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THEME:
Health & Wellbeing Amidst a Prolonged Pandemic- Implications for Physicians & Patients

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BOOK OF ABSTRACTS

Titles and Authors

Bio Sketches for Speakers

Scientific Session 1A

Major Alhassan Mohammed Yakubu is a Principal Laboratory Scientist at the Pathology Division of the 37 Military Hospital in Accra. He holds an MPhil in Medical Biochemistry and certificate in Leadership and Management in Health from University of Ghana and University of Washington respectively. He was instrumental for the Pathology Division to achieve the ISO 15189 accreditation which has been maintained till date. He has co-authored a few papers. He was the corresponding author on a research paper titled "Molecular Characterization of Haemagglutinin Genes of Influenza B Viruses Circulating in Ghana during 2017 and 2018". He is currently the Quality Manager at the Pathology Division of the 37 Military Hospital.

Dr Nana Kwame Ayisi-Boateng (MBChB, MPhil, FGCP) is a Senior Lecturer at the School of Medicine and Dentistry and a Family Physician at the University Hospital, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. He is a Fellow of the Ghana College of Physicians and Surgeons. At the height of the COVID-19 pandemic, he served as the Lead for the COVID-19 Case Management Team at the KNUST Hospital and has several COVID-19-related publications in peer-reviewed journals. He is currently a Co-Investigator and Site Coordinator for an ongoing Multi-country Phase III COVID-19 Vaccine Trial.

Dr Stephen Osasan is a consultant histopathologist and a researcher. He obtained his primary medical qualification (MB.ChB) from Obafemi Awolowo University, in 1997 and became a fellow of the Postgraduate Medical College of Nigeria (FMCPath) in 2007. As a research fellow at the University of Alberta where he conducted extensive research on microcirculation endothelial changes in kidney transplant biopsies. He subsequently became a Fellow of the International Society of Nephrology. He currently works as a Consultant Histopathologist at King Fahad Hospital Al Bahah in the Kingdom of Saudi Arabia

Scientific Session 1B

Dr Dzifa Dey is a Rheumatologist and senior lecturer at the University of Ghana Medical School. With over 12 years of experience in managing patients with autoimmune and rheumatic conditions, Dr Dey has worked on over 40 publications on topics relating to her field. She is a member of several local and international committees and also serving as general secretary of AFLAR. Over the years, she has won of grant support from organizations such as the Lupus Research Alliance. She is the director of The Rheumatology Initiative - Ghana, and currently heads the Rheumatology unit at KBTH.

Dr. Marie Patrice Halle Ekane (nee Maffossog) is an associate professor in the Faculty of Pharmaceutical Sciences, University of Douala, Cameroon. Marie is the chief of Nephrology and Haemodialysis in Douala General Hospital and a consultant with the Department of Internal Medicine of the same hospital. Marie is also the Secretary General of the Cameroonian Society of Nephrology. Marie's research interests include kidney disease prevention, referral patterns in nephrology, outcomes of end-stage kidney disease patients on haemodialysis, and viral infections of the kidney. Marie has 92 publications in local and international journals.

Dr. Yasmine Hardy is a senior specialist physician in Infectious Diseases and the head of the COVID-19 treatment centre at the Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana. Her research areas are particularly in HIV and COVID-19 and she has a number of publications to her credit. She has supported the National AIDS Control Programme in Ashanti Region in training healthcare providers involved in HIV care. She is also the KATH site principal investigator for the Randomised Evaluation of COVID-19 Therapy (RECOVERY) trial. She was part of the international AIDS 2020 conference where she presented a case series on COVID-19 in HIV patients.

Dr Dora Abra Egblewogbe graduated with an MBChB degree from the University of Ghana Medical School in 2006. She is a Fellow of the West African College of Physicians and a member of the Ghana College of Physicians and Surgeons. Dora is the Clinical Care Coordinator at the Family Medicine SUB-BMC/ Korle Bu Polyclinic and a part-time tutor at the Accra College of Medicine. She is passionate about providing patient-centered care to clients, research and loves to teach residents and medical students.

Scientific Session 1C

Dr. Onyemocho Audu obtained MBBS and FWACP-Community health, from Ahmadu Bello University Zaria in 1998 and 2011; and a Master's in Gender Studies from Benue State University, Makurdi in 2019. He has over 15 years of professional experience and expertise in reproductive health, gender, and rehabilitation medicine. As a lecturer, he trains both undergraduate and post-graduate medical professionals and as well offers consultancy services on community-based issues of public health importance. Through these services, he has developed several formidable research teams that have facilitated multidisciplinary approaches toward sustainable development in Nigeria and beyond. He has over 90 publications in scholarly, peer-reviewed journals.

Dr. Chika Mary Emeka is a Consultant Physician and Dermatologist at a large federal teaching hospital in southeast Nigeria. She has spoken at national

conferences and won awards for best resident oral presenter and first runner-up for poster presentation of an original research article. She is a public health enthusiast and passionate about improving skincare practices among people through health education. She has published articles in peer-reviewed national and international journals. She likes writing articles on topical health issues for social media campaigns. Chika believes in healthy living so engages in physical fitness exercises on most days of the week.

Dr. Amoako Duah is head of Internal Medicine Department and Gastroenterology Unit of the University of Ghana Medical Centre Ltd. He obtained his medical degree from the University of Ghana Medical School in 2004. He is a fellow of the West Africa College of Physicians and Ghana College of Physicians and Surgeons. He is a member of the Internal Medicine Faculty Board and Exams Moderation Committee of Ghana College of Physicians and Surgeons. He has published 22 articles in peer-reviewed journals. His research interest areas are liver cirrhosis, viral hepatitis, liver cancer and gastrointestinal endoscopy.

Dr Teuwafeu Denis Georges, Internist, Consultant Nephrologist. He graduated from the University of Yaounde I and is the Head of the Renal Unit of the Buea Regional Hospital and a Senior Lecturer in the Faculty of Health Sciences, University of Buea, Cameroon. His field of interest is renal pathology, dialysis and clinical research.

Scientific Session 2A

Dr Rafiq Okine is a Senior Resident at the Department of Community Health, University of Ghana Medical School and has interests in infectious disease epidemiology, vaccine research, implementation and evaluation of immunisation programmes and health system strengthening.

Dr Benedict Calys-Tagoe is an Associate Professor of Community Health and Epidemiology at the University of Ghana Medical School and the School of Public Health. He is also a field Supervisor for the faculty of Public Health (Ghana College of Physicians), Chapter Chairman (Ghana) and Faculty Secretary for the Faculty of Community Health of West African College of Physicians (WACP). Benedict is a Fellow of the WACP as well as the Ghana College of Physicians and Surgeons and holds a post-doctoral Fellowship in research methodology from the University of Michigan. His research interests include epidemiology of communicable and non-communicable diseases particularly cancers and stroke.

Dr. Ruth Owusu-Antwi is a Fellow of the Ghana College of Physicians and a Lecturer at the School of Medicine and Dentistry, KNUST. She also practices at

KATH as a senior specialist and the current head of the Psychiatry Unit. She is the attending Psychiatrist at Recovery Pathways clinic, a renowned private clinic that specializes in Mental health care. She has won many awards in her field of practice, including the 2019 International Fellow of the Association of Women Psychiatrists in San Francisco, in recognition of her work towards women mental health. She's the President of Psychiatric Association of Ghana (PAG).

Dr Teuwafeu Denis Georges, Internist, Consultant Nephrologist. He graduated from the University of Yaounde I and is the Head of the Renal Unit of the Buea Regional Hospital and a Senior Lecturer in the Faculty of Health Sciences, University of Buea, Cameroon. His field of interest is renal pathology, dialysis and clinical research.

Scientific Session 2B

Dr. Adelaide Ankomaa Asante graduated from the School of Medical Sciences, Kwame Nkrumah University of Science and Technology in 2015. She also holds a master's degree in Public Health from the University of Ghana. Adelaide served briefly at Nyaho Medical Center before joining the Rheumatology Unit at Korle Bu Teaching Hospital (KBTH) as a medical officer. There, she developed a keen interest in Rheumatology and clinical research. Her pursuit of more knowledge led to her enrollment in the EULAR online rheumatology course in 2021. She is currently a second-year resident in the Department of Internal Medicine and Therapeutics at KBTH.

Dr Dzifa Dey is a Rheumatologist and senior lecturer at the University of Ghana Medical Schoo. With over 12 years of experience in managing patients with autoimmune and rheumatic conditions, Dr Dey has worked on over 40 publications on topics relating to her field. She is a member of several local and international committees and also serving as general secretary of AFLAR. Over the years, she has won of grant support from organizations such as the Lupus Research Alliance. She is the director of The Rheumatology Initiative - Ghana, and currently heads the Rheumatology unit at KBTH.

Dr George Acquah is a young Ghanaian physician, scientist and entrepreneur. He holds an MB ChB from the University of Ghana Medical School (2012) and an MPH from the University of Ghana School of Public health (2018). He is currently a resident at the West African College of Physicians, specializing in community medicine and a part-time lecturer at Accra College of Medicine. He is passionate about medical innovation, entrepreneurship, and digital technology. His areas of interest artificial intelligence in healthcare, mathematical models for disease prediction and transformation of medical images across various radiological imaging modalities.

Dr. Fiifi Duodu, MD, is a physician specialist with the premiere Korle Bu Teaching Hospital (KBTH). After graduating from medical school in 2011, Dr. Duodu pursued a successful residency in neurology that pinnacled in October 2022. His choice of neurology stemmed from working at the Stroke Unit at KBTH. Dr. Duodu's vision is to see more collaborations between regional and international neurological associations to increase the number of doctors with advanced knowledge in the field, thereby improving the quality of patient care, especially in developing countries. He is married with two daughters.

Scientific Session 2C

Dr Lenusia Ahlijah is a specialist family physician and the Medical Superintendent of Tema Polyclinic. She had an 8-year stint in paediatrics at the Tema General Hospital, soon after graduating from the University of Ghana Medical School, in 2002. She has been practicing as a family physician since she became a member of both the Ghana College of Physicians and WACP. Her special interest area now is geriatrics, her research interest area is falls among older adults. Dr. Ahlijah's vision is to see older adults in Ghana age successfully through advocacy for social and healthcare systems that are older-adult friendly.

Dr Francis Agyekum is a Senior Lecturer at the University of Ghana and a Consultant Cardiologist at the Korle-Bu Teaching Hospital, where he also serves as the Training Coordinator for post-graduate training in Internal Medicine. Dr. Agyekum is a Fellow of the West African College of Physicians and the Ghana College of Physicians and Surgeons. He also has Master of Science (MSc) in Preventative Cardiovascular Medicine from the University of South Wales and Post-Graduate certificate in Interventional Cardiology from the Guangdong Cardiovascular Institute, China. His research interest is in genomic and environmental determinants of cardiovascular diseases, with specific interest in hypertension, heart failure, and coronary artery diseases. He has been part several of research projects. Dr. Agyekum is currently the General Secretary of the Ghanaian Society of Cardiology. He is married with three children.

Dr. Lambert Appiah is a practicing cardiologist and a researcher with interest in global cardiovascular health including prevention, epidemiology, clinical trials, implementation science, improving health systems and training. He also works as a senior lecturer at the Department of Medicine, School of Medicine and Dentistry of the Kwame Nkrumah University of Science & Technology. He is a Fogarty Global Health Fellow, a Fellow of the WACP and the GCPS, International Society of Cardiovascular Disease Epidemiology and Prevention (ISCEP) and a member of the International Society of Global Health (ISoGH). He has a Post graduate certificate in Clinical research from the Harvard Medical School.

Juliet Mmerem is a Consultant Physician/Infectious Disease Specialist at the Department of Medicine, University of Nigeria Teaching Hospital, Enugu, Nigeria. She is involved in the management of persons with infectious diseases likewise practices tropical medicine. She recently completed her medical residency program in April 2022 and was admitted as a fellow of the West African College of Physicians. She has also completed a postgraduate MSc in Public health with the University of South Wales, UK in July 2022. She has special interest in neglected tropical diseases(NTDs) and HIV medicine and is involved in research at various levels.

POSTERS

1. **Dr. Onyemocho Audu** obtained MBBS and FWACP-Community health, from Ahmadu Bello University Zaria in 1998 and 2011; and a Master's in Gender Studies from Benue State University, Makurdi in 2019. He has over 15 years of professional experience and expertise in reproductive health, gender, and rehabilitation medicine. As a lecturer, he trains both undergraduate and post-graduate medical professionals and as well offers consultancy services on community-based issues of public health importance. Through these services, he has developed several formidable research teams that have facilitated multidisciplinary approaches toward sustainable development in Nigeria and beyond. He has over 90 publications in scholarly, peer-reviewed journals.

