Strengthening Health Education Professionals Workforce in Zambia

IN ASSOCIATION WITH
UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
AND
SCHOOL OF NURSING

CONTENTS

THE UNIVERSITY OF ZAMBIA

Welcome Speech by Dr. Elliot B. Kafumukache - Dean School of Medicine, University of Zambia.

Distinguished Guests ladies and gentlemen, I'm delighted to welcome you all to the 2022 Strengthening Health Professional Workforce Education Programs for Improved Quality Health Care in Zambia (SHEPIZ) Annual Clinic Symposium.

I also wish specially welcome our keynote speakers.

The Strengthening Health Professional Workforce Education Programs for Improved Quality Health Care in Zambia (SHEPIZ), is a Training Grant which is built on prior NIH supported project; MEPI/NEPI but addressing the increasing disease burden and public health needs, double burden of Chronic Diseases, HIV and other NCD, human resource capacity building and expanding health services research in Zambia"

The SHEPIZ project is a United States National Institutes of Health training grant aimed at strengthening the healthcare force to improve the health care delivery in Zambia.

The theme for this year's symposium is "**Developing Quality Healthcare Workforce for Improved Healthcare Outcomes in Zambia"**

This year's symposium marks an important milestone to celebrate the first Annual Clinical symposium sponsored by (SHEPIZ) an NIH funded project being administered by the UNZA School of Medicine in conjunction with Schools of Nursing Sciences, Health Science and Public Health and the University of Zambia- Vanderbilt Partnership (UVP) project.

This symposium is a platform for the presentations and dissemination of research results, inter-professional education and community-based education, and Implementation Science learning processes through the Ridgeway Campus Schools. Academic staff and postgraduate students from all universities in Zambia and other researchers in the country are expected to share their work at the symposium

Additionally, one of the outputs for SHEPIZ is to review and update the curricula for undergraduate and post graduate programsat UNZA School of Medicine and Nursing Sciences by strengthening research, implementation science and other clinical competencies.

I wish to thank all the twenty-four (24) speakers on today's program for submitting more than fifty-five abstracts. I'm sure we will learn much from the insightful research presentations. We shall be honoring the many excellent researches who have positively contributed their efforts in improving Quality Health Care to the both Zambian population through a Certificate giving ceremony.

I thank the members of the organizing committee, editors, moderators of the keynote speakers and parallel sessions and notable experts appearing in the video and adverts in celebrating this great event.

I would also like to thank Government officials present today the Honourable Minister of Education, Mr. Douglas Syakalima MP, Prof. Lackson Kasonka - Ministry of Health Permanent Secretary for(Technical services), The Acting Vice Chancellor, Professor Annie Sikwibele (UNZA), Acting Vice Chancellor Mulungushi University - Dr. Kawunga Nyirenda and Dr. Wilma Nchito – Director, Directorate of Research and Graduate Studies (DRGS).Allow to say that DRGS was very supportive and the contributed substantial financial resources to this symposium.

Finally, I thank all our collaborations, cooperation and support from academics our friends in academia, the health services sector, and the results achieved would not be possible without your support.

Thank you all for contributing your valuable time in providing guide to this extraordinary event. I now welcome you all to enjoy the symposium today and wish you all God's blessings and good health.

Thank you.

THE UNIVERSITY OF ZAMBIA

Acknowledgement by the SHEPIZ Principal Investigator – Prof. Fastone Goma

Good Morning!

The Guest of Honour Sir, Honorable Minister of Education Mr. Douglas Syakalima MP,

The Acting Vice Chancellor, UNZA, Professor Annie Sikwibele,

The Acting Deputy Vice Chancellor, UNZA, Professor Boniface Namangala

The Vice Chancellor Mulungushi University, Prof. Kawunga Nyirenda,

The Director National Health Research Authority, Professor Godfrey Biemba

The Director General Higher Education Authority, Professor Steven Simukanga

The Director Directorate of Research &Graduate Studies, Dr. Wilma Nchito

The Director Quality Assurance, Dr. Jonathan Tambatamba

All the Sponsors and collaborating SHEPIZ Partners

Representatives from All Laudatory bodies/Institutions

All Deans Present from the 13 Schools of the University of Zambia,

All Moderators

All Participants in the 2022 SHEPIZ 1st Clinical Symposium

Symposium organizers

Let Me Just say All distinguished invited Guests, Ladies and gentlemen.

The Strengthening Health Professional Workforce Education Programs for Improved Quality Health Care in Zambia (SHEPIZ), is a Training Grant which is built on prior NIH supported project; MEPI/NEPI but addressing the increasing disease burden and public health needs, double burden of Chronic Diseases, HIV and other Non-Communicable Diseases, Human Resource Capacity Building and expanding health services research in Zambia"

The SHEPIZ project is a United States National Institutes of Health training grant aimed at strengthening the healthcare workforce to improve health care delivery in Zambia. The theme for this year's symposium is "**Developing Quality Healthcare Workforce for Improved Healthcare Outcomes in Zambia**"

This Year's first ever SHEPIZ's Symposium is being presented under the five sub-themes namely;

- Inter-Professional Education and related subjects, Health/Medical education
- Non-Communicable Diseases/Neglected Tropical Diseases and Chronic Conditions
- HIV and Co-morbidities, infectious diseases, Vaccine/Immunization and infections, e.g. COVID-19, Influenza, etc.
- Implementation Science and Health Systems, Healthcare Management and Universal Health Coverage case studies.
- Clinical Care, morbidity, and mortality case studies.

Through this year's symposium we hope to address dissemination of research results, inter-professional education and community-based education, and Implementation Science learning processes through the Ridgeway Campus Schools.

It is with great pleasure that Iwelcome youall to the First Annual SHEPIZ Clinical Symposium. This will be a yearly event

Thank you!

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE AND SCHOOL OF NURSING SCIENCES

1ST SHEPIZ SYMPOSIUM

28TH JULY, 2022

SPEECH BY THE VICE CHANCELLOR - UNIVERSITY OF ZAMBIA

- ➢ THE GUEST OF HONOUR, MINISTER OF EDUCATION MR DOUGLAS SYAKALIMA, MP
- ➢ THE PERMANENT SECRETARY (TECHNICAL SERVICES) MINISTRY OF HEALTH
- ➢ THE ACTING DEPUTY VICE CHANCELLOR UNIVERSITY OF ZAMBIA
- ➢ THE ACTING VICE CHANCELLOR MULUNGUSHI UNIVERSITY
- ➢ ALL OTHER CHANCELLORS FROM REPRESENTATIVE UNIVERSITIES HERE PRESENT
- ➢ SENIOR GOVERNMENT OFFICIALS PRESENT
- ➢ REPRESENTATIVES FROM PRIVATE SECTOR
- ➢ ALL DEANS AND DIRECTORS PRESENT FROM REPRESENTATIVE UNIVERSITIES
- ➢ ALL PROFESSORS PRESENT
- ➢ HEADS OF DEPARTMENTS
- ➢ ALL INVITED GUESTS
- ➢ ALL INVITED GUESTS - DISTINGUISHED LADIES AND GENTLEMEN

IT IS MY HONOUR AND PRIVILEGE TO HOST THE FIRST EVER ANNUAL CLINICAL SYMPOSIUM FOR THE UNIVERSITY OF ZAMBIA SCHOOLS OF MEDICINE AND NURSING SCIENCES WITH FUNDS FROM STRENGTHENING HEALTH PROFESSIONAL WORKFORCE EDUCATION PROGRAMS FOR IMPROVED QUALITY HEALTH CARE IN ZAMBIA (SHEPIZ), PROJECT WHICH IS A TRAINING GRANT.

SHEPIZ IS FOCUSED ON DEVELOPING HEALTH SERVICES RESEARCH APPROACHES ARISING OUT OF EXISTING TRAINING PROGRAMS THAT PREPARES HEALTH CARE WORKERS WITH ENOUGH TRANS-DISCIPLINARY RESEARCH TRAINING AND PRACTICES SO AS TO EQUIP THEM WITH REQUISITE SKILLS THAT ENABLE THEM TO RESPOND TO KEY NATIONAL CHALLENGES DERIVED FROM MAJOR NATIONAL DISEASE AND HEALTH SYSTEM PRIORITIES.

MAY I FURTHER INFORM YOU GUEST OF HONOUR THAT SHEPIZ PROJECT IS A 5 YEAR PROJECT WHICH COMMENCED IN SEPTEMBER, 2019 AND WILL RUN UP TO AUGUST, 2024. THE PROJECT HAS FOUR AIMS INCLUDING HEALTH SYSTEMS RESEARCH STRENTHENING, CLINICAL SKILLS

DEVELOPMENT, INTERPROFESSIONAL EDUCATION AND INSTITUTIONAL CAPACITY BUILDING. THE DEVELOPMENT OF THE SPECIALIZED PROGRAMMES LARGELY FALLS UNDER THE SECOND AIM WHOSE FOCUS IS CLINICAL SKILLS DEVELOPMENT.

GUEST OF HONOUR SIR, WE ARE PROUD TO INDICATE THAT THE UNIVERSITY HAS PLANNED FOR MORE CLINICAL SYMPOSIUM TO BE HELD IN THE COMING YEARS TO ENSURE THAT RESEARCH IS APPRECIATED THROUGH FUNDING FROM NATIONAL HEALTH INSTITUTE.

EVERY YEAR, THE UNIVERSITY WILL BE HOLDING THE CLINICAL SYMPOSIUM AS A PLATFORM WHERE ACADEMICS COULD SHARE AND DISCUSS WORK DIRECTLY RELATED TO RESEARCH AND OPERATIONS ON CRISIS PREVENTION AND RESOLUTION. AND THIS IS WHY WE ARE

GUEST OF HONOR, AT THE BEGINNING OF THIS YEAR, WE LAUNCHED A CALL FOR PAPERS FOR THIS SEMINAR ON THE THEME "DEVELOPING QUALITY HEALTH CARE WORKFORCE FOR IMPROVED HEALTH CARE OUTCOMES IN ZAMBIA".

GUEST OF HONOR, WE RECEIVED A NUMBER OF PAPERS AND 57 WHERE SELECTED FOR PRESENTATION DURING THIS 2-DAY SYMPOSIUM.

LOOKING AT THE PROGRAM FOR THIS SEMINAR, I AM CERTAIN THAT IT WILL BE AN OPPORTUNITY FOR AN EXCELLENT EXCHANGE OF KNOWLEDGE.

TO NIH FUNDING, MAY I ALSO INDICATE THAT THIS SYMPOSIUM RECEIVED FUNDING FROM DIRECTORATE OF RESEARCH AND GRADUATE STUDIES AMOUNTING TO K135, 000.00, NATIONAL HEALTH RESEARCH AUTHORITY K50, 000.00 AND VANDER-BUILT UNIVERSITY USD 1000.00. WE ARE GREAT FUL FOR THAT.

TO THIS EFFECT, GUEST OF HONOUR WE ARE CONFIDENT THAT THE FOURTH COMING SYMPOSIUM WILL RECEIVE

THE PROGRAMMES HAVE RECEIVED DUE INPUT, AND SUPPORT OF THE IMPORTANT STAKEHOLDERS. THE STAKEHOLDER INVOLVEMENT IN THE PROCESS IS FURTHER EVIDENT FROM THE GUESTS INVITED TO THIS LAUNCH.

GUEST OF HONOUR, THE TOTAL NUMBER OF PROGRAMMES BEING LAUNCHED ARE IN 18 IN TOTAL DIVIDED INTO THREE BROAD CATEGORIES

1. **MASTER OF SCIENCE IN NURSING**
➢ MASTER OF SCIENCE IN NEONATAL NURSING
➢ MASTER OF SCIENCE IN PALLIATIVE CARE
➢ MASTER OF SCIENCE IN ONCOLOGY NURSING
➢ MASTER OF SCIENCE IN CRITICAL CARE NURSING
➢ MASTER OF SCIENCE IN EMERGENCY AND TRAUMA NURSING

2. **MASTER OF MEDICINE**
   - MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY GYNAECOLOGIC ONCOLOGY
   - MASTER OF MEDICINE IN DERMATOLOGY AND VENEREOLOGY

3. **MASTER OF SCIENCE IN SPECIALIZED MEDICINE**
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE MALE GENITOURINARY RECONSTRUCTION AND PROSTHETICS
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE GLAUCOMA
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE PAEDIATRIC INFECTIOUS DISEASES
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE PAEDIATRIC GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE PAEDIATRIC OPHTHALMOLOGY AND STRABISMUS SURGERY
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE COMMUNITY EYE HEALTH
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE FORENSIC PATHOLOGY
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE GASTROENTEROLOGY
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE PAEDIATRIC ANESTHESIA
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE VITREO-RETINA SURGERY
   - MASTER OF SCIENCE IN SPECIALIZED MEDICINE BREAST SURGERY

GUEST OF HONOUR MAY YOU TAKE NOTE THAT THE PROGRAMMES BEING LAUNCHED CUT ACROSS THE DIFFERENT MEDICAL SPECIALTIES AND SUB-SPECIALTIES RANGING FROM INTERNAL MEDICINE, INFECTIOUS DISEASES, SURGERY IN PARTICULAR BREAST SURGERY, OPTHALOMOLOGY, TO UROLOGY. OTHERS ARE ANAESTHESIA, GYNAEONCOLOGY AND DERMATOLOGY.

THE NURSING PROGRAMMES ON THE OTHER HAND, RANGE FROM NEONTAL NURSING (CARE OF THE NEW-BORN), TO EMMERGENCY AND TRAUMA NURSING, CRITICAL CARE UP TO ONCOLOGY (CANCER CARE) AND PALLIATIVE (END OF LIFE) CARE.

