delivery of healthcare. He explained the antibiotic footprint, modeled after the carbon footprint model that visualizes a country's antimicrobial use, a “global communication tool” for evidence to facilitate practice and policy aimed at reducing antimicrobials.

Dr. Nimesh Poudyal presented the CAPTURA that captures data on antimicrobial resistance patterns and trends in Asia. He presented interactive mapping of AMR data sources and laboratory capacities, demonstrating data analysis and visualization using exemplar dataset for identifying gaps in data analysis and visualization. He showed how this can be used for increasing local data analysis capacities for AMR.

Dr. MO Salman presented One Health Concept and its link to Antimicrobial Resistance (AMR). He discussed the role of Veterinary Medicine and gave a brief description of animal health and its link to human medicine. The role of veterinary medicine was to benefit human health mainly by improving animal-origin food's safety. Antimicrobial resistance is a global One Health issue. One Health is an approach that recognizes the interconnectedness of people, animals, and the environment. Antimicrobial use in animals, people, and the environment contributes to the emergence of resistance, and resistance spreads across species and settings. He added that the analysis and strengthening of relevant regulatory systems are the primary concerns for food safety national authorities. He concluded that the way forward for AMR needed scientific evaluation of the role of use/abuse of antimicrobial through comprehensive assessment.

Sangeeta Rao talked about occupational risk of antimicrobial resistance to livestock farmers and the farming environment. She concluded that antimicrobial resistance and 'food safety of animal origin' are important. In One health issue, biosecurity and infection control at the farm level are critical factors and antimicrobial usage and compliance need to be better understood at the food and animal level. She concluded that continuing education and training on stewardship are the key factors in reducing the AMR.

Dr. Nadeem Hassan emphasized to focus more on Anti-Microbial Resistance in humans and animals and referred to challenges in data collection, and the complexities in data sources.

Session Title

RMNCAH Quality Improvement Initiatives in Pakistan Using WHO Tools

Background: Pakistan has witnessed progress in some key RMNCAH indicators in the recent years including the reduction in maternal and child mortality and improvement in institutional deliveries and skilled birth attendance. Despite the reported progress, performance of indicators like newborn mortality, early initiation of breastfeeding is still sluggish. The major underlying factors are the poor quality of care (which is reflected by lack of maternal and newborn death review), irrational use of C-sections, poor practices during the early newborn care and low capacities of healthcare staff to offer contraceptive services. There is a dire need to ensure that quality improvement initiatives are institutionalized along with the the continuum of care covering pre-conception, pregnancy, delivery and postnatal/postpartum periods. In this regard, the WHO framework for improving quality of care

for mothers and newborns around the time of childbirth is being adopted for implementation. Health Service Academy arranged a scientific session on RMNCAH Quality Improvement Initiatives in Pakistan using WHO tools as WHO Pakistan and other partners are making concerted efforts to support the government in its endeavors to ensure RMNCAH quality of care.

Session Panel

- Chair: Dr. Nausheen Hamid, Parliamentary Secretary for Health
- O-hairs: Dr. Palitha Mahipala, Country Representative WHO Pakistan
- Keynote Speaker: Dr. Blerta Maliqi, QoC focal point from WHO HQ
- Discussant: Dr. Samina Naeem Khalid, MNCH Consultant

Session Presenters

- Ms. Anam Arif WHO Sub-Office Quetta
- Prof. Dr. Nasim Saba, Head of Gynecology/Obstetrics, MTI, DI Khan, KP.
- Dr. Shahida Shaikh, Head of G/O, Shaikh Zayed Women Hospital, Larkana, Sindh
- Dr. Khurram Mubeen Deputy Director IRMNCH&N Program, Lahore, Punjab, Dr Yahya Gulzar, WHO sub-office Punjab

Proceedings of the Session:

Dr. Nausheen Hamid, Parliamentary Secretary for Health and Co-chair **Dr. Palitha Mahipala**, WR Pakistan started the session. Dr. Blerta Maliqi, QoC focal point from WHO HQ joined the session as a Keynote Speaker through ZOOM.

Dr. Blerta Maliqi shared a comprehensive overview of the WHO's Quality of Care Framework – Quality standards at the time of childbirth. Improving quality of care to achieve SDG targets to achieve preventable maternal, newborn and child deaths. She highlighted the unsatisfactory progress in MNCH targets whereby the rates of MMR, IMR and still birth are still fairly high. She highlighted the effects of CCVID pandemic in relation to the slow progress in RMNCH indicators. She explained the interventions and the network for improving the quality in health care and shared the lessons learnt from the implementation of certain interventions in different countries and the way forward.

Ms. Anam Arif highlighted the institutionalization of maternal and perinatal death surveillance and response system in Pakistan with a special focus on experience(s) from Khyber Pakhtunkhwa and Baluchistan. She expressed the importance of maternal and perinatal death surveillance system and its review of implementation in Baluchistan. She highlighted the challenges being faced and the way forward.

Dr. Khurram Mubeen shared a success story of Punjab regarding building health worker capacities for improved contraceptive services. He shared that IRMNCH & NP is focused to provide quality services for reproductive health with special focus on family planning services provision through focus on quality-of-service delivery, engagement of key stakeholders for standard training package, training of trainer (ToT) on standardized training package, monitoring the quality of training (Master Trainer/WHO/Program), MEC wheel translation into local language, clinical refresher Urdu manuals for SBAs and supportive supervision.

Dr. Naseem Saba provided the context of ten group classification system (Robson tool) and the ways to move towards rationalization of C-sections in Pakistan. She stressed that the Robson Classification can be used as a tool to judge care rather than to recommend care, and it is up to the hospital itself to decide its use.. She pointed that TGCS is a useful starting point.

