Book of Abstracts

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MESSAGE FROM THE CONFERENCE CO-CHAIR PUBLIC HEALTH 2022

We wish you a very warm welcome to the fourth virtual International 2022 Public Health and Well-being Conference. Our hope is that over the next 2 days you will not only listen to and discuss important and timely issues in public health from around the world. We have keynote speakers from New Zealand, the USA, and Malaysia. Presenters come from the USA, the UK, Indonesia, Malaysia, Sri Lanka, Bangladesh, China, Pakistan, Taiwan, Japan, Saudi Arabia, Zambia and India. We have tried to arrange the presentations in specific areas of interest including: the COVID pandemic, Health Policy, Knowledge, Nutrition, dentistry, Prevention of Illness, In addition, please do not neglect to attend the poster session with a focus on COVID and health. Examining posters will give you a chance to ask questions not only about specific public health issues but also methods used in attempting to discover causes and solutions.

Astonishingly, some of the major health advances in the past century which were accomplished through Public Health research and measures are currently being challenged. The anti-vaccine or anti-vaccers as they are called have organized and disseminated through social media or non-peer reviewed journals their critiques that vaccination leads to autism or cancer. This leads to the fact that measles made a come-back in the USA and the fear stoked by the 'alternate' and non- science based media that the COVID vaccine will do you harm. As recently as this past- year health workers in other parts of the world have been murdered by religious extremists when attempting to vaccinate children against polio. Gun control is another public health measure which has been successfully fought against by gun manufacturers who put their profits above the health of the public. And the free and easy way that "pain killers" have been distributed leading to a continuous climb in drug overdoses and mortality can be attributed to big pharma's search for profit above public's health.

Thus, we have many challenges ahead of us and much work to do. It is hoped that by continuing our work and meeting together periodically to discuss research methods and findings that we will further protect and secure the public's health.

Prof. Sally Guttmacher
Conference Co-chair of PUBLIC HEALTH 2022
Emerita Professor of Public Health,
New York University, USA
Senior Technical Advisor: Community Rising Africa Network

MESSAGE FROM THE CONFERENCE CO-CHAIR PUBLIC HEALTH 2022

Greetings! I warmly welcome you to the 4th Conference on Public Health and Well-being. With an encouraging number of participants this year, we are delighted to see that these this conference is becoming larger and more substantial every year.

The theme for this year's conference, "Effectiveness of Public Health Interventions to Control a Pandemic" is very apt as we look back, ponder upon, and discuss the overall successful role of public health interventions globally thus far, which enabled us to slowly move towards the endemic phase of the unprecedented COVID-19 pandemic.

The submissions for presentations for this conference came from Sudan, Pakistan, Iran, India, Thailand, the US, Japan, South Africa, the Philippines, the UK, Sri Lanka, China, India, Malaysia, Indonesia, Korea, Hong Kong, and Russia. Issues that will be discussed range from challenges of communities and countries in dealing with the pandemic including socioeconomic and psychosocial effects of the COVID-19 pandemic, vaccination uptake, big data utilization in the pandemic, and well as many more pressing public health matters which are equally important. Undoubtedly, we will experience a wide variety and richness of ideas that scholars and practitioners bring into this conference. Hence, I hope that this conference will allow the participants to share the knowledge, strategies and expertise contained within the discipline of Public Health, not only in mitigating the spread and the harm of the recent COVID-19 pandemic, but also in intervening and managing many other public health issues around the globe.

I would also like to welcome and humbly thank the esteemed keynote and plenary speakers who will generously share their expertise in this conference, and also extend our gratitude to Universiti Putra Malaysia, the conference academic partner. Additionally, this conference would not be possible without the generous help from the conference organizing committee members and the numerous volunteers, without whose generous contributions this conference would not have been possible.

Most of all, I thank you, the participants, for enriching these annual conferences by your presence. I hope you will enjoy the content, renew old friendships, make new friends, get new ideas, and above all, have a good time.

Dr. Aidalina Mahamud
Conference Co-chair of PUBLIC HEALTH 2022
Senior Medical Lecturer and Public Health Specialist,
Department of Community Health, Faculty of Medicine and Health Sciences,
Universiti Putra Malaysia

MESSAGE FROM THE ACADEMIC PARTNER PUBLIC HEALTH 2022

Welcome to all speakers and participants to this year's conference, with the theme - "Effectiveness of Public Health Interventions to Control a Pandemic".

The COVID-19 pandemic was, and still is, a fast-moving, novel, and unprecedented biological crisis. In the last two years, it has been noted that traditional public health principles and interventions have been the pillars in the management of the COVID-19 pandemic. At the same time, it was also seen that modern technologies and unconventional approaches have been used to augment to roles of these public health principles and interventions.

In the recent pandemic, which was an event full of volatility, uncertainty, complexity, and ambiguity (VUCA), the pre-requisite to the success of any public health interventions was good leadership. A complex blend of leadership styles and approaches were required in containing the chaos, motivating the front liners, and controlling the spread of the virus, all while balancing lives and livelihood.

In the realm of academia, as we continually strive to conduct research in public health interventions, we also look into areas such as socioeconomic and leadership. Findings of these research may allow deeper understanding of the nature of the pandemic, hence assisting policymakers in making the best possible executive decisions, and cost-effective choices in actions and resource allocations.

It is hoped that all participants and public health practitioners in this conference would concur that apart from the interventions implemented in a pandemic, focus should also be given to the art and science of leadership during a VUCA biological crisis, so that we can learn, improve, and refine them in view of future pandemics.

On behalf of University Putra Malaysia as the Academic Partner of this conference, I hope this conference will broaden our horizon in the field of public health, establish new friendships and networks, and enable us to explore current and future research directions.

Dr. Norliza Ahmad
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ABSTRACTS OF FREE PAPER SESSIONS

COVID 1 (A)

ECONOMICS (B)

CHRONIC DISEASES (C)

VACCINE (D)

SYSTEMS, ANALYSIS (E)

Existing Drug Rehabilitation Programs at Selected Residential Drug Rehabilitation Facilities in Sri Lanka

Fernando, C.A., Jayamaha, A.R., Herath H.M.N.D.M., Dharmarathna, H.N.N.D., Fernando, M.M.M.R., Ranadeva, N.D.K., Darshana, A.T., Renuka, A.N., Senanayake, B., Amarabandu, P.N., Samarasinghe, K.L., Fernando, S.S.N.

ABSTRACT OF POSTER SESSIONS (P)

COVID

TECHNICAL SESSION A

COVID 1

A1 [01]

THE CHANGING TREND OF PAEDIATRIC EMERGENCY DEPARTMENT VISITS IN MALAYSIA FOLLOWING THE COVID-19 PANDEMIC

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Pediatric emergency department (ED) visits have declined nationwide following the implementation of the Movement Control Order (MCO) to curb the spread of COVID-19. We aim to study the trend and characteristics of pediatric ED visits in Malaysia following significant COVID-19-related events. A 5-year interrupted-time-series observational study of paediatric ED patients from two tertiary hospitals in Malaysia was conducted. Aggregated monthly data were analysed using Joinpoint software against significant events during the COVID-19 pandemic. The primary outcome was the number of ED visits, types of disease presentations, triage severity, revisit within 24 hours, and hospitalisation. A total of 281,224 paediatric visits to tertiary hospitals were recorded (Kelantan: 51.5%, Johor: 48.5%), with the median age of 4.0 years and males being the majority (56.9%). A gradual increase in the total number of visits was observed until the implementation of the first MCO (monthly per cent change (MPC): 0.46%, p=0.045). Meanwhile, there is a significant reduction in the total ED visits (MPC: -4.7%, p=0.002) and all causes of visits five months after the MCO except for respiratory (MPC: 36%, p=0.021), ENT (MPC: 40.3%, p=0.026) and reviews or procedural visits (MPC: 40.9%, p<0.001). Although opening schools has increased disease severity (yellow triage MPC: 15.6%, p=0.013; red triage MPC: 32.9%, p=0.032), hospital admission has reduced (MPC: -4.3%, p<0.001). The inverse change in disease severity and hospital admission reflects the paediatric utilization of ED as the pandemic evolves. A multicenter study involving primary healthcare facilities is recommended for future studies to capture a wider range of diseases.

Keywords: Emergency department visit, Paediatric, COVID-19, movement control order

A2 [02]

EXPLORING THE GOOD, THE BAD AND THE 'MEH' OF ISOLATION IN COVID-19 LOW-RISK QUARANTINE AND TREATMENT CENTER (PKRC): DRAWING LESSONS FROM INDIVIDUAL EXPERIENCES

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As part of the prevention and control strategies for COVID-19, Malaysia had developed the COVID-19 Low-Risk Quarantine and Treatment Centres (PKRC) aim to isolate patient without symptoms or having minimal symptoms. The isolation of COVID-19 patients in institutions like the PKRC may influence the overall health of the patients. By removing patients from the familiar and the support of home environments, they are subjected to health effects as a result of environmental exposure in PKRC settings, in particular the physical, biological as well as psychosocial factors that influence the health of an individual. Therefore, this writing aim to explore the positive and negative experiences of individuals admitted to PKRC, focusing on the environmental conditions and to recommend measures for improvements. This is a qualitative study is based on two methods. Using the keywords "isolationcovid, PKRC, #pkrcmaeps" and "kuarantinPKRC", a Google search of reports, newspaper articles, vlogs and commentaries related to experiences from patients admitted to PKRC. Secondly, review of Twitter posts, facebook posts and Youtube videos using similar keywords. The results showed several findings; 1) Patients are satisfied with the food and physical amenities in PKRC in particular bed and toilet. 2) Patients expressed good attitude from staff and the friendship, motivation and support from fellow patients to enable them to remain mentally positive during their admission in PKRC. 3) Large PKRC with many patients at a time cause issues of noise and lack of privacy. 4) PKRC with cold air-conditioned hall cause some discomfort and perceived worsening of symptoms. Hence, it is recommended that future institutional isolation for cases of infectious disease reserved for necessary cases while providing optimal efforts to achieve a positive environment for patient recovery and health.

Keywords: COVID-19, isolation, low-risk COVID-19 quarantine centre, environment

A3 [03]

THE IMPACT OF THE COVID-19 PANDEMIC ON CHILD HEALTH: A CASE STUDY IN JAPAN

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By performing nationwide surveys of parents, children, healthcare services and related institutions, the current study examines the impact of COVID-19 on child and parent health, and institutes' support for children with difficulties during the pandemic in Japan. Two different surveys ("Parents and Children", and "Institutions") were implemented from October to November 2020. The Parents and Children survey includes questions about demographic and household characteristics, the impact of COVID-19 on work and daily life, applications for financial support, relations with children and partners, and health conditions. The final sample comprised 2,582 parents who have a child aged 0 - 18 and 1,032 children aged 9 – 18. The Institutions survey includes questions about the impact of COVID-19 on their services and cooperation with other related institutions. The final sample comprised 2,298 institutions which are responsible for education or healthcare services (e.g., social welfare services, board of education, schools, child consultation centers). The response rate was relatively high compared with similar surveys of its kind; 53.0% for maternal and child health divisions and 56.5% for child consultation centers. The analysis revealed that in the Parents and Children survey, around 90% of children felt stressed during the pandemic. High levels of stress measured using the UCLA PTSD Reaction Index for DSM-5 Children Age 6 and Younger, were observed especially among children whose parents have mental health issues. This leads to the conclusion that the increased burden for parents during the COVID-19 pandemic negatively impacted children. It was revealed that the number of child abuse cases reported to related institutions were an upward trend during the pandemic. The Institutions survey demonstrated that child consultation centers took a greater number of inquiries about children's sexual behavior problems and game addiction. A preventive social work approach is required to give a greater level of support to all children, especially in an unusual situation like the COVID-19 pandemic.