GUEST OF HONOUR, MAY I SAY WE HAVE EXECUTED OUR MANDATE AS A UNIVERSITY IN DEVELOPING THESE PROGRAMMES, WE NOW HAVE A THREE-FOLD REQUEST:
- THROUGH YOU TO THE HONOURABLE MINISTER OF HEALTH FOR RECOGNITION OF SUPER-SPECIALIZED QUALIFICATIONS .
- HIGH EDUCATION AND THE ZAMBIA QUALIFICATION TO CONSIDER CLASSIFICATION OF SPECIALIZED PROGRAMMES WHICH DO NOT FIT DIRECTLY INTO THE ZAMBIA QUALIFICATION AUTHORITY FRAMEWORK.
- THE HEALTH PROFESSIONS COUNCIL OF ZAMBIA AND THE NURSING AND MIDWIGFERY COUNCIL OF ZAMBIA, FOR RECOGNITION AND APPROPRIATE REGISTRATION OF SUPER-SPECIALIZED QUALIFICATIONS.

MAY I NOW THANK ALL ORGANIZATIONS, INSTITUTIONS AND INDIVIDUALS WHO SUPPORTED THE DEVELOPMENT OF THESE PROGRAMMES

FINALLY, I WISH TO COMMEND THE SCHOOL OF MEDICINE AND SCHOOL OF NURSING SCIENCES FOR PRODUCING THE NEED-BASED PROGRAMMES WHOSE GRADUATES ARE ENVISIONED TO MEET DIVERSE HEALTH CARE NEEDS OF THE ZAMBIAN POPULATION.

DISTINGUISHED LADIES AND GENTLEMEN, THANK YOU FOR MAKING TIME TO COME AND WITNESS THIS HISTORICAL ACADEMIC EVENT. WE ARE HOPEFUL THAT YOU WILL BE OUR

The role of SHEPIZ on the landscape of human health research in Zambia

Guest Editor: Prof. Evans Mpabalwani

Strengthening Health Professional Workforce Education Programs for Improved Quality Health care in Zambia (SHEPIZ) was as a result of a competitive NIH grant in 2019 and the Principal Investigator is Prof. Fastone Goma. It is a four year grant whose main aim is anchored on strengthening human capital developmentin the health sector and is based in the University of Zambia Schools of Medicine and Nursing Sciences, Lusaka, Zambia. In Zambia, like many other places, professionals appreciate research and evidence generation to influence practice many years after they have been in-service. This project endeavors to strength research capacity training at undergraduate and postgraduate levels so that the graduates from these institutions have research based inquisitive minds which start very early in their careers and go beyond into the field to interrogate what they do and suggest evolving evidence practices. The theme of the symposium is "Developing Quality Care Workforce for Improved Health Care Outcomes in Zambia". The symposium will showcase research activities from the four Schools at Ridgeway Campus and indeed other Health and Allied Institutions in Zambia.

Globally, there is consensus that generation of specific knowledge bases through research coupled with appropriate training and retraining programmes targeted strategically through the health care systems and that focus on major national priorities has great potential to reduce the associated disease burden and improve major health outcomes. It is against this background that during curriculum review, which happened at a timely period of the project, for undergraduates and postgraduate in the Schools of Medicine and Nursing Sciences which SHEPIZ sponsored, research was enhanced at these levels respectively. I am happy to report that the majority of abstracts from the two schools are a testimony of this effort by SHEPIZ.

Furthermore, this symposium has brought together researchers, academicians, both undergraduate and postgraduate students from across Zambia. This symposium will highlight ten specific research areas which include i) HIV and co-morbidities ii) Interprofessional education and related subjects iii) Noncommunicable diseases / Neglected Tropical Diseases iv) Infectious Diseases v) Chronic diseases vi) Health/Medical Education vii) Implementation Science viii) Health Systems, Health Care and UHC ix) Vaccine/Immunisation and infections x) Clinical care, morbidity, and mortality case studies. Some of these research activities are home grown and others are collaborative in nature and these are by no means exhaustive.It is these types of research that go a long way in influencing or shape policy in the health sector. We believe the symposium will increase the visibility of research to other stakeholders.

On behalf of the organizing committee, we would like to welcome and thank the participants to the first SHEPIZ symposium. To those who submitted the abstracts, we say thank you for having made this symposium a success. It is because of your abstracts that we are here today. We further thank the Editorial Board of the Medical Journal of Zambia for having been on hand to publish the abstracts online. To them we say thank you and we are indebted to the valuable advice from the Senior Medical Journal Editor, Prof. Bellington Vwalika.

Other members of the Editorial Team of SHEPIZ include: Prof. BellingtonVwalika, Prof. Trevor Kaile, Prof. Fastone Goma, Prof. Margaret Maimbolwa, Prof. Geoffrey Kwenda, Prof.WilbroadMutale, Dr. Patricia Mukwato, Dr. Cosmas Zyambo, Dr. Concepta Kwaleyela, Dr. Vaseen Shaikh, Dr. Michael Chigunta, Dr. Ruth Waila, Mr. Emmanuel Musenge and Ms. Victoria Kalusopa. Their editorial skills are highly appreciated.

Reference: UNZA SHEPIZ NIH Grant 2019 - Grant Number: 1R25TW011219-01A1 FAIN: R25TW011219

DAY 1, THURSDAY, 28 JULY 2022

Abstract Driven Session (10 Minutes presentations 5 minutes Q&A)
Break Out 1a: HIV and Co-morbidities, Infectious diseases, Vaccine/Immunization and infections (e.g. COVID-19, Influenza)

Moderator: Prof. Evans Mpabalwani

The Emergence of SARS-CoV-2 in Zambia: Characterization of its Genetic Diversity and Transmission Patterns

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The emergency of SARS-CoV-2 variants has been a major problem leading to outbreaks of COVID-19 diseases worldwide. The changes in the genome of the virus caused by mutations has led to the emergence of variants with altered characteristics/phenotype. The variants are referred to as variants of concern and interest because they are deadly and high transmissible, causing illness by evading the host immune system. To fully understand the mutations in the genes of the virus, genome sequencing is a power tool for determining the genetic variations of SARS-CoV-2 virus. The samples with higher viral load after RT-PCR will be isolated in order to perform genome sequencing so as to identify the mutations which alter the viral phenotypic traits. And this can also help to tract the spread of the disease due to mutations of the virus as it moves from person to person. As we anticipate that more VOC/VOI will emerge, it is important to continue monitoring the genomic diversity of SARS-CoV-2 as this will help in vaccine and drug design. And this work can also be useful in genomic epidemiology where genomic surveillance is employed to detect new mutations which can for instance spread rapidly, increase disease severity or even evade vaccine induced immunity.

Keywords: SARS-CoV-2, VOC/VOI, genome sequencing, epidemiology, host immunity, genomic diversity

Effects of HIV status and Linguistic Medium on the Test Performance of Rural Low-Literacy Adults: Implications for Neuropsychological Test Development in Zambia.

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ABSTRACT

Background: Elderly residents of rural African communities are often excluded from access to HIV services because neuropsychological assessment relies on tasks which demand literacy in English. Yet, many cognitive functions (such as memory and verbal fluency) could be assessed in local languages rather than English. The study was designed to test the hypothesis that tests administered to low-literacyrural adults in a familiar language could be more sensitive to HIV-induced neurocognitive impairments than tests in a less familiar language.

Methodology and Materials: It was an experimental design involving – English and Chichewa versions. Low-literacy adults between 40 to 65 years old (n = 28 HIV+ and 22 HIV-) were purposely sampled from rural clinics

of Eastern Zambia where Chichewa is a familiar language. Four verbal tests of Neuropsychological Test Battery (Hopkins Verbal Learning Test immediate recall, Hopkins Verbal Learning Test Delayed Recall, Animal and Action Naming) were translated using Nida's dynamic equivalence theory of translation. ANOVA was performed to determine the effect of HIV status, linguistic medium and gender on performance.

Results: Results indicated that HIV positive respondents scored significantly lower than HIV negative respondents, and the mean scores on the English medium version were consistently lower than scores on the familiar (Chichewa) version across all tests and all groups. A significant interaction effect was found for neuropsychological test performance between HIV status and linguistic medium, with the difference between HIV positive and HIV negative groups being larger with the Chichewa version **(all ps <.001).** There was no statistically significant effect of gender on test performance.

Conclusion: This finding indicated that, the local language version can discriminate more sharply between rural low-literacy HIV positive and HIV negative individuals than the unfamiliar English version. The study has shown that the primary language is best suited to test neurocognitive performance in rural low-literacy HIV positive adults. Future studies involving the development of tools in other Zambian languages ought to be undertaken to assess HIV-associated neurocognitive functional disorders that remain highly prevalent and continue to represent a significant public health problem in this part of Zambia.

Key Words: HIV status, Linguistic Medium, interaction effect, Rural-Low Literacy Adults, Neuropsychological Test, Performance.

Isolation and Identification of Oral Poliovirus Vaccine Virus and Establishment of The Duration of Vaccine Virus Shedding Among Vaccinated Children in Zambia.

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ABSTRACT

Background: Poliomyelitis is a disease caused by Wild Polio Viruses (WPVs) that results in life-long lameness and sometimes death. WHO recommended vaccination with Oral Polio Vaccine (OPV) to eradicate this disease. It has been proven that by the 4th week post vaccination, a higher percentage of children will seroconvert and shed poliovirus in their stool. Poor seroconversion of OPV by children in low income countries has been noted and could result from several issues. Isolation of the Sabin strain from healthy vaccinated children indicates valid protection from fecal-oral infection. Unlike the Zambian scenario, several studies have documented the isolation of vaccine virus at high rates in patients that presented with AFP. This study aimed to isolate and identify Sabin strain and establish the duration of vaccine virus shedding, and the proportion of children that shed the vaccine virus.

Materials and methods: The study utilized closed-ended questionnaires administered by research assistants as well as stool collected from participants. The stools were analyzed using cell culture and PCR at the UTH virology laboratory.

Results: A total of 384 stool samples fulfilled the inclusion criteria. Children that shed the Sabin strain were 30 (7.8%) with 45 (11.7%) having excreted Non-Polio Enteroviruses (NPENTs). Children from rural areas and those with fewer vaccinations had lower rates of Sabin isolation. The study found that Sabin strain was identifiable 4weeks post vaccination in children at reasonable rates.

Conclusion: Children in rural areas are also at a risk of infection if vaccination campaigns are not scaled up and there is a possibility of a waning immunity in children

that are vaccinated with OPV overtime. NPENTs may serve risks of poor oral vaccine performance, thereby risking re-introduction of polioviruses post the polio endgame. It may be of use to further the diagnosis of AFP cases that are categorized as non-polio compatible.

Keywords: *Oral Polio Vaccine, Polioviruses, Non-Polio-Enteroviruses, OPV Shedding*

The Impact Of Covid-19 on Cancer Nursing Care at the Cancer Disease's Hospital, Lusaka, Zambia

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ABSTRACT

Background: Coronavirus disease 2019 (COVID-19), is a respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Covid-19 was declared a pandemic on March 11, 2020 by the general director of World Health Organization (WHO) due to the spread across the globe. Zambia commenced its response on COVID-19 on 30 January 2020 and declared the outbreak on 18 March 2020, after recording the first two cases of COVID-19 from citizens who had returned from a holiday in France. As of 23 February 2021, Zambia had recorded number of 10,972 cumulative cases of COVID-19 and 1,051 deaths (Ministry of Health, 2020a). The outbreak of the Covid-19 disease caused a stir in the way care was delivered in the hospitals and the Cancer diseases hospital was not spared. This study explored how nursing care was impacted.

Methods: A descriptive, cross sectional study design was used, involving 94 randomly selected nurse respondents. A questionnaire was used to collect quantitative data. Descriptive analysis was conducted using the Statistical Package for Social Science version 26.0

Results: From 94 respondents,51.1% indicated that Covid-19 had an effect on nursing care at CDH with 42.6% indicating provision of care was severely affected . Of the factors affecting quality of care, 51.1% indicated low access to drugs and furthermore 27.7% only had access to any cancer medication hence affecting the quality of care.

Conclusion: Covid-19 significantly affected health service provisions at Cancer Diseases Hospital with a number of critical areas drastically affected. spread of the infection and continuation of care thereby, maintaining a good standard of nursing care provision.

Break Out 1b: IPE and related subjects, Health/Medical Education Moderator: Dr. Marjorie Makukula

An assessment of readiness for remote learning and teaching: case of the university of Zambia School of Nursing Sciences

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ABSTRACT

The World Health Organization declared COVID-19 a pandemic on 11 March, 2020. Following the declaration, many countries rapidly implemented measures to limit human interaction and curb the spread of the Disease. Among the measures implemented, were closing of schools, colleges and universities as these were seen as potential breeding grounds for COVID-19. With the closures of learning institutions, university authorities quickly resolved to immediately implement and roll-out online teaching as a measure to allow continued teaching and learning. Prior to the COVID-19

Pandemic, the main mode of teaching and learning for full time students at the University of Zambia, School of Nursing was mainly face-to face.

Methods: A mixed methods design using a case-study and **ADKAR** approach (**A**wareness of the need for change; **D**esire to participate in and support the change; **K**nowledge necessary for change; **A**bility to implement change and **R**einforcement to sustain the change) was utilized. Data was collected using an online survey questionnaire administered to Educators, Administrators, Nursing and Medical Students from Six countries across sub-Saharan Africa. However only data from Nursing students and Educators from the University of Zambia is reported for this abstract.

