ispe International Society for Pharmacoepidemiology

African Regional Interest Group

Virtual Meeting 2021

JUNE 28 - 30

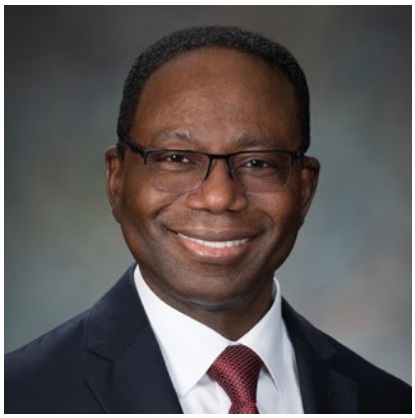
AfRIG2021.org

#AFRIG

@IntPharmacoEpi

Presented in conjunction with MURIA

Welcome to AfRIG



Dr. Kwame Appenteng
Chair, ISPE Africa

Prof. Brian Godman
MURIA

Dr. Olaf Klungel, FISPE
President, ISPE

On behalf of the International Society for Pharmacoepidemiology (ISPE), the Africa Regional Interest Group (AfRIG) and the Medicines Utilizations Research in Africa (MURIA) Group, we welcome you to ISPE AfRIG and MURIA's virtual conference on Pharmacoepidemiology and medicines utilization in Africa.

The conference theme: "Building research capacity in Pharmacoepidemiology for healthcare systems in Africa: *Data Networks and Analytics to Support Patient Care and Medical Products Policy"* is timely given the increasing interest in Pharmacoepidemiology training and research in recent years and propelled by the COVID-19 pandemic. Several African countries are in the process of developing healthcare databases that could potentially be utilized for patient-centered research purposes. Globally, there is growing use of real-world data for health-related research, and for regulatory decision-making regarding the safety and effectiveness of marketed medicinal products and devices. This is therefore an exciting scientific meeting, which draws on the collective knowledge and experience of a multi-disciplinary panel of leading global experts, to share and gain insights into ongoing scientific research in Africa, explore pharmacoepidemiology opportunities for the African continent, and to find avenues for collaborative scientific research work for the benefit of patients in Africa. We hope you enjoy every session of the conference.

AFRIG 2021 Virtual Meeting Scientific Program Committee

Thank you to the AfRIG 2021 Virtual Meeting Planning Committee for their commitment and dedication to developing an outstanding educational program.

Kwame Appenteng (Chair)
Astellas, US

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North-West University (Potchefstroom campus), South Africa

Dan Kajungu
Makerere University Centre for Health and Population Research (MUCHAP), Uganda

Irene Murimi (Co-Chair)
Massachusetts College of Pharmacy and Health Sciences, US

Joseph Fadare
Ekiti State University College of Medicine, Nigeria

Chioma Ejekam
Lagos University Teaching Hospital, Nigeria

Brian Godman
University of Strathclyde, UK

Paul Coplan, FISPE
Medical Device Epidemiology, Johnson & Johnson, US

Daniel Ankrah
Korle-Bu Teaching Hospital, Ghana

Amanj Kurdi
University of Strathclyde, UK

Macarius Donneyong
The Ohio State University, US

Maribel Salas, FISPE
Daiichi Sankyo, US

Ilse Truter, FISPE
Nelson Mandela University, South Africa

Efe Eworuke
US Food and Drug Administration, US

Julius Asubonteng
Gilead Sciences, US

Karen Cohen
University of Cape Town, South Africa

Sylvia Opanga
University of Nairobi (School of Pharmacy), Kenya

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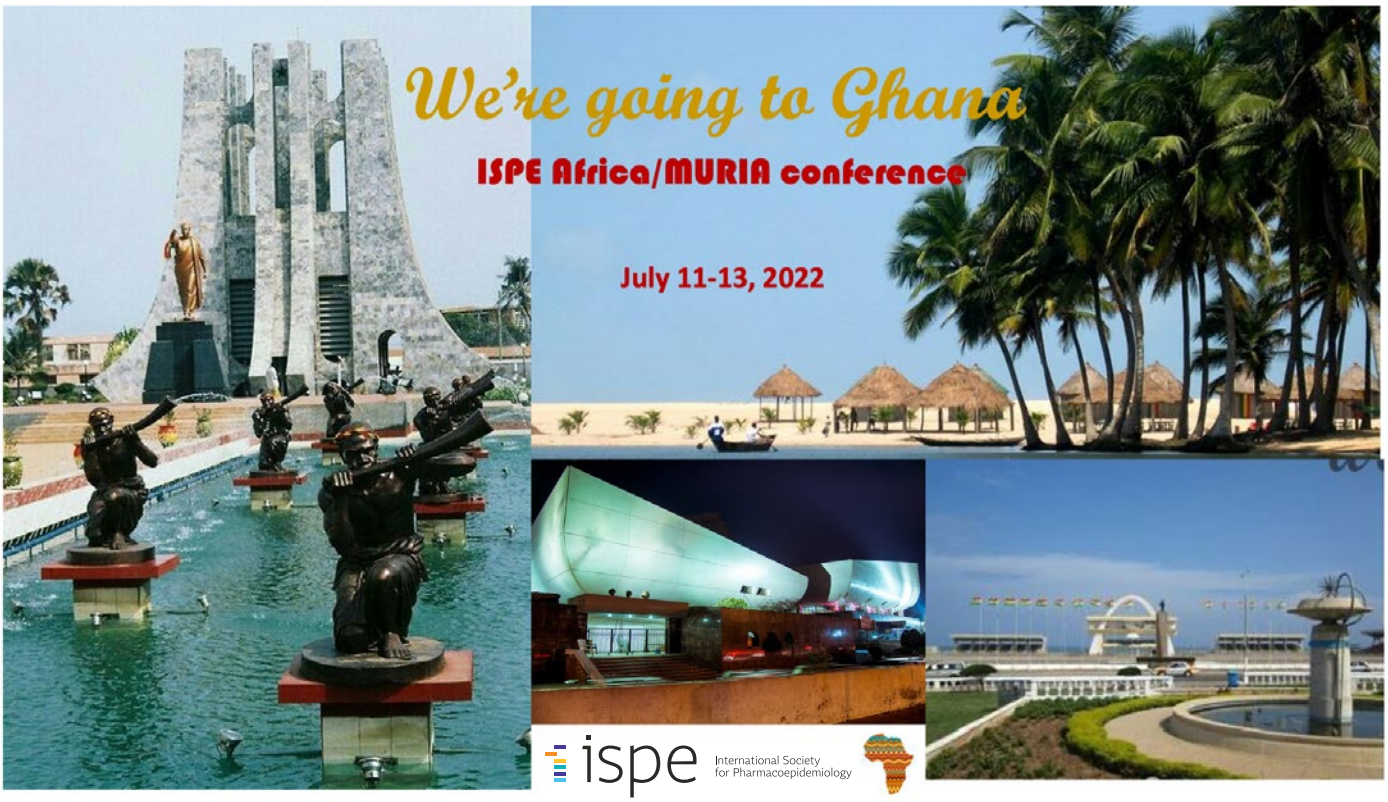


PROGRAM SCHEDULE

Monday, June 28

12:00 PM – 1:30 PM

Keynote: Building Infrastructure for Healthcare Database Research in Africa: The Pan-African Network for Centers for Pharmacoepidemiology and Pharmacovigilance

MODERATOR:
Kwame Appenteng, Astellas

Pharmacoepidemiology: Opportunities for Africa
Brian Strom, FISPE
Chancellor of Rutgers Biomedical and Health Sciences and the Executive Vice President for Health Affairs at Rutgers University, US

The Importance of Health Data Networks in Africa
Solomon Iyasu, FISPE
Merck & Co., Inc., US

The Promise of Health Data Networks for Africa
John Nkengasong
Director, Africa Centres for Disease Control and Prevention (Africa CDC), Ethiopia

How to build Pharmacoepidemiology and Pharmacovigilance Networks? The experience and lessons learned from ENCePP, a research center perspective
Susana Perez-Gutthann, FISPE
RTI Health Solutions, Spain

Towards a Pan-African health data network infrastructure – experience from the European Health Data & Evidence Network (EHDEN)
Nigel Hughes
Scientific Director of Observational Health Data Analytics/ Epidemiology at Janssen Research and Development, US

1:30 PM – 1:45 PM

Break

1:45 PM – 2:45 PM

Training Session: Introduction to Pharmacoepidemiology

MODERATORS:
Macarius Donneyong, The Ohio State University, US
Sylvia Opanga, University of Nairobi, Kenya

Introduction to Pharmacoepidemiology
Stanley Edlavitch, FISPE
University of Missouri School of Medicine, US

Pharmacoepidemiology Study Designs
Arnold Chan, FISPE
National Taiwan University Health Data Research Center, Taiwan

Biostatistical Methods in Pharmacoepidemiology
Efe Eworuke
US Food and Drug Administration, US

Bias and Confounding Including Methods Like Propensity Scores
Olaf Klungel, FISPE
University of Utrecht, Netherlands