2. **Dr Lily Gloria Tagoe** is a Paediatrician, currently pursuing a fellowship in Paediatric Oncology from the Ghana College of Physicians. She is a member of the Faculty of Paediatrics of both the Ghana and West African Colleges of Physicians (WACP). She was the recipient of the Asuquo Antia Memorial Prize for the best Membership candidate in Paediatrics for WACP in 2019. Lily has special interest in paediatric leukaemia, lymphoma and supportive care. She is also a very passionate childhood cancer advocate who believes that no child with cancer should have poorer outcomes simply because of which part of the planet they find themselves.

3. **Dr. Akosua Fredua-Agyeman** is a paediatrician and a member of the West African College of Physicians with interest in Neonatology. She currently works at the 37 Military Hospital and one of the lead doctors in charge of the Sickle Cell Clinic. She obtained her basic medical degree from the Kwame Nkrumah University of Science. Akosua is a christian and happily married. She has a passion for caring for people, especially children, and enjoys baking/cooking in her free time. Akosua loves fashion and all things beautiful.

4. **Dr Gordon Manu Amponsah** graduated with BSc Human Biology and Bachelor of Medicine and Surgery from the Kwame Nkrumah University of

Science and Technology (KNUST). He also has a Master of Philosophy (Human Physiology) from KNUST. He is a Member (Internal Medicine) of the West African College of Physicians (WACP), Physician Specialist and Senior Resident at Komfo Anokye Teaching Hospital, Directorate of Medicine sub-specializing in cardiology with the WACP. Gordon is also an assistant lecturer at the Department of Physiology of KNUST

5. **Dr. Caleb Otu-Ansah** is a Member of the West African College of Physicians, (Psychiatry) who practices in Komfo Anokye Teaching Hospital in the Psychiatry Department, and an adjunct Lecturer at Christian Service University College, Kumasi. His area of interest is research and innovation; especially in Neuropsychology, paediatric neurocognitive development, psychometrics & faith/science interplays/interactions. He is a Christian who enjoys worshipping with the saxophone, and is passionate about helping to build up others, especially the underprivileged.

6. **Dr, Ijeoma Ohuche**, MBBS, PGPN, FWACP is a Consultant Paediatrician at the University of Nigeria Teaching Hospital, and at the Niger Foundation Hospital, Enugu. She had her undergraduate medical training at the College of Medicine, University of Nigeria, Nsukka and her residency training at the University of Nigeria Teaching Hospital, Enugu. She is a promising researcher, having published articles in reputable journals and made presentations at several conferences.
Dr. Ohuche completed a subspecialty training in Paediatric Endocrinology at the Paediatric Endocrinology Centre for West Africa in Lagos, where she emerged the best graduating student of the 2016/2017 group.

7. **Dr. Marian Opoku-Agyakwa** is a family physician who works at the University of Ghana Medical Centre in Legon, Accra. Her BSc and MBChB degrees were obtained from the University of Ghana, Legon. Marian has an MSc in Health Service Administration and Leadership from the Ghana Institute of Management and Public Administration, Legon and a professional certification in Addiction Medicine. She is a Fellow of the Faculty of Family Medicine of the West African College of Physicians. Her areas of interest prevention of Sickle Cell Disease and Addiction Medicine.

8. **Dr Oladimeji Adebayo** is a Nigerian medical doctor, who recently completed his residency training in internal medicine (cardiology sub-specialty). He will be inducted as a fellow of the West African College of Physicians during the 46th WACP Annual General & Scientific Meeting currently being held in Accra, Ghana. He is an avid researcher. His key research interests are preventive cardiology, interventional cardiology, and health system strengthening.

9. **Dr. Victor Ekow Eduam Ekem** is a nephrology fellow-in-training, currently attached to the nephrology unit of the Korle-Bu Teaching Hospital. He

is a member of both the Ghana College of Physicians and West Africa College of Physicians. His research interests include trends of kidney disease, cost-effective renal care and adult metabolic medicine. Victor has co-authored a paper titled "Delayed diagnosis of polycythaemia vera in an adult female with non-cirrhotic portal hypertension". He is an avid reader and enjoys world history and philosophy. Victor loves to watch tennis and football in his spare time and is happily married with two lovely children.

1Ai

IMPACT OF COVID-19 ON MORTALITY PATTERNS AT THE 37 MILITARY HOSPITAL IN THE YEARS 2020 AND 2021: AN AUTOPSY STUDY

S. Attoh, F.K. Hobenu, M. Alhassan, M. McAddy, P.K. Akakpo

Introduction: The JM Wadhwani Department of Anatomical Pathology receives cases from the 37 Military Hospital and its environs. About 2,800 corpses are received annually either as Hospital Deaths or community/Brought-In Dead (BID). Though the mandate for autopsy is determined by the manner of death as natural (due to disease) or unnatural (eg. accidents, misadventure, homicides), the coroner mandates all autopsies deemed necessary by the institution, especially when the cause of death is unknown. We sought to ascertain the impact of COVID-19 on mortality patterns at the 37 Military Hospital morgue.

Methodology: Statistics of cases received at the department in 2020 and 2021 were collated and compared to past years, 2017, 2018 and 2019. The autopsy determined underlying causes of death were categorized and compared to previous years.

Results: A total of 6,087 autopsies were performed out of 14,353 cases received at the department (42.4%) with a steady decrease annually from 2017 to 2021 representing 1502, 1371, 1321, 965 and 920 respectively. When categorized, all the other broad categories of underlying causes of death were proportionately lower in 2020 and 2021 as compared to 2017, 2018 and 2019 though not statistically significant. Cardiovascular related deaths (mostly hypertension and its related complications) were the leading causes of death (35.2%) followed by infections (19.1%), accidents/ injuries and poisons (18.1%), tumors and tumor-like conditions (8.3%), gastrointestinal tract/ hepato-biliary disorders (5.7%), metabolic (3.3%), haematological (1.9%), renal (1.6%), pregnancy related conditions (1.2%), others (4.9%) and unascertained causes (0.7%), with minimal variations respectively. Only 31 cases (3.2%) of COVID-19 were determined at autopsy in 2020 and 20 cases (2.2%) in 2021

Conclusion: The mortality pattern of the years under review have not changed significantly though number of autopsies performed have decreased. There was no significant impact of Covid-19 on autopsy determined mortality pattern.
Awareness and education on Cardiovascular diseases, Infections, Accidents, Injuries and Poisons must be intensified with more resources committed to prevention.

1Aii

COVID-19 ASSOCIATED WITH HIGH MORTALITY AMONG PATIENTS WITH ACUTE STROKE IN A UNIVERSITY HOSPITAL IN KUMASI, GHANA – A RETROSPECTIVE STUDY

Ayisi-Boateng, N. K., Mohammed, A., Konadu, E., Sarfo, F. S.

Introduction: The World Stroke Organization (WSO) has raised concerns about the global impact of COVID-19 on occurrence of stroke and its implications for stroke care, especially in low-middle-income countries. We sought to describe the profile and outcomes of acute stroke admissions in relation to COVID-19 status.

Methods: This is a retrospective study involving all stroke patients admitted to the University Hospital, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana from 1st March, 2020 to 30th November, 2020. Stroke was diagnosed clinically and confirmed with a head Computerized Tomography scan. All stroke patients with symptoms suggestive of COVID-19 were tested using real time polymerase chain reaction (RT-PCR). Bivariate analysis was performed to identify factors associated with in-patient mortality. Statistical significance level was set at $p < 0.05$.

Results: A total of 93 patients with confirmed acute stroke were hospitalized within a 9-month period with 3 (3.2%) having confirmed COVID-19 infection. All COVID-19 cases had ischemic stroke and all of them died. Bivariate analyses identified COVID-19 status ($p=0.016$), mean pulse rate ($p=0.036$) and patients who did not receive angiotensin receptor blocker (ARB) ($p=0.029$) or calcium channel blockers (CCB) ($p=0.016$) were associated with in-patient mortality.

Discussion/Conclusion: Approximately 3% of patients with acute stroke had COVID-19 and all of them died. Due to atypical presentations of COVID-19 and its high risk of stroke, we recommend that patients with acute stroke admitted to hospitals should be screened for possible SARS-CoV-2 infection.

1Aiii
COVID-19: A RISK TO LUNG CANCER?

Osasan, S.A., Oche, G.A., Daramola, O.J., Adefolalu, O.A., Ige, O.O., Sergi, C.

Introduction: Understanding the etiopathogenetic mechanisms of diseases is essential to improve patients' survival and help formulate targeted preventive interventions. Microarray technology has been widely applied to the analogy between gene expression levels and used to predict disease progression for accurate diagnosis and prognosis assessment. The COVID-19 pandemic and the clinical symptom in survivors raises the question of the possible risk of long-term oncogenic sequelae of the disease. We, therefore, aimed to explore the risk and possible pathogenetic pathways of carcinogenesis in COVID -19 patients using differentially expressed genes (DEGs) in both diseases.

Methods: We searched the GEO database using targeted keywords. The selection criteria for the datasets include COVID-19, NSCLC, and control tissues. Sufficient clinical information is the criterion. Thus, two gene expression profiles were collected; these are GSE164805 (for COVID-19) and GSE118370 (for NSCLC). GSE164805 was based on the Agilent-085982 Arraystar human lncRNA V5 microarray, while GSE118370 was based on Affymetrix Human Genome U133 Plus 2.0 Array.

The Database for Annotation, Visualization, and Integrated Discovery (DAVID) was used to perform the Gene Ontology function and KEGG pathway enrichment analysis of the identified DEGs. P values <0.005 were considered significant. Pathway intersection analysis was performed using the Enrichment Map tool STRING version 11.0 to assess the relationship between the DEGs identified in the study. This is considered statistically significant at $p < 0.05$.

Results: 240 DEGs were identified in the COVID-19 tissues and 952 in NSCLC. 9 DEGs were commonly expressed in both diseases. While all nine genes were downregulated in COVID-19 samples, only three were Downregulated in both pathologies.

Based on gene ontology analysis, we observed specific functionally enriched biological processes (BP), cellular components (CC) and molecular functions (MF) associated with the nine genes found in both COVID-19 and Lung cancer. These include calcium ion binding, transmembrane receptor protein kinase activity, actin binding, transforming growth factor beta receptor activity, actin filament binding and cytoskeleton binding.

Outputs for the three commonly downregulated genes include MF, such as icosanoid receptor activity, NAD+ nucleotidase, NAD(P)+ nucleosidase activity, signalling receptor activity and molecular transducer activity. In contrast, the BP associated with them includes the immune system process, inflammatory response regulation, cytokine production regulation, and gene expression regulation. At the same time, the CC associated with them is an integral component of the plasma membrane and plasma membrane signalling receptor complex. Furthermore, subjecting the remaining six genes to similar analysis retrieved only findings for BP and CC; the BP identified are endothelial cell development, system development, multicellular organism development and vascular channel development; as for the CC, we also found an integral component of the plasma membrane, cell junction components, and anchoring junction components. Each functionally enriched category was found to be significant (based on $p<0.05$), and all involved in carcinogenesis.

Finally, following an ongoing mutational analysis of some transcription factors from COVID-19 patients based on the selection pressure algorithm reveals some mutations associated with non-small cell lung cancer; we are still working on ultimately elucidating this.

Discussion/Conclusion: The genes identified in this study have been implicated in carcinogenesis. Therefore, their dysregulation in COVID-19 patients may constitute a long-term risk for lung cancer.

1Aiv

COVID-19 VACCINE HESITANCY IN A RESOURCE-CONSTRAINED CONTEXT: A CROSS-SECTIONAL STUDY OF THE CONTRIBUTIONS OF INDIVIDUAL AND CONTEXTUAL FACTORS AND REASONS FOR HESITANCY AMONG ADULTS IN SOUTH-EASTERN NIGERIA

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Introduction: COVID-19 vaccine hesitancy(VH) is a global health problem. In response to COVID-19 pandemic, governments around the world rolled out

different COVID-19 vaccine programmes. Although factors that are responsible for VH differ in time, places, persons and types of vaccine but individual and contextual factors may contribute to the variability with the rates and patterns of COVID-19 VH.

Aim: The aim of the study was to determine the contributions of individual and contextual factors and reasons for VH among adults in South-Eastern (SE) Nigeria.

Methodology: A cross-sectional study was carried out from March to April 2021 on 400 adults in SE Nigeria. Data were collected using structured, pretested and researcher administered questionnaire which elicited information on individual and contextual factors for COVID-19 VH and reasons for VH.

Results: The study participants were aged 18-86(51±14.2) years. There were 227(56.8%) females. COVID-19 VH rate was 78.0% (95%CI, 72.4%-83.7%). The most common reason for VH was safety of COVID-19 vaccines. The individual factors associated with COVID-19 VH were age(P=.002) and occupational status(P=.027). The contextual factors associated with COVID-19 VH were vaccine safety(P=.001), vaccine confidence(P=.029), misbelief in COVID-19 infection(P=.031) and self-perceived low risk of contracting COVID-19 infection(P=.041). The individual predictor of VH was young age less than 50 years(OR=2.461; 95%CI, 1.0432 - 5.260; P=.010) while the significant contextual predictors were concerns on vaccine safety(OR=4.690; 95%CI, 2.094-7.348; P=.015) and absence of confidence in the vaccine(OR=2.941; 95%CI, 1.033 – 8.136; P=.032).