Keywords: COVID-19, social work, child health

A4   **[04]**

IMPACT OF THE COVID-19 PANDEMIC ON PERCEIVED STRESS, ANXIETY, AND DEPRESSION AMONG UNDERGRADUATES IN KIU, SRI LANKA

Somathilaka, M.T.M.[1], Arachchi, A.M.P.S.[1], Ahinsa, P.A.L.[1], Safna, R.M.F.[1], Muzniya, A.F.[1], Sampath, M.K.A.[2]

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[2]Sri Lanka Institute of Biotechnology (SLIBTEC), Sri Lanka

COVID-19 pandemic continues to have a significant effect on stress, anxiety, and depression among undergraduates attending KIU. The normal routine of undergraduates has been greatly influenced by COVID-19 and the inability to address these emotional disorders will, unfortunately, lead to increased psychological impacts. A descriptive cross-sectional study was conducted from March to September 2021, among undergraduates from all the disciplines at KIU (n=260). A self-administered online questionnaire was shared, and data were collected on demographic details, social association with COVID-19, depression, anxiety, and stress using validated Perceived Stress Scale and DASS- 21. SPSS(v25) was used to analyze data by performing Chi-square and Mann-Whitney tests. The p<0.05 was considered statistically significant. Out of 260 participants, A majority (221, 85%) had moderate perceived stress (PS), 10 (3.8%) had high levels of PS, and 29 (11.2%) had low levels of PS. There was no significant association between PS level and sociodemographic data. According to the DASS-21 scale, 145 (55.7%) undergraduates showed signs of depression, 154 (59.3%) suffered from anxiety, and 79 (30.5%) showed signs of stress. There was a significant association between gender and stress according to the DASS-21 scale (p=0.010). However, gender had no significant association with depression or anxiety. In conclusion, most students encountered moderate perceived stress regardless of gender or other socio-demographic variables and a plenty of students showed signs of depression. These issues need to be addressed as prolonged stress or depression may have a serious long-term impact on the mental and physical health of the students.

Keywords: COVID-19, Perceived Stress, anxiety, depression, students, mental health

A5   **[05]**

A QUALITATIVE STUDY ON BURNOUT AND COMPASSION FATIGUE AMONG COUNSELLORS AND THERAPISTS

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Therapists and counsellors are at a high risk of developing secondary trauma, burnout, and compassion fatigue. Continuous exposure to trauma and pain of patients can have a negative impact on wellbeing of therapists. Burnout is a state of mental, physical, and emotional exhaustion brought on by accumulated stress. Compassion fatigue is a condition in which someone becomes numb to the suffering of others and not/less able to display empathy towards them. World health organization defines burnout as an occupational phenomenon and should not be applied to describe experiences in other areas of life. Burnout is included in international classification of diseases 11 as occupational phenomenon resulting from unmanaged, chronic workplace stress. Professional burnout is a multidimensional condition which includes exhaustion, detachment, and professional efficiency (Maslach burnout inventory). When counsellors and therapists experience burnout, their patients are also affected negatively. The main aim of the study is to understand the degree and prevalence of burnout and compassion fatigue among therapists and counsellors. A qualitative method based focused group study including therapists and counsellors based in Bangalore, India. In depth face to face (offline or online), semi structured interviews. The qualitative interviews will be taken place either in focused groups or personally through open ended questionnaires based on social situation, economic situation, and personal characteristics. Also, the data would be categorized into Clinical, Non-Clinical, demography and background or status of patients handled by the subjects.

Keywords: Burnout, compassion fatigue, counsellor, therapists, exhaustion, focused group study

A6   **[06]**

THIRD WAVE OF COVID-19 PANDEMIC IN AFRICA: CHALLENGES AND RECOMMENDATIONS

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Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has evolved in different waves and is currently in its third wave for the majority of countries around the world. Each wave emanated with its own set of challenges. Lower and middle income countries such as most African countries have faced additional challenges compared to high-income countries. This paper highlights the challenges faced by Africa during the third wave of COVID-19 and proposes recommendations and strategies to contain the spread. We conducted a mini-review for the newly released articles and researches about the challenges faced by Africa during COVID-19. Fragmented healthcare sectors, limited healthcare resources and emergence of co-infections in COVID-19 patients, inadequate vaccination rollout and political conflicts are the major challenges faced by the African countries. Recommendations to defeat this outbreak and subsequent pandemics is to raise the public's awareness about vaccines through campaigns and social media in order to lessen vaccine hesitancy. Governments as well should focus on under-served and vulnerable populations, patients with comorbidities, and communities living in endemic-strickeng settings as these people are more prone to the severe form of the diseased. Moreover, by adopting socio-ecological perspectives, one can implement multi-level integrated interventions to help control COVID-19 more effectively.

Keywords: COVID-19, Africa, vaccines, challenges

A7   **[07]**

ASPIRATIONS OF HEALTHCARE PROFESSIONALS TO COMBAT CHALENGES FACED BY LOWER-MIDDLE INCOME COUNTRIES DUE TO A PANDEMIC LIKE COVID-19

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Institute of Health Management Research, Bangalore, India

Lower- middle income countries have poor access to health care services compared to high income countries. It is definitely a challenge for these countries to face pandemic like COVID-19 because of lack of (trained healthcare professionals, surveillance, medical supplies, equipment, and infrastructure, accessibility to health care services and awareness to people). Besides poor access to health care services there is increased disease burden of non-communicable and communicable diseases in these countries which imposes threat as people with these diseases are more likely to get infected by COVID-19 and post recovery complications are more serious in these groups. Challenges faced by these countries due to pandemic are increased mortality and morbidity which led to negative impact on mental health, reduced coverage for health services of communicable and non-communicable diseases and overall maternal and child health interventions, difficulties faced by health care workers such as increased (workload, stress, social exclusion) increased out of pocket expenditure for patients. Methodology used for this study is literature review, cross sectional study by constructing a questionnaire (5point likert scale) targeted at young adults working in healthcare sector and evaluation is done by descriptive analysis. So, for these countries preventive, primitive and curative measures need be implemented appropriately through increased training of healthcare professionals, improved (medical research, infrastructure) adequate medical supplies to face a pandemic like COVID-19.

Keywords: Lower- Middle income countries, challenges, COVID-19, health care services

A8   **[08]**

MENTAL HEALTH ASSESSMENT: A CROSS SECTIONAL STUDY ON RELATIONSHIP BETWEEN STRESS AND WORK AMONG EMERGENCY MEDICAL TECHNICIANS

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Work stress can lead to mental illness, as well psychological distress and physical illness. This study aims in determining the relationship between the perceived stress and their quality of working life and to suggest the fundamentals for change, thereby to help them have a better period of time in life spent working. The focus of this paper is to throw light on the widespread silent issue 'The Mental Health' on the emergency medical technicians in Tamil Nadu, India. A convenience sample consisting of 200 employees are considered on voluntary basis and have given their consent to this study. A semi-structured interview will be conducted face to face for a period of three weeks. One of the most widely disseminated methods of assessing stress is the Perceived Stress Scale and the Work Related Quality of Life Scale are being considered, and these questionnaires will be translated in their local language. With the collected data using two standard questionnaires, the correlation between perceived stress and the quality of work-life is determined using Scatter diagram. Two third of the EMTs show moderate stress level and average quality of work-life, thereby the obtained result reveals strong negative correlation. To improve the quality of work-life, recommendations to be considered for organizational intervention in scheduling of circulating shifts and to address the issues on job security, overtime, underpaid, work space conflicts thereby exercised to live a balanced and healthy life.

Keywords: Emergency medical technicians, stress, mental health, quality of working life

A9   **[09]**

SEASONAL VARIATION OF COVID-19 AND ROLE OF LAND SURFACE AND AIR TEMPERATURES: A CASE STUDY IN WESTERN IRAN

Aboubakri, O.

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The seasonal variation of covid-19 is still unknown, though, it might be influenced by meteorological drivers. In this study, in addition to monitoring data including, air temperature, humidity, wind speed and sun hours, the impact of Land Surface Temperature (LST) measure by satellite Aqua on the seasonal variation was assessed using a novel methodology. We spatio-temporally kriged the LST at first. The kriged LST was bias corrected using Bland-Altman and daily observed data. In order to assess the impact of the predictor and the monitoring data, some aspects of an epidemic, namely pandemic shape, timing (i.e., Peak and Trough) and size (i.e., Peak to Trough Relative and Attributable Fraction) were compared after and before adjusting for the predictors in order to see the change in the aspects. Given the nonlinear distribution of the covid-19 pandemic (i.e., seasonal variation), a distributed lag non-linear model was used in this study. In addition, the interaction effect between the predictors and season was assessed in the model. Before adjusting for the predictors, the peak happened between August and September. After adjusting, the peak went down and was slightly moved forward (i.e., September). However, a considerable uncertainty was seen in the seasonality after adjustment for the variables. The Attributable Fraction (AF) and peak to trough relative (PTR) were 0.23(95%CI; 0.15, 0.32) and 1.62(95%CI; 1.34, 1.97), respectively, showing high impact of season. After adjusting for air and land surface temperatures the values slightly increased: they were changed to 0.24(95%CI; 0.14, 0.47) and 1.68(95%CI; 0.92, 3.09), respectively. The pattern was similar for both air and land surface temperatures. Compared to temperature, the role of humidity, wind speed and sun hours was negligible in seasonal distribution of the diseases. We found the role of temperature on the seasonal variation of covid-19. However, given the big uncertainty after adjusting for the variable, it is hard to see how temperature affects the variation based on our data.

A10   **[10]**

PATIENT CHARACTERISTICS AND DISCREPANCIES IN HEALTHCARE EXPERIENCES STRATIFIED BY RACE IN THE EMERGENCY DEPARTMENT DURING COVID-19: A SPIDER DIAGRAM VIEW

Meller, L.[1,2], Mina, G.[1,3], Curlin, K.[1,3], Baham, M.[1,3], Smith, C.[1,3], Aijaz, A.[1], Makar, C.[1,3], Saadat, S.[1], Taylor-Lucas, C.[3,4,5]

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[2]University of California, San Diego, School of Medicine,
[3]UCISOM Program in Medical Education, Leadership Education to Advance Diversity – African, Black, and Caribbean (PRIME LEAD-ABC)
[4]UCISOM Department of Pediatrics
[5]UCI Pediatric Exercise and Genomics Research Center (PERC)

Discrimination based on race and ethnicity is a major concern in medicine. We aim to explore discrepancies between emergency department (ED) patients' social determinants of health and experience across different races during COVID-19. This cross-sectional survey study recruited adult patients at an academic ED. Patient experience and descriptive information were assessed, and spider diagrams were used to illustrate the differences according to race. Our study included 460 patients (55% female), of which 180 (39.1%) were White, 157 (34.1%) were Hispanic, 76 (16.5%) were Asian and 26 (5.7%) were Black. Black patients had the lowest insurance coverage (80.8%) and Hispanic patients had the least college education (40.8%) (Figure 1). Black and Hispanic patients also had the lowest primary care provider coverage (60% and 62.42%, respectively) (Figure 1). Black patients also reported the poorest past ED experiences (23.08%) and had the highest level of agreement that healthcare providers/agencies treat people differently based on race or ethnicity (34.62%) (Figure 2). COVID-19 was the largest barrier to ED visits for Asian patients and Black patients (26.32% and 23.08%, respectively) (Figure 2). Overall, we found that the largest discrepancies in social determinants of health existed among Black and Hispanic patients. Hispanic patients had the lowest level of higher education while Black patients exhibited the lowest rate of insurance and PCP coverage. Black patients also reported the highest level of previous poor ED experience, and believed most strongly that medical discrimination existed. Further research is needed to characterize the diversity of patient experiences and health outcomes.