2:45 PM – 3:00 PM

Break

3:00 PM – 4:00 PM

CONCURRENT SESSIONS

Training Session: Pharmacoepidemiology in Public Health

MODERATORS:
Irene Murimi-Worstell, Massachusetts College of Pharmacy and Health Sciences
Dan Kajungu, Makerere University Centre for Health and Population Research (MUCHAP), Uganda

Application of Pharmacoepidemiology in Regulatory Work
Adebola Ajao
US Food and Drug Administration, US

Measurement of Treatment Effects Using Real-World Data
Jesper Hallas, FISPE
University of Southern Denmark, Denmark

Application of Pharmacoepidemiology in Clinical Practice
Joseph Fadare
Ekiti State University College of Medicine, Nigeria

PROGRAM SCHEDULE

Oral Session 1

MODERATORS:
Karen Cohen, University of Cape Town, South Africa
Hannes Mouton, University of Cape Town, South Africa

Knowledge, Attitudes, Perspectives, and Practices of Prescribers Towards Antimicrobial Use and Resistance in Three Major Hospitals in Northern Ghana
Cynthia Akumanue
Department of Pharmacy, School of Medicine, University for Development Studies, Tamale, Ghana

Evaluating the Recommendation of Immediate Switching from First- to Second- Line Antiretroviral Therapy Following a First Viral Load Greater than 1000 Copies/ml: An Exploratory Retrospective Study in Namibia
Sackaria Ndevahoma
University of Namibia, Windhoek, Namibia

Assessment of Unsafe Disposal of Unused and Expired Medicines Practices Among Households in Northern Nigeria
Salim Ilyasu
Department of Pharmaceutics and Pharmaceutical Technology, Bayero University, Kano, Nigeria

Antihypertensive Medicine Use Differs Between Ghana and Nigeria
Samantha Hollingworth
University of Queensland, School of Pharmacy, Brisbane, Australia

4:00 PM- 4:05 PM

Closing Remarks

Tuesday, June 29

12:00 PM – 1:30 PM

Progress in Vaccine Development and the Use of RWE In Africa

MODERATOR:
Paul Coplan, FISPE, University of Pennsylvania School of Medicine, US

The East Africa Vaccine Initiative
Ombeva Malande
East Africa Centre for Vaccines and Immunization (ECAVI), Kenya

Lessons Learned in Testing COVID-19 Vaccine Candidates
Glenda Gray
South African Medical Research Council (SAMRC), South Africa

Ebola Vaccine CT Experience in a Conflict Zone
Didier Nzolo,
Unit of Clinical Pharmacology and Pharmacovigilance, University of Kinshasa, DRC

Variants Have Changed the Covid-19 Vaccine Endgame: The Need for Combination Prevention
Salim Abdool Karim
Vice-Chancellor (Research), University of KwaZulu-Natal, Past Chair of the South African Covid-19 Response team, Member of African Task Force for Coronavirus, South Africa

1:30 PM – 1:45 PM

Break

1:45 PM – 3:15 PM

Pharmacovigilance in Africa

MODERATOR:
Maribel Salas, FISPE, Daiichi Sankyo, US

Current Status of Pharmacovigilance in Africa
Alex Dodoo
Ghana Standards Authority, Ghana

Pharmacovigilance Experience in Nigeria
Kazeem Oshikoya
Lagos State University College of Medicine, Nigeria

Development of the Pharmacovigilance System in Kenya
Christabel N. Khaemba
Pharmacy and Poisons Board, Kenya

Pharmacovigilance System in Morocco
Rachida Soulaymani Bencheikh
Centre Anti Poison et de Pharmacovigilance du Maroc Ministry of Health Morocco, Morocco

PROGRAM SCHEDULE

3:15 PM – 3:30 PM

Break

3:30 PM – 4:30 PM

CONCURRENT SESSIONS

Training Session: Pharmacovigilance

MODERATORS:
Ilse Truter, FISPE, Nelson Mandela University, South Africa
Julius Asubonteng, Gilead Sciences, US

Pharmacovigilance: Concepts and Methods on Causality and Signal Detection
Maribel Salas, FISPE
Daiichi Sankyo, US

Pharmacovigilance in Public Health Programmes
Ushma Mehta
School of Public Health and Family Medicine, South Africa

Evaluating Pharmacovigilance Activities Using the WHO Pharmacovigilance Indicators
Chioma Ejekam
Lagos University Teaching Hospital, Nigeria

Oral Session 2

MODERATOR:
Zaituni Mulaa
Amanj Kurdi, University of Strathclyde, Glasgow, UK

Household Access to Non-Communicable Disease Medicines During Universal Healthcare Roll-out in Kenya: A Time Series Analysis
Zana Wangari Kiragu
Boston University School of Public Health, US

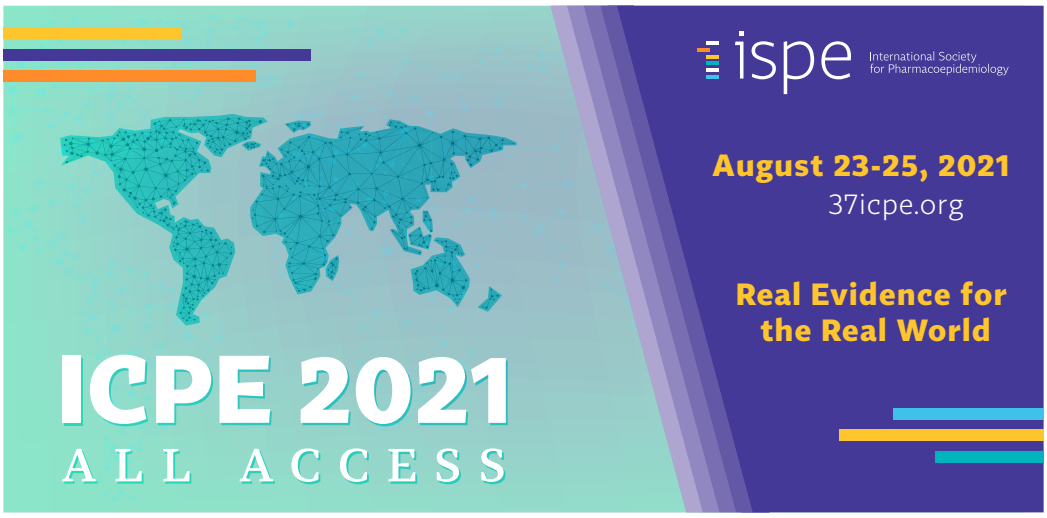
Incidence of Cutaneous Adverse Drug Reactions in Dermatology Clinic of Lagos University Teaching Hospital, Lagos, Nigeria
Anthonia Okosun
West African Postgraduate College of Pharmacist, Nigeria

Adverse Drug Reactions in a South African HIV Clinic Cohort Over a 5-Year Period; Findings and Future Implications
Gabazi PL Nxumalo
Division of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences Univerisity, South Africa

Drug Related Problems Among Patients with Rheumatic Diseases and Connective Tissue Disorders at a Kenyan National Referral Hospital
Sylvia Opanga
School of Pharmacy, University of Nairobi, Kenya

4:30 PM – 4:35 PM

Closing Remarks



PROGRAM SCHEDULE

Wednesday, June 30

12:00 PM – 1:30 PM

Antimicrobial Resistance

MODERATOR:
Brian Godman, University of Strathclyde, Glasgow, UK

Quantifying Antimicrobial Use in LMICs – Prospective Ways Forward
Natalie Schellack
University of Pretoria, South Africa

The Nigerian Experience with Antimicrobial Resistance
Abiodun Egwuenu
Nigeria Center for Disease Control (NCDC), Kenya

Progress with the Kenyan National Action Plan for Antimicrobial Resistance
Dr. Evelyn Wesangula
Ministry of Health in Kenya
Margaret Oluka
University of Nairobi, Kenya

1:30 PM – 1:45 PM

Break

1:45 PM – 2:45 PM

CONCURRENT SESSIONS

Training Session: Drug Utilization Research

MODERATORS:
Johanita Burger, North West University Potchefstroom Campus, South Africa
Francis Kalemeera, Hage Geingob Campus, School of Pharmacy, Namibia

Drug Utilization Metrics That Can Be Applied in Pharmacoepidemiology Research (statistics for drug utilization and pharmacoepidemiology research)
Ilse Truter, FISPE
Nelson Mandela University, South Africa

Methods for Measuring and Assessing Appropriate Medication Use
Lisa Pont, FISPE
University of Technology Sydney, Australia

Drug Utilization Data Collection Methods
Brian Godman, *University of Strathclyde, Glasgow, UK*
Amanj Kurdi , *University of Strathclyde, Glasgow, UK*

Oral Session 3

MODERATORS:
Maelle Dandjinou, Université de Montréal, Canada
Daniel Ankrah, Korle-Bu Teaching Hospital, Ghana

Suboptimal Hepatitis B Vaccination Uptake in High-Risk Healthcare Workers Employed at a South African Tertiary Hospital
Sandra Nhira
Division of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences University, South Africa

Traditional Healers Support Infant Vaccination and Call for Training to Improve their Vaccination-related Advice Given to Clients
Lebogang Chiloane
Division of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences University, Pretoria, South Africa

Availability and Use of Long-Acting Insulin Analogues Across Africa Including Biosimilars; Current Situation and Implications
Brian Godman
Strathclyde Institute of Pharmacy and Biomedical Sciences, Glasgow, UK

Completeness of Pharmaceutical Industry Insulin Adverse Event Reports from Africa and the Middle East
Charity Mlotshwa
North-West University, Potchefstroom, South Africa

2:45 PM – 3:00 PM

Break

3:00 PM – 3:45 PM

Membership Meeting

3:45 PM – 4:00 PM

Closing Remarks

From the day you're born, we never stop taking care of you.