Dr. Shahida Inayat Magsi shared a vision for maternal and child health in which every newborn infant has the right to have a healthy start in life, and Early Essential Newborn Care (EENC) has shown impressive reductions in deaths, infections, and intensive care unit admissions, with Pakistan becoming the third country in the EMRO to implement EENC in 2019, following Palestine and Sudan.

Dr. Palitha Mahipala in his closing remarks pressed upon the importance of legislation for notification and compilation of the relevant data regarding MNCH to find, explore and trace the actual ground realities and the way forward to manage them. He highlighted that WHO tools are simple and implementable and can bring improvement in MMR and IMR in many countries.

Dr. Nausheen Hamid, Parliamentary Secretary for Health concluded the session with her final remarks. She praised about the wonderful work presented by the provinces and acknowledged the efforts especially in the context of implementing QOC initiatives. She exemplified that most of the MCH centers BHUs are providing antenatal care in Islamabad Capital Territory. She also shared that the Provinces are also improving in terms of their care provision and functioning at large.

Health Technology & Medical Education

Background: Community based medical education is the key to eradicate diseases at the grass root level. Innovations and development in the field of health technology are the way ahead especially in a populous country like Pakistan with the population of over 220 million.

In this background Health Service Academy arranged a scientific session on Health Technology and Medical Education as medical education both at community and at health professional level are essential to meet the increasing demand of industry and other stakeholders keeping in view the increasing economic cost and large volume of technical and health information available.



Session Panel

- Chair: Maj. Gen. Shahab Naqvi (Rtd)
- Co-Chairs: Professor Inam, Professor of Community Medicine, Rawal Institute of Health Sciences (Proper Designation)
- Keynote Speaker: Dr. Ayesha Issani, Head of Radiology Department, Pakistan Institute of Medical Sciences
- Discussant: Dr. Ayesha Sheraz, Senior Research fellow (NIPS)

Session Presenters

- Prof. Shuwei Liu, Shandong (Establishing and Applications of High Resolution Digital Human Sectional Dataset & Application in Medical Education: A Prospect for China Pakistan Medical Education)
- Dr. Muhammad Shahbaz (China Pakistan Health Corridor MOU signing)
- Mr. Pan Wen General Secretary WHO Traditional medicine Foundation (WHO Traditional Medicine Foundation cooperation with HSA for establishment of Academy of Traditional Medicine & Hospital)
- Prof. Hao Li Associate Professor at the Department of Global Health/Global Health Institute, Wuhan University (Public-Private Academic Partnership (PPAP): A Model for Sino-Pak Collaboration in Health)

Proceedings of the Session:

Dr. Ayesha Issani gave the opening remarks about Health Technology that is application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures, and systems developed to solve a health problem and improve quality of lives. Medical Education requires research work and expansion of curriculum. The Practical Approach towards utilization of AI in Medical Education is development of Software for AI based diagnosis of COVID-19 pneumonia on chest x-rays and HRCT. An example is a software that has been developed for diagnosis of breast cancer on mammograms. Community based medical education is the key to eradicate disease at the grass root level.

Dr. Muhammad Shahbaz briefed about Pak-China Health Corridor which was established in 2017 to promote health with collaboration between Pakistan and China. There are a number of projects going on with many universities between Pakistan and China to promote healthcare and MoU has been signed between HSA, WHO and Wuhan. Pakistani students rank number 3 in Chinese universities. There is opportunity for collaboration not only for COVID-19 but also for promotion of healthcare infrastructure as a whole. The only barrier is the language barrier and if that can be overcome there can be new avenues for Pakistani students in the discipline of health including wide ranging options of joining universities in China or by being part of projects in Pakistan launched by Pak China Health Partnership.

Prof. Shuwei Liu, Shandong talked about establishing and applications of High Resolution Digital Human Sectional Dataset & Application in Medical Education. A prospect for China Pakistan Medical Education discussed about the technologies offering high resolution cross sections of human from head to toe and the impact of this advanced technology in diagnosis of multiple ailments.

Prof. Hao Li talked about Public-Private Academic Partnership (PPAP). A Model for Sino-Pak Collaboration in Health (Public-Private -Academic Partnership)- PPAP.

Mr. Pan Wen talked about establishment of the WHO traditional medicine foundation that can carry forward the contribution of traditional medicine to help save lives and improve health. The mission of the traditional medicine foundation is to assist the member countries in different domains, e.g. formulating and implementing traditional medical policies and regulations; supervision for herbal products; formulating standards; education and training of traditional and complementary medical technology service providers. They provide information on policies, regulations, service profiles and

research data and obtain reliable objective information resources for consumers. The session concluded that the traditional medicine should be integrated into national health care and primary health care, and relevant strategic standards should be identified and evaluated. Safety and quality should be ensured, especially while evaluating products and services, for the qualification of technical service providers, and the methods and standards used for evaluating effectiveness.

Session Title

Monitoring Progress for Health and Nutrition SDGs

Background:

A session was conducted for measuring and monitoring progress towards achieving the health and nutrition related SDGs. The aim was to generate evidence to foster advocacy and accountability for women's, children's and adolescents' health and analyzing data on coverage of health



interventions. Emerging health risks such as Covid-19 pandemic have aggravated the challenges to ensure adequate availability of medicines, medical technologies and commodities at public health facilities. The main goal of nutrition monitoring is to accurately measure and survey the dietary and nutritional status of the Pakistan's population, as well as the quality, quantity, and safety of the food it eats.