Conclusion: This study has shown the prevalence of COVID-19 VH with the most common reason for VH being safety of COVID-19 vaccines. Individual factors associated with VH were age and occupational status. The contextual factors associated with VH were vaccine safety, vaccine confidence, misbelief in COVID-19 infection and self-perceived low risk of contracting COVID-19 infection. The individual predictor of VH was age less than 50 years while the contextual predictors were vaccine safety concerns and absence of vaccine confidence.

1Bi

COVID-19 AND AUTOIMMUNE RHEUMATIC PATIENTS IN GHANA: THE MANAGEMENT AND ASSOCIATED OUTCOMES OF PATIENTS WHO DEVELOP COVID-19.

Dey, D., Adjei, P., Katso, B., Issaka, S., & Nyame, D.

Introduction: The higher risk of COVID-19 infection among patients with Autoimmune Rheumatic Disease (AIRD) has been described. However, details of the management strategies and associated outcomes in AIRDs patients are few particularly in Africa where patients have limited access to health care coupled with limited data availability on the impact of COVID -19 and what may influence outcomes. Furthermore, whether risk factors identified globally differs from the situation in Ghana remains yet to be established. We assessed the incidence, management options and associated outcomes of COVID-19 positive AIRD patients in Ghana.

Methods: We identified patients who tested Covid-19 positive and managed at the Korle-Bu Teaching Hospital (KBTH) COVID-19 treatment center from 1st August 2020 to 1st July 2021. We again identified positive cases via referrals from other COVID-19 management teams across the country to the rheumatology clinic as well as vis face-to-face clinic visits, telephone and electronic surveys sent to patients belonging to the AIRD cohort. Details regarding demographics, clinical features, COVID-19 status, management options and reported outcomes were extracted using chart reviews and questionnaire. Outcomes of COVID-19 disease was defined as "complete recovery", "recovered with post-infection complications" and "mortality". We used chi-squared and Fishers' exact test to compare baseline demographics, clinical features, management options and outcome variables. We applied the logistic regression model to estimate the effect or independent risk of associated variables on COVID-19 positivity in our study participants. Statistical significance was pegged at 95% confidence level with a p-value of < 0.05.

Results: Thirty-one (31) patients tested positive for COVID-19 using PCR analysis with minimum and maximum ages being 19 and 69 years respectively. Majority, 54.8% were SLE patients, followed by 32.3% being RA, 9.7% being MCTD and 3.2% being SS. Approximately 71% were managed on self-isolation/quarantine basis and 23% were monitored at hospital with both management options resulting in "*complete recovery*". One (3%) patient each was managed in ICU and

HDU on Oxygen therapy respectively, with both resulting in an outcome of "*mortality*". No management option produced the outcome "*recovered with post infection and complications*". Mortality was thus 6% among the severe patients. Using bivariate analysis, we found association between (Sulfasalazine, Omeprazole and Cyclophosphamide) and COVID-19 infection, ***p*** **=** (0.022, 0.030 and 0.036) respectively. The demographic variables (age and region of origin/residence) were found to be associated with COVID-19 infection, ***p*** **=** (0.05 and 0.005) respectively. Using logistics regression however, only patient's region of origin/residence was found to be associated with an increased risk of infection, ***p*** **=** (0.004)

1Bii

SERUM CREATININE AS A PREDICTIVE TOOL FOR ADVERSE OUTCOMES IN COVID19 PATIENTS IN TWO TREATMENT CENTRES IN DOUALA-CAMEROON

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Renal impairment is frequent in hospitalized patients with COVID-19 and is reported to be associated with poor outcomes.

To assess the prevalence of elevated serum creatinine (Scr) in COVID-19 patients, compare the characteristics and outcomes of COVID-19 patients with and without renal impairment in two referral hospitals in Douala – Cameroon.

A hospital-based retrospective cohort study from March, 2020 to March, 2022, including files of patients admitted in the COVID-19 units of the Douala General Hospital and Laquintinie Hospital Douala. Files were grouped into elevated and normal Scr. Comparison of socio-demographic, clinical and paraclinical characteristics, and outcomes between the two groups was done. Scr >13mg/l for males and >12mg/l for females was considered elevated. Data was analyzed using the software SPSS version 26.0. Statistical significance was set at a p-value <0.05.

A total of 543 COVID patient's files were included of whom 273 (50%) had raised Scr. Hypertension and diabetes were significantly more prevalent in patients with elevated Scr (p=0.001 and p=0.014) respectively. The most common biological abnormalities were elevated C-reactive protein, D-dimer, neutrophilia, and lymphopenia with no difference in both group. Patients with elevated Scr were more likely to receive oxygen therapy compared to those with normal Scr (p=0.046). The mortality rates were 45.8%, and 14.1% in patients with elevated and normal Scr respectively (p<0.001). On multivariate analysis, low oxygen saturation <80% (p<0.001, aOR=3.116) was a predictor of mortality in patients with elevated Scr.

More than half of hospitalized patients with COVID-19 in Douala had elevated SCr and it was associated with high mortality compared to those with normal Scr. Low oxygen saturation on admission was a predictor of mortality in patients with raised SCr.

1Biii

SYMPTOMATOLOGY, CO-MORBIDITY PROFILE AND CASE FATALITY OF COVID-19 AMONG PEOPLE LIVING WITH HIV IN KUMASI, GHANA

Hardy Y.

Introduction: Literature has shown greater disease severity and poorer outcomes among Coronavirus disease 2019 (COVID-19) patients with underlying co-morbidities including, but not limited to, diabetes mellitus, hypertension, chronic kidney disease, chronic lung disease, malignancy, cerebrovascular disease and obesity.

There are however conflicting reports on the effects of COVID-19 on people living with HIV (PLWH). There are also limited data on the symptomatology, co-morbidity and case fatality of COVID-19 among PLWH in the West African sub-region.

We therefore sought to characterize the clinical symptoms, co-morbidities and

outcomes of hospitalized COVID-19 patients with and without HIV.

Methodology: This prospective study was conducted among reverse transcriptase polymerase chain reaction confirmed COVID-19 patients admitted at the COVID-19 treatment center, Highly Infectious Isolation Unit (HIIU), at the Komfo Anokye Teaching Hospital in Kumasi, Ghana from March 2020 to July 2021. HIV screening was done for all patients on admission.

Data on baseline demographics (age, sex, occupation, marital status, alcohol and smoking history), patients' clinical characteristics (symptoms, vitals, underlying co-morbidities and COVID-19 severity), viral load (if HIV positive), in-hospital outcomes, as well as outcomes averagely 7.5 months after discharge were collected for this cohort. Frequencies and percentages were used for reporting the socio-demographic data and other categorical variables whereas means/standard deviations (SD) and medians/inter-quartile ranges (IQR) were used for numerical variables.

Results: Over the period, 16(4.8%) out of 330 patients admitted with COVID-19 were PLWH. The median (IQR) age of PLWH and HIV negative patients hospitalized with COVID-19 was 45.5(35.5-57.0) years and 60(45-72) years respectively. There were more females in the HIV positive cohort (56.2% vs 45.2%). Mean viral load, available for 8 patients, was $\log_{10}6.1(\pm 6.5)$ copies/ml.

Common clinical symptoms among HIV patients compared to their HIV negative counterparts were cough (81.3% vs 72.1% p = 0.425), breathlessness (68.8% vs 70.7% p = 0.866), chest pain (54.6% vs 15.9% p = 0.001), muscle pain (54.6% vs 31.0% p = 0.103) and fever (37.5% vs 51.7% p = 0.269) respectively.

The common co-morbidities in PLWH and HIV negative patients were hypertension (37.5% vs 64.4%, p = 0.003), liver disease (20% vs 6.6%, p = 0.052), acute kidney injury (13.3% vs 13.8% p = 0.959) and diabetes mellitus (6.3% vs 39.9%, p = 0.007) respectively.

Case fatality among PLWH and HIV negative patients at discharge was 37.5% vs 33.1% (p = 0.801) respectively and case fatality averagely 7.5 months post discharge was 40.0% vs 11.0% (p = 0.049) respectively.

Discussion/Conclusions: There are hints of a high post-discharge case fatality from COVID-19 among PLWH in this small study sample. Larger, case-control studies are needed to assess the long-term interactions between HIV and COVID-19.

1Biv

EXPLORING THE ILLNESS EXPERIENCES AMONGST FAMILIES LIVING WITH COVID-19 IN GHANA: THREE CASE REPORTS.

Ayisi-Boateng, N. K., Egblewogbe, D., Owusu-Antwi, R., Essuman, A., & Spangenberg, K.

Introduction: The 2019 corona virus disease (COVID-19) has wreaked havoc on countries, communities, and households. Its effect on individuals and their families, although enormous, has not been adequately explored. Current literature has focused on the biomedical impact of the pandemic with little attention to the psychosocial effects, especially on families living with COVID-19. We thus present a report on the illness experiences of three families in Ghana who had at least one member diagnosed with COVID-19.

Methods: The index patients presented to the Kwame Nkrumah University of Science and Technology (KNUST) hospital in Kumasi, Ghana, between April and June 2020 and were diagnosed with COVID-19. Patients were either asymptomatic or had mild symptoms and their clinical management was based on the Ministry of Health protocols. Three individuals and their families were interviewed during the mandatory 14 -day period of isolation by a family physician and a psychiatrist.

A validated tool was used to explore the illness experience as follows:

1. What are your *fears* about COVID-19 in your family?
2. What are your *ideas* about the infection?
3. How has the infection in your family affected your regular activities or *function*?
4. What are some of your *expectations*?

Family 1: A 52-year-old male trader with a travel history to Europe was seen on 7th April 2020 with a fever (temperature 39 °C) but no respiratory symptoms. The family lived in their own private accommodation where each person had access to private bathroom facilities. His wife and three children tested negative for COVID-19 while their 24-year-old female domestic caretaker tested positive.

Family 2: A 24-year-old male health worker, reported with a 2-day history of rhinorrhoea, sore throat, and headache on 28th May 2020. His was a family of eleven and they shared bathroom facilities.

Family 3: A 41-year-old building artisan, who suspected exposure to an individual confirmed with COVID-19, reported to the University Hospital on 1st June 2020 for screening. His 14-year-old daughter tested positive, but his wife and two other daughters tested negative. They lived in a densely populated household and shared a kitchen and bathroom facilities with other tenants.

Respondents had a fair idea about the symptoms of COVID-19, mode of transmission and safety precautions to curb its spread. Fear of infecting other family members and death were the commonest fears expressed. The infection had caused family separation and loss of income. Majority of them were hopeful that family members with COVID-19 would recover and be reunited. In one family a feeling of unity was engendered.

Families living with COVID-19 experience significant psychosocial problems in addition to physical and economic challenges. The biopsychosocial impact of COVID-19 is tremendous and family physicians and other primary care workers have an essential role to play in addressing this.

1Ci

A FIVE-YEAR RETROSPECTIVE REVIEW OF MONKEYPOX AND LASSA FEVER CASES IN BENUE STATE UNIVERSITY TEACHING HOSPITAL, MAKURDI, NORTH-CENTRAL NIGERIA.

Audu, O., Kwaghgande, G.T., Mbaave, P., Swende, T.Z., Abata, J.S., Anejo-OKopi, J.

Introduction: Monkeypox and Lassa fever has been a global public health threat in recent times. However, there is currently not sufficient data to fully understand the recent transmissions including the non-endemic regions. This study assessed the epidemiological pattern of cases of Monkeypox and Lassa fever in Benue State University Teaching Hospital (BSUTH), Makurdi, north-central Nigeria.

Methodology: A retrospective study of all suspected cases of Monkeypox and Lassa fever managed at the infectious disease unit of the BSUTH was carried out. The period under review covers January 2017 to August 10th, 2022.

Results: Out of the 109 cases reviewed, the prevalence of Lassa fever was 40(36.7%) and Monkeypox was 5(4.5%). They were predominantly male (56.9%) with a mean age of 31.0 years (SD = 14.0 years). There was a steady increase in the total number of suspected cases ranging from 10.1% in 2018 to 55.0% in 2022. Twelve (52.2%) of the 23 local government areas in the state were affected and Makurdi had the highest proportion 24(53.3%). The peak of the presentation was in January (32.1%), February (33.0%) and March (11.9%). Those between 21-30 years (33.3%), farmers (22.9%) and students (20.2%) were the most affected. Three (75.0%) of the confirmed cases were healthcare workers. The mortality rate of Lassa fever was 5(13.5%) of this, healthcare worker was 1(2.5%) and Monkeypox was 0.0%. The mortality rate among the female patients was significantly higher than that of the males ($p < 0.05$).