Keywords: Social determinants of health; health dare discrepancy; healthcare diversity; Public Health; spider diagram; emergency department
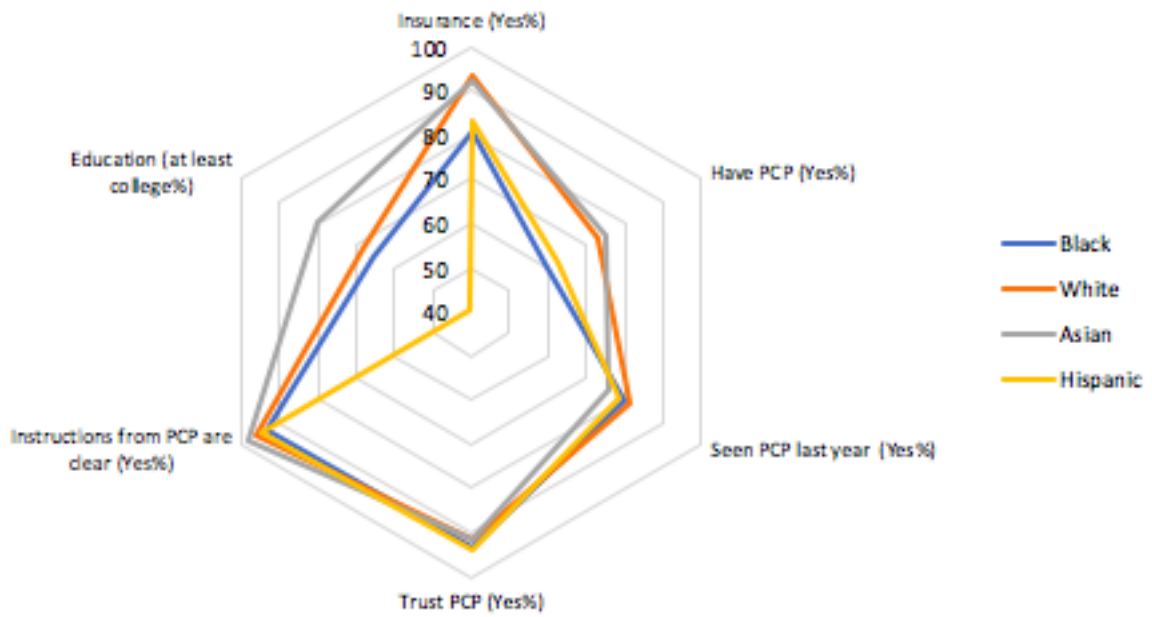
Figure 1. Differences in ED patient social determinants of health stratified by race.
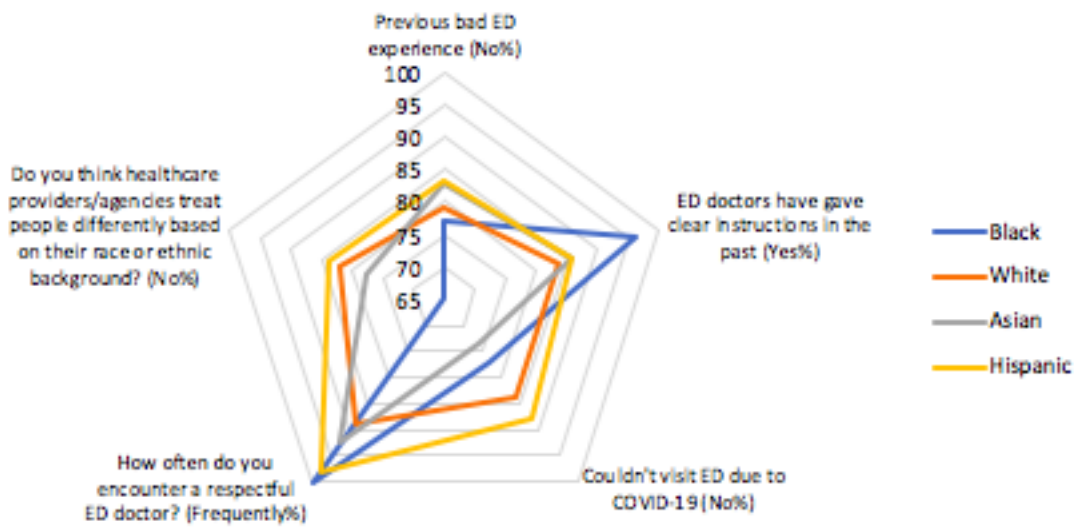
Figure 2. Differences in ED patient experience stratified by race.

TECHNICAL SESSION B

ECONOMICS

B1   **[11]**

THE INDIRECT EFFECT OF CORONA VIRUS DISEASE (COVID-19) PANDEMIC ON ECONOMIC GROWTH IN MALAYSIA

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Universiti Putra Malaysia

The Coronavirus (COVID-19) pandemic started in the 4th quarter of 2019. The pandemic severely affected Malaysia's economy and it experienced a negative Gross Domestic Product (GDP) growth rate in 2020. However, the growth rate in 2022 is forecasted a range of 5.5% to 6.3%. This study incorporates the COVID-19 indirect impacts on economic growth, conditional to COVID-19 deaths in Malaysia. It uses Auto Regressive Distributed Lag model with monthly secondary data from January 2020 to April 2020 from the Department of Statistics and the Ministry of Health Malaysia. The marginal effect result shows a negative relationship and significance at 1%, indicating that an increase in COVID_19 infection leads to a decrease in economic growth in Malaysia conditional to COVID-19 deaths. Therefore, the study concludes that COVID-19 indirectly negatively affects economic growth.

B2   **[12]**

HUNGER AMONG FOOD PRODUCERS: FOOD SECURITY AMONG FOOD WORKERS IN THE PHILIPPINES

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The mixed method study examines the role of job security, food chains, and social protection in the Philippines from March 2020-2022. This covers the period of intense lockdowns until the easing of restrictive measures nationwide. Food workers from plantation to processing to distributing are included in the survey. The experience of hunger was described by collecting data online. The prevalence of hunger is described in the study and linear regression is used for analysis. The findings aim to show the relationship between the experience of hunger with access to food, jobs, livelihood, and social protection. Qualitative data on food systems is also gathered and presented on a map. The study aims to guide public health policies in designing social protection and food systems during an intensified health crisis.

Keywords: Hunger, social protection, food security, farm workers

B3   **[13]**

LONGITUDINAL ASSESSMENT OF LOCAL INEQUALITY IN HEALTH BEHAVIORS IN STOCKTON ON TEES

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Whereas inequalities in health behaviors could be attributable to local area level deprivation status, poorer areas may also have clustering of unhealthy behaviors. This study used a multistage sampling to detect a 5% difference in health outcomes between the least- and most-deprived areas in Stockton-on-Tees and assessed geographical inequalities in health behaviors using a prospective 18-month cohort survey (4 waves). Data were collected from 20 most- and 20 least-deprived areas of Stockton-on-Tees, North-East England between April 2014 and October 2015. This study examined whether unhealthy behaviors among adult residents varied by area level deprivation and time during a period of austerity. Number of unhealthy behaviors (smoking, not eating 5 fruits and vegetables each day, drinking alcohol, and infrequent exercise) were used as an outcome. Residents from most-deprived areas had significantly higher number of unhealthy behaviors, which remained constant over the period. Male and younger ones also had higher number of unhealthy behaviors. Percentage of resident with 3 or more unhealthy behaviors for most-deprived and least-deprived at baseline was (38% vs 22%), which was 22% vs 15% at wave 4. Inequalities in health behaviors were relatively stable throughout the study period against a backdrop of austerity. This assessment of risk factors suggests that more research is needed to understand the clustering of unhealthy behavior and factors associated with it. Previous research shown that materialistic factors were the most common determinants of geographical inequalities in health behaviors and addressing them are an important approach to health promotion.

B4   **[14]**

INTEGRATIVE HEALTH PRACTICES AND HEALTH EQUITY FOR MARGINALIZED POPULATIONS

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Socioeconomic conditions impact health profoundly and disproportionately. Chronic diseases are the leading cause of death and disability in the United States and account for 7 of the top 10 causes of death globally. Evidence-based integrative health practices address the primary causes of most chronic disease. In addition, group treatments provide a clinically effective and economically affordable methodology for treating chronic conditions. Besides treating patients regardless of their ability to pay, federally qualified health centers (FQHCs) promote health equitably in their communities. Combining integrative medicine practices with community health center-sponsored group interventions creates the ability to address root causes of chronic disease, decrease isolation, and provide accessible care for all community members. This research presents both the first and second iteration of a participatory action research (PAR) study conducted with FQHC staff. The initial iteration explored the receptiveness of clinicians and administrators in four urban community health centers to the use of integrative health group practices for their patients. Interviews and discussions were conducted with 7 administrators and clinicians at 4 urban federally qualified health centers (FQHCs). Three themes, 6 sub-themes and 3 sensory concepts were identified. Relying upon these themes, the second PAR study identified the next step in equitably advancing the health and well-being of FQHC patients should include training staff in integrative health practices while embedding cultural sensitivity into the training process. The second iteration of the PAR study involved a training intervention for FQHC staff in evidence-based practices such as guided imagery, acupressure, yoga and qigong. We also collected pre- and post-intervention measures for resilience, self-efficacy, and mindfulness. In this workshop we share the pre- and post-training assessment results. We also demonstrate the practices by training session attendees in three of the eight integrative health practices used in the research. Attendees leave with resources to reproduce both the training sessions and the research process if they so choose.

B5   **[15]**

PATIENT'S WILLINGNESS TO PAY FOR CANCER RADIATION THERAPY AT TERTIARY HOSPITAL UNDER THE THAI UNIVERSAL COVERAGE SCHEME

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Most patients in Thailand have mainly used the Thai universal coverage by government supports. The aim of this study was to assess cancer patients' willingness-to-pay for radiation therapy and to examine the factors associated with their willingness-to-pay. The data collection was divided into two phases with simple random sampling of cancer patients. Phase I was a face-to-face interview to assess the mean and standard deviation of the willingness to pay for services. Phase 2 were direct open-ended interviews. A total of 40 cancer patients participated in Phase I and 30 participants in Phase II. Most of them were female, aged 21-30 years, graduated with a bachelor's degree, full time working, and had monthly income in the range of 283 – 1,414 USD. All patients were willing-to-pay for radiotherapy services. Patients with early-stage cancer and having high monthly income (2,546 – 3,112 USD.) were more willing to pay than other people with an average cost of 1,061 USD. per course of treatment. The characteristics of the hospital that were a chance for patients to be willing-to-pay a higher amount of money than other cases included the speed of admission and the availability of facilities, ready-to-use location, and safe and works well.