Session Panel

- Chair: Dr. Baseer Achakzai, Director Nutrition Regulation, MNHSR&C
- Co-Chairs: Dr. Sabeen Afzal, Deputy Director Technical MNHSR&C
- Keynote Speaker: Dr. Saima Abid President Public Health Association KP
- Discussant: Dr. Zahra Ladhani, Faimer Philadelphia, USA

Session Presenters

- Dr. Saima Abid (SA), President PPHA, KP
- Dr. Masuood Ahmad Khawaja (MK), National Coordinator Nutrition at MNHSR&C
- Dr. Nabila Zaka (NZ), Director ORIC Health Services Academy
- Ms. Maida Umer (MU), Data analyst Health Services Academy
- Dr. Tahir Ezra Raza (TR), Director CGPH, University of Manitoba
- Mr. Ikhtlaq Ahmad (IA), Assistant Director ORIC, Health Services Academy

Proceedings of the Session:

Dr. Baseer Achakzai gave opening remarks and **Dr. Saima Abid**, highlighted the malnutrition and food insecurity situation globally. She said in Pakistan 1 in 3 persons is malnourished. Like other LMIC, Pakistan is facing similar challenges i.e., climate change, food insecurity and clean drinking water. She concluded that government should invest to improve infrastructure and encourage variety of food production.

Mr. Masood Ahmed said Pakistan has struggled to improve wasting, stunting, and vitamin D status in both mothers and children over the past years. He recommended a multi-sectoral approach to address sensitive nutrition issues. He suggested policies and guidelines like integrating food waste management in nutrition programs and UHC packages, nutrition education for dietary risk factors, logistics, recording, and addressing supply issues. He talked about a recently approved project for tackling malnutrition-induced stunting that will cover approximately 70 million people in 67 high burden districts selected in each province and region based on the highest prevalence of stunting and wasting per NNS 2018.

Dr. Nabila Zaka presented an M&E framework for monitoring progress towards UHC implementation and the framework developed by HSA, Ministry of Health and UoM. The document reports on the progress of global SDG-3 commitments for UHC and linkages with other SDGs. She said measuring the reduction in the health system bottlenecks, monitoring, and evaluation capacity building; learning exchange; financial coverage; equitable access; and quality of care; can contribute to the sustainable monitoring and evaluation at the district level.

Ms. Maida Umer highlighted the progress on nutrition SDGs and pointed that the drivers for reducing stunting can be divided into three levels i.e. basic, underlying, and immediate. Inappropriate practices, household food insecurity and minimal income, poor sanitation and lack of clean water, low literacy, lack of ownership and political commitment, incompetence to support multi-sectoral programs were the critical contributors to malnutrition.

Dr. Tahira Raza talked about the Services Availability and Readiness Assessment (SARA). She emphasized the importance of nutrition and explained that no country could achieve universal health coverage (UHC) without investing in essential nutrition actions, and good nutrition for all cannot be achieved without UHC. She said 2020 was a critical year that integrated nutrition actions into health systems by leveraging the drive towards UHC. Pakistan is the first country to adopt DCP-3 recommendations.

Mr. Ikhtlaq Ahmad briefly talked about the impact of Covid-19 on RMNCH and nutrition services. He highlighted the impact of covid-19 on routine family planning services, antenatal, postnatal care, and immunization. The session was concluded with the remarks of the chair. The chair said that advocacy and motivation were essential for public health professionals, and the pandemic situation had provided an opportunity to focus more on the preventive side. Moreover, Pakistan has performed well despite the current prevailing situation of COVID-19. Therefore, more importance should be given to nutrition as it is a burning issue affecting the future of Pakistan.

Session Title

Contraceptive Commodity Security Challenges (Crisis) and Local Production of Contraceptives

Background: Pakistan has the sixth largest population in the world. With the current rate of growth, the population will double by 2050. According to PDHS 2017-18, contraceptive prevalence rate (CPR) was 35% among married women of reproductive age (WRA); 56% intended to use family planning services (FP) and unmet need for family planning was 21%. These statistics further becomes alarming with structural inequalities which affect population outcomes. Overall fertility rate is 4.1 children per WRA with significant urban rural disparity: 3.3 children in urban setting compared to an average rate of 4.5 children in rural areas. There is a need is to provide at least one family planning method (FP) that is affordable to low-income couples. This session brought experts to discuss contraceptive commodities security challenges, barriers for its availability and local production. DKT International is one of the leading global organizations providing health facilities specially related to the Family Planning sector. During the last 13 years, DKT Pakistan has been providing access to safe and affordable family planning and reproductive health products to the population on an equitable basis.

Session Presenters

- Mr. Farhan Hassan (FH), Chief Operating Officer-DKT International
- Dr. Muhammad Tariq (MT), Country Director Chemonics
- Mr. Justin Thompson (JT), Country Director-DKT
- Dr. Masooma Zaidi (MZ), Senior Project coordinator Health-KFW

Session Panel

- Chair: Dr. Nausheen Hamid, Parliamentary Secretary for Health
- Co-Chairs: Brig. Dr. Waseem Ahmed, Medical Superintendent Railway Hospital RIPHAH , Rawalpindi
- Keynote Speaker: Dr. Muhammad Tariq, Country Director (Chemomics-Contraceptive commodity security situation in Pakistan)
- Discussant: Brig. Dr. Ambreen Anwar, Gynecologist, Military Hospital Rawalpindi

Proceedings of the Session:

Dr Ayesha Baber from Al-Shifa School of Public Health began the proceeding with recitation from Holy Quran followed by vote of thanks to all distinguished guest and participants.

Dr. Farhan Hassan from DKT said that the unintended pregnancies will drop by 68% if unmet need of modern contraceptive is met in the world. He informed that IUD usage in Pakistan is 2 million only. He stressed upon the need of use of mass communication as a method to access large population and raised the issue of sensitivity of the topics during advertising for family planning commodities.