Conclusion: Our study revealed that Monkeypox and Lassa fever are present in Benue State, but the prevalence and case fatality rate of Lassa fever was higher than that of Monkeypox. There is a need for epidemiological surveillance activities to understand how these viruses circulate, survive and spread in the animals and environment.

1Cii

ACNE VULGARIS AMONG SECONDARY SCHOOL STUDENTS IN EBONYI STATE, NIGERIA, A RURAL-URBAN COMPARATIVE STUDY

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Introduction: Acne vulgaris is a common chronic disorder of the skin pilosebaceous gland with a high prevalence in adolescents globally. Lesions occur in sebum-rich areas of the body and the pathophysiology hinged on increased sebum levels, follicular hyper-keratinization, inflammation, and colonization of follicles by Cutibacterium acnes. Acne vulgaris is associated with

complications and may have a psychosocial impact on adolescents. There appears to be a paucity of studies comparing acne vulgaris in urban versus rural areas in Southeast Nigeria hence the need for this study.

The objectives were to determine the prevalence of acne vulgaris in urban versus rural secondary school adolescents in Ebonyi and identify markers of severity. The patterns of acne, the correlation between sebum levels and its severity, and psychosocial impact were also described.

Methods: This cross-sectional comparative study was conducted in 4 co-educational secondary schools (2 urban and 2 rural) across Ebonyi State in 2020. Ethical clearance, consent, and permission were obtained from relevant authorities. A total of seven hundred and thirty-six students were screened; of these, five hundred students with active acne were interviewed and examined. A structured interviewer-administered questionnaire was used to obtain data on socio-demography, risk factors for acne, and acne grade. A psychosocial evaluation was done using the Cardiff acne disability index and the hospital anxiety and depression scale while facial skin sebum was measured using a sebumeter. Data analysis was done with Statistical Package for Social Sciences (SPSS) version 22.

Results: The overall prevalence of acne vulgaris was 67.9% with a female-to-male ratio of 1.4:1. It was however more prevalent in the rural (79.4%) than in urban (59.4%) participants. There was a significantly earlier onset of acne (13.24±1.52 years) in urban than in rural participants (13.88±1.70 years).

Mild non-inflammatory facial acne was most common, (urban 48.2%, rural 48.6%) while severe acne was seen in the rural group. Positive predictors of acne severity include age, milk intake, family history, body weight, and sebum while sleep duration was a negative predictor. The average skin sebum levels were higher in the T-zone of the face (Urban 77.99±49.39*ug/cm*^{2}, Rural 93.78±52.21*ug/cm*^{2}) than in the U-zone (Urban 70.23± 38.45*ug/cm*^{2}, Rural 74.21± 45.61*ug/cm*^{2}) with a significant positive correlation between sebum levels and acne severity. The mean Cardiff Acne Disability Index was higher (2.35±2.55) in urban than in rural (2.04± 2.33) participants. The burden of anxiety (Urban 3.90 ±3.24, Rural 3.94±3.50) was more than depression (Urban 1.85±2.13, Rural 2.31±2.67) in participants.

Discussion: There is an increased prevalence of acne vulgaris in adolescents with a differential rise in the rural area likely due to the influence of civilization; as diet,

lifestyle, and body care products previously rampant in the urban are now also seen in the rural areas. Additionally, acne vulgaris impacts the psychological health of participants, as seen by the predominance of anxiety in the study.

Conclusion : Acne vulgaris remains a significant skin disorder in adolescents, not only globally but also in Ebonyi State. Health education and policies targeted at adolescents would help ameliorate the impact of the disorder.

1Ciii

ACUTE KIDNEY INJURY IN PATIENTS WITH LIVER CIRRHOSIS: PREVALENCE, PREDICTORS, AND IN-HOSPITAL MORTALITY AT A DISTRICT HOSPITAL IN GHANA.

Amoako Duah, Francisca Duah, Daniel Ampofo-Boobi, Bright Peprah Addo, Foster Osei-Poku, Adwoa Agyei-Nkansah.

Background: Liver cirrhosis is a worrying medical condition globally, particularly in Ghana where hepatitis B and alcohol are important risk factors. It is a complication of all chronic liver diseases characterized by replacement of liver tissue by fibrosis, scar tissue, and regenerative nodules, resulting in increased loss of liver function. Cirrhosis can remain compensated for many years before the development of a decompensating events. Acute kidney injury (AKI) is one of the most severe complications of cirrhosis and heralds a worrying prognosis with an estimated mortality of about 50% in a month and 65% within a year. Infection and hypovolemia have been found to be the main precipitating factors of AKI in liver cirrhosis. Early detection and treatment of AKI may improve outcomes. AKI in patients with liver cirrhosis in Ghana and their impact on inpatient mortality are largely unknown. This study was aimed to determine the prevalence, precipitating factors, predictors, and in-hospital mortality of AKI in patients with liver cirrhosis admitted to a district hospital in Ghana.

Methods: The research design was a prospective hospital-based study, conducted at the internal medicine department, St. Dominic hospital, Akwatia, from 1st January, 2018 to 30th April, 2020**.** One hundred and seventy-nine (179) consecutive hospitalized patients with liver cirrhosis were recruited. The

patient's demographic data and clinical features were collected using a standardized questionnaire. Biochemical and haematological tests, urine examination, ascitic fluid analysis, chest x-ray of patients with suspected pneumonia as well as abdominal ultrasound scans were conducted for all patients. All patients were then followed up until discharge or death.

Results: There were 117(65.4%) males out of the 179 patients with a mean age of 49.94 and 45.84 years for those with and without AKI, respectively. The prevalence of AKI was 27.9% (50/179) and majority of them had AKI stages 2 and 3. Stage 2 and 3 AKI were associated with increased odds (statistically significant) of mortality compared to Stage 1a with odds ratios of 10.29 (1.02 -103.95) and 48 (3.64 -631.76) respectively. Out of 50 participants with AKI, 64.0% (32/50) died, contributing 41.0% of all inpatient mortality amongst participants. There was a significant association between AKI and death (p = <0.001). The major precipitating factors of AKI were infections (60.0%), hypovolemia (20.0%) due to gastrointestinal bleeding and gastroenteritis, and refractory ascites (16.0%). The major causes of liver cirrhosis were significant alcohol consumption and Hepatitis B virus in 72 (40. 2%) and 65 (36.3%) of participants, respectively. Alkaline phosphatase, INR, Model for End Stage Liver Disease Sodium, sodium and blood urea nitrogen were independent predictors of AKI.

Conclusion: AKI was common among patients with liver cirrhosis with high in-patient mortality. The major precipitating factors of AKI were infection, hypovolemia from gastrointestinal bleeding and gastroenteritis, and refractory ascites. ALP, INR, MELDNa, serum sodium, and BUN were independent predictors of AKI. Strategies to prevent and treat precipitating factors early may lead to an improvement in the outcome of these patients. A similar study should be conducted country-wide to get a well-balanced prevalence of AKI

1Civ

CLINICAL PROFILE AND LIMITATIONS IN THE MANAGEMENT OF HBV PATIENTS ATTENDING CLINIC AT A DISTRICT HOSPITAL IN GHANA

Amoako Duah, Yvonne A. Nartey

Background: Chronic hepatitis B (CHB) is estimated to cause between 500,000 to 1.2 million deaths worldwide every year through liver cirrhosis and hepatocellular carcinoma (HCC). Hepatitis B is the cause for almost half of all cirrhosis diagnosis and 80% of HCC worldwide Liver cirrhosis and HCC are the commonest liver diseases causing death in Ghana. Viral suppression or control of viral replication have been established to significantly decrease the risk of cirrhosis and its complications, including HCC, and even to induce regression of fibrosis and cirrhosis. The most critical problem in the management of CHB in sub-Saharan Africa is the high cost of investigations and antiviral drugs. There is scanty information concerning newly diagnosed CHB patients and their management challenges in Ghana. This study sought to determine the clinical characteristics and management challenges of CHB patients in Ghana.

Methodology: A prospective cohort study was conducted involving newly diagnosed CHB patients being managed at St. Dominic hospital between 1st January 2018 to 24th June 2020. Patient demographic and clinical features were abstracted using a standardized questionnaire. Diagnostic investigations which were necessary for all newly diagnosed cases were requested for all patients at the first clinic visit and results recorded. These included Hepatitis B serology; Serum Hepatitis B virus DNA (HBV DNA); HIV and Hepatitis C serology; Liver biochemistry and function tests; Full blood count (FBC); Alpha fetoprotein (AFP); and Abdominal ultrasound scan. The proportion of patients able to undertake investigations and treatment were determined, and the limitations to standard management were recorded. The performance of APRI score in the diagnosis of cirrhosis was also investigated.

Results: Overall, 334 newly diagnosed chronic hepatitis B patients were recruited during the study period. Of these, 227 (68.0%) presented with asymptomatic CHB. Almost a third of cases (32.1%) reported late with liver-related complications (HCC - 15.9% and liver cirrhosis – 16.5%). The female to male ratio for chronic HBV cases was 2:1, however the opposite trend was seen in liver cirrhosis cases, with a higher male to female ratio of 2:1. The majority (86.8%) of HCC cases were male, with a male to female ratio of 7:1. The overall median age at diagnosis was 35 (28-34). Less than a quarter (22.2%) were able to undertake viral load testing and 23.4% were eligible for treatment. Of those who

were eligible for treatment, only 42.3% were able to initiate treatment. The sensitivity of APRI score with cut-off value of 2 in the diagnosis of liver cirrhosis was 70.2% and specificity was 97.9%. There was improved sensitivity without much loss to specificity, 80.6% and 95.5% respectively, when the APRI cut-off value was revised to 1.1.

Conclusion: A high proportion of newly diagnosed CHB patients presented late with liver-related complications**.** Majority of the participants were not able to afford viral load test and antivirals for those who required treatment. Screening of hepatitis B among general population and inclusion of CHB management in the National Health Insurance Scheme should be encouraged.

1Cv

CAUSES OF ADMISSION AND OUTCOME IN ADULTS LIVING WITH HIV/AIDS IN THE BUEA REGIONAL HOSPITAL.

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Introduction: HIV/AIDS constitutes a significant proportion of hospitalization and a leading cause of illness and death in developing countries. This study aimed at identifying causes of admission, in-hospital outcome, and factors associated with poor outcome in HIV patients in a tertiary hospital in Cameroon

Methodology: A 5-year retrospective study was carried out. Files of admitted HIV patients aged 18 or older from January 2017 to December 2021 were reviewed for demographic, clinical, and laboratory data. Each admission was assigned a reason for admission and an outcome according to the clinical finding or the diagnosis at admission. Statistical significance was set at a p-value <0.05.

Results: We included 982 files out of 10328 admissions, giving a proportion of 9.5%. 92 files were excluded. 22.9% were newly diagnosed HIV positive. There was a female predominance (57.8%). The mean age was 44 ±12years and the median hospital stay was 7 days. The commonest causes of admission were

tuberculosis (16.1%), pneumonia (13.4%), kidney failure (13.1%), diarrheal diseases (11.3%) and meningoencephalitis (10.5%). The in-hospital mortality rate of 26.1%. Absence of cotrimoxazole prophylaxis (aOR:2.09, p=0.038) was an independent risk factor of mortality, whereas WHO clinical stage 1-2 (aOR:0.27, p=0.012), absence of an associated diagnosis (aOR: 0.60, p=0.036) and absence of previous admission (aOR:0.55, p=0.046) reduced the odd of death. WHO clinical stage 1-2 (aOR: 0.57, p=0.023) and absence of an associated diagnosis (aOR: 0.52, p≤0.001) were predictors of short hospital stay, whereas absence of comorbidities (aOR:2.079, p=0.033) was an independent a risk factor of prolonged hospital stay.

Conclusion: Communicable diseases including opportunistic infections were the major causes of admission among HIV patients at the BRH and the in-hospital mortality was high.

2Ai

SELF-REPORTED ADVERSE EVENTS FOLLOWING IMMUNISATION (AEFIS) FOR COVID-19 VACCINE AMONG HEALTHCARE WORKERS IN THE UPPER WEST REGION OF GHANA

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Introduction: Prior to the introduction of COVID-19 vaccines, public health and social measures ranging from guidelines on hand and respiratory hygiene, use of facemasks to large scale movement restrictions were introduced to curb disease transmission. Documentation and transparent communication on vaccine safety plays an important role in improving public confidence and acceptance of safe and efficacious vaccines. The objectives of the study were to document and characterize adverse events following immunisation (AEFIs) with COVID-19 vaccines and to determine associated factors among healthcare workers.