Keywords: Cancer, radiation therapy, willingness-to-pay

TECHNICAL SESSION C

CHRONIC DISEASES

C1   **[16]**

A HUMAN RIGHTS-BASED APPROACH IN HIV CASCADE OF CARE DURING COVID-19 PANDEMIC IN INDONESIA

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HIV is no longer a burden to public health in developed countries. Indonesia is one of the few countries in the Asia Pacific with high HIV epidemic burden and high number of new infections amongst young key populations such as Men who have sex with men (MSM) & Transgenders. The HIV epidemic can be dramatically worsened amid COVID-19 response and related policies. Stigma and discrimination hinder the HIV/AIDS prevention and eradication program which was also observed in the early COVID-19 response. The increase in new HIV cases requires a comprehensive response that focuses on prevention that is integrated into the HIV cascade of clinical care. This paper uses a sociolegal approach to explore the HIV & Covid-19 related regulations & policies in accordance with the principles and framework of right to health as one aspect of human rights. Indonesia has regulations and law in relation to HIV/AIDS elimination program. The right to health for PLWHA is guaranteed and protected by laws and regulations. The constitution of the Republic of Indonesia article 28H & 34 point 3 explicitly states that everyone has the right to obtain health services & State has responsible for providing proper health service facilities. The same guarantee is also regulated in article 9 of Law of the Republic of Indonesia No. 39 of 1999 on Human Rights. Efforts to tackle HIV/AIDS in an integrated, comprehensive and quality manner are regulated in Presidential Regulation No. 76 of 2012, Minister of Health (MoH) Regulation (MoHR) No. 21 of 2013, MoHR No. 51 of 2013, MoHR No. 74 of 2014, MoHR No. 82 of 2014, MoHR No. 87 of 2014, MoH Decree No. 90 of 2019 on the national guidelines of HIV care. HIV services also becomes the minimum service standard that must be fulfilled by local governments and are entitled to be obtained by every citizen at a minimum according to Government Regulation No. 2 of 2018. Director General of Infectious Diseases Control & Prevention from MoH issued a Circular Letter No. PM.02.02/3/2022/2020 to ensure the continuation of essential HIV and Sexual Transmitted Infection care. The Minister of Home Affairs through Circular Letter No. 440/4532/SJ also required governors, regents, and city majors across Indonesia to remain committed to prioritize HIV & TB programs amid Covid-19 pandemic. Human Rights & law enforcement and intersectionality consideration is essential to achieve the target of ending AIDS by 2030. The optimal response to HIV/AIDS and COVID-19 requires political will and commitment from the state.

Keywords: HIV-AIDS, COVID-19, Indonesia, human rights

C2 [17]

BRAVING UNCERTAINTY IN THE QUEST FOR A CURE: CANCER CARE ACCESS DURING THE COVID-19 NATIONAL LOCKDOWN

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This paper examines cancer care access during the nationwide lockdown due to COVID-19 in two states of India's northeast. A semi-structured interview was conducted by purposive sampling of ten participants with cancers of the oral, lungs, stomach, breast and cervix. Six key informant oncologists and four Non-Governmental Organisations facilitating cancer care access were interacted. Ethical clearances were received from the study institutes. The data was coded and transcribed verbatim on emerging themes. The emerging themes were a financial constraint, harassment, alternative medicine and bridging gaps by NGOs. Whereas, if financial status hampered access, harassment on availing care was encountered with choosing herbal medication in fear of chemotherapy, surgery and testimonials of relatives. However, support was extended during the troubled times due to the COVID-19 pandemic. Lessons learnt during the COVID-19 pandemic extend beyond the functioning of a robust health system. Collaboration via sectors became pronounced during this uncertainty, thus, emerging resource pooling and zeal to take charge of one's health. Cancer institutes could magnify these lessons on strengthening outreach and service delivery.

Keywords: Cancer, cancer care access, COVID-19, India

C3 [18]

DID ALL LYNCH SYNDROME PATIENT RECEIVED 2 YEARLY COLONOSCOPY FOLLOW UP?

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To have a better understanding on the colonoscopy follow up in patient with lynch syndrome in BVH. To increase awareness of the importance of colonoscopy follow up in patient with lynch syndrome. Target population: Patient tested positive with Lynch gene in Blackpool Victoria Hospital. 17 patients were identified, 7 had colorectal cancer and 10 were genetic carrier/lynch family. Colonoscopy interval since diagnosis of lynch syndrome were examined with Electronic patient record (Nexus). Patient with 2 yearly colonoscopy+- 6 months delay were considered on time, if more than this time period- considered missed colonoscopy. Target-100 percent coherence. Out of 7 patient, 4 had never missed 2 yearly colonoscopy. 1 patient did not attend/cancelled, 1 patient asked to remove from the list. 1 have missed 1 appointment. Out of 10 family/Genetic carrier, 5 had never missed 2 yearly colonoscopy. 1 no colonoscopy letter found? New to hospital? Other reasons. 1 had one colonoscopy across 3 years- possible lynch family. 2 have missed 1 appointment + one late booking (COVID). 1 patient did not attend/cancelled. Possible reasons for DNA's/ Late/ missed colonoscopy: COVID-19- long booking list/ patient fear going to hospital, DNACPR/ terminally ill patient, Pt refuse/ did not attend, Switch GP/ pt move out of area, Patient on another course of treatment(eg on ovarian Ca treatment). Potential solutions: wrote a patient letter to GP for colonoscopy for GP reminder, patient education- importance of colonoscopy.

C4   **[19]**

FACTORS RELATED TO ANEMIA PREVALENCE AMONG WOMEN OF CHILD BEARING AGE IN ARENA OF GLOBAL PANDEMIC

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Health authorities in Pakistan in collaboration with local and foreign NGO's working hard to achieve the targets set by WHO in 2012, to reduce anemia prevalence and its related factors but due to prevailing COVID-19 crisis, all resources and attention are paid towards it, which led to ignorance of exciting basic health issues. The study illustrated anemia prevalence and its related factors among women of childbearing age in arena of global pandemic. A time-lagged, cross-sectional survey conducted among 1,702 volunteer women's, of aged between 15 to 49 years across five major cities of Pakistan, from June 2021 to November 2022 by using nonprobability consecutive sampling technique. Blood sample results were analyzed, to determine prevalence and anemia severity. Chi square and multiple logistic regression were performed to examine the relationship and effect of related factors with hemoglobin levels, using SPSS version 26. Among 1,702 participated respondents, 788 (46.3%) were non-anemic, and 914 (53.7%) were anemic. Anemia prevalence in Karachi was slightly greater (n=294, 55.48%) compare to other cities and mean hemoglobin level was 11.98 ± 0.92 g/dL. The chi-square and multiple logistic regression indicated that respondents' age, educational level, marital status, employment status, mother profession, family income, menstrual period duration, living conditions, chronic health conditions, use of iron and folic acid supplements, junk food, breastfeeding, source of drinking water, contraception pills, adverse pregnancy outcome, knowledge about anemia and its preventive measures, father and husband occupations were associated significantly with anemia. Results confirmed that, anemia is a multifactor health problem and that was totally ignored during COVID-19 pandemic. Therefore, equal attention should be given to anemia surveillance and awareness programs, mobilization of community health workers and volunteers to reach wide range of population including women's of childbearing age even during emerging pandemics.

Keywords: Anemia, women of childbearing Age, factors, prevalence, COVID-19, pandemics

C5 [20]

DIABETES SELF-CARE BEHAVIOR AND ASSOCIATED FACTORS IN TYPE 2 DIABETES PATIENTS WITH PERIPHERAL NEUROPATHY SYMPTOMS: A MIXED METHODS STUDY

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This study aimed to determine the factors associated with self-care behavior of diabetic patients with symptoms of peripheral neuropathy. This is a two-phase sequential exploratory mixed methods approach to determine factors related to self-care behavior in type 2 diabetic patients with symptoms of peripheral neuropathy. A total of 12 participants were involved in phase 1 (qualitative study) aimed at exploring perceptions, experiences, barriers, and supports in performing diabetes self-care. 118 type 2 diabetic patients were recruited for phase 2 (quantitative study). Pearson correlation test was used for bivariate analysis and a multiple linear regression test for multivariate analysis. Of the 124 sample respondents, 118 participated in the study. As many as 59% of diabetes self-care behavior is in a poor category. Self-efficacy ($p = 0.000$; $r = 0.678$), quality of life ($p = 0.008$; $r = 0.243$), individual perception ($p = 0.000$; $r = 0.426$), family support ($p = 0.000$; $r = 0.466$) were significantly associated with diabetes self-care behavior. The results of the coefficient of determination test obtained an R Square value of 0.518. This shows that the overall effect of independent variables on diabetes self-care behavior is 0.518 or 51.8%. The self-care behavior of type 2 diabetic patients with symptoms of peripheral neuropathy is mostly poor. Appropriate, accessible, and sustainable program support is needed from policymakers to improve self-care behavior and related factors in type 2 diabetic patients with symptoms of peripheral neuropathy.

Keywords: Self-care behavior, type 2 diabetes, peripheral neuropathy, mixed methods study

C6   **[21]**

BREASTFEEDING PRACTICES – POSITIONING, ATTACHMENT AND AWARENESS ON COLOSTRUM FEEDING AMONG POSTNATAL MOTHERS – A HOSPITAL BASED MIXED METHODS STUDY

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Breastfeeding is one of the most effective ways to ensure child health and survival. Colostrum feeding, Positioning and attachment plays an important role in breastfeeding whereas poor breastfeeding leads to poor milk transfer, breast engorgement and absence of colostrum in feeding might lead to increase in risk of infection. The current study was aimed to assess the positioning and attachment during breastfeeding among postnatal mothers, to create awareness on colostrum feeding and to identify the factors associated with improper positioning and poor attachment. A Hospital based mixed methods study was carried out in a tertiary care hospital in Karur, Tamilnadu from May 2022 to September 2022 for 5 months. In quantitative phase, 112 Postnatal mothers were interviewed continuously based on World Health Organization's Baby friendly hospital initiative and Integrated Management of Neonatal and Childhood Illness Guidelines. In qualitative phase, 40 staff nurses were selected to state the action points to improve the poor breastfeeding services. Bivariate and multivariate analyses were employed. Mean rank and Kendall's Concordance co-efficient were used to calculate the data. More than Quarter percent of Postnatal mothers demonstrated improper positioning and poor attachment. Primipara mothers, less than 15 days old infants and failure to breastfeeding counselling were associated with poor breastfeeding practices. Younger mothers, primipara, maternal occupation and breastfeeding counseling influenced breastfeeding practices. They deserve more attention, support and direction for effective breastfeeding. The action points need to be prioritized and implemented to achieve Baby friendly hospital in the district.

Keywords: Positioning, attachment, breastfeeding, colostrum, postnatal

TECHNICAL SESSION D

VACCINE

D1 [22]

ANALYZING THE EFFECTIVENESS OF VACCINATION AS A PREVENTIVE MEASURE IN COMBATING COVID-19 AND RECOMMENDATIONS FOR FUTURE HEALTH EMERGENCIES IN INDIA

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In order to mitigate the impact of the COVID-19 pandemic, India launched the world's most extensive vaccination drive. Almost 1.9 billion vaccination doses were given till 13th May 2022 since the beginning of the drive, with 1 billion people vaccinated for 1st dose and 0.87 billion people for 2nd dose. The objective of the study is to analyze the impact of vaccination on the control of SARS-CoV-2 infection. The secondary data was obtained by the World Health Organization for COVID-19 cases and the Ministry of Health and Family Welfare for vaccination from 22 Jan 2022 to 13th May 2022. Exponential regression was performed for total cumulative vaccinations (18 years & above received at least one dose) as independent variable and rate of COVID infection/0.1million/week, as dependent variable. The p-value is 0.001 with a negative slope emphasizing that the correlation is significant for the selected time period. Further, the predictive model with $R^2 = 0.96$ shows the model is best fitted. The mathematical model supports the role of vaccination in decreasing cases of COVID-19. Predicting the rate of occurrence of infection in the backdrop of vaccination drive can be a valuable tool for assessing vaccine effectiveness and planning for future actions.