Dr. Muhammad Tariq talked about linking commercial industry with commodity security as a crucial step. He remarked that despite spending millions on social marketing, CRP in Pakistan remains low. He talked about digital data system and how it can revolutionize the system using a single platform. He stressed upon the need of local production of FP commodities via inviting the commercial sectors and providing incentives. He emphasized the need to connect commercial industry with public health and gave an example of incentives for the commercial sector, group purchasing and collaboration of industrial with health sector need during COVID-19 pandemic.

Mr. Justin Thompson talked about DKT social marketing and introduced clean room facility project which plays an important role in childbirth. He informed the participants about their wide presence globally. He talked about range of family planning issues like safe abortion, STDs and social marketing of contraceptives.

Dr. Masuma Zaidi talked about DKT experience in development of healthcare system in Pakistan since 2016 and working with different organizations on reproductive health projects e.g. maternity

hospitals in Peshawar, Greenstar, FPA, and Agha Khan University. She suggested that FP commodities should be included in essential services, should have women self-care centers, improve public private partnership, restore the global supply chain disrupted by COVID-19 pandemic and behavior change approaches to maximize contraceptive usage.

Dr. Naseer Mohiddin advisor DKT informed the group that there is a collaboration of DKT with Government of Pakistan for local provision of contraceptive.

Dr. Waseem Ahemd raised an important issue of misconception about FP and need to address according to the local norms. **Dr. Ambreen** pointed to the mindset of the people as a barrier because health is not the priority and stated lack of women empowerment as another important barrier for contraceptive usage. **Brig. Dr. Waseem Ahmed** stressed on the need to put efforts together to reduce the misconceptions about family planning. He praised DKT, KFW and Dhanak for involving the local community members and religious scholars to create awareness about family planning.

Dr. Nousheen Hamid praised all efforts of DKT to support Government in ensuring uninterrupted supply and availability of the contraceptive stocks and increasing awareness of FP need among the population. Dr. Hamid informed that Government of Pakistan is very keen to encourage and facilitate the local production of all the contraceptives. She also acknowledged DKT Pakistan for taking the lead and setting up an IUCD Assembly Unit at Faisalabad. She invited all interested potential partners to initiate the processes of local production of contraceptives in Pakistan.

Session Title

Enabling the Ecosystem with Local Evidence and Coordinated Approaches

Background: Based on data from 2010–2014, there are almost 25 million unsafe abortions occurred annually across the globe. Restrictive laws and other regulatory barriers, lack of availability of trained providers and services, high cost, stigma, providers biases and hesitancy, conscientious objection, and many other factors such as long waiting time, screening, and diagnostics formalities required at the health facilities could be among several reasons of delay or decline to service provision (WHO 2020). In this background Health Service Academy arranged a scientific session on Enabling the ecosystem with local evidence and coordinated approaches to ensuring that women and girls have the

information and understanding to inform their reproductive health decisions and that they can act independently to make their own choices regarding abortion.

Session Panel

- Chair: Dr. Yasmin Qazi, RITz Consulting, BMGFP
- Co-Chairs: Dr. Sonia Riaz, Deputy Director Technical, Sehat Sahulat Program Islamabad
- Keynote Speaker: Dr. Shabbir Awan, Country Director IPAS

Session Presenters

- Dr. Omar Adil- A Celebrity/TV Anchor Women Health Activist
- Dr. Sadiya Ahsan Pal - Population and RH expert
- Safer Shah - Legal Expert on Abortion Laws

Proceedings of the Session:

Ms. Mehrin Shah shared the objectives of the session as followed:

1. To share local evidence base for improving approaches towards abortion self-care.
2. To sensitize the audience on Pakistan abortion law; its current interpretation (religious; policy and providers' perspectives) and implications on the women health and life),
3. To mobilize champions for advocacy to improve ecosystem around abortion.

Dr. Yasmin explained abortion and its burden in Pakistan and stressed that contraception has been a collective failure that has led to this burden. She expressed that pandemic has increased gender and equity factors in vaccination which shows how gender has its specific role in every situation that leads to discussion on this topic for furthering ideas on solutions in this regard.

Dr. Shabbir Awan expressed that the topic is less sought due to certain factors. He shared a National study of 2002 that was followed up in 2012. He sketched a comprehensive image on the rationale behind the restrictions to access to safe abortion. He emphasized that for identification of areas, there is a need to tap and assess further work like family planning. IPAS has depicted the solution to many of these issues as an image via the Sustainable Abortion Ecosystem (SAE) - the IPAS Framework being divided upon the pillars including Human Rights and Equity, Partnerships and Collaboration,

Local Expertise and Ownership and Accountability. Improving quality of care via Sustainable Woman-Centered Care was also highlighted. **Advocate Safeer Shah** was invited to discuss the abortion laws. He appreciated IPAS for the initiatives that have brought many foundation successes for basic women needs in our society. He recommended for awareness of medical networks on abortion laws and reforms by law enforcing agencies in collaboration with MoH so that laws can be procedurally incorporated. He talked about necessary treatment in good faith to save the life of women. This law gives broad and visionary provision of rights for which the general public needs to be informed. He talked about how Pakistan gives the right to abortion when the risk to life and risk to health is evident.

Dr. Omer Adil emphasized the need for sex education for children and stigma associated with it. He discussed the need to use media approach and create educational dramas that can reach the population. He talked about lack of awareness of the general population that depend on traditional methods that can risk precious lives.