We never stop working to make your life healthier. That's why we're working to fight the COVID-19 pandemic and developing robotics to find and treat cancer. Why we're restoring heart rhythms, relieving depression, controlling HIV and combating multidrug-resistant tuberculosis.

At Johnson & Johnson, we're not just a baby company. We're creating life-saving medicines, vaccines and medical technologies. And partnering with both public and private sectors to make sure everyone has access to care.

Keeping you healthy your whole life is our life's work.

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ORAL ABSTRACTS

Presenting author underlined.

10

Antihypertensive Medicine Use Differs Between Ghana and Nigeria

Samantha Hollingworth[1,2] | Seye Abimbola[3]
Yaa Owusu-Agyeman[4] | Jonathon Zobi[4] | Emily Thatcher[4]

[1]University of Queensland, School of Pharmacy, Brisbane, Australia
[2]Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
[3]University of Sydney, School of Public Health, Sydney, Australia
[4]mPharma, Accra, Ghana

BACKGROUND

Non-communicable diseases are a growing burden in many African countries; cardiovascular disease is prevalent. Antihypertensive medicines (AHM) are a common treatment option but we know little about community use.

OBJECTIVE

To describe AHM use in Ghana and Nigeria using a novel data source.

METHODS

We used data from mPharma – a health and pharmaceutical company who distributes pharmaceuticals to hospital and retail pharmacies. We extracted data using the Anatomical Therapeutic Chemical (ATC) classification codes and calculated use in defined daily doses and explored patterns by class, medicines, dose, and originator or generic product.

RESULTS

AHM use differed between Ghana and Nigeria. The most commonly used classes in Ghana were angiotensin receptor blockers (ARB) followed by calcium channel blockers (CCB) and angiotensin-converting-enzyme inhibitors (ACEi). The five most commonly used products were 16mg candesartan, 30mg nifedipine, 10mg lisinopril, 5mg amlodipine and 50mg losartan. In Nigeria ARB, CCB and diuretics were widely used; the top five products were 50mg losartan, 10mg lisinopril, 30mg nifedipine, 40mg furosemide, and 5mg amlodipine. More originator products were used in Ghana than Nigeria.

CONCLUSION

The differences between Ghana and Nigeria may result from a combination of medical, contextual and policy evidence and reflect factors related to clinical guidance (e.g. standard treatment guidelines), accessibility to prescribers and the role of community pharmacies, and structure of the health system and universal health coverage including funding for medicines. We show the feasibility of using novel data sources to gain insights on medicines use in the community.

15

Drug Related Problems Among Patients with Rheumatic Diseases and Connective Tissue Disorders at a Kenyan National Referral Hospital

Manani Joseph[1] | Sylvia Opanga[1] | Stephen Githinji[2]

[1]School of Pharmacy, University of Nairobi, Nairobi, Kenya
[2]Department of Medical Physiology, School of Medicine, University of Nairobi, Nairobi, Kenya

BACKGROUND

Patients with rheumatic diseases are often on multiple long-term medications predisposing them to drug therapy problems. There is inadequate literature on DRPs among these patients in Africa.

OBJECTIVE

To describe drug related problems and their associated factors among patients attending the rheumatology clinic at Kenyatta National Hospital (KNH).

METHODS

A cross-sectional survey was conducted at the rheumatology clinic and recruited all the eligible patients who consented. The socio-demographic, clinical and laboratory data was collected from the patients' files. Data on DRPs was collected by interviewing patients using the Cipolle and Strand Pharmacotherapy Work Up form. Data analysis was done using STATA version 13.0. Ethical approval was obtained from the University of Nairobi/ KNH Ethics Review Committee.

Presenting author underlined.

RESULTS

88 patients were recruited into the study. The mean age was 44.48±15.89 years. Most participants were female (89.8%). A majority (93.3%) had other comorbidities. Most patients were on disease modifying antirheumatic drugs (83.0%). The prevalence of DRPs was 48.9%. The most common being noncompliance (17%).The odds having a DRP reduced by 0.078 with each year increase in age. Steroid use was significantly associated with 0.122 fold (95% CI=0.016-0.912) reduction in the adjusted odds of developing a DRP (P=0.040); use of NSAIDS was associated with a 6.641 fold (95% CI=1.241-35.540) increase in the adjusted odds of developing a DRP (P=0.027).

CONCLUSION

The prevalence of DTPs was high. Age, duration, severity of disease and the type of medication were significantly associated with the DRPs. These patients require close monitoring to prevent and resolve DRPs.

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Assessment of Unsafe Disposal of Unused and Expired Medicines Practices Among Households in Northern Nigeria

Salim Ilyasu[1,2] | Abubakar Ibrahim Jatau[3]
Basira Kankia Lawal[4] | Ismaeel Yunusa[5]
Abubakar Sadiq Wada[6] | Garba Mohammed Khalid[7]
Mustapha Mohammed[8] | Anas Haruna[9]
Khaulat Zubair Jibril[10] | Sagir Mustapha[11]

[1]Department of Pharmaceutics and Pharmaceutical Technology, Bayero University, Kano, Nigeria
[2]Department of Pharmaceutics and Industrial Pharmacy, Ahmadu Bello University, Zaria, Nigeria
[3]School of Pharmacy and Pharmacology, University of Tasmania, Sandy Bay, Hobart Australia, Australia
[4]Department of Clinical Pharmacy and Pharmacy Management, Kaduna State University, Kaduna, Nigeria.
[5]University of South Carolina, College of Pharmacy, Columbia SC, USA
[6]Department of Pharmacology and Therapeutics, Bayero University, Kano, Nigeria
[7]Department of Pharmaceutical Sciences, University of Milan, Via Giuseppe Colombo 71, Milan, Italy
[8]School of Pharmaceutical Sciences, Universiti Sains Malaysia, 11800, Penang, Pulau Pinang, Malaysia
[9]Department of Pharmaceutical and Medicinal Chemistry, Kaduna State University, Kaduna, Nigeria.
[10]Yusuf Dantsoho Memorial Hospital, Kaduna, Nigeria
[11]Department of Pharmacology, School of Medical Sciences, University Sains Malaysia, Health Campus, 1650, Kota Bharu, Kelantan,, Malaysia

BACKGROUND

Unsafe disposal of unwanted medicines has continued to be a serious concern globally. Data on such disposal practices among households and the availability of national drug disposal programmes are limited in Nigeria. The aim of this study was to assess the practice of unsafe disposal of unused and expired medicines in northern Nigeria.

METHODS

Participants were recruited into the study using an online survey (via Google Forms) and face-to-face interviews. A hyperlink to the online questionnaire was shared with the targeted population through emails and social media platforms.

RESULTS

A total of 319 valid responses were included in the analysis, of which 60.2% reported practising unsafe disposal of unused and expired medications. The most used methods were dustbin (52.6%), burning (10.6%), toilet sink (9.4%), and water drain (9.4%). Frequently involved medicines were analgesics (32.6%), antibiotics (24.4%), and antimalarials (21.7%). Most of the practice resulted from non-adherence (34.9%), self-medication (23.6%), polypharmacy (23.4%), adverse effects (18.1%) and incidental ingestion by children (9.4%). Participants (86.2%) are aware of the health hazards related to the practice, and (95.3%) were willing to comply with a Return of Unused Medicines (RUM) concept.

CONCLUSION

The practice of unsafe disposal of unused and expired medicines is common among the participants. The majority are aware of the health hazards involved and are willing to comply with the RUM concept. Therefore, improved awareness is needed to promote the safe disposal of unused medicines in the community.

ORAL ABSTRACTS

Presenting author underlined.

26

Evaluating the Recommendation of Immediate Switching from First- to Second- Line Antiretroviral Therapy Following a First Viral Load Greater Than 1000 copies/ml: An Exploratory Retrospective Study in Namibia

Francis Kalemeera | Sackaria Ndevahoma
Mwangana Mubita
University of Namibia, Windhoek, Namibia

BACKGROUND

When Efavirenz-based ART was the preferred first-line regimen, the Namibia ART guidelines recommended a set of recommendations before switching to second-ART when the viral load (VL) test at six months post ART initiation was >1000 copies/ml. However, a South-Africa (SA) – based study recommended immediate switching with a VL >1000 copies/ml. We conducted this exploratory study in one health facility to determine if the SA-based study findings and recommendations were applicable to Namibia.