Keywords: COVID-19, Vaccination, Health emergencies, preventive measures, India

D2   **[23]**

THE LEVELS OF ACCEPTANCE AND URGENCY OF COVID-19 VACCINE AMONG ADULTS WITH COMORBIDITIES IN METRO MANILA

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For the past few years, the COVID-19 pandemic has been the utmost concern for public health and safety. COVID-19's highly transmissible nature, along with its wide spectrum of symptoms and tremendous mortality toll, has made it one of the worst pandemics in human history. Vaccines have been made available to control the spread and severity of the pandemic. These vaccines were developed with the goal of minimizing symptomatic COVID-19 infections and reducing the risks of a more serious prognosis. This study focused on determining the levels of acceptance and urgency of COVID-19 vaccines among adults with comorbidities in Metro Manila, considering that these respondents are at risk of acquiring the disease. A total of 139 respondents participated in this survey which was disseminated online to the four central districts in Metro Manila using the stratified purposive sampling technique. The survey questionnaire obtained the respondents' demographic information and subsequently determined the levels of acceptance and urgency. The study concluded that age has a significant effect while sex and location do not have a significant effect on the level of acceptance and urgency. Knowledge, attitude, and preference for the COVID-19 vaccine positively influenced the level of acceptance, while the sources of information and the practices of health protocols negatively influenced the level of acceptance of COVID-19 vaccination among adults with comorbidities. Moreover, knowledge, sources of information, and attitude positively influenced the vaccine urgency, while practices of health protocols negatively influenced the vaccine urgency towards COVID-19 vaccination among adults with comorbidities.

Keywords: Comorbidities, COVID-19, level of acceptance, urgency, vaccine

D3 [24]

VACCINE AND CDC ATTITUDES AND THE PREVALENCE OF MISINFORMATION IN COVID-19 VACCINE TWEETS DURING THE OMICRON VARIANT

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COVID-19 vaccine hesitancy poses a serious threat to public health safety. With social media, particularly Twitter, vaccine misinformation can spread at an unprecedented rate that furthers mistrust in experts, especially the Centers for Disease Control and Prevention (CDC) in the United States (U.S.). Therefore, this study aims to determine common themes, prevalence of misinformation, and attitudes toward the CDC in vaccine-related tweets from the U.S. Geocoded tweets mentioning words containing "vaccin" were collected from 24/11/21, the first reported case of the Omicron variant, to 24/1/22, n=71,795. Non-COVID-related tweets were removed. Vaccine sentiment and common themes were collected from a sample of 387 tweets. Claims and sources were verified with the World Health Organization and MediaBiasFactCheck. Afterward, the "vaccin" database was filtered for tweets mentioning the CDC, n=579. The same elements were collected along with CDC sentiment. CDC trust remains low, even among pro-vaccinators. Major themes included lack of transparency, falsifying statistics, and inconsistent guidelines. Although most tweets supported vaccination, anti-vaccine tweets covered more themes and used a wider variety of sources, seeming more convincing and thus having higher engagement. Some also cited and misinterpreted the CDC to legitimize misleading claims, which could further erode CDC trust and strengthen hesitancy. Consequently, it is necessary to rebuild trust through increasing the CDC's transparency, thoroughly explaining misconceptions, and providing consistent messaging. Additionally, pro-vaccinators should display positive attitudes towards vaccine-hesitant individuals and include more sources and statistics in tweets. Future studies will be needed to implement such an intervention program and measure its efficacy.

Keywords: COVID-19, Twitter, vaccine-hesitant, CDC, misinformation, trust

TECHNICAL SESSION E

SYSTEMS, ANALYSIS

E1   **[25]**

ARE TRACE ELEMENT MEASUREMENTS IN HAIR RELIABLE?

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Trace elements analysis in hair has been used for over 50 years in research for different diseases. Researchers compared trace elements in hair with results from serum to identify new methods for body element measurements and disease treatments. However, none of the current studies evaluate the reliability of the data from trace elements in hair. In this study, head hair concentrations of elements from a total of 192 subjects were measured and analyzed by an x-ray fluorescence analyzer (XRF). The results of our study not only showed how age and gender change some trace elements in the hair of different growth periods but also found significant differences along any single hair sample. We identified three different locations along each hair sample, including tip, middle and root, and measured TE values with four elements, including calcium, chlorine, copper, and zinc. For instance, the results show that the average calcium concentration from the tip is 9249.1765, the average calcium concentration from the middle is 3674.6373, and the average calcium concentration from the tip is 5574.5392. Then, we conducted a paired t-test for all 4 elements. This statistical analysis results rejected our hypothesis that concentrations of elements along the hair should be similar. The results of this study question the reliability of trace elements data in previous studies and suggest that a standard measurement method of trace elements in hair should be established for future research. Implications for both academic research and practice, as well as suggestions for future studies, are discussed.

Keywords: Trace elements, hair, age, gender

E2   **[26]**

A LOGISTIC REGRESSION MODEL TO PREDICT METABOLIC SYNDROME IN THE TRANSPORT EMPLOYEES

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Metabolic syndrome is groups of risk factors of non-communicable diseases. It's a growing epidemic throughout the world and often leads to hospitalization and imposes a great financial burden on health care system. Develop an equation to predict the probability of metabolic syndrome to spot high risk cases can active health promotion program more progressively. The logistic regression model from the metabolic syndrome is used to predict the risk factors of employees' history. The paper aims to establish an efficient model for predicting metabolic syndrome by leveraging the strengths of logistic regression. A total of 397 transport employees were selected via systematic sampling, including bus drivers and conductors, and data were obtained from survey questionnaires. Gender, age, position, education, income, social support, knowledge, attitude and environment were identified as predictors of the given outcome (95% CL, $p < 0.001$). The results using logistic regression cross tabulation was to obtain the significant values. Omnibus test, Wald statistic, and Hosmer-Lemeshow test showed models adequacy. The classification table shows occurrence from prediction, producing percentage of correct classification for the metabolic syndrome was 84.9%. Finally, age, waist, eating behavior, smoking and drinking had high odds of the metabolic syndrome ($1.15 \leq OR \leq 1.7$, $p \leq 0.05$). This valid model is a valuable tool that predict probability of the metabolic syndrome occurrence and support health workers to realize how intensive health promotion program for employee.

Keywords: Metabolic syndrome, health promotion, logistic regression, employee

E3 [27]

A GENETIC ANALYSIS IDENTIFIES HAPLOTYPE AT ADIPONECTIN LOCUS: ASSOCIATION WITH THE METABOLIC HEALTH AND OBESITY PHENOTYPES

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Obesity and metabolic syndrome frequently co-exist and define obese individuals into different obesity phenotypes, such as metabolically health obese (MHO), metabolically unhealthy obese (MUO) and metabolically unhealthy normal weight (MUNW). Growing evidence suggests that genetic predisposition and environmental factor can explain the heterogeneity among these phenotypes. We conducted a case-control study including 130 MHO, 251 MUNW, 208 MUO and 336 health controls by genotyping 2 SNPs (rs2241766, rs1501299) in ADIPOQ to investigate possible associations between SNPs in the ADIPOQ gene with susceptibility to three obese phenotypes respectively in Chinese Han population. Unconditional logistic regressions were used to detect the association between ADIPOQ SNPs and MHO/MUNW/MUO risks. Variant G allele of rs2241766 was associated with a reduced odds of MUO (additive model: Adjusted OR=0.55; 95% CI=0.40-0.75; P<0.001) and no evidence of any significant association between rs2241766 and MHO phenotype (additive model: Adjusted OR=0.84; 95% CI=0.61-1.16; P=0.306) or MUNW phenotype (additive model: Adjusted OR=0.95; 95% CI=0.73-1.24; P=0.720) was found. Minor allele T of rs1501299 were significantly associated with decreased risk of MHO (Adjusted OR=0.53; 95% CI=0.37-0.76; P<0.001), MUNW (Adjusted OR=0.63; 95% CI=0.48-0.83; P=0.001) in additive genetic model after correction for multiple testing. The variant G allele of rs2241766 was negatively associated with risk of MUO and variant T allele of rs1501299 exhibited reduced odds for MHO and MUNW. Beyond that, future studies are warranted to validate and extend our findings.

Keywords: Metabolically healthy, obesity phenotypes, ADIPOQ, Polymorphism

E4   **[28]**

FORENSIC PATHOLOGY SERVICE USER EXPERIENCES OF THE MANUAL AND ELECTRONIC NATIONAL INJURY MORTALITY SURVEILLANCE SYSTEM

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Accurate documentation of a surveillance system requires active participation of the concerned agencies, who are also the intended users of the data, so to ensure that the methodological realities and conceptual underpinnings have been addressed accordingly. The National Injury Mortality Surveillance System, a rich epidemiological injury mortality database, was developed to promote the Forensic Pathology Service quality and timeliness of data. This study aims to determine Forensic Pathology Service user experiences of the National Injury Mortality Surveillance System. A total of 47 National Injury Mortality Surveillance System trained Forensic Pathology Service staff in Mpumalanga participated in a formative evaluation study from November 2019 to November 2022. Thematic analysis was conducted on 12 focus group discussions and themes presented itself across three categories, namely, the individual, organisational and system level. Whilst the National Injury Mortality Surveillance System supports the identification of injury preventative responses, shortcomings were identified, particularly the adequate documentation of case files. Concerningly, the Forensic Pathology Service required a standardized approach to capture data within the death register and complete documentation for case files needed to be filed and stored as per the Forensic Pathology Service standard operating procedures. Quality assurance measures and best data management practices needs to be built in all steps of the Forensic Pathology Service system to promote quality data.

Keywords: Injury mortality, surveillance system, national injury mortality surveillance system

E5 [29]

AN EVALUATION OF AN INJURY MORTALITY SURVEILLANCE SYSTEM'S MANUAL- AND ELECTRONIC SURVEILLANCE METHODOLOGIES

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Injury mortality surveillance systems are critical to monitor changes in a population's injury outcomes so that relevant injury prevention responses may be adopted, particularly in South Africa where the injury burden is nearly twice the global rate. The National Injury Mortality Surveillance System (NIMSS) is a comprehensive epidemiological injury mortality dataset, currently focused in Mpumalanga and utilizing either manual or electronic web-based systems for data collection. This study evaluates the performance of the NIMSS's manual- and electronic (also e-NIMSS) surveillance methodologies. In Mpumalanga, 47 NIMSS trained forensic pathology service staff were recruited as part of a formative evaluation from November 2019 to November 2022. Twelve focus group discussions were thematically analysed to determine emerging themes and patterns related to NIMSS use. The manual and e-NIMSS surveillance system were evaluated across the WHO attributes of simplicity, acceptability, timeliness, flexibility, data quality and stability and the findings reported accordingly. Overall, irrespective of the methodology used, both proved to lower mortuary operating costs, result in increased FPS operational output, and provided injury mortality data more timeous and securely. Enhancements to surveillance systems is of high priority to enable timely and accurate injury mortality profile information which is vital to inform public policy and interventions.

Keywords: Injury mortality, WHO surveillance system attributes, national injury mortality surveillance system

TECHNICAL SESSION F

STUDENTS, SUBSTANCE ABUSE

F1 [30]

ASSESSING HEALTHCARE STUDENTS' KNOWLEDGE, ATTITUDE & PREPAREDNESS TOWARDS MONEKYPOX

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During covid-19 pandemic, many people don't know the causes, effects& modes of transmission of new virus and entire world is in panic state. As per world health organization (WHO) now Current emerging disease is monkey pox and also became outbreak in Africa. An orthopoxvirus based zoonotic illness known as monkeypox causes a smallpox-like vesicular pustular illness in humans. Through systematic analysis of the research and published literature has found the evolution of the monkeypox, epidemiology, with a focus on the number of confirmed, likely, and/or potential cases, age at presentation, mortality, and geographic distribution of cases across West and Central Africa have increased in recent years. Healthcare practitioners worldwide are attempting to become familiar with the varied clinical manifestations and therapy for this infection and also public health organizations seek to contain the current outbreak. In light of the current outbreaks worldwide, we provide updated information on monkeypox for healthcare professionals in this research. The primary objective of this study is to assess the knowledge, attitude, and preparedness of health care management students towards monkey pox.