Dr. Nausheen Hamid talked about the *Sehat Sahulat* program as an advancing program under MoHS and said it will be a game changer in the coming times. The aim is to achieve Universal Health Coverage starting from most needing areas of Pakistan. She shared regarding the indoor healthcare services which also include maternity packages. The limit of benefit package is now being extended and maternity package is being enhanced particularly for counselling of women post-delivery from January 2022.

Dr. Yasmin concluded that there is a need for an approach towards a safe society in which women can take care of their health and help improve their society as well.

Session Title

Access to Care

Background: Health is influenced by the quality of care as well as level of access and utilization of healthcare services. Globally, COVID-19 has adversely impacted health systems at countless levels, contributing to increase in disease burden and higher mortality. Increased in mortality has not only stressed the health system, but also severely impacted the service utilization especially for maternal and child health in Pakistan. Access to care importance had been the corner stone throughout the COVID-19 pandemic.

Session Panel

- Dr. Shamsa Zafar, HOD Gynecology and Obstetrics, Fazaia Medical College
- O-hairs: Dr. Rukhsana Khan, HOD Community medicine, Fazaia Medical College
- Keynote Speaker: Dr. Mukhtar Ahmad Chair, Director Malaria Control Program, Islamabad
- Discussant: Brig. Dr. Ambreen Anwar, Gynaecologist, Military Hospital Rawalpindi

Session Presenters

- Mr. Salman Sohail (SS), The Impact of COVID-19 on Smoking Patterns in Pakistan: Findings from a Longitudinal Survey of Smokers?
- Mr. Aamir Hussain (AH), COVID-19 vaccine reluctance among healthcare professionals in district West Karachi
- Ms. Meha Siddiqui (MS), Prevalence and Association of Anthropometric Indices of growth with vaccination of children under 5 years of age
- Dr. Saadia Rafique (SR), Prevalence and Predictors of stunting in children: a meta-analysis

Proceedings of the Session:

Dr. Muhammad Naseem Khan, welcomed all participants and distinguished panelist and presenters. He stressed the importance of access to care specifically in the context of COVID-19. The session started with the chair presenting her research on the COVID-19 contact tracing in the ICT conducted with collaboration with DHMT, Islamabad.

Dr. Zafar presentation was titled “*Process Mapping the Islamabad Capital Territory’s COVID-19 Contact Tracing System*”. She informed the group that there is a dire need for establishment of National and District Surveillance Systems as hubs of coordination, information and need for active surveillance system rather than passive surveillance. She talked about importance of scaling- up of services, resource mobilization and task shifting that was done in order to accomplish contact tracing in Islamabad within limited financial resources.

Mr. Salman Sohail in his presentation “*Impact of COVID-19 on Smoking Patterns in Pakistan*” stated that there have been significant bidirectional changes in smoking patterns since COVID-19 in Pakistan. Many people have stopped, reduced, or tried quitting smoking. Increased in smoking was also reported along with relapsed after quitting. Among those reporting quitting at the start of

COVID-19, 39% (81/206) relapsed in the subsequent months. In the second presentation “COVID-19 vaccine reluctance among healthcare professionals in district West Karachi” **Dr. Khurram and Dr Aamir Hussain** stated that the study reported substantiality high proportion of COVID-19 vaccine reluctance among the participants. Reluctance was found more among the female healthcare professionals; among which nurses had higher vaccine hesitancy than other healthcare professionals. The fear of side effects, inconclusive research findings of clinical trials and lack of trust were the major reasons for vaccine hesitancy.

Ms. Meha Siddiqui in her presentation reported the results of meta-analysis and informed that lack of childhood vaccination is associated with stunting and wasting in children. Increase in coverage would help in solving the problem of poor growth in developing countries. She also reported that childhood vaccination have shown to decrease child morbidity and mortality. Childhood vaccination programs are high-return investments because they give long-term benefits for children, mainly by protecting from cognitive and physical disabilities.

Dr. Saadia Rafique reported the findings of the study “Prevalence & Predictors of stunting in children”. She informed that pooled prevalence of stunting in children under five years of age was 39.11%. The main predictors reported were mother’s education (80%), weight of the baby at birth 60%, breast feeding and socio-economic status was 53.3 %.

Session Title

Strengthening Health Systems

Background: Health system strengthening relies on evidence-based policy advice, building individual and institutional capacity and supporting priority programmes through better governance, financing, workforce, technologies and services. Strengthening health systems is guided by the values and principles of primary health care in addition to the four reform areas outlined in the World Health Report 2008: universal coverage, service delivery, leadership and public policy reforms. Pakistan is committed to achieving the health-related targets of the Sustainable Development Goals with the aim of attaining universal health coverage. Health equity and the right to health contribute to sustainable development and poverty reduction. Embarking on Pakistan national vision towards universal coverage will entail reforms in the health system, as well as addressing social and environmental

determinants of health. The national health vision 2025 provides a way forward to confront the challenges that face the national health system such as inequities, rising exposure to health risks, increasing health care costs and low levels of access to quality.