Methods: The study was a descriptive, cross-sectional study conducted between 01 March 2021 and 30 April 2021. The data were collected using a self-administered electronic questionnaire which covered demographic characteristics, comorbidities, and occurrence of AEFIs. The study participants were healthcare workers in the Upper West region who received the ChAdOx1-nCoV-19 vaccine and data were collected through 28 days after receipt of the vaccine. Descriptive analyses were performed to show the frequency of AEFIs, demographic and other clinical characteristics. Where appropriate the chi-squared test and binary logistic regression were performed to determine association between demographic, clinical factors and AEFIs.

Results: Completed responses were received from 158 healthcare workers. Majority were males (110, 70%), with mean(s.d.) age of 31±4.5 years. Comorbidities were infrequent (16/158, 10%). About 77% (122/158) reported a history of AEFI, most (92%) of which were mild and non-serious. Less than 10% of the respondents were hospitalized, with mean(s.d.) duration of admission of 1.26±0.49 days. The top five AEFIs reported were injection site pain (65%), headache (63%), general malaise (48%), fever (47%) and fatigue (46%). Other AEFIs reported included nausea, chills, anosmia, ageusia and abdominal pain. Majority of the AEFIs occurred within 24 hours after vaccination and resolved within 24-72 hours. There was no association between occurrence of AEFI and sex, age, comorbidity, prior history of COVID-19 infection and pre-vaccination medication. Less than thirty percent (24.6%) of the respondents reported the AEFIs using the any of the approved reporting platforms.

Conclusion: Majority of the AEFIs reported were mild and non-serious and aligns with the safety profile of the currently authorized COVID-19 vaccines. The low reporting rates emphasizes the need for the Ghana Food and Drugs Authority (FDA) in collaboration with the relevant health agencies to intensify public education and engagements to improve confidence in vaccination programmes and to reduce hesitancy.

2Aii

COMPARATIVE ANALYSIS OF CLINICAL CHARACTERISTICS OF COVID-19 AMONG VACCINATED AND UNVACCINATED PATIENTS IN A MAJOR TREATMENT FACILITY IN GHANA

Benedict NL Calys-Tagoe; Joseph Oliver-Commey; Georgia NK Ghartey; Abdul Gafaru Mohammed; Delia Bandoh; Christian Owoo and Ernest Kenu

Background: As at May, 20th 2022, the Corona Virus Disease 2019 (COVID-19) caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV 2) has led to about 522 million infections and 6 million deaths worldwide. About 4 billion people in the world have been fully vaccinated with the various types of COVID-19 vaccine since the vaccines were first rolled out in December 2020. Six million persons in Ghana had been fully vaccinated as at May 18th 2022. Though studies have shown association of vaccination with reducing disease severity, morbidity and mortality rates in other parts of the world, such data is lacking in the Ghanaian setting. Therefore, this study aimed at comparing the clinical characteristics of COVID-19 among vaccinated and unvaccinated patients in a major treatment facility in Ghana.

Methods: We conducted a retrospective study among COVID-19 cases reporting to the Infectious Disease Center in Ghana. Data on both COVID-19 in-patients and out-patients from March 2020 to December 2021 were extracted from patient folders, using a digital abstraction form. Associations between patients' vaccination status and their clinical presentations were determined using logistic regression at a significance level of 5%.

Results: The study included 775 patient records comprising 615 OPD cases and 160 hospitalized cases. Less than one-third (26.25%; 42) of the patients hospitalized were vaccinated compared to almost 40.0% (39.02%; 240) of the patients seen at the OPD. Vaccinated individuals were nearly three times (aOR = 2.72, 95%CI:1.74-4.25) more likely to be managed on an out-patient basis as compared to the unvaccinated. The death rate among the vaccinated group and the unvaccinated were (0.71%; 2) and (3.45%; 17) respectively, with a significant reduction in the risk of dying among the vaccinated compared to the unvaccinated (aOR = 0.13, 95%CI: 0.028 0.554).

Conclusion: Less than half of both the in-patient and OPD patients were vaccinated. Mild infections, less days of hospitalization, outpatient treatment and higher chances of survival were associated with being vaccinated against SARS-CoV-2. Prudent measures should be implemented to encourage the general public to take up SARS-CoV-2 vaccines.

2Aiii

PREVALENCE AND CORRELATES OF LIKELY MAJOR DEPRESSIVE DISORDER AMONG THE ADULT POPULATION IN GHANA DURING THE COVID-19 PANDEMIC

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Introduction: Emerging research suggests that the novel coronavirus disease (COVID-19) pandemic and associated public health restrictions have caused psychological distress in many contexts. Hence the need to determine the prevalence, and demographic, social, clinical and other COVID-19 related correlates of major depressive disorder symptoms among the general population in Ghana during the COVID-19 pandemic.

Methods: The study was a cross-sectional survey on an online platform to assess demographic, social, clinical variables as well as COVID-19 related variables. Major depressive disorder symptoms were assessed using the Patient Health Questionnaire-9. Analysis was done using descriptive and inferential statistics.

Results: The prevalence of likely MDD symptoms among the sample population was 12.3%. Unemployment, loss of jobs during the pandemic and rate of exposure to COVID-related news were independently and significantly associated with the likelihood that respondents had likely MDD.

Discussion: The 12.3% prevalence of likely MDD symptoms among the general population in Ghana is higher than the 6.5% prevalence rate in China reported by Wang et al. (2020) at the initial stages of the COVID-19 pandemic, and the 9.2% prevalence rate reported in the general population of Cyprus about two weeks into the implementation of restrictive government measures. However, the prevalence of likely MDD symptoms we observed in Ghana is lower than that reported in Canada and the USA (14.8–44.0%) in those settings. Factors that could potentially contribute to the differences in the prevalence rates for likely MDD in each of these jurisdictions compared to Ghana include: differences in the restrictive measures put in place by governments, rates of infection, hospitalizations and deaths from COVID-19, economic and financial impact of the pandemic and the social protections available to citizens.

Conclusion : This study has identified the prevalence and correlates of depressive symptoms in Ghana during the COVID-19 pandemic. It revealed the urgent need for mental health policy makers and the government of Ghana to have policies in place to alleviate the potential threat to the mental health of the population.

2Aiv

INFLUENCE OF COVID-19 ON HIV ARV TREATMENT ADHERENCE, FOLLOW UP AND NEW CASE DETECTION IN BUEA REGIONAL HOSPITAL AND LAQUINTINIE HOSPITAL DOUALA CAMEROON

D.G Teuwafeu, C. Nkouonlack , AD. Nanfack, JC. Assob

Background: To fight against COVID pandemic have allow creation of treatment centres in several hospitals possibly reducing patients frequentations to the HIV care unit due to the fear of contracting the disease. This study aimed to evaluate the impact of COVID-19 on HIV ART treatment and HIV new case detection.

Methods: This was a hospital-based retrospective study. It included files of HIV patients on ART initiated on treatment and follow-up in two reference hospital Cameroon, from January 2016 to December 2021. The files were divided into two groups including all files from 2016 to 2019 for adherence and visit, and records of all new cases from January 2018 to December 2021, aged 18 years and above. Data were retrieved using a data collection sheet. Significance was set at a p-value of <0.05.

Result: There was a significant decrease in the number of patients that visited the treatment centres during the covid period with a maximum of irregular visits in 2020 and a maximum loss to follow-up in 2021. A good number of patients did not do their viral loads between 2020 and 2021 with a spike in 2020. The adherence decreased during the COVID-19 period, $p<0.0001$ more than four times maximum in 2020 and the loss to follow up maximum in 2020, the reasons of non-adherence being antiretroviral treatment not taken in time in the pharmacy, appointments not respected with the spike in 2020. The new cases detected during COVID-19 were significantly inferior to the period before ($p=0.0003$).

Conclusion: COVID-19 had a negative impact on HIV during the period of barrier methods by decreasing the number of patients that visited the treatment centres hence the adherence and the testing. This led to decreased viral load suppression.

2Bi

ASSESSING THE EFFECTIVENESS OF TELEMEDICINE DURING THE COVID-19 PANDEMIC: A STUDY AT THE RHEUMATOLOGY CLINIC OF KORLE-BU TEACHING HOSPITAL

A. A. Asante, S.D. Otoo, B Dzudzor, D. Dey

Introduction: The Covid-19 pandemic has led to the disruption of healthcare services across the world. Interest in the impact of the pandemic on the management of patients with chronic conditions, including patients with rheumatic diseases has grown due to the belief that these patients have an increased risk of Covid-19 infection with resultant complications. As part of measures to control the spread of the Covid 19 infection, services at the outpatient department of the Korle-Bu Teaching Hospital (KBTH) were suspended following national guidelines and protocols. The rheumatology clinic introduced telemedicine services to ensure continuity of care among patients living with autoimmune rheumatic conditions. During this time, patients were to send all their complaints and results of laboratory investigations to a dedicated phone number via a telephone call or WhatsApp messenger. These were reviewed by doctors who gave their feedback through the same means. The current study evaluates the effectiveness of telemedicine in delivering care to these patients during the period.

Methods: A cross-sectional study was conducted at the rheumatology clinic in August 2021. Participants were patients with autoimmune rheumatic diseases (AIRD) who utilized the telemedicine service from March 2020 to March 2021. The questionnaire had five major sessions assessing participants' demographic and clinical characteristics, ease of use, accessibility, overall satisfaction with telemedicine, and recommendation for further use of telemedicine services. The instrument was mainly distributed electronically. Responses were measured on a 5-item Likert scale (strongly agree – strongly disagree).

Results: A total of 101 patients participated in this study. The average age was 37.8±13.25 years. The majority were females (82%). Close to 50% of the respondents had tertiary education with 63.3% residing within the Greater Accra region. Most of the patients patronized the service about twice each month (61.4%) with WhatsApp messenger being frequently utilized (78%). Approximately 70% of the participants found the services easy to use without any assistance while 72% sometimes had difficulty accessing the service mainly due to issues of poor internet connectivity and data availability. Although 40% of participants felt they did not receive adequate attention from the health care

provider, a similar number felt no difference in using telemedicine in comparison to traditional in-person visits. Additionally, a majority (82%) admitted that they felt safer using this service during the pandemic and 81% agreed that they were able to manage their condition(s) better. More than half (60%) wished to patronize the service beyond the pandemic. While 30.9% recommended that there should be improved access to doctors, a quarter (24.5%) recommended combining telemedicine with in-person services and 2.7% wished the service be stopped.

Discussion/Conclusion: Overall, evidence from this study shows that telemedicine was largely effective among the AIRD patients who utilized this service during the pandemic. We opine that, since patients with rheumatic conditions require close monitoring and adjustment of treatment based on disease activity, telemedicine provides a means by which inconveniences of in-person visits can be curtailed.

2Bii

AUTOIMMUNE RHEUMATIC PATIENTS IN GHANA: ROLE OF MOBILE TECHNOLOGY IN IMPROVING HEALTH LITERACY AND PATIENTS' DISEASE ACTIVITIES.

Dey, D., Katso, B., Issaka, S. & Mensah, E.

Introduction: Systemic autoimmune rheumatic patients in developing countries of sub-Saharan Africa have more severe disease and complications with significantly lower survival rates than those in the developed countries. Significant gabs in autoimmune disease awareness coupled with specialist shortage and socioeconomic challenges remains the important issues facing these patients. The need to increase patients' understanding of their disease which will empower them to participate in self-managed care for improved outcome is of utmost importance. Mobile technology is increasingly becoming a major asset in such situation.

Methods: This was implementation research to pilot the feasibility of mobile education in Ghanaian rheumatic disease patients to improve patient care and

disease outcome. Participants were SLE and RA patients' sample into control and intervention groups. The intervention was knowledge tips about rheumatic conditions disseminated to patients remotely via mobile phone text messages. The ACREU Rheumatoid Arthritis questionnaire and Lupus Knowledge Questionnaire measured patients' health literacy. The DAS-28 and SLEDAI measured disease activity levels. Paired t-test and bivariate correlation analyses were employed to determine associations.

Results: A total of 148 (67% SLE and 33% RA) patient with majority being females, 92.7% for SLE and 83.7% for RA participated. Average disease durations were 28months and 65 months for SLE and RA respectively. Baseline knowledge was very high, over 80% for RA and 100% for SLE. There was a 3.4% increase and 5% reduction in knowledge of the cases and controls in the RA group respectively after intervention but this change was not statistically significant (***t* =** -1.668, ***p* =** 0.102). Knowledge remains at 100% for SLE (both cases and controls) after intervention. Whereas 31.03% of RA cases were at high disease before intervention and remains same after the intervention, approximately 45% of controls were at high disease before intervention which reduced to 15% after. Whereas 3.1% of SLE cases were at severe disease before intervention which increased to 11.1% after, exactly 6.0% of controls were at severe disease before intervention and increased to 12.1% after. There was no significant association between the mobile education and changes observed in RA knowledge levels, (***r* =** 0.173, ***p* =** 0.234). Again, changes in patients' disease activity levels and knowledge levels in RA patients holds no significant association, (cases; ***r* =** -.187, **p =** 0.332), (controls; ***r* =** -.185, ***p*** = 0.434).