Keywords: Monkeypox, epidemiology, pandemic, preparedness, mortality, smallpox

F2   **[31]**

STUDENTS' LED HEALTH EDUCATION CAMPAIGNS: A QUALITATIVE ANALYSIS FOR CHALLENGES AND OUTCOMES

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Health-education is an important element of health promotion and a contributor to a better quality of care. As well, empowering people with knowledge about their major health issues is a required sustainable developmental goal. Objectives: We assessed students' perceived barriers and outcomes of their led health-education sessions. In this qualitative study on the students of the Faculty of Medicine, University of Khartoum we recruited all the medical students who led a rural health-education session at the last faculty's medical convoy through a purposive sampling method, a total of 45 students were interviewed in a semi-structured recorded interview. The records were kept confidential in a safe place accessible only by the authors and transcripted later. Data was then analyzed thematically through Atlas ver-9. Two themes constituted students' perception of these health-education sessions. Firstly, educational benefits; they stated that holding and organizing these sessions helped them to systematically understand and be aware of these healthcare topics and it also improved their communication skills in terms of doctor patient interaction. Secondly, villagers' reaction; they said some rural residents demonstrated a lack of interest in the health-education sessions and attend only with incentives, also cultural barriers played a role as some had sensitivity toward certain topics which were regarded as cultural norms. Health education campaigns could be adopted as part of the medical curriculum due to their positive impact as an educational process for the students and students should however be trained and familiarized with the cultural norms of Sudan's rural settings.

Keywords: Health-education, rural areas, qualitative

F3   **[32]**

TEENAGE PREGNANCY PREVENTION: AN OBSERVATIONAL STUDY

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The Department of Health and Human Services began administering a Teen Pregnancy Prevention (TPP) program through what is now the Office of Population Affairs in 2010 (DHHS, 2021). Via replication of approved, evidence-based programs, sexual education was administered to teens across the country with goals of preventing teen pregnancies and sexually transmitted infections (DHHS, 2021). One funded program delivered TPP curriculum in community-based settings across southwestern Ohio for four years, using undergraduate nursing students as facilitators. The program served 1,642 females; 15-19 years old. The objectives were to gather data on baseline knowledge, attitudes, behaviors, intentions, and perceptions related to sexual health in a target population and examine trends in knowledge at 12-months post intervention. Identical surveys were distributed at baseline and at 12-months post-intervention. Survey questions from original instruments were assigned to one of nine categories for a more focused exploration on critical topics. Teen perception of risk was not found to align with the risky behaviors reported. Healthcare providers must work to find ways to address feelings of invincibility in teens before other educational efforts may be effective. Ongoing evaluation of target populations is necessary to ensure effective programming.

Keywords: Teen pregnancy prevention, sexually transmitted infection, women's health, sex education

F4   **[33]**

REPORTING OF ADVERSE EFFECTS AFTER VACCINATION AMONG MEDICAL STUDENTS

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COVID 19 first reported in Dec 2019 wrapped the whole world in its grip with a large number of infected cases and deaths of people within a short span of time. There was an uproar in public for vaccines. The scientists spent day and night developing vaccines and they were introduced into the market in the shortest time possible. Unfortunately, the people including the medical students believe that vaccines were 'rushed' into use and are not safe. This surprising attitude of health care professionals is creating further unease in the general public. Objectives are to evaluate the responses of medical students, COVID 19 vaccine recipients about the post-vaccination side effects, to correlate the post-COVID vaccine symptoms with preexisting health diseases, gender, year of study, allergies, and smoking, to evaluate which vaccine was safe in terms of symptoms in medical students and to know why the respondents were resistant to get vaccinated. Cross-sectional, primary research based on quantitative evidence was conducted in August 2021 to analyze responses of medical students, COVID 19 vaccine recipients about the post-COVID 19 vaccination symptoms of 1st-5th year students. Self-Structured Questionnaires were distributed among 500 students, 100 from each year of study. An equal proportion of males and females was kept. Data was analysed using SPSS v 22. Chi-Square test was employed. All 500 students were vaccinated, with the majority having been administered Sinopharm (44%), followed by Sinovac (39%) and others being Cansino, Moderna, etc, 14.2% of students had pre-existing diseases, but no relation with post-vaccination adverse effects was found. The majority 49.8% (n=249) remarked that they didn't notice any symptoms after vaccination but 36.6% reported mild symptoms, 9% moderate symptoms, and 4.6% severe symptoms who had to be hospitalized . Pain at the inoculation site of the body (40%), and general fatigue and tiredness (34.4%) were the most prominent followed by many other symptoms. The female students reported severe and irregular menstruation as the chief post covid vaccine complaint. The Moderna vaccine was found to be safest with regard to side effects followed by Sinovac and Cansino. The fear of side effects and Western hype/Propaganda was found to be the main reason for hesitancy. The chi-square test applied showed no correlation of post-COVID vaccination symptoms with gender, year of study, smoking habits, allergies, and addictions. The COVID vaccines being used all have a high safety profile according to scientists and researchers but many students have reported post Covid vaccine symptoms like pain at the injection site, myalgia, fatigue, heavy menstrual bleeding in female students, swollen ankles, swellings in armpit and groin region etc. These were manageable in some but 4.6% had severe symptoms and had to be hospitalized. Hesitancy regarding vaccination due to apprehension against its side effects is still present in medical students, but that can be eradicated only by a prolonged and continuous stream of researches exploring various effects of the COVID 19 vaccine.

F5 **[34]**

GENDER AND RACE DISPARITY IN YOUTH MARIJUANA USE FROM 2012 TO 2020: A LONGITUDINAL EXAMINATION OF RECREATIONAL MARIJUANA LEGALIZATION EFFECTS

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As more states have legalized recreational marijuana, youth marijuana use has emerged as a critical concern in the U.S. However, the findings from previous studies are not consistent and even conflict with each other. The current study posited that these discrepancies should be caused by gender and racial differences in youth marijuana use and empirically examined this argument. This study employed nationally representative survey data, "Continuing Study of American Youth - 12th-Grade Survey," from 2012 to 2020. For the analysis, we have examined the longitudinal changes in youth marijuana use by gender and race groups and also introduced logistic regressions to clarify the effect of legalization after controlling for personal characteristics. As more states have legalized recreational marijuana, marijuana use among female youths has increased significantly ($b = .274$, $p < .01$), while that of males has not changed ($b = -.010$, $p > .05$). Recreational marijuana use also positively influences white and black youths ($b = .014$, $p < .01$; $b = .018$, $p < .05$ correspondingly); however, its impact on Hispanic youths is negative ($b = -.016$, $p < .05$). Different attitudes, perceptions, and circumstances should cause distinctive effects of marijuana legalization across gender and race groups. Future studies should consider these demographic differences in youth marijuana use for more effective intervention efforts.

Keywords: Recreational marijuana legalization, youth marijuana use, gender difference, racial difference

F6   **[35]**

PREVALENCE OF SECONDHAND SMOKE EXPOSURE IN IRAN DURING 2009-2020, EVIDENCE FROM 31 PROVINCES: A SYSTEMATIC REVIEW

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The present study aimed to provide a systematic review of studies on the prevalence of second-hand smoke (SHS) exposure in Iran population as a serious health hazard. A literature review of studies that considered SHS exposure, available in multiple electronic databases including Web of Science, PubMed, and Scopus published 2009-2020 in English and two Persian databases (SID and Magiran) was carried out following the PRISMA recommendations. A total of 55 studies were included based on the inclusion and exclusion criteria and the quality assessment. Our study showed that studies conducted in 16 provinces in Iran considered the second-hand smoking, and no independent study investigated the topic in other 15 provinces. Distribution of studies in terms of age group revealed that a single article considered infants (6-24 months). Based on the results of the present study, a large population of Iran exposed to SHS and the exposure prevalence was higher in the center, west and northwest than in south and east of the country. Moreover, Based on Iran- STEPs 2016(Stepwise Non-communicable Diseases Risk Factors Survey in Iran*) study*, the overall prevalence of SHS exposure at home was higher than workplaces. The results of the present study recommended that effective protection measures should be comprehensive in term of exposure places and due to the fact that the exposure prevalence in some provinces was higher than the others, it seems especially important to consider the local measures and cultural aspects in SHS control programs.

Keywords: SSecond-hand smoke, exposure, indoor air pollution, prevalence

F7   **[36]**

SENTIMENTS OF INDIVIDUALS WITH SUBSTANCE USE DISORDER REGARDING EXISTING DRUG REHABILITATION PROGRAMS AT SELECTED RESIDENTIAL DRUG REHABILITATION FACILITIES IN SRI LANKA

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Individuals with severe forms of substance use disorder (SUD) require residential rehabilitation, which provides continuum of care. Having positive perception towards the rehabilitation programme is an important standpoint that contributes to successful recovery. Hence, the current study aimed to assess the sentiments of individuals with SUD regarding existing state and non-state residential drug rehabilitation programmes in Sri Lanka. A descriptive cross-sectional study was conducted, enrolling 462 rehabilitees from 07 rehabilitation facilities using a pretested interviewer-administered questionnaire. The questionnaire was developed using peer-reviewed published literature to capture the important aspects of different rehabilitation programmes including nature of the programme, infrastructure and temperament of the professionals. Data were analyzed using descriptive statistics by IBM SPSS version26. Of the rehabilitees, 99% (n=459) were males with an average age of 29±7 years. The content of the programmes was believed to be intriguing (61.7%,n=285), with satisfactory depth (54.1%, n=250) and encouragement (93.7%, n=433). Rehabilitees stated that the professionals of the rehabilitation programme were friendly (80.3%, n=371) and provided required (88.5%, n=409) psychological assistance. Program smoothness was viewed as neither rough nor smooth (56.7%, n=262). Rehabilitees were pleased with the provided infrastructure facilities (90.7%, n=419), freedom (75.1%, n=347) and security (96.8%, n=447). They have acquired sufficient awareness on complications of substance use (97.0%, n=448) and relapse prevention (96.3%, n=445). Rehabilitees (94.8%, n=438) requested to ease the limitations placed in communication with their family members. The study revealed that the rehabilitees have a constructive and satisfactory perception regarding the existing residential drug rehabilitation programmes in Sri Lanka.

Keywords: Sentiment, substance use disorder, residential rehabilitation, rehabilitee, Sri Lanka

POSTER SESSION

COVID

P1 **[37]**

STRESS AND COPING AMONG COLLEGE STUDENTS DURING A COVID-19 RED ALERT STATUS ON CAMPUS

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A number of studies have found that college students have experienced high rates of stress during the pandemic. Despite the high rates of stress among college students, research on students' use of coping strategies has been mixed. In light of the need to further understand college students' stress and coping during the COVID-19 pandemic, the current study examined stress and coping strategies during a campus red alert at a mid-sized U.S. university. Data previously collected from an online survey sent out to all undergraduate students 30 days after the COVID-19 red alert status was instituted in the Fall of 2020 were analyzed. The survey included a scale assessing coping strategies as well as a scale assessing perceived stress. A total of 198 students completed these scales. Regression analyses indicated that perceived stress during the red alert status was associated with several maladaptive coping strategies, such as denial, substance use and behavioral disengagement. Whereas perceived stress was inversely associated with positive coping strategies, such as active coping, planning, and acceptance. Prevention and health promotion efforts on campus should include increased access to the wellness center, coping skills-related informational workshops, and programmatic opportunities that foster social interactions.