Session Presenters

- Dr. Baber Tasneem Sheikh - Director Technical, JSI (Strengthening building blocks and Strengthening Health systems: Configuring post COVID-19 scenario in Pakistan)
- Prof Hassan Abbas Zaheer - the WHO advisor on Blood Regulation, Availability and Safety (Blood Safety Systems Reforms in Pakistan)
- Amna Khan - (Health Systems Strengthening through digital health technologies)
- Sobia Naeem - (Innovative technologies are helpful to cope with emerging public health problems)
- Imran Ali - (State of human resources for health in Pakistan: Issues, challenges and the regulatory framework)

Session Panel

- Chair: Prof. Dr. Zafar Ali Chaudry, VC, Faisalabad Medical University, Faisalabad
- O-hairs: Dr. Ali Mir, Population Council
- Keynote Speaker: Dr. Samia Latif, Consultant Communicable Disease Control, Public Health England
- Discussant: Brig. Dr. Sadia Khan, Associate Professor, Rawalpindi Medical University

Proceedings of the Session:

Dr. Saadia Latif provided history of the vaccination and related issues of myth, fake news, misinformation for which vaccines have been widely objected and rejected; although vaccines are the single most cost effective and clinically effective method of saving lives. She stressed the importance of taking into account all the barriers in play against the vaccine and used the example of the extensive work of building trust, creating awareness and engaging society in the dialogue and embedding the right information through professionals done for COVID-19 vaccine. She also highlighted the importance of using real stories and social media impact through real time information and data to achieve the goals

Dr. Babar Tasneem in his presentation “Strengthening Health System building blocks: Configuring Post COVID-19 Scenario in Pakistan” said that in spite of fragmented health system and some of the shortcomings like lack of appropriate training of healthcare professionals, lack of funding for PPEs and other resources; Pakistan led an impactful control of COVID-19 pandemic. He stressed the need to increase the fiscal space for health, investing in human resources for health, establishing an inventory management system, using information for decision-making and tailoring service delivery to local context and wider system values.

Prof. Hasan Abbas in his presentation titled “Blood Safety Systems Reforms in Pakistan” compared the scenario prior to reforms and after the reforms. He informed that all reforms were brought in between 2008 till 2011. He emphasized on the technical achievements of policies, Voluntary Non-Remunerated Blood Donor (VNRBD), human capacity development, quality management system, clinical rationale use of blood, management information system, research and development and the legislative and regulatory achievements.

Dr. Momina Muzammil and Dr. Amna Khan presented on Health Systems Strengthening through Digital Health Technologies. The presenters informed that there are limited numbers of countries where digital health initiative is currently working. Use of the digital system through Covid-19 innovation research project, provided an opportunity to identify gaps in preparedness and response of health systems. Dr. Amna provided overview of the mobile app and web portal aspect of project *Hayat*. The mobile app is a service delivery module whereas web-portal is a monitoring dashboard.

Dr. Ali Mir concluded that telemedicine is one of the fundamental pillars that may help in strengthening the foundation of health systems.

Session Title

Antimicrobial Resistance

Background: The Antimicrobial Resistance (AMR) has resulted in an alarming increase in the burden of infections due to multi-resistant bacteria and limiting the choice of antimicrobials for treatment. Rising AMR is posing a serious threat in achieving Sustainable Development Goals (SDGs) targets especially in absence of even a single AMR specific SDG indicator. AMR contributes to ~700,000 deaths/year including 230,000 people who die from multidrug-resistant tuberculosis.

These estimates would rise to 10 million deaths per year by 2050. SDGs 1 (no poverty), 2 (zero hunger), 3 (good health and well-being) and 8 (decent work and economic growth), among others- depends on ensuring that life-saving drugs continue working. Pakistan have developed National AMR Strategic Framework for Containment of Antimicrobial Resistance (2016) and an operational AMR National Action Plan (2017). To bridge implementation gaps GoP through Fleming Fund grant from UK government working to develop a thorough plan on AMR involving the human health, animal health and other related stakeholders under One Health.

Session Panel

- Chair: Professor Dr. Mohsin Saeed Khan, Member Senate HSA.
- Co-Chairs: Dr. Imdad Ali, Registrar, Pakistan Medical Commission
- Keynote Speaker: Dr. Ahmad Hussien Tariq, Health Service Academy

Session Presenters

- Mr. Muneeb Altaf (MF), Post Graduate Trainee of Community Medicine Department, King Edward Medical University, Lahore
- Ms. Omer Shujat Bhatti (OSB), PhD Scholar, Department of Environmental Science, International Islamic University, Islamabad
- Dr. Khadija Munir (KM), Assistant Professor, Fatima Jinnah Medical University Lahore; *Side effects of Sino-pharm Covid-19 vaccine observed in healthcare workers in Pakistan*
- Mr. Atta Ur Rehman (AR), Assessment of Communication Gaps in Pharmacovigilance System among Health Care Stakeholders in Tertiary Care Government Hospitals of Islamabad

Proceedings of the Session:

Dr. Muneeb Altaf in this presentation “*The influence of antibiotic stewardship program in indoor patient of Asia- a systematic review*” presented resultS of antimicrobial stewardship program (ASP) with reference to cost effectiveness of the program, antibiotic consumption, mortality rate, length of hospital stays and clostridium difficile infection. He informed that effective implementation of ASP have resulted in reduction in consumption of antibiotics and cost of medicine; thus is the corner stone to handle AMR issue.

Dr. Omer Shujat Bhatti talked about fragile healthcare infrastructure of Pakistan and questions raised related to epidemic preparedness, prevention and strategizing priorities in his presentation titled “*Epidemic consideration in Architectural design of healthcare facilities: A case for hospitals & healthcare facilities in Pakistan*”. He informed that less than 10% of the facilities developed had medical personnel engaged at time of the building design for understanding the demand of medical infrastructure. Quarantine/ isolation setting, infectious diseases or nosocomial diseases control, buffer zoning and other specialized protocol required for treatment of patients prior to COVID19 showed lack of prioritization in health infrastructure related to public health consideration of diseases or possible epidemic situations. He stressed the importance to bridge the gap between involvement of architect and medical team at time of design of a health facility.