Results: A total of 194 out of 285 students participated in the survey. Majority (65.3%) of students thought that their learning had partially changed while 33.7% thought it had completely changed due to the COVID-19 pandemic. Similarly 52.4 % of Educators thought teaching had partially changed while 47.6% thought it had completely changed .All Educators reported that they were confident in the use of software to implement e-learning, while only 43.2% of students were confident that they could use the software needed for remote learning. About 44.8% of students had no reliable electricity, 44.5% had no private space to work/study from and 50% had no good internet connectivity. However, majority of students (68.3%) had a computer and 89.1 had a smart phone to use for remote learning. Only 32% had learning materials needed for remote learning. The major hindrances to remote teaching from the teachers' perspective was not having reliable electricity connectivity as reported by 52.3%, not having private space to work from while at home, (40%) and not having a good internet connectivity as reported by 47.6%.

Conclusion: Challenges to remote learning include electricity disruptions due to load shading, poor internet connectivity, expensive internet bundles, difficulties in concentrating while at home, missed lessons and disrupted clinical placement. Financial challenges made e-learning to be identified as being expensive as they could not afford to buy internet bundles in addition to paying tuition fees.Loss of employment by family who were the sponsors due to due to COVID Pandemic compounded the situation.

Online Interprofessional Education (IPE) For HIV: A Case of Health Professionals' and Students' Training In Zambia

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ABSTRACT

Background: This means Strengthening interprofessional education for HIV project is an initiative that ensures effective management of HIV/AIDS and promotes good patient outcomes through interprofessional education (IPE) of students and early career healthcare professionals.In Zambia, STRIPE HIV year two training for preservice finalist students and health care professionals was conducted through online

learning and the University of Zambia School of Nursing Sciences implemented the course using the zoom platform.

Purpose: The purpose of the study was to examine the impact of online interprofessional education (IPE) as reported by participants who took part in the two online STRIPE HIV interprofessional education zoom workshops conducted by the University of Zambia, School of Nursing Sciences for a period of three days. Participants comprised medical, Pharmacy, Biomedical, Nursing and Midwifery students drawn from the University of Zambia and Lusaka Medical Apex University; and health care professionals drawn from the University Teaching Hospitals Women and New born, Chilenje general hospital and Chongwe district hospital and Chongwe district health Office.

Materials and Methods: The study was a cross sectional analytical study using an online survey that was completed by 52 participants. Simple random sampling using computer generated random numbers was used to draw participants for the workshop and all workshop participants were requested to complete the questionnaire. Data was analysed using Statistical package for Social Sciences (SPSS) version 23. Chi-square and Fisher's exact tests were used to test for associations between usefulness of STRIPE-HIV workshop materials and selected factors. Manny Whitney test was used to ascertain differences in Means for continuous non normally distributed variables.

Results: Over three quarters of participants 42 (80.8%) were students, while qualified professionals accounted for less than a quarter 10 (19.2%). Furthermore, females accounted for a larger proportion of the participants 36 (69.2%).Additionally, nearly all participants 50 (96.2%) rated the STRIPE-HIV training materials as very useful, with over a quarter 17 (32.7%) reporting having acquired new knowledge on HIV and its management through the online training platform. Furthermore, a quarter of the participants 13 (25.0%) reported having learnt the importance of Interprofessional care for improving health outcomes. There was a statistically significant association between participants' professional discipline and their rating of the usefulness of STRIPE HIV course materials ($p = 0.005$). The Manny Whitney test to compare mean age between participants who rated the training materials as moderately useful and those who rated them as very

useful showed no statistically significant result ($p = 0.42$).

Conclusion: There is evidence of acquisition of new knowledge as well as development of a positive attitude toward interprofessional collaboration among health professionals and students through online learning.Therefore,it can be concluded that online education is a valuable platform that can be utilised as a mode of learning apart from the traditional face to face learning.

Keywords: Online, Interprofessional education, Health Professionals, HIV/AIDS, Health Outcomes

Process of Developing, Piloting and Evaluating an Inter-professional Community Based Education Programme Among Undergraduate Students at the University of Zambia: Lessons from the SHEPIZ Project

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ABSTRACT

Background: Despite substantial increase in the interprofessional education (IPE) programmes globally, there has been no information on the community based interprofessional education (IPE-CBE) initiatives in Zambia. Selected faculty from school of Public Health, Medicine, Nursing and Health sciences collaborated to develop the IPE-CBE curriculum that would allow students engage inter-professionally with the community. The aim of this paper is to report the Process, Piloting and Evaluation of the IPE-CBE programs among the medical, nursing and physiotherapy undergraduate students at the University of Zambia.

Methods: The   Desk reviews, workshops, piloting, cross section survey was utilized. Descriptive analysis was performed at 95% confidence level and 5% margin of error, with a response distribution of 50%.

Results: 73.3% of the students were medical students, 14.2%nursing and 11.6% physiotherapy. In terms of competencies, values/ethics for Interprofessional Practicewas ranked highat weighted average of 4.25,Interprofessional Communication at weighted average of 4.24. Roles/Responsibilities and Teams and Teamwork weighted average at 4.06 and 4.07 respectively.

Conclusion: Our findings have demonstrated that although IPE CBE is a good strategy for the implementation of field work, sustainable resources and logistical issues need to be sortedif the program is to be implemented effectively.

Keywords: Community based education, interprofessional education, undergraduate students, Zambia

Experiences of Labour and Childbirth Among Primiparae in Monze District, Zambia

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ABSTRACT

Background: Labour and childbirth mark another developmental phase in the life of a woman and her family. The processes that occur are physiological, social and psychological. Women anticipate labour differently hence, their different behaviour during labour. For some women the process of childbirth might result in increased feelings of insecurity, anxiety, and intense childbirth-related fear. The midwife as a key figure in this process should therefore, be supportive and assist the woman safely through childbirth by recognising and meeting her needs and wellbeing. The key concern for maternity care providers is that maternity care services continue to meet the needs and expectations of women and their families. Therefore understanding childbirth experiences and their meaning could be important in planning individualized care for mothers. The purpose of this study was to explore labour and childbirth experiences among primiparae in Monze district.

Methods: The researcher used a qualitative design utilising the interpretive phenomenological approach to better understand the first time mothers' experiences of childbirth at Monze mission hospital. Twelve primiparae aged between 18 and 29 years within six weeks of giving birth were recruited to the study. A semi-structured interview was used to collect data, which was analysed using the thematic analysis method.

Results: Two major themes that emerged from the data were: Support and care, and Childbirth reality. The major theme of support and care emerged from subthemes; comfort in the care received, delighted with availability of midwives and nurses, surprised with the care received, pain versus yelling by midwives, inadequate service provision, and labour pains. The results under support and care showed that the support and care received by women during childbirth were interpreted as being either positive or negative. The interpretations were generally centred on the attitudes, interpersonal communication, physical and psychological support, and management of labour complications by service providers. Physical and psychosocial support and care provided comfort, consolation and encouragement to the mothers, *"...what I liked about this labour is how the nurse who delivered me spoke to me...The nurse said...today, I want to take care of you... she got a stool and sat near me* (smile)...*I felt very nice! Seeing the nurse sitting near me and saying, I just want to take care of you... I was very delighted because the midwife gave me full attention by sitting near me"* Mrs MH narrated. While non-caring attitudes, poor communication and inappropriate care led to mothers' negative childbirth experiences *"...there was no one who was there to talk with me. I don't know if they were too busy or there was shortage, but I was left alone and I didn't like it...there was no care and support there!"* Mrs CK said. The major theme of Childbirth reality for the first time mothers was interpreted in the sphere of childbirth related fears and the joy of seeing their new born babies. Experiencing labour for the first time was encompassed with fear of labour pains, midwives, labour ward, delivery, labour outcome, being operated, slow progress, and just fear of the unknown. All the study participants expressed joy at the birth of their babies and felt very happy when their babies were delivered. Some described it as a feeling of indescribable happiness that occurred when the baby slipped out and the pain suddenly disappeared.

Conclusion: The childbirth phenomenon was experienced in a way that elicited unique exceptional feelings, responses and challenges that have potential to assist midwives provide and promote positive childbirth experiences for primigravidae. Satisfaction with childbirth was interpreted as the most important qualitative outcome in the assessment of the phenomenon because it was linked to postnatal emotional wellbeing, self-esteem and early interaction with the infant. Thus, understanding childbirth experiences and attached meanings is essential when planning intrapartum care for primigravidae.

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Impact of birth perineal Trauma on women birthing at Ndola Teaching Hospital, Zambia

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ABSTRACT

Perineal trauma following childbirth is reported to affect about 70% of women in low and medium-income countries birthing in health facilities. Although birth perineal trauma has the potential to affect many aspects of a woman's well-being in both the immediate and long-term; it is still a neglected phenomenon of women's health, particularly in sub-Saharan Africa. The purpose of this study was to gain insights on the impact of birth perineal traumas on women birthing at Ndola Teaching Hospital. This qualitative study utilised a descriptive phenomenological approach. Purposive sampling was utilised to select 15 participants who had birthed at Ndola Teaching Hospital and sustained birth perineal traumas. Data were collected between from November, 2020 to April, 2021 through face-to-face interviews utilising an interview guide in participants' homes. Data were analysed using content analysis. **Findings from** participants' description of the impact of perineal trauma derived four themes namely; "Perineal pain", "Fear of future reproductive health outcomes", "Substandard perineal wound management", and "Diversion from Reality. The major themes were supported by nine subthemes. Most women who sustain childbirth perineal trauma suffer in silence. Therefore, midwives need to be very observant during the postpartum period because the morbidity affects many aspects of the women's well-being. This study recommended that Midwifery

administrators should reinforce adherence to stipulated guidelines to minimise its negative impacts. This coupled with effective midwifery education implemented by good clinical supervision and mentorship of trainees during clinical learning should be emphasised.   Professional counselling of individual and couples on perineal care, sex education and future reproductive activities can improve the overall wellbeing of the women.

This study concluded that birth perineal trauma is a distressing phenomenon of childbirth. Skillful repair of perineal traumas with emphasis on pain management and diligent postnatal care comprising perineal examination can reduce negative impacts on women.

Key words: Perineal trauma, birthing women, wound management, perineal pain

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Breakout 1c: None Communicable Diseases/Neglected Tropical Diseases and Chronic Conditions
Moderator: Prof. Bellington Vwalika

Adherence to Radiation Therapy among Cervical Cancer Patients at Cancer Diseases Hospital in Lusaka, Zambia

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ABSTRACT

Background: Radiation therapy has the potential to improve cure rates and provide palliative relief for cervical cancer patients. Despite adherence to radiation therapy being a key treatment modality, patients rarely follow prescriptions. Poor adherence to radiation therapy is associated with low survival and high mortality rates. This study therefore sought to investigate the levels of adherence and factors influencing adherence to radiation therapy among cervical cancer patients being treated at Cancer Diseases Hospital.

Methods: A cross-sectional analytical study design was used, 142 patients were selected from the outpatient department using a fish-bowl sampling method. A structured interview schedule was used to collect data. Data was entered and analyzed using SPSS, the binary logistic regression analysis was used to predict levels of adherence to treatment and to identify factors associated with adherence to RT among cervical cancer patients. Adherence in this study meant to strictly follow health care providers recommended instructions such as receiving all the prescribed fractions of radiation therapy treatment without any interruptions.

Results: The findings showed that 93% of the participants adhered to radiation therapy while 7% did not adhere to treatment. Majority of the patients 77.1% had experienced side effects of radiation therapy. About 28% of patients had severe psychological distress. By using binary logistic regression, there was a statistically significant association between adherence and perceived quality of health care services ($p = 0.001$). The Binary logistic regression analysis showed that holding other variables constant, patients who perceived to have received poor quality of health care services were 0.005 (99.5%) times less likely to adhere to RT treatment compared to those who had perceived to have received good healthcare services, and this effect was highly significant (OR: 0.005, CI: 0.004 - 0.062, P: < 0.001). The other independent variables were not statistically significant despite being associated with adherence among cervical cancer patients.

Conclusions: The findings showed that patients who perceived good quality of health care services had higher chances of adherence compared to those who perceived poor quality of health care services. There is therefore a need for quality service provision which could include good maintenance of radiation machines. Furthermore, there is a need to develop guidelines for follow-up in case of any disease outbreak to avoid interference with patients' treatment schedules and appointments for reviews.

Keywords: Cervical Cancer, Adherence to Radiation Therapy, Psychological Distress, Health Care Systems, Side Effects, Economic Status and Stage of the Disease

Spectrum and Determinants of Congenital Heart Defects in Down Syndrome Children Presenting At The University Teaching Hospitals, Children's Hospital.

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ABSTRACT

Background: Down syndrome (DS) is the commonest chromosomal abnormality caused by presence of extra genetic material on chromosome 21. Congenital heart defects (CHD) are frequently related with DS, with a global prevalence of 40-60% and a spectrum that varies by geographical region. This study assessed the CHD spectrum, determinants associated with CHD, and phenotypic variations in DS.

Methods: In this cross-sectional study conducted between February and November 2020,DS children aged 16 years and below presenting to the University Teaching Hospitals, Children's Hospital in Lusaka, Zambia were recruited based on phenotypic features using K. Fried diagnostic criteria. Participants were assessed using a structured questionnaire, physical examination and two-dimensionalcolourdopplerechocardiography. Data collected was statistically analysed using Stata.

Results: Of the 101 DS participants, majority 56 (55.4%) were males. Over two-thirds 71 (70.3% [95% CI: 60.5-78.5]) had CHD with 53.5% (38/71) having single lesions. Atrioventricular Septal Defect (AVSD) was the commonestlesion 14 (19.7%), followed by multiple lesion combinations of AVSD with Patent Ductus Arteriosus (PDA) 9 (12.7%), Atrial Septal Defect (ASD) with PDA 8 (11.3%) and a single lesion: secundum ASD 8 (11.3%). PDA was the commonest 47.9% (34/71) lesion seen either as single or in multiple lesion combinations.