METHODS

This was a case-control study. Cases and controls were patients on second- and first- line ART, respectively. We conducted bivariate analyses, and multivariate analysis to identify factors that were associated with switching to second-line ART. The confidence level was set at 95% and significance at a p-value <0.05.

RESULTS

A total of 183 patients were included: 81 and 102 were cases and controls, respectively. VL tests at six and three months after were implemented for 8.2% (n=15) and 2.7% (n=5) respectively. The predictors of switching were poor adherence (adjusted Hazard Ratio [aHR] = 20.3 (1.9 – 220), p=0.013); a first VL >1000 copies/ml (aHR = 20.2 (7.6 – 53.5), p<0.001); opportunistic infections (aHR = 12.9 (2.1–79.8), p=0.006); male gender (aHR = 5.2 (1.7 – 15.7), p=0.003); and lack of adherence counseling (aHR = 3.8 (1.2 – 12.3), p=0.024).

CONCLUSION

The first VL >1000 copies/ml was an independent factor for switching to second-line ART. New local research is underway, with a large number of patients, to assess whether this finding applies to the DTG-based 1st-line ART.

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Knowledge, Attitudes, Perspectives, and Practices of Prescribers Towards Antimicrobial Use and Resistance in Three Major Hospitals in Northern Ghana

Cynthia Akumanue[1] | Kwame Ohene Buabeng[2]
Cynthia Amaning-Danquah[3]
[1]Department of Pharmacy, School of Medicine,University for Development Studies, Tamale, Ghana
[2]Department of Pharmacy Practice, Faculty of Pharmacy and Pharmaceutical Sciences, College of Health Sciences, Kwame Nkrumah University for Science and Technology, Kumasi, Ghana
[3]Department of Pharmacology, Faculty of Pharmacy and Pharmaceutical Sciences, College of Health Sciences, Kwame Nkrumah University for Science and Technologyence and Technology, Kumasi, Ghana

ABSTRACT

Antimicrobial resistance (AMR) is a menace known to complicate the management of patients with or at risk of infections. The purpose of this study was to assess the Knowledge, Attitudes, Perspectives, and Practices of prescribers and their role in the prevention and containment of antimicrobial resistance in three major hospitals in Northern Ghana. A cross-sectional study was carried out among prescribers in the hospitals in the Tamale Metropolis from May to June 2018. A simple random sampling approach was used to select 102 participants. Data were obtained using self-administered structured questionnaires.

102 respondents completed the questionnaires (response rate of 100%). All 102 respondents recognized antimicrobial resistance as a health problem globally and nationally, while only 27% recognized it as a problem in their own facilities. 97.03% of respondents rightly identified causes of AMR. 97% were aware of appropriate guidelines to support the management of infections and they encourage their colleagues to use them for optimal therapy. All 102 respondents believe that dispensing antibiotics without prescription contributes to AMR and should not be encouraged. 100% think the use of antimicrobial agents in the community must be restricted and highly regulated. 9.8% of the prescribers however reported that they prescribe antibiotics for all patients with fever; only about 7% said they take samples for culture and sensitivity analysis before initiating antimicrobial therapy.

Establishing antimicrobial stewardship programs would be a useful intervention and should emphasize the need for carrying out culture and sensitivity testing.

ORAL ABSTRACTS

Presenting author underlined.

35

Incidence of Cutaneous Adverse Drug Reactions in Dermatology Clinic of Lagos University Teaching Hospital, Lagos, Nigeria.

Anthonia Okosun[1] | Ibrahim Oreagba[2]
Alesha Akinkungbe[3]

[1]West African Postgraduate College of Pharmacist, Lagos, Nigeria
[2]Department of Pharmacology, Therapeutics and Toxicology College of Medicine, University of Lagos ,Idi-araba, Lagos, Nigeria
[3]Department of Dermatology, Lagos University Teaching Hospital, Idi-raba, Lagos, Nigeria

BACKGROUND

Cutaneous adverse drug reactions (CADRs) are the most frequent of all drug reactions and manifest with varied and diverse morphology. Due to their unpredictability and severity, early detection and reporting of suspected causative drug is highly recommended.

OBJECTIVE

To determine the incidence of cutaneous adverse reactions, assess implicated drugs, the pattern and severity and to assess causality using the Naranjo algorithm scale.

METHODS

A retrospective cohort study on CADRs was done at the Dermatology clinic of Lagos University Teaching Hospital Idi-araba Lagos, Nigeria from January 2015 to December 2019. A self structured proforma and Naranjo's adverse drug probability scale were used in obtaining data from patients' case files and were descriptively analyzed.

RESULTS

A total of 12,859 case files were reviewed, 117 of the reviewed cases had CADRs. The incidence of cutaneous adverse drug reactions ranges from 0.8% to 1%. Females were more affected than males. The most common implicated drug were antibiotics and most of the cutaneous adverse drug reactions were presented as rashes and eruptions. Majority of the patients had their skin reactions possibly from drugs.

CONCLUSION

The incidence of cutaneous adverse drug reactions in our study was low and majority were of mild to moderately severity pattern. The most common cutaneous manifestation was rash and eruption. Antibiotics and corticosteroids were the most causative agents. Majority of the CADRs detected were possibly drug related and hence preventable, thus awareness is needed as a timely intervention to limit occurrence and re-occurrence

ORAL ABSTRACTS

Presenting author underlined.

38

Household Access to Non-Communicable Disease Medicines During Universal Healthcare Roll-out in Kenya: A Time Series Analysis

Zana Wangari Kiragu[1] | Peter Rockers[1]
Monica Onyango[1] | John Mungai[2] | John Mboya[2]
Richard Laing[1,3] | Veronika Wirtz[1]

[1]Boston University School of Public Health, Boston, USA
[2]Innovations for Poverty Action, Nairobi, Kenya
[3]University of Western Cape School of Public Health, Cape Town, South Africa

OBJECTIVE

This study aims to describe trends and estimate impact of county-level UHC expansion in Kenya on household availability of NCD medicines, medicine obtainment at public hospitals and proportion of medicines obtained for free.

METHODS

Data from phone surveillance of households in eight Kenyan counties between December 2016 and September 2019 were used. Three primary outcomes related to access were assessed based on patient report: availability of NCD medicines at the household; NCD medicine obtainment at a public hospital versus a different outlet; and NCD medicine obtainment free of cost versus at a non-zero price. Mixed models adjusting for fixed and random effects were used to estimate associations between outcomes of interest and UHC exposure.

RESULTS

197 respondents with UHC were similar on all demographic factors to 415 respondents with no UHC. Private chemists were the most popular place of purchase throughout the study. Adjusting for demographic factors, county and time fixed effects, there was a significant increase in free medicines (aOR 2.55, 95% CI 1.73, 3.76), significant decrease in medicine obtainment at public hospitals (aOR 0.68, 95% CI 0.47, 0.97), and no impact on the availability of NCD medicines in households (aβ -0.004, 95% CI -0.058, 0.050) with UHC.

CONCLUSION

Access to UHC caused a significant increase in free medicines, indicating financial risk protection. Interestingly, this is not accompanied with increases in public hospitals purchases or household availability of NCD medicines, indicating that cost subsidization efforts should be matched with supply-side investments, to facilitate availability of quality-assured medicines.

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Availability and Use of Long-Acting Insulin Analogues Across Africa Including Biosimilars; Current Situation and Implications

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BACKGROUND

Prevalence rates of diabetes mellitus are growing, and likely reach 34.2 million people in sub-Saharan Africa by 2040. This has significant implications on morbidity, mortality, and costs exacerbated by complications. Complications in patients requiring insulins enhanced by hypoglycaemia. Long-acting insulin analogues can reduce hypoglycaemia and improve patient compliance. However, typically appreciably more expensive than other insulins, limiting their listing on national essential medicine lists (EMLs). Biosimilars may help reduce prices and enhance listing.

OBJECTIVE

Assess current listing and funding for insulins including long-acting insulin analogues across Africa.

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METHODS
Mixed methods approach including documentation of utilisation patterns and prices nationally as well as from hospitals, ambulatory care, wholesalers and pharmacies among a range of African countries. Input from senior level government, academic, and healthcare professionals on the current situation with long-acting insulin analogues and potential changes needed to enhance future funding of biosimilar long-acting insulins.

RESULTS
Variable listing of long-acting insulin analogues on national EMLs across Africa due to high prices and issues of affordability. Even when listed in EMLs, utilisation in public healthcare systems is limited due to similar issues including affordability. Appreciably lowering the prices of long-acting insulin analogues via biosimilars should enhance future listing on EMLs and use accompanied by educational and other initiatives. However to date, limited price reductions for biosimilars versus originators across Europe and Asia.

CONCLUSION
There are concerns with funding long-acting insulin analogues across Africa including biosimilars. A number of activities have been identified to improve future listing on EMLs and subsequent use.

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Adverse Drug Reactions in a South African HIV Clinic Cohort Over a 5-Year Period; Findings and Future Implications

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BACKGROUND
Adverse drug reactions (ADRs) contribute to morbidity and mortality, which in many cases are preventable. Pharmacovigilance plays an important role in the detection, assessment and prevention of these ADRs.