Conclusion: The intervention did not produce a significant improvement in patient's knowledge or disease activity, this we attribute to the already high levels of baseline health knowledge and smaller sample size. Majority of the participants were already using their phones to search for knowledge on their conditions and also belongs to support groups that send such information through their phones. The high baseline knowledge observed in addition to numerous findings from other studies indicate the increasing relevance of mobile technology in enhancing the health literacy of patients living with chronic conditions.

2Biii

AN OVERVIEW OF INNOVATIONS IN MEDICINE

Acquah G.

Introduction: Innovation is the process of outdooring an idea or invention. Healthcare offers an opportunity for tons of ideas and inventions to be explored to improve the quality of care for patients, prolong life expectancy and reduce expenditure on treatment of diseases.

Methods: An overview of literature on medical innovation was done by reviewing over 70 peer-reviewed articles on innovations in medicine using the search engines Google and Pubmed, themed textbooks, encyclopedia of innovations, case studies, seminars and video presentations on healthcare innovations.

Results: Outstanding innovations in medicine include genomic sequencing, telemedicine, artificial intelligence (AI), nanomedicine and robotic surgery. Innovative solutions to meeting patients' needs in resource constrained settings include concierge practice, the hospital-at-home concept, and telemedical practice. Creativity and innovation in medical practice can radically transform the outcome of healthcare.

Conclusion: A supportive environment for creative thinking coupled with the nurturing of an innovative mindset amongst healthcare professionals has the potential to improve access to quality healthcare for patients.

2Biv

THE EFFECT OF MOBILE HEALTH (mHEALTH) TECHNOLOGY ON BLOOD PRESSURE CONTROL AMONG PATIENTS WITH HYPERTENSION IN GHANA AND NIGERIA: A COMPARATIVE STUDY

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Introduction: The burden of uncontrolled hypertension is high in the sub-Saharan Africa, with its attendant increased risk of strokes, myocardial infarction, chronic kidney disease, and renal failure. Mobile health technology, a modern and innovative strategy looks promising in improving blood pressure control rate among patients with hypertension. This study determined the effect of mobile health on blood pressure control, medication adherence, and lifestyle changes among patients with hypertension in Nigeria and Ghana.

Method: A cluster randomized clinical trial involving four clinics in Ghana and Nigeria. Patients with hypertension were randomly selected into two groups as intervention and control groups: Intervention group received regular reminders and information on the need for adherence to medications, diet, clinic appointments and lifestyle changes on their mobile phones twice a week in addition to the standard medical care at their clinics while participants in the control group received standard medical management alone. Data were collected at baseline, 3 months and 6 months and analyzed using SPSS 21. Descriptive statistics, Chi-square were used at significance level of $p<0.05$.

Results: A total of 225 subjects were recruited for the study across the two countries, consisting of 109 and 116 subjects in the control and intervention arms in both countries. The mean age for the control and intervention were 61.2±12.6 and 61.0±9.8years respectively. There was a female preponderance for control (62.7%) and intervention (64.7%).

There was significant improvement in BP control from baseline to six months ($p=0.002$) in the intervention group compared to control. There was significant improvement in medication adherence ($p=0.029$), physical activity ($p=0.035$)

and fruits and vegetable intake (p=0.036) in the intervention group compared to the control group for the first 3 months. This however declined by the 6th month for medication adherence (p=0.010), physical activity (p=0.648) and fruits and vegetable intake (p=0.170) respectively.

Conclusions: The mHealth increased the proportion of blood pressure control. However, improvement in adherence level and physical activity was short-term and not sustained. A lot still need to be done for a permanent and sustained improvement in adherence and lifestyle changes.

2Ci

FALLS AMONG OLDER ADULTS ATTENDING TEMA GENERAL HOSPITAL, GHANA: PREVALENCE AND ASSOCIATED FACTORS.

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Introduction : In older adults, a significant cause of morbidity and mortality are falls. The prevalence and severity of their consequences rise progressively with advancing age. Thus the phenomenon of falls among older adults has become an issue of public health concern, and the need for fall prevention programmes cannot be overemphasised. Unfortunately, whereas data on falls and associated risk factors among community-dwelling older adults in developed countries abound, data to guide policy on fall prevention programmes in developing countries including Ghana is limited. We, therefore, sought to determine the prevalence of falls and fall-related injuries among older adults, and the association with patient characteristics.

Methods: We sampled 300 adults aged 60 years and above from Tema General Hospital between February and April, 2020 for this cross-sectional study. Structured questionnaires were used to collect data on explanatory variables including socio-demographic variables, clinical history, anthropometric

variables, visual acuity, hand grip strength, and Timed-Up-And-Go scores. The prevalence of falls and associated patient characteristics were determined. Fall-related injuries were also described and categorized. Logistic regression models were used to assess the association between prevalence of falls and patient characteristics. Significance level was set at $p \leq 0.05$.

Results: The period prevalence of falls over 1 year was 32% and that for fall-related injuries over the same period was 12.7%. The socio-demographic characteristics associated with falls were age (p=0.007), sex (p=0.001), marital status (p=0.004) and level of education (p=004). Additionally, medical conditions associated with falls were arthritis (p=0.004), stroke (p=0.046), hearing difficulties (p=0.01), visual impairment (p<0,001) and impaired functional mobility (p=0.001). Independent predictors of falls that identified were female sex (OR=2.145, 95% CI:1.053-4.372), stroke (OR=4.115, 95% CI:1.383-12.245), having a good perception of one's health (OR=2.531. 95% CI: 1.016-6.304) and visual impairment (OR=2.020, 95% CI: 1.095-3.726) when logistic regression was done.

Discussion/Conclusion: Although developing countries are trailing behind the developed world so far as research on falls and fall prevention strategies are concerned, this study has been able to determine the period prevalence of falls among community-dwelling outpatient attendants.
The fall prevalence of 32% and the burden of fall-related injuries (12.7%) reported by this study were comparable to those reported by other global studies.

Also, the study was able to identify some independent predictors of falls (female sex, having a history of stroke, having a good perception of one's health and being visually impaired), and other factors such as, marital status, arthritis, hearing difficulty and impaired functional mobility that were significantly associated with falls among older adults. These factors have been documented to be amenable to public health interventions at the primary care level. We, therefore, recommend fall prevention programmes targeting older adults, especially females, and community-based preventive health activities that reduce fall risks and the incidence of stroke and visual impairment.

2Cii

CORRELATION OF HEMATOLOGICAL INDICES WITH FASTING BLOOD GLUCOSE LEVEL AND ANTHROPOMETRIC MEASUREMENTS IN GERIATRIC DIABETES MELLITUS SUBJECTS IN LAGOS STATE UNIVERSITY TEACHING HOSPITAL, IKEJA, LAGOS, NIGERIA.

Introduction: Hyperglycaemia alters qualitatively and quantitatively all the full blood count parameters. The alterations among other factors are responsible for the macrovascular and microvascular complications associated with diabetes mellitus (DM). This study is aimed at correlating haematological parameters in DM subjects with their fasting blood glucose (FBG) and anthropometric parameters.

Methods: This was a cross-sectional study of participants attending clinics of Lagos State University Teaching Hospital, Ikeja. The study recruited one hundred and two (102) DM subjects and one hundred (100) non-DM controls. Venous blood samples were collected for full blood count assay while FBG was done, structured questionnaires were administered, and anthropometric measurements of all participants were done. Data were analyzed with Statistical Package for Social Science version 23. P was set at ≤0.05.

Results : Using a haemoglobin concentration cut-off of 11g/dl, 39.2%, and 13% DM and control participants respectively had values lower than 11g/dl. A total of 22.5% and 3% of DM and controls respectively gave a history of previous blood transfusion.White blood cells count and platelet

count means were (6.12±1.60 and 5.30±7.52,p=0.59) and (213.31±73.58 and 228.91±73.21,p = 0.26) $*10^9$/L in DM subjects and controls respectively. FBG and all the anthropometric data in DM subjects were significantly higher than in controls.

Conclusions: The prevalence of anaemia in DM subjects was three times higher than in controls. The white blood cell count was higher but not statistically significant in DM compared with controls. But platelet count was higher but not statistically significant in controls compared with DM subjects.

2Ciii

CORONARY INTERVENTIONS AT THE KORLE-BU TEACHING HOSPITAL (KBTH), GHANA.

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Background: Atherosclerotic Cardiovascular diseases (ASCVD) are the leading causes of death worldwide, with coronary artery disease (CAD) leading the chart. Coronary interventions in Ghana began at the Korle-Bu Teaching Hospital in 1993 by expatriate doctors with Ghanaian cardiologists taking over in September 2016. The aim of this retrospective review was to present six-years experience at the cardiac catheterization laboratory from September 2016 to March 2022.

Methods: Retrospective review of Cathlab records including all coronary angiograms (CAG) and percutaneous coronary interventions (PCI) from September 2016 to December 2021. Significant CAD was defined as an obstructive intraluminal lesion of ≥ 50% stenosis in one or more epicardial coronary arteries. PCI included balloon angioplasty with or without stenting. Data were summarized using Microsoft Excel and IBM SPSS 22.

Results: The total number of CAG was 779, with 75% males. The mean age of patients was 57.1±8 years. Four hundred and sixty-eight of the patients (60%) had significant obstructive CAD of which 426 had PCI. A hundred and ninety of them presented with acute coronary syndrome (ACS) constituting 40.6% of those who had PCI with 63 (33.2%) being STEMI. The indications for the elective CAG and PCI were stable angina, ischemic heart disease or ischemic cardiomyopathy and pre-operative assessment. Of the 27 diagnostic CAGs for pre-operative assessment, 5 had significant CAD (diagnostic yield of 18.5% for CAD). Of the 80 people who had diagnostic CAG for suspected ischaemic heart disease, 28 had significant CAD (diagnostic yield of 35%). The main risk factors were age, hypertension (80.2%), overweight/obesity (66.3%), diabetes mellitus (33.7%), dyslipidaemia (33.7%), and cigarette smoking (9.3%). 40.7% of the patients had 3 or more traditional cardiovascular risk factors. Only 18 patients were referred for coronary artery bypass surgery over the period. Five patients died during PCI giving peri-procedure mortality of 1.2%, all of which occurred during emergency primary PCI for acute coronary syndrome.

Conclusion:
ASCVDs commonly present as stable coronary artery disease, ACS, or heart failure among Ghanaians. Many patients have multiple traditional cardiovascular risk factors. The low peri-procedural mortality demonstrates the capacity of Ghanaian cardiologists to safely intervene in patients with CAD.

2Civ

COST AND OUTCOME OF ACUTE CARDIOVASCULAR DISEASE HOSPITALIZATIONS IN GHANA

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Introduction: Cardiovascular diseases (CVDs) are on the rise in Sub-Saharan Africa. The management of these CVDs comes at an exorbitant cost to both individuals and health institutions. However, there is a paucity of data on the economic impact of the most common CVDs in Ghana. Our objective was to describe the in-patient cost and outcomes of acute CVD admissions in a leading teaching hospital in Ghana.

Methods: We retrospectively reviewed hospital admissions, cost of hospitalization, length of stay, and CVD outcome following cardiovascular disease admissions between January 2018 and December 2019 at the medical block of the Komfo Anokye Teaching Hospital, Kumasi.

Results: A total of 1975 patients with a mean(±SD) age of 62.2 years (±16.1) and 52.6% males were admitted over the study period. The top 3 most prevalent CVDs among admitted patients were stroke(48.5%), hypertensive urgencies/emergencies(42.7%), and heart failure (29.4%). The overall case fatality rate (CFR) was 21.5% (95% CI: 19.7%-23.3%). The CFR for stroke, hypertensive urgencies/emergencies, and heart failure were 28.9%, 17.6% and 14.1%, respectively. Median (IQR) length of stay and cost of treatment across all CVDs was 5(3-9) days and USD $195.29(137.9-288.9), respectively. The highest median cost for admission was for stroke (USD $211.19). Compared to survivors, Coronary artery disease, hypertension and stroke were independent predictors of a higher cost of hospitalization among patients who died than those that survived of these CVDs.

Discussion: To the best of our knowledge this is the first attempt to report findings of the cost of treating CVDs in Ghana. We sought to describe the in-patient cost and outcomes of CVD admissions in the second largest teaching hospital in Ghana. We found Stroke, uncontrolled hypertension (hypertensive urgencies and emergencies) and heart failure constituting the top 3 most common CVD admissions and the overall median in-patient cost of CVD hospitalization was USD $195.29. Similarly, the median cost for all patients who

survived was USD $193.45 and USD $203.27 for non-survivors. Of all admitted CVD cases, Stroke admissions accounted for the highest cost at USD $211.19. Indeed these figures may be an underestimation, given these estimates do not capture data on out-of-pocket expenditures for some diagnostic tests (Electrocardiography, Echocardiography) and prescription medications operating on a 'cash and carry' basis. Data on cost estimates for CVD admissions show substantial variations between developed and developing countries basically due to heterogeneity in terms of methodology employed making it challenging to compare, however, what remains clear is that as CVD risk factors and hence CVD prevalence increase, its associated cost of care undoubtedly will increase. Again, as developing countries enter the delayed degenerative disease phase sooner than later due to rapid health transition and improved care, there is bound to be an increase in the cost of hospitalization.