DS participants were 3% less likely to have a CHD with each increase in unit age (months) (p=0.004). Similarly, there was a 38% reduced chance of having CHD when pulmonary hypertension (PH) was absent(p=0.024). However, an increase in birth order showed no significant difference in risk of having CHD (AOR=1.00; 95% CI: 0.068-1.47; p=0.987).

Conclusion: The prevalence of CHD was comparable to studies in Nigeria and Afghanistan, with a CHD spectrum comparable to most other studies elsewhere. The most common lesion was an AVSD. The prevalence of phenotypic characteristics was comparable to South Africa. CHD is more likely in DS children with a history of long-term medicine use and PH. A decreased chance of CHD is associated with an older unit age (months) at presentation. Therefore, the value of early cardiac screening and intervention in improving the quality of life and life span of DS children cannot be overstated.

Application of the Modified Six Step Kerns Model in the Review of the Bachelor of Medicine and Surgery degree programme at the University of Zambia

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Background: At the University of Zambia, School of Medicine, the Bachelor of Medicine and Surgery was last reviewed in 2010. This poseda threat in the training of medical doctors as the learning outcomes may be unresponsive to emerging trends and methodologies in the management of patients, clients and communities. This paper presents a model that was used in the review of the bachelor of medicine and surgery degree programme at the University of Zambia in 2021.

Methods: A modified Kern's 8 step model for curricular design was used in the review of the MBCHB UNZA curriculum:

Step 1: Competency Framework Design: -The competency framework was designed based on the World Federation for Medical Education (WFME) standard for basic medical education (WFME, 2015).

Step 2: Needs Assessment: - An online needs assessment survey was administered to 614 medical students while a workshop involving Faculty and key stakeholders in medical education was held to discuss the need for the review of the curriculum.

Step 3, 4 and 5: Strengths, Weaknesses, Opportunities, Threats, Critical Success Factor Analysis and Educational Strategies design: -these steps were conducted to establish the educational strategies and factors that would result into successful implementation of the programme.

Step 6, 7 and 8: Course Writing, Implementation and Evaluation: - Individual expert course writers were assembled to conduct course writing using a 10-day workshop model and development of both the implementation and evaluation plans for the curriculum.

Results: The key results obtained from the review process included:

1. Designed the curriculum into the four key thematic competency areas of medical education: Knowledge, Skills and Performance, Safety and Quality, Communication, Partnership, and Teamwork while Maintaining Trust.
2. Reduction of the training period from 7 to 6 years as was before.
3. Development of an innovative and social responsive curriculum by strengthening interprofessional education, implementation science, evidence-based practice, critical thinking and incorporating emerging health needs of society

Conclusion: The modified six-step Kern's model to curriculum development can be an effective method for the development and review of curriculum for health professions educational programmes and may be dependent on the availability of a motivated team, financial and other relevant resources in order to fulfil the dictates of all the steps.

Keywords: *Curriculum Review, Kerns Six step Curriculum Review Model, Bachelor of Medicine and Bachelor of Surgery*

Break Out 1d: Clinical care, morbidity and mortality case studies
Moderator: Dr. Selestine Nzala

Biomass smoke exposure as a risk factor esophageal cancer in Zambia

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INTRODUCTION

The International Agency for Research on Cancer recognises biomass smoke as a probable carcinogen to humans. Regular exposure to biomass smoke is very common in Africa with close to 70% of its population being completely reliant on solid fuels. In published literature, there is growing, but not yet conclusive, evidence of a link between esophageal cancer and exposure to biomass smoke.

Aim: The aim of the study was to evaluate lifestyle risk factors for esophageal cancer in patients seen at a single Zambian hospital.

Methods: In this case-control study conducted in Lusaka, Zambia, we used interviewer-administered questionnaires to evaluate domestic exposure in esophageal cancer patients and controls. Two sets of data were analysed; one with unmatched cases and controls and the other one with matching by age and sex.

Results: We enrolled 366 patients with 131 cases and 235 controls. Among the cases, 50 (38%) were females and the median age was 56 years (IQR 46-65). The body mass index was less than 18.5kg/m^2 in 44% of the esophageal cancer cases. About 88% of the cases enrolled were from the eastern half of Zambia with less than 5% being from provinces in the western regions of the country. Esophageal cancer was significantly associated with domestic exposure to biomass smoke in univariate analysis (OR 3.1; 95% CI 1.7- 5.6, p<0.001), and after adjusting for potential confounders (OR 2.1; 95% CI 1.1- 3.8, p=0.017). Matched comparisons showed similar results for this association in univariate analysis (OR 2.9; 95% CI 1.5- 5.8, p<0.001) and using conditional logistic regression (OR 2.8; 95% CI 1.3- 5.9, p=0.005). Other risk factors found to be independently associated with esophageal cancer were rural residence (OR 2.3; 95% CI 1.0- 5.3, p=0.004), lack of formal education (OR 3.9; 95% CI 1.5- 9.9, p=0.04) and living in poor housing (OR 2.4; 95% CI 1.1- 5.6, p=0.034)**.**

Conclusion: There is an association between oesophageal cancer and domestic exposure to biomass smoke. Limiting exposure to biomass smoke could have an impact on the occurrence of oesophageal cancer in Africa.

Keywords: Esophageal cancer, biomass smoke, risk factors

Circadian Rhythm of Blood Pressure in Patients with Preeclampsia at University Teaching Hospital, Lusaka, Zambia

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ABSTRACTS

Background: Blood pressure (BP) follows a circadian rhythm characterized by a nocturnal dip of more than 10% in normotensive persons. Disturbed circadian rhythm of BP has been reported in hypertensive disorders including preeclampsia, depicted by nocturnal non-dipping and/or reversal. Nocturnal hypertension is said to be a risk factor for cerebrovascular and cardiovascular events. Globally, the few studies that have been conducted, show varying findings on nocturnal dipping pattern in patients with preeclampsia and none have been from sub-Saharan Africa involving pregnant black women. Preeclampsia remains a leading cause of maternal and perinatal morbidity and mortality, worldwide.

Main Objective: The main objective of this study was to evaluate the circadian rhythm of blood pressure in patients with preeclampsia at UTH, Lusaka. A cross-sectional analytical study was conducted at Mother and Newborn hospital of UTH, Lusaka, Zambia. Convenient and purposive sampling was used for client selection of both preeclampsia and normotensive women. Secca weight scale and Stadiometer were used to collect anthropometric measurements. Questionnaire and Assessment forms were administered for reports on life style. Contec ABPM50 monitor was used to record 24hr BP and heart rate. STATA V14 was used for data analysis. Paired and independent t-tests were used for associations of continuous variables.

Results: Twenty-three (23) women were enrolled with a median age of 28 (range of 19- 42 years). Normotensives were eleven (11) with a gestational age range of 27 to 39 weeks; daytime mean BP was 111.9/62.8 mmHg and nighttime BP was 97.4/55.7 mmHg. Patients with preeclampsia were twelve (12), with a gestational age range of 20 to 40 weeks; daytime mean BP of 134.3/85.7 mmHg and nighttime BP of 137.8/88.2 mmHg. Nocturnal dipping occurred in all normotensives with a statistically significant (P<0.001) dip of 13%. Among patients with preeclampsia, 10/12 (83.3%) were non-dippers (dip of 2.6%) (p>0.05). However, 2 of the 12 patients (16.7%) were dippers (dip > 10%) and had severe proteinuria.

Conclusion: Circadian rhythm of BP is significantly disturbed in preeclampsia with loss of nocturnal dipping pattern in majority of the patients. The loss of nocturnal dipping pattern results from the association of preeclampsia with impaired baroreflex control of BP that decreases BP variability. The preeclampsia patients in whom the dipping pattern was preserved, had severe proteinuria like most of the non-dipper counterparts. There seems to be no direct relationship between dipping pattern and severity of proteinuria in preeclampsia. This finding must be confirmed in larger studies.

Prior-Camp Experiences and Stress Related to Posttraumatic Stress Disorder (PTSD) Among Refugees at Maheba Refugee Settlement.

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ABSTRACT

Background: Traumatic experiences can lead to the development of Post-Traumatic Stress Disorder (PTSD), an anxiety disorder common among victims of trauma, such as refugees. Very few studies have been conducted in Zambia in relation to the link between traumatic experiences and PTSD related symptoms. Therefore, the aim of the study was to find out the experiences of refugees at Maheba Refugee Settlement prior to camp, and subsequent stress and symptoms related to PTSD.

Methods and Material: The study was conducted through quantitative cross-sectional and correlational design in August 2016 on a representative sample of 234 participants refugees at Maheba Refugee Settlement in North-Western province of Zambia. Data was collected through two instruments namely: i) a self-constructed

questionnaire to capture demographical data and traumatic experiences that participants underwent, and ii) a standardised Post Traumatic Symptoms Scale (PTSS) to ascertain the symptoms of Post-Traumatic Stress Disorder (PSTD).

Results: Findings indicate that 66% of participants had experienced physical, emotional, economic and social traumatic events prior to camp, on the PTSS scale 64% of participants had symptoms of PTSD.i) Arousal Symptoms, in which 61% were symptomatic, ii) Avoidance Symptoms with 67% as symptomatic, and iii)Re-experiencing Symptoms were 64% were symptomatic. Further, results reviewed a strong relationship between prior-camp experiences (specifically physical experiences such as sexual abuse, sounds, exposure to dead bodies among others), and symptoms related to PTSD represented by p=0.001.

Conclusion: Most refugees suffer from PTSD among other anxiety disorders. A number of factors, especially man-made factors were attributed to the above development, hence more studies are needed in this area. A strong recommendation is made to all stakeholders involved in the affairs of refugees, to consider a comorbidity of mental health conditions alongside the physical well-being of refugees.

Determinants of Neonatal Outcomes for Preterm infants admitted to Neonatal Intensive Care Unit at Ndola Teaching Hospital in Ndola district, Zambia

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ABSTRACT

Background: Prematurity is one of the leading causes of death in neonates and preterm complications being the leading cause of death and, many survivors face a life time of disability. In Zambia, each year there are 77, 600 preterm births of which 6,800 die due to preterm complications. Neonatal outcomes for preterm infants vary in the world with developed countries having positive outcomes, while Asia and sub-Saharan African countries continue experiencing poor outcomes. The purpose of this study was to identify determinants of preterm infants' survival, survival with lifelong complicationsor death during the neonatal period while being admitted to the neonatal intensive care unit at Ndola Teaching Hospital.

Methodology: Using the quantitative methodology, with a panel longitudinal approach, *this study analysed the determinants of neonatal outcomes for preterm infants from February to June 2019.* Data was analysed using SPSS. Chi-square test used to test association for categorical data. Multivariable multinomial logistic regression used to identify true determinants of neonatal outcomes.

Results: The sample size was 173 and two participants were lost to follow-up. Infants were followed up for a month.108 survived, eight developed complications and 55 died. Findings revealed low apgar score at 1minute, low birth weight, failure to suction, and nursing in an incubator as significant determinants of preterm infants' death. Infants with normal or intermediate apgar scores were less likely (OR=0.170 (95% CI=[0, 0.675]) and 0.053 (95% CI=[1.238, 0.0755]) respectively) to develop complications and less likely ((OR= 0.053, (95% CI= [0.038, 0.19]) and (OR= 0.106, 95% CI= 0.017, 0.741]) respectively) to die within the neonatal period than those with poor apgar score. Preterm infants with a birth weight greater than 1500 grams were less likely (OR= 0.209, 95%CI= [0.059, 0.741]) to die during the neonatal period than those weighing 500 to 1500 grams.

Conclusion: This study revealed service and health related factors as definite determinants of neonatal outcomes for preterm infants, therefore these factors should be considered in the improvement of their survivor.

Break Out 1d: Implementation Science and Health Systems, Health care management and UHC
Moderator: Mrs. Victoria Kalusopa-Mwiinga

Determinants of Alcohol Use Among Pregnant Women at George Health Centre in Lusaka District, Zambia

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ABSTRACT

Background: Alcohol use in pregnancy can lead to several physical, mental and social problems to the unborn baby known as fetal alcohol spectrum disorders (FASDs). The objective of the study was to explore the determinants of alcohol use among pregnant women.

Method: The study adopted a mixed method approach. A cross sectional design recruited 255 pregnant women and qualitative data was collected through focused group discussions from women who gave a history of drinking alcohol. Descriptive and inferential analyses were drawn from quantitative data and thematic analysis was used for qualitative data.

Results: The prevalence of alcohol use was 40.4% (103), using the modified Audit-C (consumption) classification among pregnant was graded as high consumption 17.5%(18) and low consumption 82.5% (85). Significant factors associated with alcohol use included marital status p-value 0.019 [Adjusted Odds Ratio (AOR) 1.679 95% confidence interval (CI) :0.852,3.308], smoking p-value 0.006 [AOR 20.2, 95% CI: 0.010,0.639]. there was reduction of alcohol use among women of high SES (AOR 0.388, 95% CI:0.130,1.159) compared to low SES, and 49.5% among women with one or two pregnancies compared to those with more pregnancies were observed. There were no significant associations on knowledge and SES. Qualitative data analysis showed three themes ;1) type of alcohol rather than the alcoholic content; ii) societal pressure and iii) belief in perceived benefits.

Conclusion: The prevalence rate of alcohol use is higher than previously recorded for the country. There is need for assessment, identification and management of pregnant women attending antenatal care in health facilities. There is greater need for intensifying and contextualizing public health interventions on addressing alcohol effects on pregnancy among women of reproductive age especially those in low SES residents.

Keywords: Alcohol use, prenatal, FASD, culture,

Factors influencing the utilization of female condom among sexually active women in four districts of Zambia.