OBJECTIVE
This study aimed to ascertain the association of ADRs with antiretroviral and concomitant medicines in a country with high rates of HIV.

METHODS
Retrospective cohort study using data extracted from 595 patient files enrolled on ART, ≥15 years and receiving ART at the facility from April 2013 to December 2018. Bivariate analyses were performed to test for association of factors potentially associated with ADRs. All statistical tests were two-tailed with $p < 0.05$ considered statistically significant.

RESULTS
ADRs were reported in 58.9% (349/595) of the patients. Eighty-seven point five percent (523/595) of the patients were receiving concomitant medicines. A total of 904 ADRs were reported, of which the most common included general body pain (n = 111, 12.0%), headache (n = 82, 8.9%), and facial and oral sores (n = 78, 8.6%). No significant association was found between ADRs and concomitant medicines. A significant association was found between ADRs and CD4+ counts ≤ 350 cells/mm3 ($p<0.015$) and with different age categories ($p<0.001$) with the 10 most prominent ADRs.

CONCLUSION
Special attention should be given to patients with a low CD4+ count and patients older than 30 years, especially in the first 6 months of treatment, as this is the period where patients are most vulnerable to ADRs.

ORAL ABSTRACTS

Presenting author underlined.

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Traditional Healers Support Infant Vaccination and Call for Training to Improve Their Vaccination-Related Advice Given to Clients

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BACKGROUND

Traditional healers (THs) are among the most trusted sources of health-related advice, with 32% of South Africans having trust in THs. Declining infant vaccination coverage suggests declining trust in vaccination.

OBJECTIVE

To explore the perceptions and interests of THs about vaccination and the vaccination-related advice given to their clients.

METHODS

An exploratory qualitative study, using semi-structured in-depth interviews, conducted amongst THs (n=31) in the Tshwane District Municipality, Pretoria. Interviews were voice recorded and transcribed verbatim. Transcripts were imported into NVivo12®, data coded using line-by-line open coding and codes grouped into a framework of themes. Ethical clearance was obtained and participants provided written informed consent.

RESULTS

THs were not knowledgeable about vaccination mechanisms, but understood population benefits of vaccination. Very few THs were against vaccination and allopathic health systems. Most indicated their support of vaccination, recommended vaccination when asked for advice about vaccination and were eager to attend vaccination-related training. Vaccine safety and effectiveness concerns threatened their support of vaccination. THs were interested in collaboration with the allopathic health system, and referred clients to hospitals/clinics for diseases they cannot treat.

CONCLUSION

THs are well placed at primary healthcare level to promote infant vaccination and are eager for training. Training should emphasize vaccine effectiveness and safety, and the benefits of vaccination outweighing the low risks associated with vaccination. This will strengthen their vaccine advocacy, which has the potential to increase infant vaccination coverage. Collaborative partnerships are needed to bridge the gap between THs and allopathic health systems.

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Suboptimal Hepatitis B Vaccination Uptake in High-Risk Healthcare Workers Employed at a South African Tertiary Hospital

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BACKGROUND

Healthcare workers (HCWs) exposed to patients' blood and body fluids are at an increased risk of contracting hepatitis B (HB). Despite the highly effective and safe HB vaccine (HepB) being provided free to HCWs at Dr. George Mukhari Academic Hospital (DGMAH), a 2011 study reported only 38.9% of high-risk HCWs being fully vaccinated (i.e. received three HepB doses).

OBJECTIVE

To determine HepB coverage and investigate reasons for accepting or declining HepB, in HCWs at DGMAH in 2019.

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METHODS
Descriptive quantitative study using a self-administered, anonymous questionnaire, with informed consent provided by completion. All high-risk HCWs were given information and invited to participate. Questionnaires were distributed to the first 500 volunteers, returned in sealed envelopes and collected the following day. Data captured in Microsoft Excel® were imported to SPSS® StatisticsV25.0 for descriptive statistical analysis. Ethics approval and permission from hospital management were obtained.

RESULTS
The response rate was 71.2% (356/500). At least one HepB dose had been received by 74.4% (265/356), while 38.2% (136/356) received all three doses. Unvaccinated HCWs reported lack of information on HepB (39.5% [30/76]) and reasons related to vaccine hesitancy (38.2% [29/76]). Vaccinated HCWs reported the need to protect themselves (84.9% [220/259]); being at risk of exposure (72.6% [188/259]); and the need to protect patients and the community (72.2% [187/259]).

CONCLUSION
A concerted effort to train DGMAH HCWs in the field of vaccinology, to address both lack of information on HepB and vaccine hesitancy, is necessary to improve HepB coverage, which remains low after 8 years.

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Completeness of Pharmaceutical Industry Insulin Adverse Event Reports from Africa and the Middle East

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BACKGROUND
Completeness of individual case safety reports (ICSRs) for insulin is vital for timely identification of safety signals.

OBJECTIVE
To assess the completeness and report completeness-associated variables of pharmaceutical industry insulin ICSRs in Africa and the Middle East.

METHODS
Unique post-marketing insulin ICSRs in the Novo Nordisk® safety database from January to December 2018 were compared using the vigiGrade® completeness score and assessed for associations between case variables (seriousness, reporter type, and source of report) and report completeness.

RESULTS
Overall, 4863 ICSRs were analysed, 59.9% from the Middle East. The mean vigiGrade® score was 0.58. Middle Eastern ICSRs had higher mean scores than African ICSRs (0.65 vs. 0.46; $p<0.001$). Completeness scores peaked at 0.32, 0.70, and 1.00 (Middle East) and 0.35 and 0.50 (Africa). Serious ICSRs achieved higher mean scores than non-serious in the Middle East (0.77 vs. 0.63; $p<0.001$) and Africa (0.47 vs. 0.46; $p=0.14$). Solicited ICSRs achieved higher mean scores than spontaneous in the Middle East (0.70 vs. 0.43; $p<0.001$) and Africa (0.48 vs. 0.42; $p=0.004$). ICSRs from physicians and other HCPs had significantly higher mean scores (0.89 and 0.82) than consumers and pharmacists (0.49 and 0.33) in the Middle East ($p< 0.001$). In Africa, consumer- and pharmacist-reported ICSRs had higher mean scores than physicians and other HCPs reports (0.47, 0.47, 0.39 and, 0.37, respectively; $p<0.001$).

CONCLUSION
Pharmaceutical industry insulin ICSRs completeness and the missing information affecting completeness in Africa and the Middle East differ. Completeness of ICSRs was associated with event seriousness, report source, and reporter type.

POSTER PRESENTATIONS

Presenting author underlined.

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Pattern of Adverse Drug Reactions in Nigerian Children with HIV: Evidence from the Nigerian Pharmacovigilance Centre

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INTRODUCTION

Adverse drug reactions (ADRs) due to antiretroviral therapy are well described in adults, but little is known about ADRs among children on antiretroviral therapy in Nigeria.

OBJECTIVE

To investigate the pattern of adverse drug reactions to antiretroviral therapy reported among children in Nigeria from 2014 to 2018.

METHODS

A retrospective review of individual case safety reports (ICSRs) due to antiretroviral drugs received by the National Pharmacovigilance Centre, Nigeria, of which 85(2.5%) were from paediatric patients. We defined paediatric patients as patients aged less than 15, according to National HIV treatment guidelines. We evaluated ADRs using the WHO System-Organ Classification. We assessed patients' demographic data, suspected drugs, concomitant medicines, seriousness and outcome of ADRs. Data was analysed using descriptive statistics.

RESULTS

The age of cases was 8 ± 4.3 years, with 50 (58%)male cases. Zidovudine and Nevirapine were the commonest drugs reported in 63 (74%) and 67 (79%) cases respectively. Skin disorders (47%), systemic disorders (20%), gastrointestinal disorders, (15.2%) and anaemia (13%) were the common ADRs identified. Concomitant Cotrimoxazole use was identified in 60 (70.5%) cases. Serious ADRs were reported by 4.7% of patients, with one fatal outcome.

CONCLUSION

A wide range of ADRs were observed among children on antiretroviral therapy in Nigeria, with more male cases than females. Our study suggests that skin and appendages disorders are the most frequently reported ADRs among children on ARVs. Given that children are often excluded from clinical trials, there is a need for continuous pharmacovigilance of ARVs in the paediatric population.

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Validity of Pneumonia Severity Assessment Scores in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis

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BACKGROUND

Community-acquired pneumonia (CAP) treatment decisions are often guided by severity assessment scores, such as pneumonia severity index (PSI) and CURB-65. Although widely used, their validity in low- and middle-income countries (LMICs) is not well-defined. We aimed to investigate the available evidence around the validity and performance of the existing scores in adults with CAP in LMICs.

METHODS

Medline, Embase, Cochrane Central Register of Controlled Trials, Scopus, and Web of Science were searched to May 21, 2020. Studies of any design evaluating a pneumonia severity score/tool among adults in LMICs were included. Bivariate random-effects meta-analysis was performed to examine the scores' performance in predicting mortality when at least four studies were identified. Studies' quality was assessed with Quality in Prognosis Studies criteria.