Keywords: College, stress, coping, COVID-19, pandemic, prevention

P2   **[38]**

ASSOCIATIONS BETWEEN PSYCHIATRIC MORBIDITY AND COVID-19 VACCINE HESITANCY: AN ANALYSIS OF ELECTRONIC HEALTH RECORDS AND PATIENT SURVEY

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Psychiatric illness contributes to significant risk for severe Covid-19 morbidity and mortality. Identifying and addressing risk factors for vaccine hesitancy is critical to minimizing the societal burden of COVID-19, especially amongst vulnerable populations. This study aims to examine the prevalence of vaccine hesitancy in those with psychiatric illnesses and the association between psychiatric morbidity and vaccine hesitancy. Electronic medical records and a patient survey were collected from 14,365 patients at a group medical practice between February and May 2021. To calculate odds for vaccine hesitancy and adjusted for sociodemographic characteristics and physical morbidity, logistic regression was used. Of 14,365 participants 1,761 (12.3%) participants reported vaccine hesitancy. Vaccine hesitancy was significantly more prevalent amid participants with substance use (29.6%), attention deficit and hyperactivity (23.3%), posttraumatic stress (23.1%), bipolar (18.0%), generalized anxiety (16.5%), major depression (16.1%), other anxiety disorders (15.5%), tobacco use (18.6%), and those previously infected with COVID-19 (19.8%) compared to participants without each disorder. Adjusting for sociodemographic characteristics and physical comorbidities, substance use (1.68), and tobacco use (1.44) were significantly associated with elevated odds for vaccine hesitancy and bipolar disorder (0.65) was inversely associated with vaccine hesitancy. Implementing interventions will be necessary for vaccine uptake in these populations.

Keywords: Psychiatric illness, COVID-19, vaccine hesitancy

P3 [39]

COVID-19 VACCINATION IN THE UK SOMALI COMMUNITY: EXPLORING ATTITUDES, ACCEPTANCE AND HESITANCY

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The COVID-19 pandemic has exposed and exacerbated longstanding health inequalities affecting Black and ethnic minority groups in the UK. Whilst vaccines are a crucial and effective tool in the pandemic response, there is evidence that ethnic minority groups are less likely to take the COVID-19 vaccine. This study explores the key barriers and drivers towards COVID-19 vaccine uptake in the UK Somali community. An anonymous online survey was circulated through various social media channels in April 2022. The survey was designed to collect participants' demographic information as well as responses on their general vaccine beliefs, beliefs about the COVID-19 vaccine, and motivations for vaccination. There were a total of 59 responses from Somali participants, of which the majority were female (n=44, 74.6%) and aged 18-24 (n=44, 74.6%). Overall, 79% of respondents were fully vaccinated, equivalent to the vaccination rate in the general UK population. The greatest motivators for vaccination were to protect one's own health and the health of family and friends. The most common reason for not accepting approved vaccines was concerns about their short- and long-term side effects. The findings suggest that Somali language resources, especially targeted at the elderly population may improve vaccine confidence in the future.

Keywords: COVID-19, vaccination, Somali, vaccine hesitancy

P4 **[40]**

A QUANTITATIVE STUDY OF THE HEALTH AND DISEASE PERCEPTIONS OF AMAZONIAN INDIGENOUS POPULATIONS FOLLOWING THE SARS-CoV-2 PANDEMIC

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Peru has the world's highest COVID-19 confirmed death rate, with the Amazon region particularly hard hit. This study investigates the current health perceptions of indigenous Amazonian Peruvians. 100 adults were randomly selected across seven villages for survey and data collection. Data gathered this year was compared to previous visits in 2002 and 2014. The primary finding was increased confidence in modern medicine. COVID-19 greatly affected the region - 78% report having COVID-19 symptoms, and both traditional and modern medicines were widely used. Most were unable to seek medical help if required, with distance being the primary reason cited. COVID-19 vaccination rates were very high (97%) and prevention measures were consistently utilized. There was no effect of the modifiers gender and ethnicity on results. This study shows that health perceptions and education in this region have improved since 2014. The people of this region are receptive to government public health campaigns and poor education, or uptake is unlikely to be a primary reason for high COVID-19 mortality here. This study demonstrates that future public health campaigns are likely to be effective in this region.

Keywords: Amazon, COVID, pandemic, health

POSTER SESSION

COVID AND ANALYSIS

P5   **[41]**

COMPREHENSIVE STUDY OF LABEL USED IN LATERAL FLOW TESTS FOR SARS-CoV-2 IMMUNODETECTION

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To increase the reliability of point-of-care diagnostics of COVID-19, the antigen should be detected in minimal concentrations. The choice of a label used and detected in rapid lateral flow tests is an effective tool for this purpose. Gold nanoparticles (30 nm was the best diameter from the studied range of 15-40 nm), colored and fluorescent latex particles (with a diameter of 300 nm) were conjugated with monoclonal antibodies to nucleoprotein of the SARS-CoV-2 virus to compare these particles in the tests. For all preparations, the optimal loads of antibodies on the particles, the conditions of their immobilization, as well as the parameters for applying the obtained conjugates to the test strip membrane were chosen. The reported study was funded by Russian Foundation for Basic Research (grant 20-58-55001). The prepared strips with the compared particles were used to test the collected swabs of nasopharynx and oropharynx mucous membranes. For quantitative characterization, the SARS-CoV-2 nucleoprotein was added to swabs of healthy patients. The binding of the labels was evaluated visually and instrumentally. The detection limit for strips with gold nanoparticles was 0.7 ng/mL, with colored latex particles – 0.2 ng/mL, and fluorescent latex particles – 0.07 ng/mL. Completion of the reagents' movement along the test strip and reaching maximum optical signals in the binding zone were observed in 10 min regardless of the label. Intense signals for fluorescent latex particles in combination with an extremely low background confirm their promise as labels for highly sensitive lateral flow diagnostics of COVID-19.

Keywords: Point-of-care testing, immunochromatography, nanoparticles, sensitivity

P6   **[42]**

COVID-19 PANDEMIC DATA MODELING: A CASE STUDY OF HONG KONG

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The COVID-19 pandemic has caused significant disruption to healthcare worldwide. As a result, researchers, epidemiologists, and national authorities rely heavily on mathematical models of various sorts and data intensities to investigate the fundamentally unpredictable course of COVID-19 and the consequences of various non-pharmaceutical therapies. In this study, we aim to forecast the future COVID-19 infections, deaths, and hospitalization in Hong Kong using mathematical models. The daily number of confirmed COVID-19 cases in Hong Kong by the date of symptoms onset was provided by the Centre for Health Protection (CHP). We applied a typical Susceptible-Infected-Recovered (SIR) model of the COVID-19 pandemic. We investigated the transmission dynamics and epidemiological features of COVID-19 cases in Hong Kong across epidemic waves. The estimated reproduction ratio R_0 ranged from 1.33 to 1.95. The first to fourth waves were owing primarily to cases imported from Mainland China, overseas locations such as Europe and the United States, sea crew, aircrew members, domestic helpers, and the dancing group. To combat the epidemic, the government implemented various measures, including work from home for civil servants, school suspension, closure of recreational facilities, reducing importation pressure by closing some border control points, enhanced laboratory surveillance for early detection of cases, and so on. The SIR model shows that the transmission rate ($\beta = 0.5223$) for the Omicron variant is high during the fifth wave. However, the recovery rate is relatively high because of the introduction of the vaccination program in 2021. The majority of those who died had comorbidities and were unvaccinated. The SIR model can help to predict the infection rate accurately for the first fifth waves in Hong Kong, given enough starting information and an input of the duration of the outbreak, the model will assist decision-making when preparing for a COVID-19 outbreak. COVID-19 is an exceptionally infectious disease that spreads rapidly. The SIR model can help predict the maximum number of people infected and recovered, given initial variables from current data on the infected people.

Keywords: COVID-19, SIR model, prediction, public health

P7 [43]

BIG DATA VISUALIZATION OF MULTIPLE WAVES OF COVID-19 INFECTION IN HONG KONG

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The COVID-19 pandemic has caused significant disruption to healthcare worldwide. Data visualization can aid in persuading people to change their behavior. Once a virus has spread, public health officials must make critical judgments about how much and when to communicate. One of the most critical components of limiting an outbreak is encouraging people to adjust their behavior when it is not immediately evident that they should. Data visualization has become highly significant in communicating and convincing people. The study's aim is to visualize the COVID-19 pandemic's transmission in Hong Kong during the first fifth wave, as well as to improve overall preparedness and response for communicable diseases of importance to public. The Hong Kong government has developed contingency plans and drills to test the ability of relevant government departments and organizations to deal with potential major outbreaks of infectious diseases and public health emergencies, as well as to raise community and healthcare personnel awareness and capability. The daily number of confirmed COVID-19 cases in Hong Kong by the date of symptoms onset and daily vaccination number was provided by the Centre for Health Protection (CHP), the Department of Health in Hong Kong. We first clean the data and apply different data visualization techniques such as line graphs, bubble charts, and word clouds are used to unlock the benefits and make accurate decisions from the vast data. Several software was used for developing visualizations, such as MATLAB, Tableau, and Excel. The graphical displays can help us to identify trends, patterns, and outliers in the data, and then formulate hypotheses for further testing. The results of the data visualization provide future predictions and the current state of different aspects of the COVID-19 pandemic, the result will make practitioners, policymakers, and the public understand.

Keywords: COVID-19, data visualization, public health

P8   **[44]**

THE PREVALENCE AND RISK FACTORS ASSOCIATED WITH TRACHOMA AFTER MASS DRUG ADMINISTRATION: A SYSTEMATIC REVIEW

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Trachoma is the world's leading infectious cause of preventable blindness worldwide and one of twenty neglected tropical diseases. Trachoma is hyperendemic in many of the poorest and most rural areas with the highest burden in Sub-Saharan Africa. The SAFE strategy adopted by the World Health Organisation (WHO) to eliminate trachoma includes the provision of repeated annual mass azithromycin distributions. This study aimed to determine the prevalence and associated factors of trachoma among children in Sub-Saharan Africa following mass drug administration (MDA). A systematic review was employed using four online data bases (Medline, Global Health, Web of science and Scopus) to access relevant articles. Studies were searched for outcomes related to prevalence and factors associated with trachoma and ocular Ct infection after MDA. EPHPP tool and Risk of Bias tool were used to assess methodological quality of the studies. The result of 26 eligible studies demonstrated the overall prevalence of TF among children after different number of MDA rounds ranged between <5% in Malawi; lowest reported prevalence to 39.9% (95% CI 32.5% to 47.4%; highest reported prevalence in Ethiopia. Younger age, unclean face, ocular discharge, exposure to fewer rounds, baseline TF or Ct infection, travel by household members outside village, household visitors, siblings with TF/TI, large village size (>285 people) and last round coverage of <90% were found to be significant predictors of infection, TF and/or active trachoma after MDA. It can be concluded that through MDA significant reductions in trachoma prevalence has been achieved. However, reinfection of communities after stopping of MDA remains a problem. For the at-risk population, alternative antibiotic distribution strategies are required to achieve effective control of trachoma. Meso-endemic and hyper-endemic communities may require prolonged distribution (>7 years) of azithromycin in order achieve sustained reduction in prevalence of TF that meets the WHOs trachoma elimination target.