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ABSTRACT

Background: None or erratic use of female condoms has been seen in Zambia. The main objective of this study was to determine factors influencing the utilization of female condom among sexually active women in Chipata, Chirundu, Lusaka and Sesheke districts of Zambia

Materials and methods: A quantitative cross-sectional survey was conducted in four selected districts in Zambia. 382 female respondents aged 15 to 49 were selected using simple random sampling method. A structured interview schedule was used to collect data and analysed using SPSS version 20.0 computer software statistical package.

Results: The findings revealed that the majority (94.2%) of the respondents were not utilizing female condoms and only a few (5.8%) respondents were using the female condom. Low female condom utilization was associated with lack of partner support, knowledge, attitude, accessibility, availability, source of information and age.

Majority (61%) of the participants didn't have knowledge on how to use the female condom as they had not seen it before.

Discussion: It is evident the utilisation of the female condom is influenced by multiple factors which include lack of partner support, knowledge, attitude, accessibility, availability, source of information and age. Therefore there is need for increased public sensitization via health education to enhance the utilization of the female condom more especially on the benefits. Female condom utilization is a critical element in comprehensive, effective and sustainable approach to sexually transmitted infections/human immunodeficiency virus prevention including protection against unwanted pregnancies.

Conclusion: The FC can be used in contraception, prevention of unwanted pregnancies and sexually transmitted diseases STIs including HIV/AIDS. A better understanding of the importance of the following factors; partner support, knowledge on the FC, attitude towards FC use, availability and accessibility of the FC, source of information about the FC and age of the users of the FC will help health care providers in designing appropriate strategies to improve availability and accessibility of the FC. The effectiveness of the female condom in prevention of unwanted pregnancies and acquiring sexually transmitted infections cannot be over emphasized. Therefore there is need for increased public sensitization via health education to enhance the utilization of the female condom more especially on the benefits.

Recommendation: The family planing providers should enhance the sensitization on the effective use of the female condom and its availability.

Future studies should focus on gender issues and cultural norms which discourage women from using the female condom. In this way women will be empowered to use the female condom as they will realize its role in sexual relationships with their partners.

Keywords: Female condom utilization, prevention of STI, HIV/AIDS,

Piloting Innovative Community Engagement Approaches to curb Antimicrobial Resistance in Selected Communities in Zambia

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ABSTRACT

Background: Globally, antimicrobial resistance (AMR) is one of the biggest public health threats and a major global health security risk. In community and clinical settings the impact of AMR can be quite significant, including causing prolonged morbidity and financial impact. In Zambia, an AMR Multi-sectoral National Action Plan (NAP) was developed in 2017 by Zambia National Public Health Institute (ZNPHI). Using the Responsive Dialogue (RD), a community engagement approach, in this project we seek to improve our understanding of and engagement with antibiotics and AMR, particularly in relation to UTIs; co-creating community-informed solutions and interventions that are policy relevant; and recording the learnings on this pilot implementation and documenting potential best practices in using Rds.

Methods: The project will use the RD framework developed by the Wellcome Trust to facilitate dialogue, learning and solutions in order to enable change in attitudes, behaviours, policies and practices on community use of antimicrobials among women with UTI symptoms. The RD approach consists of a series of events where participants from different communities deliberate and work together to arrive at ideas and solutions. The study will use both quantitative and qualitative methods with a combination of semi-structured questionnaires for individual participants in the study and for focus group discussions (FGD) to facilitate the collection of information.

Conclusion: Quantitative analyses will look at the quantities of antibiotic sold for UTIs without a prescription and the percentage of patients who seek

antibiotics for UTIs, while qualitative analyses will focus on the behaviours and drivers for antibiotic seeking behaviours by patients and pharmacists who sell to them. RD methodology will therefore be used to explore and elicit results that will provide better communication about AMR and interventions.

Contextualization of Early and Enhanced Clinical Exposure Model Through Development of Curricula for Advanced Practice Nursing and Midwifery

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ABSTRACT

Background: The need for Advanced Practice Nurses is increasingly recognized globally. An Advanced Practice Nurse is a generalist or specialized nurse who has acquired advanced skills thorough graduate education with a minimum of master's Degree. This paper describes the process which was undertaken by the University of Zambia-School of Nursing Sciences in reviewing and developing advanced practice nursing and midwifery curricula which are being implemented using the Early and Enhanced Clinical Exposure Model. EECE is a novel model which entails immediate placement of nursing and midwifery masters students and their integration into the clinical area for continued hands on learning throughout the training period.

Materials and Methods: The curricula development/ review process utilized a modified Taba's Model which followed a step by step approach including, 1) desk review, 2) diagnosis of needs (needs assessment), 3) stakeholder consultations, 4) content development, 5) validations and approval from which several lessons were learnt and recommendations made. Findings and recommendations from different stage were used as a basis for reviewing and developing advanced practice nursing and midwifery curricula.

Results: Desk review, needs assessment and stakeholder consultations identified both strengths and weakness in the existing curricula. Major strengths were duration and core courses which met the minimum requirement for postgraduate nursing and midwifery training. Major weakness/gaps included some content which was too basic for masters' level and the delayed exposure to practicum sites which limited development of advanced practice skills. Others were inadequate competences for advanced practice, inadequate research methodology course, lack of content to foster development of personal soft skills and predominant use of traditional teaching methods. Stakeholders recommended implementation of advanced clinical and hands-on Masters of Nursing and Midwifery programmes which resulted into the review of four existing   (MSc Clinical Nursing; Public Health Nursing, Midwifery and Mental Health Nursing, and development of five demand driven curricula (Neonatal, Critical Care, Trauma and Emergency, Oncology Nursing and Palliative Care).

Conclusion: The reviewed and developed curricula were strengthened to close the identified gaps. Both the reviewed and developed curricula will be implemented using the Early and Enhanced Clinical Exposure Framework with a view to produce Advanced Practice Nurses and Midwives who are competent to meet diverse health care needs and contribute to improved patient outcomes.

Keywords: Advanced Practice Nursing/Midwifery; Curricula Development; Early Enhanced Clinical

Abstract Driven Session (10 Minutes presentations 5 minutes Q&A)

Factors Influencing the Involvement in Research of Medical Doctors at The University Teaching Hospitals in Lusaka, Zambia

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ABSTRACT

Introduction: Research is one of the key activities identified by the World Health Organisation to address public health problems[1]. This underscores the need for medical doctors to actively participate in research activities to identify new treatment options and optimise clinical outcomes. Therefore, this study examined medical doctors' involvement in research activities and associated factors at the country's highest Tertiary hospital in Lusaka Zambia, which also serves as a teaching hospital.

Methods: This was a cross-sectional study conducted between November 2021 and February 2022. The study used a previously validated questionnaire which was administered online through Google forms[2]. In addition, the questionnaire was sent out via the Zambia Medical Association network andsocial media platformsto 152 doctors at the University Teaching Hospital. About 73 questionnaires were returned (response rate of 48%).The logistic regression model was used to examine factors associated with medical doctors' participation in research activities.

Results: The study enrolled 73 participants with a median age of 40 years (IQR, 34-47) and median years of service, 12 (IQR, 7-17). The majority 46(63.0%) were males, and 20(27.4%) held consultant positions. Overall, about 24 (32.9%) respondents reported that they were currently participating in research activities. Senior registrars or consultants were more likely to participate in research activities than general medical practitioners or senior resident medical officers (adjusted odds ratios [aOR]=24.91, 95% CI: 1.15-538.71). Similarly, participants who created time for research activities were more likely to participate in research than participants who did not create time (aOR=7.67, 95% CI: 1.21-48.52)

Conclusion: The percentage involvement of medical doctors in research activities is low compared to similar settings. There is an urgent need for policymakers and management to consider setting protected time for medical doctors' research activities, particularly those ranked below senior registrars.

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Perceptions of Nurses at Ndola Teaching Hospital towards Sexual Health Needs of People with Mental Health Problems

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ABSTRACT

Background: Sexual and reproductive health (SRH) is among the fundamental packages of health care, which all clients seeking health care should receive. Thus, it is essential to understand nurses' perceptions towards sexual health needs of people with mental problems because nurses are champions of sexual and reproductive health rights (SRHR) for all. The aim of this study was to explore perceptions of nurses at Ndola Teaching Hospital towards sexual health needs of people with mental health problems.

Methods and Materials: A general descriptive qualitative study design was utilised and data were collected using three focus group discussions (FGDs). Purposive sampling was used to select the 21 nurses who participated in the study. Nine were male, while 12 were female. Each FGD comprised of seven participants. The discussions were audio recorded and transcribed. Thematic analysis was used to analyse the data, and six major themes emerged. Trustworthiness of the study was achieved through maintenance of credibility, transferability, dependability and confirmability.

Results: Six themes emanated from the participants: Physiological interplay among different body systems such as the nervous, endocrine and cardiovascular systems in the regulation of sex; disease process itself as well as effects of psychotropic medication; participant differences in their age, gender, educational level and cultural backgrounds; staff shortages in mental health units and deficient record keeping; social stereotypes and labelling theories. These were mentioned as societal contributions to sexual misdemeanours by people with mental health problems.

Conclusion: Participants acknowledged existence of sexual activity among people with mental health problems and there were diverse negative perceptions. Therefore, mental health specialists equipped with knowledge in SRH should be at the centre of this care provision as well as facilitating advocacy. This would in turn reduce morbidity and mortality from sexually engineered illnesses and conditions among people with mental health problems.

Neurocognitive Deficits Among Adult Road Traffic Accident Victims at The University Teaching Hospital, Lusaka, Zambia.

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ABSTRACT

Introduction: Road traffic accidents (RTAs) are of growing public health importance worldwide contributing significantly to the global disease burden thus public health experts worldwide concede that there is a global epidemic of RTAs. Exposure to RTAs may be associated with changes in brain functioning and cognitive performance.

Objective: This study sought to contribute to the understanding of the neurocognitive deficits among adult victims of RTAs.

Methodology: It is a cross-sectional study (descriptive in nature). Cognitive profiles of the affected participants were assessed by selected tests from the International Neurobehavioral test battery. The quality of life was assessed by application of the World Health Organisation Quality of Life (WHOQOL) questionnaire. The primary data obtained was analysed using descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS).

Results: Twenty-seven (27) RTA victims out of Thirty (30) had executive functioning impairment with a Domain Deficit Score (DDS) of   0.5 and all the RTA victims in the study had speed of information processing impairment with a Domain Deficit Score (DDS) of   0.5. There was no significant statistical gender difference in neurocognitive functioning (Executive functioning F=0.85, P=0.36; Speed of information processing F=0.98, P=0.33). Compromised quality of life among adult victims of road traffic accidents was confirmed (P=0.005).

Conclusion: This study shows an association between RTA and neurocognitive functioning in adult victims. Findings of this study show the presence of neuropsychological impairments in the two domains assessed (executive functioning and speed of information processing). The study indicates that RTA significantly compromises the quality of life.

Keywords: Neuropsychology; Road Traffic Accident; RTA; Neurocognitive functioning; Quality of life; Executive functioning; Speed of information processing

Factors Associated with New-onset Postpartum Hypertension at Women and Newborn Hospital-University Teaching Hospitals and Selected General Hospitals in Lusaka District, Zambia

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ABSTRACT

Background: New-onset postpartum hypertension is a common condition which develops de-novo and is associated with different risk factors. The prevalence is about 45% in some studies done in the sub-Saharan regions. The morbidity, mortality and risk factors associated with new-onset postpartum hypertension is still unknown in Zambia. The aim of the study was to determine the proportion and explore the risk factors associated with new-onset postpartum hypertension in women of childbearing age at Women and Newborn Hospital-University Teaching Hospitals and selected General Hospitals in Lusaka district, Zambia.

Methods: A facility-based case control study that recruited115 cases of participants with new-onset postpartum hypertension and218 participants who were normotensive, were conveniently sampled in the ratio 1 to 2. To determine the association, data was analyzed using frequencies and percentages, chi-square for categorical data, then univariate, bivariateand multivariate logistic regression model were a   P value > 0.05 considered as significant.

Results: The proportion of women who developed new-onset postpartum hypertension was 37.2% of study population. The only significantly associated risk factors to new-onset postpartum hypertension was a high pre-pregnancy body mass index AOR 4.91[95% CI (1.86-13.01); P =0.01], grand multiparity AOR 3.37[95% CI (1.22-9.29); P=0.019] and gestation age < 34 weeks AOR 3.43[95% CI (1.13-10.40); P= 0.029].However moderate pain after delivery was not statistically significantly associated to predispose to new-onset postpartum hypertension AOR 1.81[95% CI (1.05-3.10); P=0.031]

Conclusion: The proportion of women who had developed new-onset postpartum hypertension was high (37.2%). The significantly associated risk factors were a higher pre-pregnancy body mass index and grand multiparity. Therefore, a careful monitoring of blood pressure and early treatment of those with identified risk factors even after delivery should be recommended as well as encouraging women to reduce pre-pregnancy body mass index and avoid been grand multiparous using different family planning methods.

Keywords: New-onsetpostpartum hypertension, body mass index, grand multiparity, gestation age

DAY 2, FRIDAY, 29 JULY 2022

Abstract Driven Session (10 minutes presentation & 5 Minutes Q&A)

Evaluation of an antibody detecting point of care test for diagnosis of *Taenia solium* cysticercosis in a Zambian rural community: A prospective diagnostic accuracy study

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ABSTRACT

Background: The lack of cheap, easy-to-use, rapid diagnostic tests has led to the development of several rapid diagnostic tests for taeniosis and cysticercosis, such as the new prototype two-strip, *Taenia solium* point of care test (TS-POC), developed by the Centers for Disease Control and Prevention (Atlanta, USA) and the Technical University of Munich (Germany). It detects antibodies against taeniosis (TS-POC T) and cysticercosis (TS-POC CC). The objective of this study was to evaluate the performance of the TS POC for taeniosis and cysticercosis diagnosis in a community setting.