Conclusion: The average cost of CVD hospitalization is over a hundred times the daily minimum wage of the average Ghanaian. A greater emphasis on primordial and primary prevention is warranted to curtail the economic burden of CVDs in developing economies.

2Cv

SEROPREVALENCE AND RISK FACTORS OF DENGUE VIRUS INFECTION AMONG FEBRILE ADULT PATIENTS ATTENDING A NIGERIAN TERTIARY HOSPITAL

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Introduction: Dengue virus infection is a neglected tropical disease which is prevalent in the tropics. It is a viral hemorrhagic fever often associated with high mortality in its severe forms and an important cause of undiagnosed febrile illness in endemic settings. This study assessed the seroprevalence and risk factors of dengue virus infection among adult febrile patients at the Federal Medical Centre Owerri, Nigeria.

Methodology: This was a cross-sectional study involving 180 participants consisting of 90 febrile adults and 90 apparently healthy controls sampled consecutively. A structured questionnaire was used to obtain data. Blood sample was tested for anti-dengue IgG and IgM, dengue non-structural protein and malaria parasitemia. Data was analyzed using the IBM SPSS Statistics 25. Multivariate analysis was used to determine factors independently associated

with dengue seropositivity. P-value < 0.05 was considered statistically significant.

Results: The mean age of the study population was 39.3 ± 16.4 for febrile patients and 38.3 ± 12.5 for the controls (t= 0.466 p=0.642). There were 53.3% females and 46.7% males in each group. The seroprevalence of dengue virus infection for at least one marker (IgM, IgG or NS1) was 72.2% among febrile patients compared to 46.7% in the control group which was statistically significant (χ^2 =12.191, p=0.001). Malaria parasitemia was more frequently seen in febrile persons compared to the controls, 62.2% and 32.2% respectively, and the difference was statistically significant ($\boldsymbol{\chi}^2$=16.250 p < 0.01). Malaria parasitemia although more frequently seen in dengue seropositive than seronegative febrile patients, this difference was not statistically significant (67.7% vs. 48.0%, χ^2=2.979**,** p=0.084). Male sex (adjusted odds ratio [AOR]= 2.896, 95% CI; 1.021 to 8.212, p=0.046) and malaria parasitemia (AOR= 2.881, 95% CI; 1.043 to 7.960, p=0.041) were independent predictors of dengue seropositivity on multivariate analysis.

Discussion/Conclusion: The seroprevalence of DENV infection (any of IgG, IgM or NS1) in febrile patients in this study population was 72.2% which is comparable to 76.69% reported in India and 77.1% reported in a paediatric population in Nnewi, South East Nigeria, but slightly lower compared to 86.6% reported among healthy adults in rural Malaysia. Lower seroprevalence rates have been observed in Sudan (42.0%), Jos (16.3%)and 4.8% in Uyo, Nigeria. This discrepancy may be attributable to differences in geographical region, variation in the clinical characteristics of the population and subtle differences in the methodology and or DENV diagnostic assays employed. Although other studies have not identified male sex and malaria parasitemia as independent predictors of DENV seropositivity as in ours, a study in Sudan demonstrated that non-adoption of mosquito control practices was a predictor for dengue seropositivity.

The seroprevalence of dengue virus infection in this population was high, with a significantly higher proportion in febrile adult patients compared to apparently healthy controls. Incidentally, the burden of malaria parasitemia was also high in the study population with dengue-malaria co-infection frequently observed. These findings strengthen the need for diagnostic evaluation for dengue virus infection in febrile adult patients as malaria parasitemia may co-exist. Also, improved dengue prevention and control measures is recommended.

POSTER 1

CASE STUDY OF DRUG-SENSITIVE TUBERCULOSIS AND COVID-19 CO-INFECTION IN A TERTIARY HOSPITAL IN BENUE STATE, NIGERIA: RATIONALE FOR INTEGRATION OF SURVEILLANCE ACTIVITIES

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Introduction: Several intervention strategies have been implemented to eliminate Tuberculosis (TB) over the years. The emergence of COVID-19 has disrupted most of the strategies, thereby reversing the gains made over time. We present the rationale for the integration of surveillance activities using a case report of a Tuberculosis patient who was first managed as a case of COVID-19 in a tertiary health facility in Benue State, Nigeria, without much improvement.

Case presentation: Mrs. FA, a 69-year-old female retired civil servant, was referred to the COVID-19 isolation unit of Benue State University Teaching Hospital, Makurdi, Nigeria in June 2020 with a week history of cough productive of whitish sputum, chest pain, sore throat, mild difficulty in breathing, low-grade intermittent fever, running nose, weakness of the body and loss of appetite. No associated haemoptysis, orthopnea, paroxysmal nocturnal dyspnea, or drenching night sweats. She had a history of travelling to a COVID-19 hot zone. She was not a known asthmatic, diabetic or hypertensive patient; no history of Tuberculosis or contact with a chronic cough patient. She was admitted on a working diagnosis of COVID-19 and the samples taken turned out to be positive.

She was managed in the isolation Centre in line with the Nigerian Centre for Disease Control interim guideline for case management of COVID-19 for 14 days and was discharged home after much improvement. She had a recurrence of the symptoms a day later, and on re-assessment, she was diagnosed with drug-sensitive TB. She was managed and cured after 6 month course of an anti-TB regimen.

Discussion: As of June 2020 when the patient presented, Nigeria had 64,996 confirmed cases, 61,039 recoveries and 1,1,63 deaths and Benue State had 486 confirmed cases, 435 recoveries and 11 deaths. The TB diagnosis of the index patient was more of exclusion because of the emphasis on COVID-19. This case suggests that the initially missed diagnosis of tuberculosis and the catastrophic effects could have been avoided if the Tuberculosis and COVID-119 services were integrated.

Conclusion: Our study provides evidence that a single contact can be used to address some of the diagnostic and treatment challenges for patients and healthcare providers.

Keywords: TB, COVID-19, Integration, Services

POSTER 2

CLINICAL CHARACTERISTICS AND OUTCOMES OF PAEDIATRIC CANCER PATIENTS WITH COVID-19 INFECTION IN A PAEDIATRIC ONCOLOGY UNIT IN ACCRA, GHANA

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Introduction: COVID-19 infection, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was declared a pandemic in March 2020. Cancer comorbidity is associated with increased severity and risk of death from Covid-19 whereas Covid-19 worsens cancer prognosis due to treatment disruptions.

We describe the clinical presentation and short-term outcomes of children seen

at the Paediatric Oncology Unit (POU), Korle Bu Teaching Hospital, Ghana, who also tested positive for SARS-CoV-2.

Methodology: Retrospective review of case records of patients with COVID-19 from March 2020 to September 2021. Diagnosis of COVID-19 was confirmed by RT-PCR from nasopharyngeal swabs.

Results: Of the 10 children who tested positive, the median age was 4 years (range:1.5-16years), majority (60%) were female and 5 (50%) had acute lymphoblastic leukaemia. Nine out of the ten (90%) were symptomatic, with fever as the commonest presenting symptom (78%). Most common systems affected were respiratory (44%) – rhinorrhoea, cough, hoarseness of voice with stridor, severe respiratory distress; and central nervous system (22%) – seizures, abnormal behaviour. Positive contact history was elicited in only three (30%) patients. Neutropenia and lymphopenia were seen in 4/10 and 3/10 of the patients respectively. Three patients (30%) required supplementary oxygen during hospitalization, due to hypoxaemia and/or severe respiratory distress and overall, 5/10 (50%) required high dependency unit (HDU) care. Treatment received included antibiotics (90%), unfractionated heparin (20%) and intravenous steroids (20%). Majority (70%) of the patients experienced cancer treatment delays ranging from 9-28 days due to hospitalization followed by mandatory quarantine. Two patients (20%) died, both from Covid-19 related complications.

Conclusion: Covid-19 infection among paediatric cancer patients at KBTH showed varied clinical manifestations. Efforts to prevent disease transmission should be sustained to avoid adverse outcomes including treatment disruption.

POSTER 3
Concurrent Acute Rheumatic Fever and Infective Endocarditis: Case Report Introduction

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Acute rheumatic fever (ARF) is an autoimmune inflammatory disease caused by infection with certain strains of group A beta-haemolytic streptococci, while Infective endocarditis (IE) is microbial infection of the endocardial surface of the heart either of the valves or a septal defect1[23].

Case Presentation: A 10-year-old girl presented with a 6-week history of high-grade fever. This was associated with a prior history of sore throat, skin rash and joint pains. Despite antibiotic treatment at peripheral hospitals, she developed a gradual onset of breathlessness, palpitations and oedema thus presented at our facility. On examination patient was ill-looking, respiratory rate 35cpm, tachycardic with Pulse rate 120bpm, blood pressure 110/60mmhg, temperature 39°C. Apex beat at the 6th intercostal space, anterior axillary line with a pan systolic 4/6 murmur loudest at the mitral area and radiating to the axilla. Oral hygiene was good though pharynx was hyperemic. laboratory investigation revealed an Hb -7.9g/dl, Neutrophilic leukocytosis (WBC 20.150/mm3, Neutrophil 77.7%), ESR-126 mm/h, ASO titer- 400, Urinalysis- blood, red cell casts and Negative Blood Culture. Echocardiogram: LVEF 64, mitral regurgitation with a mobile vegetation-like object on its leaflets.

Discussion: In Africa, ARF usually present late with Rheumatic Heart Disease (RHD), resulting in high morbidity and mortality. IE occurs most frequently in patients with RHD though not in the acute stage of the ARF2[3]. In our sub-region, there is a paucity of data of ARF and IE occurring concurrently though a few cases have been reported in the western world1[4].

Conclusion: This case underlines the importance of IE in the management of ARF.

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POSTER 4

A RARE CASE OF THYROTOTIC PERIODIC PARALYSIS IN A GHANAIAN MALE: CASE REPORT

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Introduction: Thyrotoxic periodic paralysis (TPP) is a rare condition that occurs in hyperthyroid patients. During the attacks, the serum potassium levels are usually low**.** It is more prevalent in East Asians occurring more commonly in males than females. In North America, TPP has a prevalence of 0.1–0.2% among patients with hyperthyroidism; attributable to increased migration and the fact that clinicians are increasingly becoming aware of the condition. Data on TPP is however scarce in Africa and no report has been made in Ghana.

Case presentation: We report a middle aged Ghanaian male who presented to the emergency department on 2 different occasions a year apart both at night with sudden onset paralysis of all 4 limbs. On his first presentation, his symptoms resolved spontaneously, for which the diagnosis of multiple sclerosis was entertained, evaluated and ruled out. On his second presentation, he had developed overt clinical signs and biochemical evidence of hyperthyroidism with cardiac involvement and severe hypokalemia of 1.9 mmol/l. His paralysis resolved with correction of the hypokalemia and subsequently received medical treatment for the thyrotoxicosis. He has since not had another episode of the paralysis.

Discussion: In TPP, thyroid hormones activate sodium/potassium pump increasing intracellular influx of potassium. Some triggers of attacks are alcohol, strenuous exercise and heavy carbohydrate meal. Episodes typically occur at night and weakness involves proximal muscles symmetrically sparing the sensory or higher mental function. Potassium chloride and propranolol can reverse the weakness. Achieving long term euthyroid state through medical, surgical or radioiodine therapy controls the disease.

Conclusion: There should be holistic evaluation of patients with paralysis. Other less common differential diagnosis such as TPP should be entertained in patients who presents with acute onset symmetrical weakness of the limbs.

POSTER 5

PREVALENCE AND IMPACT OF COVID 19 - RELATED MENTAL DISTRESS ON FINAL YEAR MEDICAL STUDENTS IN A GHANAIAN UNIVERSITY

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WHO in 2003 estimated that 50% of mental illnesses begin before the age of 14 and 75% by age 24[1]. One study revealed final year of medical school is the most stressful, with more clinical work and assessments. Thus, final year medical students have significantly higher psychological distress compared to their colleagues in the first to fifth years[2]. COVID-19 pandemic, has also generally increased mental distress levels within the community, and is likely to negatively impact medical students more. Since the COVID-19 outbreak, no study has assessed the psychological well-being of university students in Ghana, especially medical students, hence this study.

A cross-sectional study of 128 final year undergraduate medical students of the KNUST School of Medicine and Dentistry was done by assessing the mental distress of participants using the 12-item general health questionnaire and other factors associated, and its impact on their academic output through an online platform.