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RESULTS

Of 9,898 records, 11 studies were eligible covering 12 tools. Of these, only CURB-65 and CRB-65 were included in the meta-analysis. Both scores were effective in predicting mortality risk. Performance characteristics (with 95% Confidence intervals) at high (CURB-65 ≥3, CRB-65 ≥3) and intermediate-risk (CURB-65 ≥2, CRB-65 ≥1) cut-offs, respectively, were as follows: for CURB-65, pooled sensitivity, 0.70 (0.25-0.94) and 0.96 (0.49-1.00), and for CRB-65, 0.09 (0.01-0.48) and 0.93 (0.50-0.99); pooled specificity, for CURB-65, 0.90 (0.73-0.96) and 0.64 (0.45-0.79), and for CRB-65, 0.99 (0.95-1.00) and 0.43 (0.24-0.64).

CONCLUSION

CURB-65 and CRB-65 appear to be valid scores for predicting mortality in LMICs. Whilst CURB-65 exhibited better performance in most aspects, CRB-65 may be employed where urea levels are unavailable. Lack of robust evidence regarding other scores, including PSI.

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Comparative Effect of Four Antimalarial Treatments on Haematocrit in Children in Southwest of Nigeria.

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BACKGROUND

Anaemia in malaria has both central (dyserythropoiesis) and peripheral causes (phagocytosis of both infected and uninfected erythrocytes and haemolysis). Some antimalarial drugs also cause intravascular hemolysis leading to anemia. However, it is often difficult to disentangle the anemia effect of malaria from its treatments.

OBJECTIVE

The aim of this study was carried out to compare the change in hematocrit following four antimalarial treatments. .

METHODS

Data were extracted from 313 case record forms of children that met the eligibility criteria aged 3-119 months enrolled in antimalarial clinical trials in Southwest Nigeria between 1998 and 2014. Change in haematocrit level from baseline through 28 days follow up period were compared among children treated with artemether-lumefantrine (82), artovaquone-proguanil (41), artesunate-amodiaquine (156) and chloroquine (34). Repeated measures analysis was done by fitting a general linear model (GLM).

RESULTS

The median age of the study population was 25 months and 54% were males. The mean differences (95% CI) in haematocrit from baseline were 4.7 (95% CI = 3.6, 5.8), 4.4 (95% CI = 2.7, 6.0), 3.8 (95% CI = 3.0, 4.7) and 2.4 (95% CI = 0.5, 4.4), for artemether-lumefantrine, artovaquone-proguanil and artesunate-amodiaquine and Chloroquine, respectively. Using the general lineal model, repeated measure analysis showed that there were significant differences in the mean haematocrit level over the 28-day follow-up among the four treatment groups ($p<0.05$).

CONCLUSION

All children experienced increases in haematocrit after treatment, with artesunate-amodiaquine appearing to result in a greater increase in haematocrit than other antimalarial drugs.

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Liver Enzymes During and After Antimalarial Therapy in Nigerian Children with Uncomplicated Plasmodium Falciparum Infection.

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BACKGROUND

Derangement of liver enzymes could occur during antimalarial treatment and this has been attributed to drug-induced liver toxicity. However, it remains unclear whether these changes in liver enzyme levels persist upon completion of treatment.

OBJECTIVE

This study determines plasma levels of four liver enzymes, in children treated for uncomplicated malaria infection with Artemether-Lumefantrine (AL).

METHODS

We examined the records of 102 children with microscopically-proven uncomplicated P. falciparum infection treated with AL in a clinical trial which involved follow-up visits on days 3, 7, 14, 21, and 28. Data on parasite density and liver enzymes [ALT (U/L), AST (U/L), ALP (U/L) and GGT (U/L)] at baseline, on days 3 and 28 were extracted and compared.

RESULTS

Median age of participants was 25 months (range = 3 to 119), and 49% were male. Mean values of ALT and AST did not change significantly over the course of the 28-day follow-up from baseline (25.8 – 19.1U/L p = 0.098 and 50.4 – 52.2U/L p = 0.1943 respectively). GGT decreased substantially between baseline 17.0 U/L (11.0-22.5) and day 28 15.0U/L (10.5-21.5); p= 0.0010 while ALP increased over time (baseline:305.0U/L(216.0–403.5); day 28: 345.0 U/L (241.0–492.5); p=0.0303. Elevated ALT, AST, ALP and GGT were observed in 8.5%, 20.0%, 20.9%, and 14.8% of participants, respectively.

CONCLUSION

Considerable rise in ALP, suggestive of liver injury occurred during antimalarial treatment among Nigerian children. Further research is needed to identify the underlying mechanism responsible for this drug-induced liver toxicity.

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Assessment of Knowledge Attitude and Practice of Pharmacovigilance by Leaders in Public Health Programs Undertaking Supply Chain Management in Nigeria.

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BACKGROUND

Spontaneous reporting of adverse drug reactions (ADR) is the pharmacovigilance (PV) method practiced in Nigeria. It depends on the awareness, attitude, and voluntary participation of healthcare personnel, patients, and institutions. Challenges including ADR underreporting and data quality management impact timeliness of safety alerts and efficient communication of regulatory actions to stakeholders.

METHODS

A mixed design was used to conduct cross-sectional survey of 209 leaders from public health organizations. Purposive and snowball sampling were used to administer validated semi-structured questionnaires electronically. Questions were based on provisions of the national PV policy.

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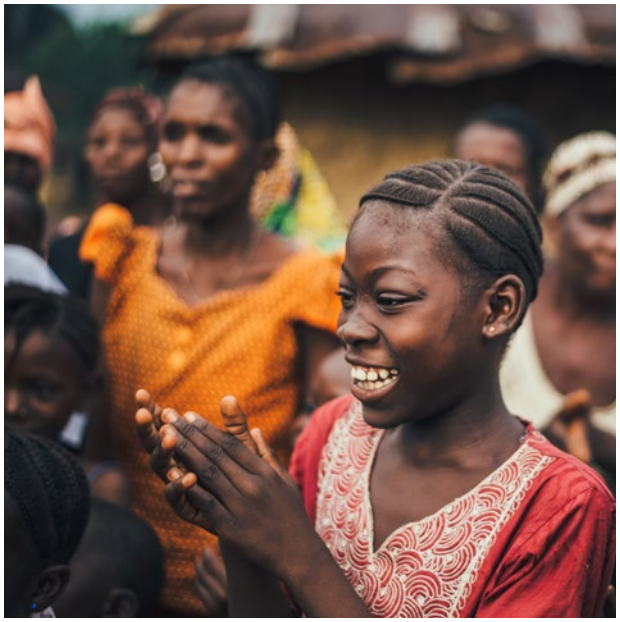
RESULTS

Overall, 55% (n =114) of the population responded. At least 59% (n =67) had both adequate knowledge and positive attitude to PV while 33% (n =38) had adequate practice. Evidently, the correlation between knowledge and practice (OR =6.25; 95% CI; P-value =0.0003) was stronger than between knowledge and attitude (OR =3.72; 95% CI; P-value =0.0011). Factors correlated to practice of PV include awareness of PV policy (OR =1.90; P-value =0.1140), PV training provided by respondents' organizations (OR =1.34; P-value =0.4801), respondents' organization receiving periodic update from the National PV Center-NPC (OR =1.11; P-value =0.8525) and respondents independently receiving periodic update from the NPC (OR =0.83; P-value =0.7279).

CONCLUSION

The study suggests the awareness of PV policy, organizational training of PV, and periodic communication from the NPC improve the leaders' knowledge, attitude, and practice of PV. Hence, these thematic interventions might improve PV outcomes.



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Trends in Antihypertensive Medicines Use in Ghana

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INTRODUCTION

Non-communicable diseases (NCD) are a growing problem in developing countries. Antihypertensive medicines (AHM) are the best treatments at an affordable cost. There are no published studies on AHM use among patients using national data.

OBJECTIVE

To describe the use of AHM in a nationwide dataset of privately insured patients in Ghana.

METHODS

We analysed the claims data for all privately-insured patients in Ghana over three years to 2018.We examined the medicines, class (calcium channel blockers CCB, angiotensin 2 receptor blockers ARBs, angiotensin-converting-enzyme inhibitors ACEi, beta-blockers BB, and diuretics) and dose by time, gender and age, and generic status. We estimate the use in defined daily dose per 1000 population per day.

RESULTS

The most widely prescribed classes of AHM were CCB, ARB and ACEi with little use of diuretics and BB. The five most widely used medicines accounted for 74% of all use: amlodipine followed by nifedipine, losartan, lisinopril, and bendroflumethiazide. Use increased over time and was double in females than males. Most use (73%) of single medicine products was generic but only 39% of all single medicine products were generic based on costs. The most widely used classes were predominantly branded products based on cost.

CONCLUSION

The patterns of use are clinically expected. The Ghana Standard Treatment guidelines are not directive about lines of treatment but there is potential for cost savings with increased use of more cost-effective medicines.