Methods: A community-based study was conducted in Sinda district, Eastern Province, Zambia. A sample of 1254 randomly-recruited participants was tested with the TS-POC. All TS-POC test-positive, and 20% of test-negative participants were selected for stool and serum sampling. Reference tests included; recombinant rES33 enzyme-linked immune-electro-transfer blot (rES33 EITB), copro polymerase chain reaction (copro-PCR), and copro antigen enzyme-linked immunosorbent assay (Copro-Ag ELISA) for taeniosis, the lentil-lectin glycoprotein EITB (LLGP EITB), recombinant T24H EITB (rT24H EITB), and the serum B60/158 ELISA (Serum-Ag ELISA) for cysticercosis. Performance characteristics were estimated using a Bayesian approach with probabilistic constraints.

Results: In total, 1254 participants were tested with 1249 giving a valid TS-POC test. Thirteen, tested positive for taeniosis while 1236 tested negative using the TS-POC T. For cysticercosis, 177 tested positive while 1072 tested negative. Based on 161 participants with complete data, the estimated sensitivity and specificity for the TS-POC T test were 38% (95% CI: 5-93%) and 99% (95% CI: 98-100%), respectively. For cysticercosis, based on 255 complete cases, the estimated sensitivity and specificity of the TS-POC CC test were 35% (95% CI: 14-63%) and 87% (95% CI: 83-90%), respectively.

Conclusion: We highlight the challenge of high variability in the number of positive cases detected and discordance of test results among *T. solium* taeniosis reference tests and recommend multi-testing and further investigation on the test combination that gives the best diagnostic performance during diagnostic evaluation. Diagnostic performance needs to be improved potentially by bench marking antigen concentration in the strip against existing cysticercosis tests such as the LLGP and rT24H EITB.

Keywords: Taenia solium, taeniosis, cysticercosis, diagnosis, point-of-care, sensitivity, specificity

Application of Interprofessional Education Model to University Pre-Licensure Health Students in the Management of Chronic Diseases in Zambia

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ABSTRACT

Background: There is evidence that multidisciplinary healthcare teams can provide better quality of care and treatment outcomes compared to that delivered by individuals from a single health discipline. In 2019, the Strengthening Health Professional Workforce Education Programmes for Improved Quality Health Outcomes in Zambia (SHEPIZ) project embarked on, among other aims, developing Inter Professional Education (IPE) in chronic disease management for undergraduate health Disciplines. The intended outcomes were premised on enhancing collaborative practice which could lead to strengthened health systems and optimal health service delivery in Zambia. The purpose of this paper is to present the process of developing and piloting IPE modules on chronic disease management for the undergraduate health professions training in Zambia.

Methods and Materials: Four distinct but interrelated approaches were applied. (1)desk review to identify best practices in IPE focusing on competences, content, training materials, delivery methods, and assessment methods.(2) module development workshopswhich comprised diverse experts with experience in IPE, medical education, general education, and management of chronic diseases.(3) review and validation of modules by experts.(4) piloting and review of the training modules.

Results: The desk review, showed that there were best practices that could be relevant to IPE for undergraduate programmes at UNZA. Best practices identified from the review guided development of seven chronic disease modules which were piloted. The findings from the pilot showed that 74 - 87% (agree or strongly agree) of the students indicated that the module activities promoted interprofessional education.

Conclusion: The process was effective for putting forth an interprofessional training program at the undergraduate level, with the potential to improve quality of care for patients and safety for patients with chronic conditions.

Epstein-Barr Virus, But Not Human Papillomavirus, Is Associated with Preinvasive and Invasive Ocular Surface Squamous neoplasia in Zambian Patients.

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ABSTRACT

***Background*:** The etiopathogenesis of ocular surface squamous neoplasia (OSSN) is not fully understood. We assessed the frequency of oncogenic viruses in OSSN by immunohistochemistry (IHC) and polymerase chain reaction (PCR) for human papillomavirus (HPV), Epstein-Barr virus (EBV), Merkel cell polyomavirus (MCPyV), Kaposi sarcoma virus, and adenovirus. Cases

from Zambia were prospectively enrolled using a cross-sectional study design between November 2017 and March 2020.

Methods: Demographic and clinical data [age, sex, HIV status, antiretroviral therapy (ART) history, CD4 count, plasma viral load] and tumor biopsies were collected from 243 consenting patients. Tumor samples were bisected, and a half was used for DNA isolation, while the other half was formalin-fixed and paraffin-embedded (FFPE) for histopathology analysis. The expressions of latent EBV nuclear antigen 1 (EBNA1), CDKN2A/p16INK4A (p16), and MCPyV large T-antigen (LT) were tested by IHC. Multiplex PCR was used to detect 16 HPV genotypes and four other DNA tumor viruses [Kaposi's sarcoma-associated herpesvirus (KSHV), EBV, MCPyV, and adenovirus]. Relationships between HIV status, viral DNA and protein expression, and tumor grades were determined by statistical analysis.

Results: OSSN tumors from patients were 29.6% preinvasive and 70.4% invasive. Patients presented with unilateral tumors that were 70.4% late stage (T3/T4). OSSN patients were HIV positive (72.8%). IHC on 243 FFPE biopsies resulted in the detection of EBNA1 (EBV), p16 high-risk HPV (HR-HPV), and MCPyV LT expression in 89.0%, 4.9%, and 0.0%, respectively. EBNA1 was expressed in all grades of preinvasive [cornea-conjunctiva intraepithelial neoplasia (CIN)1, 100%; CIN2, 85.7%; CIN3, 95.8%; and carcinoma *in situ* (CIS), 83.8%] and in invasive (89.2%) OSSN. PCR on 178 samples detected EBV, HR-HPV, and MCPyV in 80.3%, 9.0%, and 13.5% of tumors, respectively. EBV was detected in all grades of preinvasive and invasive OSSN. EBV detection was associated with high HIV viral loads (p = 0.022). HR-HPV was detected in 0.0% CIN1, 0.0% CIN2, 5.6% CIN3, 13.0% CIS, and 7.0% invasive OSSN.

Conclusions: Our findings of EBV DNA and EBNA1 protein in all the grades of preinvasive and especially invasive OSSN are consistent with a potential causal role for EBV in OSSN. The role of HPV in OSSN was not clearly established in this study.

Assessment of uterotonic potential of *Gossypium hirsutum* root extracts on isolated rat uterus smooth muscle.

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Abstract

Background: Uterotonic plants are plants that stimulate uterine contraction and are therefore used to assist labor, remove retained placenta, control postpartum bleeding and as an abortifacient. Gossypium is one of the herbal remedies that is said to be uterotonic, there are claims that root extracts can accelerate labor and childbirth, hence folks use it to induce labor. Despite being used to induce labor, the root extracts of *Gossypium hirsutum* were not yet scientifically studied to assess and prove their uterotonic potential. Therefore, this study was conducted to assess the uterotonic potential of *Gossypium hirsutum* root extract on isolated uterine smooth muscle strips.

Methods and material: This was an in vitro experimental study that was conducted using isolated strips of uterine smooth muscles that were mounted in the organ bath, the uterine strips were obtained from healthy female non-pregnant Wistar rats that weighed between 160 and 200g.The sensitivity of the isolated uterine smooth muscle strips were induced by pretreating the Wistar rats with Stilbestrol (0.2 mg/kg Subcutaneous injection) 24 hours before sacrificing them, extraction was done by maceration and Soxhlet apparatus using aqueous, methanol and petroleum ether. Effects of graded doses of the root extracts were tested on the uterus smooth muscle strips mounted in the organ bath, these experiments were done in triplicates, and the contractions produced by each concentration were observed for 5 minutes and the results were recorded using the Lab Tutor.

Results: The results showed that the crude root extracts of *Gossypium hirsutum* have demonstrable uterotonic activity, the aqueous extract was found to be both the most potent and most efficacious solvent extract (EC50 = 7.8×10^{-1} mg/ml and E_{max} = 15.25mN), methanol extract was the second most potent solvent extract (EC50= 8.2×10^{-1} mg/ml) and the least potent was the petroleum ether extract (EC50= 1.1×10^{0} mg/ml).

Conclusion: Using an in-vitro model, our study has provided scientific evidence to support the claim that *Gossypium hirsutum* has uterotonic potential, these results serve as a starting point for the development of an effective and potent uterotonic drug for induction of labor and treatment of postpartum hemorrhage.

Keywords: Phytochemical, potency, efficacy, maceration, extraction, uterotonic

A cadaveric study on the anatomical variations of the accessory pancreatic duct- University Teaching Hospitals- Lusaka, Zambia.

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ABSTRACT

ABBREVIATIONS; APD Accessory Pancreatic Duct, MPD Main Pancreatic Duct, CBD Common Bile Duct
Introduction: The pancreas is a lobulated pinkish tan organ. The lobules form the functional units of exocrine pancreas. The APD is an additional duct lying within the head of the pancreas and function as a second drainage system of the pancreas. There are a number of pancreatic ductal variations. These variations can be of clinical significance. By studying the anatomical variations of the APD, the knowledge obtained will allow practicing surgeons and endoscopists to perform safe operations.

The aim of this study was to explore the anatomical variations of the APD, to determine the course of the APD, to establish the patency of the APD and to study the communicating patterns of the APD.

Materials And Methods: This was a cadaveric descriptive cross-sectional study. The sample size was 53 formalin fixed human pancreases. The study was done at the University Teaching Hospitals, pathology department, Lusaka. Data was analysed using statistical package for social sciences version 22.0 (SPSS). Frequency tables, figures and narratives were used for presentation of data. Mean and standard deviation tests were used for continuous variables.

Results: APD was seen in 49 (98%) and was absent in 1 (2%). A straight course was observed in 26 (52%) and a descending course was seen in 14 (28%) while 8 (16%) had a loop course. Patency was observed in 36 (72%) while 13 (26%) were not patent at the minor duodenal papilla. Communicated of APD with the MPD was observed in 45 (90%). Double communication of the APD with the MPD was observed in 3 (6%) while 1 (2%) showed multiple communication with the MPD. There was no observed communication between the APD and the CBD.

Conclusion: Anatomical variations of the accessory pancreatic duct (APD) are common and the most observed course variation was a straight course. Descending and loop courses were also observed. Overall patency of the accessory pancreatic duct was observed in 72% and these opened at the minor duodenal papilla. Variable Communication patterns of APD with the MPD were observed, ranging from single to multiple communication channels. The results of this study can be used as evidence of these anatomical variations.

Keywords: Cadaveric, Anatomical variations, Accessory pancreatic duct

Enhancing Evidence Based Practice and Critical Thinking Skills of Nursing Students: Lessons from the Review of the Bachelor of Science in Nursing Curriculum of the University of Zambia

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ABSTRACT

Background: Implementation of a successful evidence based practice (EBP) and critical thinking (CT) education is necessary so that from their novice stage, nursing students not only understand their importance and be competent in the fundamental steps, but should ultimately serve to influence behaviour in terms of decision-making, through application of these two competences in their professional practice. Improvements in existing nursing education systems have become necessary to ensure that the present-day and forthcoming generations of nurses can deliver safe, quality, patient-centered care across all settings. EBP and CT competences are an essential process for a safe, efficient and skilful nursing intervention while student cantered learning approach is an effective strategy that enhances learning of these two concepts.

Purpose: To enhance the existing BSc nursing curriculum through integration of EBP, teaching of CT skills, enhancement of students centered teaching/learning approaches in order to improve learning outcomes and ultimately produce a competent and autonomous nurse capable of meeting diverse patient needs.

Materials and Methods: A needs analysis was conducted using a five-phased approach to review the BSc in nursing Curriculum. Kern's six-steps model was adapted and introduced through a series of workshop exercises ,and highlighted the application of each step as follows: (i) Bench marking of the BSc curriculum offered globally, (ii) Administration of the needs assessment tool to key stakeholders, (iii) Strengths, Weakness, Opportunities and Threat analysis (iv) Consultative meeting with major stakeholders and (v) curriculum review.

Results: The bench marking established that globally BSc programs were   of 3 years duration but 4 years regionally and locally. Program evaluation was conducted that lead to course sequencing. The needs assessment survey revealed that the number of courses in relation to the training period were quite many probably due to repetition of some content as well as the inclusion of some "A" level content that was not in tandem with the practice of nurses. Increased competition and changes in clinical placement regulations especially introduction of mandatory clinical placement fees were among the notable threats. Stakeholders validated the gaps and identified best practices from the existing curriculum as well as the discovery of other gaps and best practices including EBP and CT skills. New courses were developed to support students in academic writing and enhance professionalism. EBP and CT were integrated and duration of training was reduced from 5 to 4 years while the number of years for the program were reduced from five years to four years.

Conclusion: The BSc curriculum review was used as a springboard for integrating evidence-based practice and CT skills instruction. The process demonstrated that BSc curriculum review, in fact, could be thoroughly scrutinized to encourage positive changes to the curriculum.

Covid-19 pandemic psychosocial distress and social burdens experienced by cancer patients at cancer diseases hospital Lusaka, Zambia

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Background: Cancer diagnosis has been reported in some studies to have a significant psychosocial impact on both the patients and their caregivers. The estimated prevalence of psychosocial distress is between 35% and 55%. Commonly encountered psychological issues include and not limited to fear, anxiety, and emotions distress. Many sources of emotional distress in patients with cancer during the COVID pandemic have been reported to include poorly controlled symptoms arising from a lack of access to symptom control services and treatment. Social distress associated with social isolation, separation from family and loss of employment. The objective of this study was to explore psychosocial distress and social burdens experienced by cancer patients during Covid 19 pandemic.

Methods: A descriptive phenomenological design was employed which allowed participants describe their "lived experiences" during Covid 19. A total of 20 participants with cancer and Covid 19 positive were purposefully selected and interviewed. Thematic analysis was utilized for data analysis by the use of themes generated from participants' responses.