Dr. Khadija presented the finding of the research study in his presentation titled “*Side Effects of Sino Pharm COVID-19 Vaccine Observed in Healthcare Workers*”. The study finding showed that vaccine has no major side effects, if any most of the side effects were felt after the first dose. He concluded that Sino pharm has good safety profile with no major side effects and also considered as the safe for the patient with Co-morbidities.

Dr. Atta ur Rehman. He in his presentation “*Assessment of Communication in Pharmacovigilance System among Health Care Stakeholders in Tertiary Care Government Hospitals of Islamabad*” stated that there is a communication gap among the health care professionals as well as in adequate knowledge about the pharmacovigilance system. He also informed that there is a lack of counselling for patients how to take medicine because of the non-availability of the qualified Pharmacist

Dr. Imdad remarked that biomedical engineering, architect designer and medical professional should collectively approach to deal with health issues including epidemic. He suggested expanding the research studies to larger scale to determine the holistic picture.

Session Title

COVID-19 Impact (Free Papers)

Background: COVID-19, the current pandemic, emerged from Wuhan, China, in late December 2019. The first two cases were reported in Pakistan on 26th February 2020. In March, WHO declared it as a global pandemic. Its devastating impact on health systems has pushed countries to their limits. The initial response for this emergency is immediate healthcare buildup, strict implementation of standard operating procedures (non-pharmacological interventions) while delineating the sustainable strategy to control the pandemic. There is a need to have a robust program with foresight on scientific evidence for vaccine hesitancy, safety, efficacy, availability, management, and distribution in the coming years. Globally, COVID-19 has adversely impacted health systems at countless levels, contributing to an increase in disease burdens and higher mortality. In Pakistan, there have been 1,232,595 confirmed cases and 27,432 deaths due to COVID-19 since February 2020. This sudden increase in mortality has stressed the health system and severely impacted the service utilization for maternal and child health in Pakistan.



Session Panel

- Chair: Prof. Dr. Amena Rahim, HOD Biochemistry IIU
- Co-Chairs: Dr. Samra Mazhar, Deputy director Ministry of National Health Services Regulation & Coordination
- Keynote Speaker: Dr. Hina Javaid, Assistant professor Family Medicine UHS
- Discussant: Dr. Saira Kanwal, Ministry of National Health Services Regulation & Coordination

Session Presenters

- Mrs. Kashaf Khalid
- Dr. Kholi Noreen
- Dr. Sayema Awais

Proceedings of the Session:

Dr. Hina Javed, commenced the session and argued the Best-practice management of COVID-19 in general practice. The most common symptom in about 88% of people was fever. Up to 1:10, present with diarrhoea and start feeling sick 1-2 days before developing other symptoms. The take-home message was of maintaining a proper level of sanitation and disinfection procedures. It was emphasized to follow the standard SOPs, maintain a safe distance, wash hands for 20-30 seconds frequently, wear a mask, & get vaccinated. Vaccines are safe, effective and reduce the risk of severity of illness.

Mrs. Kashaf Khalid presented the paper ‘COVID-19 vaccine acceptance: A case study of Pakistan’. She discussed vaccine hesitancy which can hamper future COVID-19 vaccination efforts. The objective of her study was to assess the acceptance of the COVID-19 vaccine and evaluate factors affecting its acceptance among the general adult population. The vaccine acceptance rate has been lowest in Kuwait (23.6%) and highest in France (58.9%). She highlighted that governments should educate the masses and keep the vaccination free, and people should comply with the mandatory guidelines described by the health departments. Everyone must play their role to bring an end to this pandemic.

Dr. Khola Noreen, presented her paper titled ‘Impact of COVID-19 pandemic response on uptake of routine immunizations in Gujranwala’. An analytical cross-sectional study was conducted to determine the impact of the COVID-19 pandemic on routine immunization services among children under two years of age (0-23months). Significant contributing factors for incomplete vaccination included fear of getting COVID-19 infection on visiting healthcare facility, delay in reaching care due to transportation, and restricted movement during the lockdown. Other factors included the low education status of the mother, distance from the vaccination centre, and low monthly income. Thus, the COVID-19 pandemic has a significant impact on routine immunization services with delayed vaccination in nearly half of children under 2 years of age.

Mrs. Sayema Awais discussed her paper ‘Impact of COVID-19 on Utilization of Reproductive, Maternal, Neonatal, Child & Adolescent Health Services in Pakistan: Lives Saved and Lost in 2019 & 2020’ COVID-19’ She explained that increased burden of COVID-19 patients, lockdowns and the economic effects of the pandemic led to the impaired capacity of health systems as well as reduced utilization of RMNCAH services. The impact of COVID-19 on disruption of RMNCAH services was determined by comparing selected indicators related to the utilization of RMNCAH services and

reported in the District Health Information System (DHIS) for March till July both 2019 and 2020. The results showed that the disruption in health services due to the COVID-19 pandemic led to a decline in the utilization of RMNCAH services in March-July of 2020 compared to March-July 2019. Therefore, policy planners and health system managers were recommended to encourage patients to utilize routine RMNCAH health services while adopting precautions for COVID-1. The key message at the end of the session was that we should all be directly and indirectly take part in health care and spreading awareness. By using targeted techniques, COVID-19 education provision can significantly reduce the incidence of viral infection. Behaviour change should be our top most priority in order to combat this disease.