Analysis of results using SPSS showed that 30.5% of the respondents screened positive for mental distress, 20.0% of which were COVID 19 related. Risks for mental distress found are: being adversely affected by COVID 19 consequences (OR=5.96, p = 0.02), being female (OR=3.52; p=0.02), and experiencing academic challenges as a result of COVID 19 (OR=11.697, p = 0.01).

This study showed that approximately one out of every three students who participated was mentally distressed (30.5%). 20.0% of those who screened positive for mental distress were due to COVID-19 pandemic -related consequences. Significant risks for mental distress found in this study are: being affected by COVID 19 pandemic-related consequences, being female and experiencing academic challenges as a result of COVID 19 pandemic-related consequences.

Based on these findings, we recommend more accessible mental health services to address mental health challenges of students, and proactive steps to guard against mental health deterioration.

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POSTER 6

Furuncular myiasis in a paediatric outpatient clinic in Enugu South-eastern Nigeria: A Case Series.

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Introduction: Myiasis has been more commonly associated with neglect and poor standards of hygiene, especially in rural communities of sub-Saharan Africa. In our practice however, we encountered cases of myiasis among children from high socio-economic backgrounds.

Methodology: This case series was written from data obtained from the case notes of four patients seen our clinic over a twelve month period in which the mode of presentation of the patients, as well as their socio-demographic data were gotten. Ethical approval for the study was obtained from the Health Research Ethics Committee of Niger Foundation Hospital, Enugu.

Results: Four cases of myiasis were reported in children aged between 20 months and 7 years. All four children belonged to social class 1 according to Oyedeji's classification. Prior to presentation, none of the caregivers of the affected children was aware of the disease condition. All cases were successfully managed by manual extraction of the larvae once the diagnosis of myiasis was made.

Conclusion: There is a need for an enlightenment of the public as regards this disease condition. There is also the need for a high index of suspicion among medical personnel managing children in endemic areas, regarding this infestation even among children from higher socio-economic backgrounds.

POSTER 7

Why are medico-legal issues under reported in Ghana? A Pilot Study.

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Introduction: In Ghana and in many other low- and middle-income countries, medico-legal cases abound. There are many instances where the rights of patients are abused, or patients are denied access to optimal care due to inadequate resources at the facility. Unfortunately, most of such cases may never get reported.

Methodology: The study was a retrospective, purposive, qualitative study involving the interview of 16 key informants from core institutions in the Ghanaian health system**.** Using a semi-structured interview, this case study explores factors leading to medico-legal actions and why these issues are under reported in three tertiary facilities in Accra. Data from the study was analysed using thematic analysis. Ethical approval was obtained from the GIMPA Ethical Review Board and a written informed consent was obtained from each of the participants.

Results/ Discussion: There were 12 male respondents, and 4 females, their ages ranged between 37 and 63 years. The study found the following reasons for low reporting; Ghanaians are fatalistic, no mortal is bequeathed with the power to alter any occurrence. Also, most Ghanaians have the 'give it to God' attitude. Even if the victim tries to take the matter up, he/she may be impressed upon by relations and friends to 'allow sleeping dogs lie'. Additionally, the long, emotionally exacting, and expensive adjudication process is deterring. Finally, the procedures in place at the health facilities to address complaints from service users are considered non transparent and prejudiced against the complainant, compared to the court of public opinion.

Conclusion: The study concludes that superstition, laborious adjudication process and the perceived bias of authorities at the health facility are reasons for low reporting of medico-legal issues.

Recommendations:

1. There is the need for a larger study with a more diverse population.
2. More public education is required for patients to know and defend their rights.

POSTER 8

Relationship between STOP-Bang score and blood pressure parameters among young people

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Introduction: Obstructive sleep apnoea (OSA) is an independent risk factor for hypertension and its prevalence is estimated to be between 4 and 7% in the general population. The STOP-bang questionnaire is a validated tool for evaluating OSA.

We sought to determine the relationship between the STOP-Bang questionnaire score and office blood pressure parameters among ThE profile of anthRopometRy And psyChosocial issuEs on campus (TERRACE) study participants who are young participants.

Methods: A total of 354 participants who completed the STOP-bang questionnaire were included and analysed. The analysis was done using SPSS version 23. The linear relationships between the STOP-bang score and office blood pressure parameters such as systolic blood pressure (SBP), diastolic blood pressure (DBP), pulse pressure (PP), and mean arterial blood pressure (MAP) were evaluated. We evaluated all relationships between the variables by computing partial correlations separately with each covariate, thereafter correcting for significant ones together. Analysis was done using SPSS version 23. A p-value <0.05 was considered significant.

Results: The mean age± SD was 21.2±3.5 years and 232(65.5%) were females. The mean± SD of neck circumference, BMI, and STOP-Bang score was

33.0±2.3cm, 21.0±3.7kg/m^2, and 1.1±0.91 respectively. There was a positive correlation of the STOP-bang score with PP (p-value =<0.0001) and a negative correlation with DBP (p-value =0.029). The correlations between potential confounders and response variables without adjustment showed age, and BMI were positively associated with both DBP and PP. When relationship was adjusted for the covariates, only PP was positively associated with the STOP-bang score [95% CI: 0.21(0.10; -0.32), p-value < 0.0001].

Discussion/Conclusion/Recommendations: The PP has positive relationship with OSA severity among young people and this relation is influenced by age and BMI. There is need to determine PP during evaluation of young people at risk for OSA.

Keywords: blood pressure, sleep apnoea, pulse pressure

POSTER 9

Kaposi Sarcoma-Associated Herpes Virus Inflammatory Cytokine Syndrome in an HIV-negative Adult Male in West Africa

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Background: Kaposi sarcoma (KS) is a vascular tumour closely associated with human herpes virus 8 (HHV 8). In Africa, there are two main types of KS: endemic KS and epidemic KS, the latter being an AIDS-defining condition. HHV8, also known as the Kaposi sarcoma-associated herpes virus (KSHV), has been associated with other disease conditions including primary effusion lymphoma (PEL), multicentric Castleman's disease (MCD), and the recently described Kaposi sarcoma-associated herpes virus inflammatory cytokine syndrome (KICS).

KICS was described and defined in 2010 following a retrospective review of patients co-infected with HIV and KSHV. The investigators observed that there

existed a subset of patients which defied clear-cut classification into MCD or PEL. These patients also had characteristic clinical features, serological and biochemical profiles. There have been subsequent case reports of KICS using the proposed case definition, most in immunocompromised patients. Our case closely fits the proposed working case definition and highlights the importance of good history taking, careful clinical examination and analysis of laboratory parameters in patients with KS of any type. This case also brings to the fore the need for more research in the sub-Saharan region into KSHV and the challenges of diagnosis in a resource limited area where KS remains endemic.

Case Description: A 63-year-old African male with hypertension presented with a 2-year history of a reddish rash affecting his lower limbs and a week's history of dyspnoea. The skin lesions progressed over time to involve buttocks, back and arms. He also had constitutional symptoms. He was teetotal with 3 wives, 19 children and a 5-pack-year smoking history.

Examination revealed a drowsy, middle-aged man who looked unwell, was afebrile and had no lymphadenopathy. Violaceous patches, papules and nodular lesions were observed on all limbs associated with lymphoedema. He had expiratory rhonchi and fine crepitations in the middle and lower zones bilaterally. Ascites was present without organomegaly.

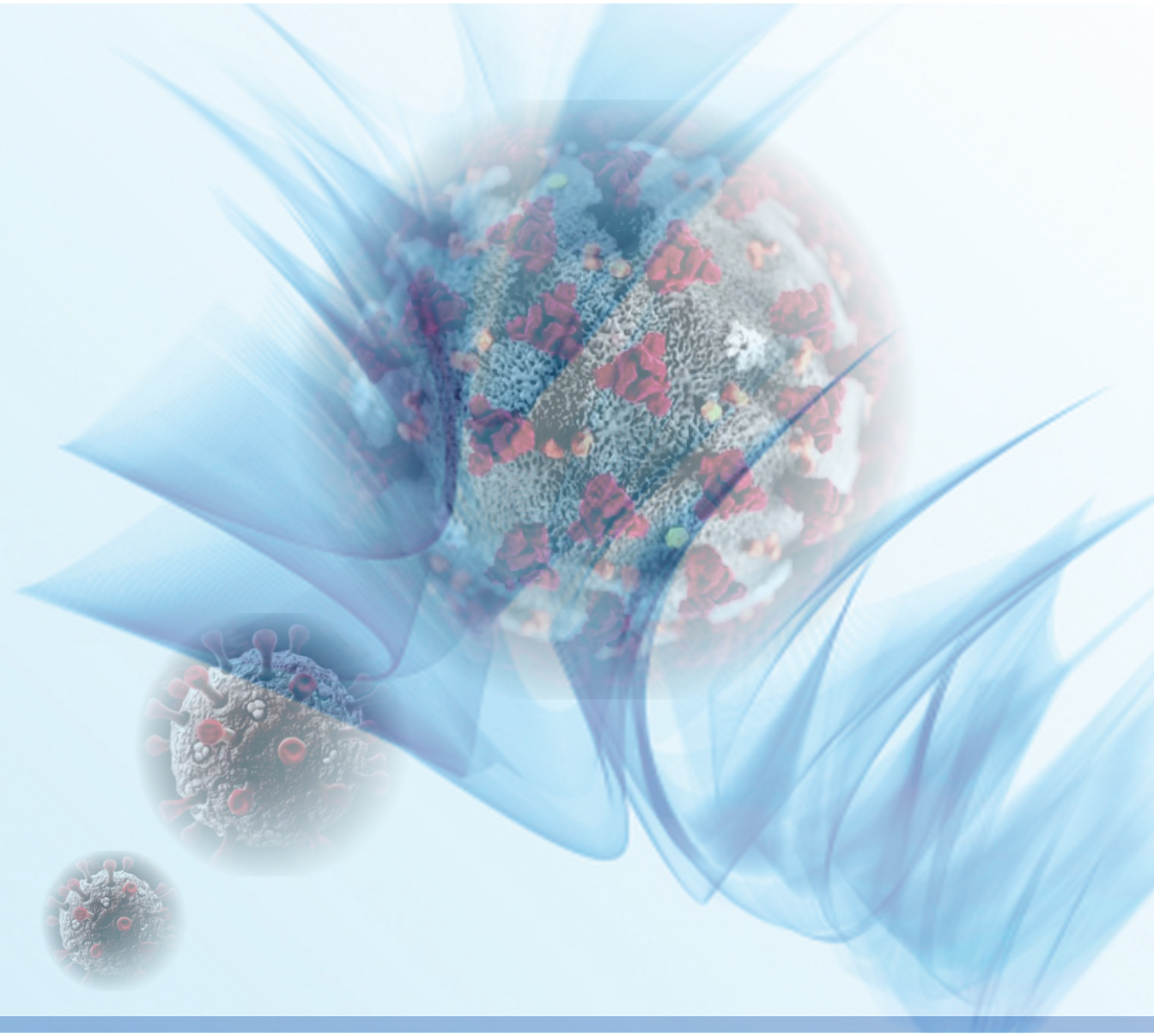
Laboratory investigations are summarized in the table below .

Biopsy of his skin lesions was consistent with Kaposi sarcoma, which was further confirmed with positive LANA staining on immunohistochemistry.
PCR for HIV RNA was negative.

He died at the end of the 3rd week on admission just prior to the onset of chemotherapy. Post mortem examination was refused by his family

Conclusion: KICS is a newly described syndrome associated with HHV 8 infection and must be considered in patients with KS of any type. More research is needed to determine the best approach to KICS diagnosis and management. The unique challenges of resource-poor settings should not hinder diagnosis and management.

A. Diagnostic Category	B. Proposed Criteria for diagnosis of KICS		C. Present in this clinical case
1.Clinical manifestation	a. Symptoms	Fever	No
		Fatigue	Yes
		Oedema	Yes
		Cachexia	Yes
		Respiratory symptoms	Yes
	b. Lab abnormalities	Anaemia	Yes – Hb – 9.1g/dL
		Thrombocytopaenia	Yes – 84 x 10*9/L
		Hypoalbuminaemia	Yes – 22g/L
		Hyponatraemia	Yes – 117µmol/L
	c. Radiographic abnormalities	Body cavity effusion	Yes – pleural, cardiac
		Lymphadenopathy	No
		Splenomegaly	No
		Hepatomegaly	No
2.Evidence of systemic inflammation	Elevated serum CRP (=3 g/dL)		Yes – 36.91g/dL
3.Evidence of KSHV activity	Elevated KSHV viral load in plasma (=1000 copies/mL) or peripheral blood mononuclear cells (=100 copies/10^6 cells)		Not available
4.No evidence of KSHV-associated Multicentric Castleman Disease (MCD)	Histopathologic assessment of lymphadenopathy excludes MCD		No lymphadenopathy



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