Keywords: Trachoma, mass drug administration, prevalence

P9 **[45]**

ANIMAL-ASSISTED THERAPY WITH PET INSECTS MAY IMPROVE PHYSICAL PERFORMANCE AND SLEEP IN COMMUNITY-DWELLING FRAIL ELDERLY WITH CHRONIC DISEASES

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Animal-assisted therapy (AAT) is an effective treatment that improves the mental and physical health. However, few have examined the efficacy of pet insects as a form of AAT for elderly. This study aimed to ascertain the effects of pet insects on physical performance and psychological health in a population of community-dwelling frail elderly with a chronic disease. This is a 8-week prospective single-arm interventional pilot study that enrolled prefrail and frail community-dwelling adults aged 70 years and older, all of whom had a chronic disease and attended a daycare facility. Pet insects and supporting programs on rearing the insects were provided to the participants and the facility. Pre- and post-interventional physical and psychological functions were evaluated. A total of 23 elderly subjects (mean age, 82.78 years) were enrolled in the final analysis. Timed up-and-go-test (TUG) for quantifying functional mobility (Δ = -0.35±0.73 sec, P = 0.034) and handgrip strength test (HS) for assessing muscle strength (Δ = 0.73±0.99 kg, P = 0.002) showed significant changes after the intervention. The insomnia severity index (ISI, Δ = -2.91±5.64, P = -0.021) and sleep duration (Δ = 0.87±1.98, P = 0.047) had improved significantly. Logistic regression analysis using the forward stepwise selection method revealed that the baseline ISI score and the absence of other comorbidities were significantly associated with the probability of positive changes in both TUG and HS tests after the intervention. Pet insects may be an effective and easily applicable type of AAT, which improves physical function and sleep in elderly.

Keywords: Animal-assisted therapy, physical performance, sleep, elderly

POSTER SESSION

GENERAL MEDICAL AND HEALTH ISSUES

P10   **[46]**

UNDERSTANDING SAUDI'S PREFERENCES OF EMERGENCY PHYSICIANS ATTIRE, A CROSS-SECTIONAL STUDY

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Patient Centered Care (PCC) is defined as the practice of attending to patients that includes listening, informing, and involving patients in their health care as per Picker's Eight Principles. A part of the patients' rights is the presentation of the caring physician which includes attitude and attire. In Saudi Arabia, it has been known by a doctor to present with white coat. Several studies showed that enhancing physician-patient relationship and improving patient experience is associated with higher reported patient satisfaction. Thus, our aim in this study is to identify Saudi population preference on the attire of emergency physicians in Saudi Arabia. This is cross-sectional study in Riyadh Saudi Arabia. Questions were asked to general Saudi population regarding physician attire by online survey. Starting consent from participants who are in public areas and in the hospital's waiting areas. Participants were asked series of questions regarding his/her age, gender, nationality, color blindness, marital status, social status, and the level of education. It showed 486 participants strongly care about how the emergency physician look as almost 52.15% strongly agreed with this statement and only 1.82% did not. 82% would like to see their male physician wearing scrubs/medical coat, however 72% where neutral when it came to the face look. On the other hand, 43% agreed on a face cover for female physician but still prefer scrubs/medical coat with 45%. When it comes to how their looks representation of the physician, both females and males strongly agreed that looks showed the physician to be more respectful to patients with 44%. after that they have equal thoughts when it comes to experience and reliability as 38% agree that looks can affect these two qualities both genders had the same percentage. Saudi females and males mostly agreed, when it came to the relation of looks to knowledge as percentage were very close with 31% neutral and 32% agreed. It was shown that both Saudi male and females equally do consider emergency physician external look as a representation on her respectfulness to his patients, then his reliability and experience, but not that significant to the knowledge he has.

Keywords: Emergency, attire, scrubs, medical coat

P11 **[47]**

AWARENESS, CONCERNS, AND PROTECTION STRATEGIES AGAINST BLOOD BORNE VIRUSES AMONG EMERGENCY MEDICINE STAFF IN 2022

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The present study aimed at evaluating the awareness and measures taken to prevent infections of Blood borne pathogens (BBPs) among Emergency Department (ED) Medical staff at King Abdul-Aziz medical city Riyadh (KAMC-R). A cross-sectional research approach was adopted. The study recruited a sample of 200 ED medical staff from KAMC-R. A self-filled questionnaire was used to elicit the data. Analysis was done by using the Statistical Package of Social Sciences v.26. The study found that 42.5% (n=85) of the ED staff did not use the regular eyewear at all, 30% (n=60) did not use face shields at all, about 75.5% of the enrolled ED staff successfully converted to double-gloving. In addition, it was found that Patient active AIDS (64%), Patient active Hepatitis (60.5%), and Patient known HIV Infection (60%) were the most reported factors influencing decision to double-gloving. Moreover, it was found that the highest reported reasons for double gloving were that double-gloving is not necessary (56%, n=112), followed by that double gloving causes decreased hand sensation (31%, n=62). Finally, the study found that the most reported reasons of not using barriers other than gloves precautions were non-necessity of barriers other than gloves precautions (31%,n=62), and non-availability (26.5%,n=53). The study concluded that ED medical staff in KAMC-R perceived a high level of lifetime risk of infection when performing procedures and that there is a lack of educational and awareness support of ED staff related to using PPEs and double-gloving when performing procedures in the ED.

Keywords: Awareness, concerns, protection strategies, blood borne pathogens, double-gloving and emergency department

P12 [48]

PATTEN OF HEPARIN DOSING AS VENOUS THROMBOEMBOLISM PROPHYLAXIS IN ADULT UNDERWEIGHT PATIENTS ADMITTED TO CRITICAL CARE UNITS IN TERTIARY HOSPITAL

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Venous thromboembolism (VTE) is one of the most common causes of hospital-related deaths in critically ill patients. Guidelines recommended VTE prophylaxis with standardized, fixed-doses for most of the patients. Underweight population has limited data to guide the appropriate drug and dosing regimen. The aim of this study was to describe the pattern of VTE prophylaxis dose regimens for underweighted critically ill adult patients and the prevalence of associated VTE and bleeding. This study is a retrospective cohort study, conducted in King Abdulaziz Medical City, Saudi Arabia. It included all critical patients admitted to the intensive care units and were above 14 years old with weight less than 50 kg or BMI of 18.5 kg/m2 or less, and were on heparin as VTE prophylaxis for more than 72 hours from January 2016 until January 2020. After screening 270 patients, only 40 patients were included in this study according to our inclusion and exclusion criteria. Only 6 patients (15%) received VTE prophylaxis as adjusted does of heparin 2500 U Q12, while the rest of the patients were taking standard dosing of heparin, 5000 U Q12 was given to 21 (52.50%) patients and 5000 U Q8 was given to 13 (32.50%) patients. None of the adjusted doses developed any complications as VTE or bleeding. There was no significant difference compared with the standard dose group. In this study, we focused on describing the pattern of heparin doses as VTE prophylaxis in underweight patient. We also, compared between the standard dosing and adjusted dosage of VTE prophylaxis on underweight patients and any complications. There was no significant difference in the complications outcome or benefits between the two groups.

Keywords: Heparin, prophylaxis, underweight, VTE

P13   **[49]**

COST ANALYSIS OF THE BLOOD COLLECTION AT PATIENT'S HOME COMPARED WITH THE BLOOD COLLECTION AT HOSPITAL

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The objective of this study is cost analysis of the blood collection at patient's home compared with the blood collection at hospital. The cost data of the home blood collection project was compared with the current blood collection service at Rajavithi Hospital, Bangkok, Thailand. All data was collected retrospectively from 500 patients who participated the project done by a collaboration between Rajavithi Hospital and a private company. This project was done by medical technician team collected all medical specimens from patients' homes and send it to laboratory for analysis and report the result. Full cost of direct non-medical and indirect costs was calculated by provider perspective including labor cost, material cost, equipment cost of medical technology service, medical record and statistics service, and finance and accounting service with societal perspective that consisted of all expenses of patients who have to travel to the hospital. The hospital cost per visit of blood collection services was 21.37 USD. The Patients' direct non-medical costs of blood collection service at Rajavithi Hospital were 30.62 USD. The cost structure of the blood collection at Rajavithi Hospital is mostly fixed cost (95% of the total cost). Only 5 percent were variable cost, while the home service can save about 50% reduction (30.62 USD. compared to the home service cost of 15.34 USD.). So, the blood collection at home can reduce the patient's cost burden by 50 percent and can reduce the hospital's cost by 5 percent, as well as being able to respond to the policy of reducing congestion in hospital during the pandemic situation.

Keywords: Home lab service, Rajavithi hospital, new normal, cost analysis

P14   **[50]**

THE PATTERNS OF ABDOMINAL TRAUMA AND FACTORS ASSOCIATED WITH ICU ADMISSION IN A MAJOR TRAUMA CENTER IN MEDINA

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Trauma is a significant health problem in Saudi Arabia. In polytrauma victims, the abdomen is the second most affected body region following the head. In the Middle East, abdominal trauma prevalence ranges from 15 per cent to 82%. This study aims to assess the patterns of blunt and penetrating abdominal traumas and to assess the factors associated with ICU admission. This is a retrospective analytical study conducted at a major trauma centre in Medina, Saudi Arabia. Admitted abdominal trauma patients from 2015 to 2018 were included. Paediatric and isolated extra-abdominal traumas were excluded. Descriptive analysis was used to identify patterns of abdominal trauma. Chi-squared test and independent t-test were applied to evaluate the association of the mechanism of injury, solid abdominal organs, associated extra-abdominal injuries, and type of injury. Multiple regression analysis was conducted to assess factors associated with ICU admission in abdominal trauma. We included a total of 218 patients with a mean age of 32.7 ± 13.9 years. Males (78.4 per cent) were predominantly greater in number than females (21.6 per cent). The primary mechanisms of injury were motor vehicle collisions (MVCs) (76.6 per cent), followed by stab wounds (12.4 per cent) and falls (7 per cent). The liver and spleen were the most injured organs (31 per cent and 30 per cent, respectively). Chest injuries were the most associated extra-abdominal trauma (47.2 per cent). The majority of MVC patients (88.6 per cent) had BTA, while stab wound was the main mechanism of injury in penetrating trauma (12 per cent) ($P < 0.001$). Penetrating trauma patients required laparotomy more than BTA patients (52.9 per cent and 8 per cent; $P < 0.05$). Eighteen percent of patients needed ICU admission. Factors positively associated with ICU admission ($P < 0.05$) were head and neck, musculoskeletal, and thoracic injuries and a moderate Revised Trauma Score (RTS). Blunt abdominal trauma was the dominant type of abdominal injury in this study. The majority of patients were young adult males. MVCs and stab wounds were the predominant mechanisms of injury. The most affected organs were the liver and spleen. Chest injuries were the most associated extra-abdominal trauma. Factors positively associated with ICU admission were head and neck, chest, and musculoskeletal injuries and a moderate RTS.

P15   **[51]**

DIAGNOSTIC IMPACT OF EMERGENCY ULTRASOUND OF RUQ PAIN

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Even though ultrasound is an excellent tool in medical diagnostics and evaluation, its lack of full automation can be a substantial downside. In this study, we evaluated the result of bedside ultrasound right upper quadrant (RUQ) pain by physicians in the emergency ward of King Saud University Medical City when compared to the review of the diagnosis by hospital radiologists. Methods: By means of a questionnaire, data were collected from King Saud hospital patients who presented with RUQ pain suggesting biliary disease in the emergency department. The questionnaire was made available on-site and a notification was passed to all on-duty physicians per shift to fill it out after the initial investigation of RUQ pain and to place the printout in a collection box. Results: Half of the initial diagnoses were cholelithiasis (53.6%), followed by cholecystitis (30.4%), and lastly cholangitis (3.4%), making the majority of suggested diagnoses related to the gall bladder. A review by the on-duty radiologist confirmed 55.2% of initial diagnoses and refuted 22.4%. Conclusion: More RUQ ultrasound training is required among emergency physicians.

Keywords: RUQ, pain, ultrasound, sonogram, imaging