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Drug Therapy Problems Among Patients on Proton Pump Inhibitors in a Kenyan National Referral Hospital

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BACKGROUND

Drug therapy problems (DTPs) are major causes of morbidity, increased cost of health care, and mortality. Proton Pump Inhibitor (PPI) use in hospitals has been increasing over time despite safety concerns.

OBJECTIVE

To identify and describe DTPs associated with PPI use by patients admitted at the medical wards of Kenyatta National Hospital (KNH).

METHODS

A cross sectional study design targeted adult patients admitted in medical wards of KNH. one hundred and seventy six participants were selected. Data was collected through participant interviews and review of medical files. Descriptive and inferential data analysis was done. Chi-square test was used to evaluate association of patient-associated risk factors with occurrence of various types of DTPs.

RESULTS

The mean age of the participants was 43.6 (SD 16.5) years. Majority were male (95, (54.0%).The overall prevalence of DTPs associated with PPI use was 43.2%. Dosage too high was the most common DTP (21.6%), followed by adverse drug reaction (16.5%). Patient related risk factors for developing DTPs were: anaemia, hypertension, cancer, HIV infection and respiratory tract diseases.

CONCLUSION

The prevalence of DTPs was very high, and this warrants extra caution in prescription of PPIs. There is need for strict adherence to guidelines, sensitization of healthcare workers and involvement of clinical pharmacists in PPI use.

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Anticoagulant Use in Pregnancy Among Patients on Ante-Natal Care at a National Referral Hospital in Kenya

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BACKGROUND

Anticoagulants have improved, prevented and treated various conditions, among them thromboembolic disorders in pregnant women, though their use has been associated with adverse effects and teratogenicity in pregnancy. There is limited data on anticoagulant use in pregnancy in Kenya.

OBJECTIVE

To evaluate the patterns of anticoagulant use and treatment outcomes among pregnant women in Kenyatta National Hospital.

METHODS

A retrospective cross sectional study evaluated anticoagulant use in pregnant women attending the antenatal clinic between January 2015 and December 2019. Universal sampling was used to recruit patients and data collected from their files. Data analysis was carried out using SPSS version 20.0. Ethical approval was obtained from the University of Nairobi/Kenyatta National Hospital ethics and review committee.

RESULTS

86 patients' records were eligible from a total of 300 files reviewed. The mean age was 29years (SD 6.655), with the gestational age ranging from 2weeks to 40weeks. 20(23%) patients were treated using anticoagulants in their first trimester, with 27(31%) and 39(46%) receiving anticoagulants in the second and third trimesters respectively. The most common indication for anticoagulant use was treatment of severe left lower limb venous thrombosis (69%, n=59). The most prescribed drug was enoxaparin (50.7% n=75) followed by warfarin (32.4%, n=48) and heparin (16.9%, n=25). Warfarin, enoxaparin and heparin combinations were also used. Most patients experienced symptomatic improvement after treatment (n=74, 85.1%).

CONCLUSION

Left lower limb DVT was the most common indication for anticoagulation therapy with enoxaparin the most commonly used anticoagulant. Treatment outcomes were good, which shows compliance to treatment guidelines.

POSTER PRESENTATIONS

Presenting author underlined.

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Drug Therapy Problems Among Patients with Thyroid Disorders at a National Referral Hospital in Kenya

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BACKGROUND

Patients with thyroid disorders are more likely to present with multiple co-morbidities, necessitating multiple medications. This predisposes them to drug therapy problems (DRPs). There is limited information regarding DRPs in this group of patients. This study aimed to evaluate and characterize various drug therapy problems among these patients in Kenya.

METHODS

A cross-sectional study was conducted among patients at Kenyatta National Hospital (KNH). Simple random sampling was used to recruit patients. Sociodemographic, clinical and laboratory data was extracted using a modified Cipolle and Strand tool, with the same tool used for interviewing patients and classifying DRPs. Data was analyzed using STATA v13.0. Ethical approval was obtained from the University of Nairobi/ Kenyatta National Hospital Ethics and Review committee.

RESULTS

Among the 85 participants recruited, 71 (83%) were females. The mean age was 51.4 years (SD 14.8, 21-83) . Hyperthyroidism was the most prevalent condition (47%). The most common comorbidity was hypertension (36%). The prevalence of DTP was 87%. The most prevalent type of DTP was noncompliance (38%) followed by dosage too low (25%) and need for additional drug therapy (16%). Risk factors for noncompliance to thyroid medication were level of education (p -0.004), income (p -0.030) and type of drugs (p -0.026).

CONCLUSION

Hyperthyroidism was the most prevalent thyroid disease. The prevalence of drug therapy problems among thyroid disease patients in KNH is high, with non-compliance being the most common. Patients need to be closely monitored for the identification and resolution of drug therapy problems.

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Knowledge, Attitude and Practices Towards Antimicrobial Stewardship Among University of Nairobi Undergraduate Students

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BACKGROUND

Antimicrobial stewardship is important in combating antimicrobial resistance. Studies have evaluated the knowledge, attitudes and practice of healthcare workers on antimicrobial resistance and stewardship, with none evaluating this among pharmacy students in Kenya.

OBJECTIVE

To assess on the knowledge, attitude and practices towards antimicrobial stewardship among University of Nairobi undergraduate pharmacy students.

METHODS

A cross-sectional survey was conducted in 2020 among pharmacy students in their clinical years of study, who consented. Well-structured self-administered questionnaire with Likert like responses was used in data collection. The data was analyzed descriptively using SPSS version 26.

RESULTS

Out of 226 pharmacy students eligible to take part in the study, 76.5% (173) were recruited. Only 28.9% of the students were aware of the one health concept and its role in combating AMR. The level of knowledge generally increased with increasing level of study with the students in their final year of study having more confidence scores in their knowledge on antimicrobial stewardship. 90% (156) of the students agreed with each of the five statements assessing on their attitude towards antimicrobial stewardship. Only 8.1% (14) were very confident in participating in clinical ward rounds to review and discuss antimicrobial choices. 34.1% (59) were not confident at all in implementing de-escalation of antibiotics. Majority were not confident in describing and implementing pre-authorization of antimicrobials.

CONCLUSION

There were varying levels of knowledge attitudes and skills regarding several aspects of antimicrobial stewardship, with more senior students scoring higher. Antimicrobial stewardship should be entrenched in the curriculum to improve this.

POSTER PRESENTATIONS

Presenting author underlined.

20

Measuring Medicines Use: Applying ATC/DDD Methodology to Real World Data

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BACKGROUND

Medicines are essential for the treatment of acute, communicable, and non-communicable diseases. The World Health Organization (WHO) developed a toolkit for drug (medicine) utilisation studies to assist in reviewing and evaluating the prescribing, dispensing, and use of medicines. There is a growing need for rigorous studies of medicine use in low and middle-income countries (LMIC) using standard approaches, especially in the context of universal health coverage.

OBJECTIVE

To provide a succinct summary of how to use the WHO Anatomical Therapeutic Chemical (ATC) classification and defined daily dose (DDD) methodology in pharmacoepidemiological studies with a focus on LMIC contexts and being aware of potential language barriers.

METHODS

We extracted information from WHO resources and published literature.

RESULTS

We present examples and case studies in layman's language e.g. the use of combination medicine products.

CONCLUSION

We encourage readers to publish their drug utilisation studies although we caution about predatory journals. We recommend the use of the RECORD-PE initiative which focuses on methods for doing pharmacoepidemiological research and evaluating the quality of published papers.

21

Medicines Use: Better Data, Better Decisions, Better Health Systems, and Better Outcomes

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BACKGROUND

Better data on medicines use can inform better decisions, better health systems, and better patient outcomes. More African studies of medicines use are emerging, especially those using routinely-collected data. Such work is even more pressing given the growing burden of non-communicable diseases (NCD) – where medicines are often the mainstay of treatment – and additional challenges in financing sustainable health systems for universal health coverage and the ongoing COVID-19 pandemic.

OBJECTIVE

To describe how medicines use studies can strengthen health systems (focus on Ghana).

METHODS

We identified sources of data: national health insurance systems (public and private); district level health information systems (DHIMS2); health service and hospital data; together with commercial local, regional, and global data. Data users need to be mindful of appropriate data governance and privacy of patient's records.

Presenting author underlined.

RESULTS & CONCLUSION

1. *Rational Use of Medicines:* Adherence with standard treatment guidelines, treatment pathways, potential cost savings, pharmacovigilance.
2. *Health Technology Assessment:* Key inputs for cost-effectiveness and budget impact analysis of medicines for inclusion within a benefits package.
3. *Patterns of Disease:* Explore prevalence and incidence of disease (especially NCDs) plus comorbidities using medicines use as a proxy for diseases, particularly in the absence of other high-quality epidemiological data.
4. *Health Policy & Monitoring and Evaluation:* Developing essential medicines lists and treatment guidelines; key indicators in M&E of health systems.
5. *Building Research Capacity:* Promoting researchers in pharmacoepidemiology using identified and accessible data sources. Initial steps in Africa can develop with continued training and support.