Findings: Five major themes emerged: fear, self-isolation compliance, anxiety, low income and emotion distress. The findings of the study indicated that participants experienced fear, emotional distress and anxiety when diagnosed with Covid 19.

Conclusion: This study indicates that there are psychosocial distress and social burdens experienced by cancer patients during COVID19. The findings of are based on the data collected from 20 participants. This shows that most participants had experienced anxiety, fear, self-Isolation compliance, low income and emotional distress. It further shows that there was insufficient psychosocial support was given to participant because most of the participants had anxiety, fear, and emotion distress. This study recommends appropriate health education concerning psychosocial support on cancer patient who had been diagnosed with Covid 19.

The limitation in the study was recall bias, since some participants had suffered from Covid 19 months before the study was conducted but it was mitigated by probing questions.

Keywords: Cancer, Covid 19 pandemic, psychosocial distress and social burdens

Onset of menopause and associated problems among women in Lusaka District, Zambia

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Background: Menstrual periods do not normally end suddenly; instead, there is frequently a period of transitional changes before and following the cessation of the period. Women typically endure physiological changes as a result of hormonal fluctuations, which impact their physical, emotional, and quality of life. Therefore, this study explored menopausal associated problems occurring in women residing in Lusaka, Zambia.

Methods: A cross-sectional study was conducted for a period of six months on 171 women aged 40 – 60 years old who were bedsitters for a hospital patient or visited

the hospital. The univariate (unadjusted) and multivariable (adjusted) logistic regression using backwards stepwise analysis was performed to identify factors associated with each of the common problems women face after menopause reporting at 95 % confidence interval (95 % CI).

Results: The study revealed that the average age of menopause onset was 47.43 ± 4.46 years, with 75% of the women experiencing menopause between the ages of 45 and 55. Women complained of back pain (66.1%), headache (45%), hot flushes (30.6%), and mood changes (24.0%). Widowed (AOR 2.94; 95 % CI: 1.24–6.63), obese (AOR 3.19; 95 % CI: 1.16 – 8.73), overweight (AOR 3.91; 95 % CI: 1.31 – 11.73), and early menopausal women (AOR 0.35; 95 % CI: 0.13 – 0.92) were more likely to experience back pain. Headaches were associated with a history of alcohol consumption (AOR 0.41; 95 % CI: 0.18 – 0.95) and the age of the first menstrual period (AOR 0.42; 95 % CI: 0.19 – 0.91). Hot flushes were associated with the age of the first menstrual period (AOR 0.43; 95 % CI: 0.19 – 0.98), educational background (AOR 2.39; 95% CI: 1.06 – 5.39), and age (AOR 0.94; 95 % CI: 0.89 – 1.00). Mood changes were significantly associated with the history of taking cardiac medication (AOR 0.14; 95 % CI: 0.05 – 0.37).

Conclusion: The age of onset of natural menopause was found to be between the ages of 45 and 55, which is similar to the global menopausal range. Women experienced a variety of menopausal and postmenopausal problems like back pain, headache, hot flushes and mood changes.

Receipt of Healthcare Provider's Advice for Smoking Cessation and Quit Attempts in Zambia

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ABSTRACTS

Background: Healthcare providers play a critical role in facilitating smoking cessation, however, despite evidence supporting the effectiveness of brief advice, most healthcare providers rarely advice and assist their patients in quitting smoking. Our study investigated the proportion of smokers in Zambia who receive smoking cessation advice from their healthcare providers; and estimated the prevalence and factors associated with quit attempts in Zambia.

Methods: The cross sectional study included 475 adults current smokers. Quit status, behavior and psychological factors; and clinical characteristics were assessed. Logistic regression was used to obtain unadjusted (UOR) and adjusted odds ratios (AOR) and 95% confidence interval (CI) for the association between various factors and quit attempt status.

Results: Of the 475 current smokers who participated in the STEPS survey, more than half were aged between 18-44 years (63.8%). The majority of the smokers were men (87.2%), rural (70.9%), less educated with no education or less than primary education (42.6%). Among the 387

current smokers who visited a healthcare provider in the past 12 months for any other medical reasons, most were men (87.1%), less educated with no education or less than primary education (42.1%) married/cohabiting (67.5%), and self-employed/formally employed (59.2%. In multivariable analysis, being advised to quit was associated with increased odds of attempting to quit. (OR, 2.84 [1.11-7.25]).

Conclusions: Our findings underscore that few smokers in Zambia are advised to quit smoking during encounters with healthcare providers. The study also found that quit advice offered by healthcare providers was significantly associated with quit attempts of the smoker. There is a need to strengthen smoking cessation policies that encourage routine screening, quit advice, and treatment of smokers so as to reduce tobacco-related comorbidities.

Keywords: Healthcare providers, Quit attempts, Quit advice, Smoking Cessation, Zambia

Uptake of Post-abortion Contraception and Associated Factors at the Women and New-born Hospital, Lusaka-Zambia

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ABSTRACT

Background: Post-abortion family planning/ contraception (PAFP/C) is pivotal for the prevention of unwanted pregnancies and reduction of their complications such as unsafe abortions, maternal morbidity and mortality. Globally, half (85million) of the pregnancies are unplanned and 50% of them end as abortions. Thus, this study assessed the PAFP/C uptake and associated factors among post-abortion care (PAC) service users at the WNH.

Methodology: This was a cross-sectional study. Data was collected using a structured interviewer administered questionnaire from women who accessed the PAC services at the WNH from July 1st 2021 to January 31st 2022. Bivariate analysis, univariate and multivariate logistic regressions were used to evaluate the association between socio-demographic, reproductive and contraceptive characteristics and PAFP/C use. A p-value of < 0.05 at 95% CI was considered statistically significant.

Results: A total of 402 women who received PAC at WNH participated in the study, of which 200 (49.8%) had received PAFP/C and 202 (50.2%) did not. The median age of study participants was 27 years, and interquartile range of 10 years. Sociodemographic factors significantly associated with uptake of PAFP/C included being married [AOR 2.34, 95% CI (1.32, 4.14); p < 0.0001], attaining tertiary education [AOR 8.94, 95% CI (1.51, 52.90); p = 0.016], being employed [AOR 1.93, 95% CI (1.27, 2.92);p = 0.002], living in medium density area [AOR 1.81, 95% CI (1.21, 2.96); p = 0.018]. Reproductive factors such as being primiparous [AOR 3.01, 95% CI (1.48, 6.14); p = 0.002], having one to three live children [AOR 2.04, 95% CI (1.12, 3.74); p = 0.021], planned pregnancy [AOR 1.75, 95% CI (1.15, 2.65); p = 0.009] and unwanted pregnancy being reason for abortion [AOR 2.94, 95% CI (1.47, 5.87); p = 0.002] were significantly associated with PAFP/C uptake. Other associated factors included contraceptive knowledge [AOR 5.77, 95% CI (2.17, 15.34); p < 0.0001], ever used contraceptives [AOR 6.59,95% CI (3.60, 12.06); p < 0.0001], having received PAFP/C counseling [AOR 291.75, 95% CI (39.43, 2158.87); p < 0.0001], wanting to wait to conceive [AOR 2.20,95% CI (1.20, 4.04); p = 0.011] and never wanting to conceive [AOR 3.26, 95% CI (1.31, 8.14); p = 0.011].

Conclusion: Uptake of post-abortion contraception was low. Messages regarding usage of post-abortion contraception should target women who are unmarried, young, have no formal education or less than tertiary education, childless, no prior contraceptive knowledge, never used contraception, want to conceive, with unplanned pregnancy and aborted spontaneously, to increase utilisation of PAFP/C.

Keywords: Post-abortion family planning/contraceptive (PAFP/C) uptake, associated factors, Women and Newborn Hospital.

Factors associated with small placental size at Women and New-born Hospital, Lusaka, Zambia

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ABSTRACT

Introduction: Pregnancy outcome is determined from sociodemographic characteristics to genetic factors of the mother. Low placental size has been identified as a possible cause of adverse neonatal outcomes. Factors predicting low placental weight may be amenable to early and affordable interventions. However, data on these factors is very limited. The aim of this study was to investigate maternal factors associated with placental size of women presenting in labour at Women and New-born Hospital in Lusaka, Zambia.

Method: This study employed a prospective cross-sectional design and enrolled 384 women in labor. Placental weight, diameter, thickness and volume were measured according to standard procedures within 30 minutes after birth. Associations between maternal and fetal factors and the weight of the placenta were evaluated using multivariate linear regression model.

Results: The mean and standard deviation of placental morphometry; weight, diameter, thickness, and volume were 466.9 ± 171.8 g, 16.6 ± 4.8 cm, 1.4 ± 0.8 cm, and 296.5 ± 247.6 cm^3, respectively. Placental morphometry increased significantly with gestation ($p < 0.001$). maternal occupation and number of antenatal visits showed significant increase in placental thickness. ($p < 0.05$). In the pregnant women, factors such as primipara and low BMI were associated with low placental weight, diameter and volume($p < 0.05$)

Conclusion: Low maternal BMI, primiparity and low socio-economic status is associated with low placental size and subsequent poor neonatal outcomes. Targeted interventions such as attaining ideal body mass index, increased antenatal attendance and improved socioeconomic status will improve the placental size and ultimately improved neonatal outcomes.

Keywords: Placental weight, placental, morphology, maternal BMI, gestation

Factors influencing a successful vaginal birth after one caesarean section at selected hospitals in Lusaka, Zambia

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ABSTRACT

Background: Pregnant women with one previous caesarean section (CS) are faced with two delivery options: vaginal birth after caesarean section (VBAC) or elective repeat caesarean section (ERCS). Subsequent CS has an increased risk of both maternal and neonatal morbidity and mortality. Planned VBAC with estimated success rate of 60-80% isclinically safer over ERCS as it limits the rise in caesareanrates. There is no single generalized validated tool to predict success of VBAC. The aim was to explore the factors associated with a successful VBAC among mothers with one previous caesarean section in selected hospitals in Lusaka, Zambia. A cross-sectional study was conducted to identify independent factors associated with significant high odds of a successful VBAC among mothers offered trial of labour (TOL).

Methods and Materials: Convenience sampling was used to enroll two hundred and ninety (290) participants. Using SPSS version 22, bivariate analysis and both univariate and multivariatelogistic regression were used to analyze data. An independent factor associated with successful VBAC and having a p-value of less than 0.05 was considered significant.

Results: Out of 290 mothers enrolled in this study, 236 (81.38%) had a successfull vaginal delivery and 54 (18.62%) failed and proceeded with emergency caesarean section. The key independent predictors of success of VBAC were primary education level (AOR: 2.21, 95% CI: 1.01-4.84), multiparity (AOR: 4.81, 95% CI: 1.16-19.93), prior successful VBAC (AOR: 9.94, 95% CI: 1.29-76.70), inter-delivery interval from primary CS (AOR: 18.54, 95% CI: 5.98-57.48), foetal distress (AOR: 9.33; 95% CI: 2.48-35.08), malpresentation (AOR: 6.13; 95% CI: 1.65-22.70), failed IOL (AOR: 20.52, 95% CI: 3.32-127.03), Bishop score (AOR: 7.06, 95% CI: 1.92-25.97), cervical dilatation (AOR: 11.62, 95% CI: 3.86-35.03), duration of labour (AOR: 20.78, 95% CI: 5.62-76.80), birth weight (AOR: 6.80, 95% CI: 3.33-13.91) and APGAR score (AOR: 28.42, 95% CI: 5.67-142.38).

Conclusion: It could be concluded that a combination of independent sociodemographic and obstetric factors which have significant high odds for good outcome of VBAC could help predict success in a given population and aid in counselling mothers on mode of delivery.

Keywords: caesarean section (CS), vaginal birth after caesarean section (VBAC), elective repeat caesarean section (ERCS), independent factors, predictors of success

The Effects of Fluoxetine in Improving the Neurocognitive Functioning of Children with Attention Deficit Hyperactivity Disorder (ADHD), at the University Teaching Hospital in Lusaka

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ABSTRACT

Background: Deficit Hyperactivity Disorder (ADHD) is a disorder commonly diagnosed in children during the developmental years (Miller D& Blum K, 2008). Stimulants are approved by the Food and Drug Administration (FDA) which is found in the United States of America to treat ADHD in children and adolescents and are considered first-line pharmacological agents in the treatment of ADHD. However, these medicines are highly controlled and are usually imported in Zambia (WHO, 2018). On the Zambian market, stimulants like methylphenidate and methamphetamine are not affordable to most Zambians. In addition to this, these medicines are mostly out of stock or not stocked at all in most places on the Zambian market making it difficult for patients to access them any time they need them even though they have the money (Hechtman L, 2005). The main aim of this study was to find out the effects of fluoxetine in improving the neurocognitive functioning of children with ADHD attending clinics at the University Teaching Hospital (UTH), Department of Psychiatry in Lusaka Zambia. Two specific objectives guided the study: to identify the effects of fluoxetine in improving attention and executive functioning in children with ADHD and to find out the effects of fluoxetine in improving memory in children with ADHD.

Methodology: The study used a causal- comparative study design which is also known as quasi-experimental study design and a purposive sampling method. The

current study was performed on 10 patients meeting DSM-5 criteria for ADHD. All participants were between 7-11years of age. Data was collected through a two-phase approach using the Developmental Neuropsychological Assessment Tool (NEPSY-II). The Participants were assessed using the NEPSY-II assessment instrument before they started taking fluoxetine and 4 weeks after taking fluoxetine. The Developmental Neuropsychological Assessment Tool (NEPSY- II) has various subtests to assess domains of cognition. The domains that were considered in this study were those which get affected when a child has ADHD. These are; memory, attention and executive functioning. To assess attention and executive functioning, the Animal Sorting Test, Design Fluency Test and Clocks Test were used. To assess memory; the List Memory Test and Narrative Memory Test were used. Data was analysed using the Statistical Package for Social Sciences (SPSS) version 21 and the analysis of variance (one-way ANOVA).