Session Title

Dietary Risk Factors and NCDs

Background: Non-communicable Diseases (NCDs) cause around 41 million deaths each year, which accounts for 71% of total deaths worldwide. In low and middle income countries 85% of total deaths are due to NCDs. Cardiovascular diseases are the leading killer followed by cancers, respiratory diseases, and diabetes; contributing more than 80% of all premature NCD deaths. The disease burden of NCDs in Pakistan is exceeding that of communicable diseases due to ongoing epidemiological transition. To achieve health related SDGs and improved health outcomes, it is crucial to promote knowledge, awareness and motivation for lifestyle changes targeting modifiable risk factors to prevent NCDs. UHC Essential Benefit Package of Pakistan also focuses on NCDs. The four major modifiable risk factors; consumption of unhealthy diet, tobacco, alcohol and physical inactivity are target priority interventions. Metabolic risk factor such as hypertension, hyperglycemia, hyperlipidemia and obesity are all caused by unhealthy dietary habits and sedentary lifestyle. MoNHSRC, Pakistan National Heart Association (PANAHA), World Health Organization(WHO) and Heartfile with collaboration with other stakeholders are working to taxing Sugar Sweetened Beverages and reduction of trans fats. The session has been jointly organized by Nutrition Wing MoNHSRC, WHO and PANAHA.

Session Panel

- Chair: Dr. Mahipala Palitha, WR Pakistan
- O-hairs: Dr. Baseer Khan Achakzai, Director Nutrition, Ministry of National Health Services, Regulation and Coordination (M/o NHR&C)
- Keynote Speaker: Brig Dr. Abdul Hameed Siddiqui, Armed Forces Institute of Cardiology
- Discussant: Dr. Syed Zakir Hussain Shah, Advisor, Population Program Wing, M/o NHR&C

Session Presenters

- Dr. Khawaja Masuood Ahmed (KMA), Health Harms of Sugar Sweetened Beverages
- Mr. Munawar Hussain (MH), Reducing Consumption of SSBs – Policy Options
- Dr. Noureen Aleem Nishtar (NAN), An Overview Around Trans Fatty Acids in Pakistan
- Mr. Malik Imran Ahmed (MIA), Tobacco Taxation in Pakistan
- Dr. Saba Amjad (SA), Research and policy engagement for Trans-Fatty Acids Elimination in Pakistan

Proceedings of the Session:

Mr. Sana Ullah Ghumman moderated the session. He welcomed all the delegates and the participants and opened the session with Recitation of Holy Quran.

Dr. Baseer Khan Achakzai thanked WHO role in supporting MONHR&C. He reaffirmed importance of minimizing excessive use of salt, trans fatty acids (TFA), Sugar-sweetened beverages (SSB) in Pakistan. Dr. Baseer informed that several government interventions to control and prevent NCDs with mass advocacy efforts are underway.

Dr. Masuood informed that Sugar-Sweetened Beverages increased disease burden of obesity and NCDs due to sugars, devoid of nutritional value. He further informed that total direct and indirect cost of both illnesses attributable to excess weight in Pakistan is RS. 428 billion (PIDE 2015). High rates of obesity and overweight was seen more among women of reproductive age (WRA) and children under five and in urban setting (STEP survey, 2014-15) (National Nutritional Survey Pakistan (2018).

Dr. Munawar Hussain shared the policy and best practices set up which included implementation of 20% excise tax on SSBs, a package of healthy food policies including front package labelling, marketing restrictions and healthy school food policy. Giving examples of tax percentage from other countries and informed the participants that Pakistan has lower tax on SSBs than many regional countries.

Dr. Noureen Aleem Nishtar informed about the NCD burden and Trans-Fatty Acids (TFA) intake in Pakistan, global health impact of TFAs and global evidence of TFA elimination resulting in reduction in NCD mortality. She presented WHO guidance and REPLACE campaign to eliminate trans-fat in foods by 2023 highlighting all components of REPLACE action package. Dr. Nishtar shared existing TFA regulations in Pakistan and major regulatory challenges faced for TFA elimination.

Dr. Saba Amjad, presented Heartfile's research and policy engagement for TFA elimination in Pakistan. She informed that Pakistan has the 2nd highest per capita TFA intake in the WHO-EMRO region (after Egypt). Heartfile was involved in development of National Action Plan for TFA elimination via TFA technical working group (Sep 2019) and is actively working with both federal and provincial government to steer policy processes. She presented major challenges in Pakistan and emphasized on using evidence based best practices. A documentary was played titled "Striving for a Trans Fat Free Pakistan: A Documentary Film" prepared for media engagement.

Dr. Palitha Mahipala emphasized upon the importance of reducing salt, sugars and TFAs from diet. He informed the participants that WHO initial 4x4 model for NCDs with four diseases and four risk factors, is now 5x5 with addition of risk factor of air pollution and mental health diseases. He also stated that these 5 risk factors are easily modifiable risk factors and can prevent development of metabolic risk factors (hyperglycemia, hypertension, obesity, and hyperlipidemia) and ultimately NCDs. Session outlined the following recommendations:

- A package of policies would be the ideal to reduce the burden of obesity and non-communicable diseases.
- Regulate marketing, including removal of health claims on unhealthy foods, and child-directed elements, mandatory, evidence-based front of package labeling on all packaged foods and beverages.
- Reformulation of processed foods to reduce salt, sugar and Trans Fats.
- Increase 20% Federal Excise Duty on SSBs

- Expedite approval of the Health Levy/Contribution bill which was approved by cabinet in 2019 and its approval is still pending.
- Support efforts for enactment of best practice TFA limits (including <2% in all fats and oils and ban on PHO).
- Generate fresh evidence to counter industry arguments
- Implementation of final National Action Plan for TFA elimination
- Undertake multi-stakeholder research on healthier replacements.
- Strengthen the monitoring and enforcement capacity of food authorities.
- Harmonize mandatory limits for TFA to <1% of total fats.
- Extend phase ban on Vanaspati to other provinces
- Build awareness about trans-fat among policymakers, producers, suppliers and retailers.
- Engage electronic, print and social media for TFA elimination.