Results: The analysis of the results for the second assessment using ANOVA were as follows, at $\alpha = 0.05$, the critical value for an F with d.f. (4, 40) being 2.61, the F ratio is 9.96 and total mean square is 272.18, and total sum of squares being 13337. Since $\alpha = .05$ and d.f. = 4, 40, (we reject H_0 since $F_{4,40}$ 2.61). The computed value of the F statistic is 9.96. There was significant difference in the neurocognitive functioning performance of children with ADHD before and after taking fluoxetine. The assessment results indicated that children with ADHD performed better after taking fluoxetine as compared to before taking fluoxetine. Therefore, the results of this study indicated that the executive functioning, attention and memory of children with ADHD improved after taking fluoxetine. The results from all tests in the second assessment were higher than the results of the first assessment.

Conclusion: The findings from the study suggest that fluoxetine provides a new light and alternative treatment for ADHD.

Exploring Neurocognitive Deficits among Children with Sickle Cell Disease and Its Impact on their Quality of Life at Lusaka's University Teaching Hospital

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ABSTRACT

Background: Sickle Cell Disease (SCD) is a chronic blood disorder that is inherited from the parents' genes. The characteristic features of this disease include a low number of red blood cells (anemia), repeated infections and periodic episodes of pain among others. The red blood cells for children with SCD are hard and sticky, shaped like a sickle and they usually clump together. This makes it difficult for them to move easily through the blood vessels, resulting in blockages of the blood flow. These blockages cause pain and also damage to major organs. In addition, the insufficient flow of blood and oxygen to the brain puts children with SCD at risk of cerebral damage that cause neurocognitive deficits functioning in domains such as memory, attention, abnormal fine motor functioning and executive functioning.

A number of studies conducted focus mainly on the prevalence of neurocognitive deficits among children with SCD whilst very few studies address the correlation between neurocognitive deficits and its impact on the quality of life on children with SCD. The current study therefore, sought to explore neurocognitive deficits among children with SCD; compare neurocognitive deficits among children with SCD and the matched control group in order to understand the impact that neurocognitive deficits have on the quality of life among children with SCD.

Objective: The study sought to explore the neurocognitive deficits among children with SCD and its impact on their quality of their lives.

Methodology: This was a cross-sectional comparative study of thirty (30) children. Fifteen (15) with SCD and a matched control group of fifteen (15) siblings; whose ages ranged from eight (8) to seventeen (17) years. It was carried out at the University Teaching Hospital, Clinic Four in Lusaka, Zambia. Neuropsychological assessment tool (NEPSY II) and Quality of life questionnaire were administered by the researcher to children with SCD and the control group. Data obtained from the neuropsychological assessments was analyzed using the Statistical Package for Social Science (SPSS). Regression analysis was used to evaluate the relationship between the neurocognitive deficits and the quality of life.

Results: The results of the study showed that 50% of children with SCD scored average in clocks and list memory tests while 80% scored below average in the rest of the tests administered. The results indicate that children with SCD have neurocognitive deficits which subsequently impact negatively on their quality of life. This is evident from the results of the Pediatric Quality of Life were the SCD group had a lower mean in all the domains and the overall QOL compared to the control group. The SCD group had low quality of life scoring 10% for very good QOL, 23% for poor QOL and 7% for very poor QOL. While the matched control scored 33% for very good QOL, 13% for good QOL and 3% for average QOL.

Conclusion: The study identified neurocognitive deficits in executive function, attention ad memory among children with SCD. Based on the findings, developmental neuropsychological testing should be done regularly on children with SCD so as to ensure early intervention and management. The findings serve as a foundation and direction for future large-scale research on neurocognitive deficits and quality of life in children with SCD, as well as ensuring that standardized methods are included in standard treatment guidelines.

A Study of Loss to Follow-up among Tuberculosis Patients during COVID-19 pandemic restrictive period at the Chest Clinic, Livingstone Central Hospital, Zambia.

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ABSTRACT

Introduction: The Coronavirus Disease (COVID-19) pandemic has emerged as a global health and economic threat on the health care delivery system. With its severity, hospitals across the globe are creating critical care spaces and limiting patient routine access to care for other diseases like Tuberculosis (TB). This study sought to determine whether COVID-19 pandemic restrictive measures that were introduced in Zambia had an impact on TB patient attendance at Livingstone Central Hospital; Chest Clinic.

Method: Reviewed health records of all TB patients attending Chest clinic between March 2019 to Sept 2019 pre-pandemic and March 2020 to Sept 2020 pandemic period at Livingstone Central Hospital. A data collection form was used to collect socio-demographic and clinical information from TB patient registers and determined whether or not the patient was lost to follow up. Using logistic regression, the odds ratios (OR) and 95% confidence intervals (CI) were calculated in order to ascertain the association between COVID-19 restrictive measures and loss to follow up and attendance for clinical follow up among TB patients.

Results: This study obtained complete information for 115 TB patients from the TB registers in the chest clinic for this period for analysis. Of these 48 (41.7%) initiated treatment during the 2020 COVID-19 restriction period and 67(58.3%) initiated treatment prior to COVID-19 restrictions in 2019. The median age was 34 years [interquartile rage (IQR) 23, 42]. With regard to gender 59(50%) were male and 56(48.7%) were female. The most prevalent associated comorbidity was HIV, 75(65.2%) whereas 40(34.8%) had none. The multivariate analysis showed that new TB patients during the COVID-19 pandemic restrictive period had 10.97 increased odds of being loss to follow-up as compared to prior the pandemic (95% CI: 3.7-32.5, p-value:<0.001).

Of the 75 TB patients with HIV comorbidity, 13(65%) were lost to follow up during COVID-19 restrictive period as compared with 7(35%). Logistic regression analysis revealed that TB patients with HIV as an associated medical condition had 12.9 increased odds of being loss to follow-up during the COVID-19 restrictive period (95% CI:3.1-54.2, p-value= 0.001).

Conclusions and Discussion: This study established that the COVID-19 preventive restrictions among TB patients in general irrespective of HIV status is associated with reduced enrolment or screening in TB care and attendance to scheduled follow up visits at Chest Clinic, Livingstone Central Hospital. Hence, the hospital administration needs to put in place alternative options to mitigate interruptions of essential health care services of significant public health impact.

TB remainsa big threat to Zambian population, following a considerable loss to follow-up of the TB patients during COVID, there is a need to develop an electronic monitoring system for the affected patients, instead of the conventional way of maintaining hard copy records. Furthermore, mobile clinics can be setup with the collaborations with the NGOs and other collaborators and stakeholders, in areas which are most affected by TB (over-populated compounds and socio-economically backward areas), which would even be a means to provide sustainable jobs to healthcare professionals.

Kidney Injury Molecule-1 Predicts Subclinical Acute Kidney Disease Among Adult Persons Living with HIV Initiating Tenofovir Disoproxil Fumarate-Based ART In Zambia

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ABSTRACT

Antiretroviral therapy (ART) has ameliorated and increased the life expectancy of persons living with HIV (PLWH), but not without potentially serious adverse effects. Tenofovir disoproxil fumarate (TDF) can cause nephrotoxicity, manifesting as acute kidney injury (AKI) that may persist after treatment discontinuation. This TDF-associated Nephrotoxicity (TDFAN) mainly occurs within the first three to six months of initiating therapy, and incidence rates range between 1% and 22%, based on the definition. The TDFAN can transcend lifelong kidney-related (chronic kidney disease (CKD) and end-stage kidney disease (ESKD)) and non-kidney related (stroke, myocardial infarction (MI) and other cardiovascular diseases (CVD)) complications whose risk remains accentuated even after discontinuing therapy.

Kidney tubulopathy biomarkers, including kidney injury molecule-1 (KIM-1), retinol-binding protein-4 (RBP-4), interleukin-18 (IL-18), and neutrophil gelatinase-associated lipocalin (NGAL) promised early diagnosis, better classification, and prognostication of TDFAN compared to the creatinine-based methods. However, predicting TDFAN before starting treatment could be better than an early diagnosis, especially in low-to-middle income (LMIC) such as Zambia.

In an article published in Plos One, a cohort of ART naïve Zambian adult PLWH prospectively followed to derive a predictive model for TDFAN within three months of initiating therapy. The TDFAN was defined as meeting any of the following kidney disease (AKD) criteria: 1) An episode of estimated glomerular filtration rate (eGFR)< 60ml/ min/1.73m^2 within three months, 2) reduced eGFR by> 35% within three months or 3) increased serum creatinine by> 50% within three months.

Forty-five participants (22%) developed TDFAN in the 3.4 months of follow-up; baseline serum creatinine, age, baseline eGFR and female sex predicted TDFAN. This study aimed at determining whether the change in KIM-1 and NGAL following two weeks of TDF use could detect subclinical nephrotoxicity before it manifests as TDFAN within three months. It was concluded that KIM-1 detected subclinical nephrotoxicity and improved the prediction of TDFAN.

The prevalence and common clinical features associated with RSV bronchiolitis in hospitalised children less than 2 years old at the university teaching hospital, children's hospital, Lusaka, Zambia

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ABSTRACT

Background: Bronchiolitis is a major cause of hospitalization in children under the age of two, and it occurs primarily in the winter, though it can occur at any time of year. The bulk of the causes are viral, with Respiratory Syncytial Virus being the most common. RSV has been linked to a low fatality rate but a high morbidity rate, which includes severe symptoms and a lengthy hospital stay. The goal of the study was to find out about bronchiolitis trends, the prevalence of RSV bronchiolitis, its clinical features, and the impact on severity and hospital stay.

Methods: A cross-sectional study was done on children less than two years admitted with clinical bronchiolitis to UTHs-CH, Lusaka Zambia.Nasopharyngeal (NP) swabs were collected and samples analyzed by rRT-PCR for RSV. Risk factors and severity of bronchiolitis were determined on admission while length of stay, HIV status and secondary outcome (died, still in hospital, discharged) were determined on day 7 of hospital admission.

Results: We enrolled 181 Children with median age five months. Two-thirds were male and more than 90% had a mother alive. The prevalence of RSV was 25.4% (95% CI; 19.5-32.2). The highest number of patients were in April while the lowest numbers were observed in July in RSV negative and in June for RSV positive. More than two thirds had severe symptoms and congenital heart disease was significantly found to be risk factor for severe symptoms (P value 0.010). No independent clinical features were associated with RSV and no difference was found in severity between RSV positive and RSV negative bronchiolitis. The median length of hospital stay was five days and six days for RSV negative and RSV positive respectively and case fatality rate of RSV bronchiolitis was 2.2%.

Conclusion: The 25.4% laboratory confirmed detection rate for RSV during the study period may be low. Because the samples were taken during the COVID-19 pandemic, interventional measures to combat COVID 19 may have helped to reduce the spread of RSV. Because clinical features of RSV are similar to those of other respiratory viruses, a clinical diagnosis may be impossible, necessitating the use of PCR to confirm the diagnosis.

Keywords: **RSV Bronchiolitis, Prevalence, clinical features, risk factors, severity**

Workplace learning experiences and perceptions of anaesthesia, surgery and obstetrics and Gynaecology registrars in the operating theatres at the University Teaching Hospitals, Lusaka, Zambia.

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ABSTRACT

Introduction: The operating theatre (OT) is a fundamental environment fostering rich, powerful learning experiences for trainees and if not well structured could potentially be a challenging place for learning to occur. The global number and distribution of surgical workforce is insufficient with low-resource setting such as Zambia disproportionately affected posing a major challenge to safer surgical care, training and negates learning experiences. Despite the extensive interest in assessing the registrars' perceptions of teaching and learning in the OT settings elsewhere using various validated tools, there has not been a qualitative study on this subject in this setting. This study aimed to explore factors that either facilitate or inhibit Anaesthesia, Surgery and Obstetrics and Gynaecology trainees' learning experiences in OT settings.

Methods: Thirteen semi-structured interviews were conducted via Zoom among year 2-4 anaesthesia, surgery and obstetrics and gynaecology registrars at the University Teaching Hospitals in Lusaka following ethical approval and informed consent. The tool was developed based on the critical incident technique. Thematic analysis was conducted on the transcribed verbatim using the six steps approach to develop emerging themes.

Results: Four main themes were generated which reflect perceptions of the theatre learning experience of registrars. These are(i) the process of learning in OT-showing the different learning strategies that trainees have adopted (experiential, situated, self-directed); (ii)the role of the supervisor (availability, attributes and feedback); (iii) supportive learning environment which enables positive learning experiences (positive influence from OT stuff); and (iv) non-supportive learning environment indicating a perceived barrier to their learning (limited resources, service provision, burnout).

Discussion: In most settings, learning of medicine has been through apprenticeship however in the recent past the move has been to have competency-based with a core curriculum that has well-defined learning outcomes. Learning new things goes beyond acquiring knowledge but contextualising and application of new knowledge meaning one ought to understand concepts, but a novice is at pains without knowing what to expect. For procedural skills in the OT context which involves human life, patient safety becomes a priority and must be guarded. The variability in the level of supervision from superiors and complexity of the OT cases coupled with the imbalance between service provision and protected learning time affected the trainees' experiences in the OT setting.

Conclusion: Establishing peer support groups which are supported by a supervisor could ensure some clinical competences and confidence are achieved earlier on by trainees; trainers should provide appropriate and timely feedback on which the trainees can reflect and construct new information and feedback should be two-way; and establishing continuous multidisciplinary teambuilding workshops within the OT settings would enhance learning experiences in the short term.

Keywords: Registrars, learning environment, operating theatre, supervision, service provision, protected learning time