22

Effectiveness and Safety of Artemether Lumefantrine in Malaria Treatment at a Regional Referral Hospital in Kenya

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BACKGROUND

Malaria is one of the leading causes of death especially in children under the age of 5 years and expectant mothers in Kenya and globally. Prompt diagnosis and treatment with Artemether- Lumefantrine (AL) has reduced the morbidity and mortality. Continuous exposure of the parasites to AL predisposes to resistance. The WHO recommended testing of the efficacy of AL every two years in endemic areas, which has necessitated this study.

OBJECTIVE

To determine the effectiveness and safety of Artemether-Lumefantrine in Bungoma County Referral Hospital in Kenya.

METHOD

Participants on treatment with Artemether-Lumefantrine were randomly selected and followed up using mobile phone calls in a longitudinal study. Any adverse events were recorded. Data was analyzed both descri ptively and inferentially using STATA version 13. Ethical approval was obtained from the University of Nairobi/ Kenyatta National Hospital Ethics and Review Committee.

RESULTS

260 malaria patients participated in the study, of which the majority were female, 53.5%. The age range was 1 month to 61 years and median of 36 months (3years). AL was found to be effective against uncomplicated malaria. AL was generally well tolerated with only 23% of the patients reporting adverse events of which abdominal discomfort (43.3 %, 26), cough (43.3%, 26) and headache (31.7 % ,19) . 5 patients reported blisters on the body, another 5 had swollen abdomen while 2 had yellow skin or blood in urine.

CONCLUSION

AL is safe and effective against uncomplicated malaria in an endemic area in Kenya. The unusual adverse events reported during the study require further investigation.

POSTER PRESENTATIONS

Presenting author underlined.

23

Antibiotic Prescribing in Hospitalized South African Children: A Point Prevalence Survey

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BACKGROUND

An estimated 33% to 78% of hospitalised children are receiving at least one antibiotic globally. Hence a critical need for antimicrobial stewardship programmes (ASPs) to identify feasible targets to monitor and modify prescribing patterns in children.

OBJECTIVE

To quantify antimicrobial usage and identify and classify which antimicrobials are used in public sector hospitals for paediatrics in SA.

METHODS

A point prevalence survey (PPS) design of antimicrobial consumption among 18 public sector hospitals from all nine provinces in SA. Antimicrobial utilisation data was collected for peadiatric inpatients present in the ward at 8:00 on the data collection day, using a web based application. Data from the app fed into MS Excel® then exported to SAS (version 9.4) for analysis.

RESULTS

A total of 1261 paediatric patient files were reviewed, of whom 49.7% (627/1261) received at least one antimicrobial. A total number of 1013 antimicrobials were prescribed. The top three antimicrobials included ampicillin (16, 4%), gentamycin (10.0%) and amoxicillin and enzyme inhibitor (9.6%). The most common infectious conditions were pneumonia (148/1013; 21.3%) and clinical sepsis (111/1013; 16.0%). The highest levels of consumption was reported for Access antibiotics (55.9%, n=566), followed by Watch antibiotics (27.8%; n=282) and lastly Reserve antibiotics (3.1%; n=31). A considerable proportion (13.2%; n=134) of antibiotics could not be classified. Parenteral administration was very common (75.6%). Surgical prophylaxis was more than one day for 66.7%.

CONCLUSION

Antimicrobials are commonly prescribed in the children population, with the beta-lactams and aminoglycosides the ATC classes most prescribed.

24

Evaluation of the Safety Issues Assessed Under Urgent Union Procedure (Article 107i referral) in the European Union (EU)

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OBJECTIVE

To evaluate the safety issues assessed under 107i referral and to identify the regulatory actions taken to prevent these issues.

METHODS

A thorough search was carried out on EMA website from May 2013- Jun 2019, to identify the safety issues assessed under 107i referral and the regulatory actions taken for these issues.

RESULTS

During the assessment period, 8 group of medicines were found to have prominent safety issues that required urgent regulatory action. Of these, the MA of 4 groups of medicines were revoked due to: heart rhythm problems (caused by fenspiride containing medicines), misuse of oral methadone formulations by injecting them into a vein (caused by methadone oral solution containing povidone), severe hypermagnesaemia (caused by Numeta G13% emulsion for infusion) and serious skin reactions (caused by tetrazepam containing medicines). For other 4 groups of medicine, the MA was granted, however the use of aRMMs were recommended. The safety issues associated includes- kidney injury & death when used in critically ill patients and patients with sepsis (associated with HES containing medicines and HES solutions for infusion), liver problems and liver failure (associated with flupirtine containing medicines) and thromboembolism (associated with cyproterone/ethinylestradiol containing medicines).

CONCLUSION

Safety of patients is always of prime importance for the authorities giving approval in the EU. For this purpose, 107i referral is followed for those medicines which require immediate regulatory action. During the study period, recommendation of aRMMs were given to majority of the medicines and complete revocation of MA was followed only when the safety issues could not be managed by aRMMs.

POSTER PRESENTATIONS

Presenting author underlined.

25

Overcoming COVID-19 Vaccine Preferences in Europe: Is the End of the Pandemic Still Foreseeable?

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ABSTRACT

Having a safe and effective vaccine alone do not save lives, it is the vaccination plus other public health measures that control pandemic. With vaccine producers stretched, production and supply chains tested, relying on a single producer alone will prolong the pandemic. Since most of these vaccines available have impeccable results in averting severe covid-19 infection and mortality, it is worth noting that, the best vaccine to safe one's life is the one that reaches him/her in time. As single manufacturer cannot produce nearly 7 billion doses for the single shots or 14 billion doses for ones requiring boosters, showing preferential bias will do more harm than good. Attitudinal change at this stage of the pandemic in overcoming vaccine hesitancy and heeding to other public health measures is crucial for effective control. The main aim of this paper is therefore to collate the available information on the vaccines uptake and to draw the public's attention to the need to reduce vaccine bias. Compared to previous prospective study on the wiliness to receive COVID-19 vaccine in the region (75%), we observed a significantly lower vaccine uptake with regards to the vaccine doses delivered in the present study (average at 62.678 +/- 3.928%). This finding is statistically significant ($p < 0.05$, CI = 95%). However, this was much higher for Oxford-AstraZeneca vaccines (50.927 +/- 4.626 %) compared to Pfizer-Biontech vaccine (86.285 +/- 2.1052 %). Public education is critical to enhance uptake for effective control of the COVID-19 pandemic.

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Stock Visibility System Knowledge, Attitudes and Practices by Healthcare Professionals in the Umgungundlovu Health District of Kwazulu-Natal

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BACKGROUND

The South African National Department of Health introduced the Stock Visibility System (SVS) for surveillance of medicines in primary health care facilities. Despite the implementation of SVS, there exists a high number of medicine stock-outs in the uMgungundlovu District.

OBJECTIVE

The objectives of the study were to assess the knowledge, attitudes and practices of healthcare professionals on the use of the SVS.

METHODS

A descriptive study using a structured self-administered questionnaire was conducted on 206 HCPs at 21 randomly selected PHC facilities. Data were collected over two weeks and were captured using Microsoft ExcelTM and imported to the Statistical Package for the Social Sciences, version 26 for descriptive statistical analysis. Participants provided informed consent; ethics approval and permission to conduct the study at the facilities were obtained.

RESULTS

All (206) questionnaires that were distributed were returned complete. Most of the participants were employed as Professional nurses (46.1% [95/206]); had two years' experience on SVS (37.4% [77/206]) and were trained on SVS. Also, most of the participants (65.1% [134/206]) had positive attitudes, good knowledge (59.5% [123/206]) and good practices (54.6% [112/206]) regarding SVS. A majority of participants (91.7% [189/206]) knew that SVS allows for the redistribution of stock between facilities. Most of the participants (74.3 % [153/206]) believed that SVS improves stock management and (74.8% [154]) submit SVS reports weekly.

CONCLUSION

HCPs in the uMgungundlovu Health District in KwaZulu-Natal had positive attitudes toward SVS. Although the knowledge and practices on the SVS were good, the scores were not exceptional.

POSTER PRESENTATIONS

Presenting author underlined.

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Antimicrobial-Associated Organ Injury Among the Older Adults: A Systematic Review and Meta-Analysis.

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BACKGROUND

Older adults (65 years and above) constitute the fastest growing population cohort in the western world. There is increasing evidence that the burden of infections disproportionately affects older adults, and hence this vulnerable population is frequently exposed to antimicrobials. There is currently no systematic review summarising the evidence for organ injury risk among older adults following antimicrobial exposure. This systematic review and meta-analysis examined the relationship between antimicrobial exposure and organ injury in older adults.

METHODS

We searched for Psych INFO, PubMed, and EMBASE databases for relevant articles using MeSH terms where applicable. After removing duplicates, articles were screened for inclusion into the study by two reviewers. The Newcastle-Ottawa scale was used to assess the risk of bias for cohort and case-control studies. The Cochrane collaboration's tool for risk of bias was used to assess the risk of bias for randomised control trials. We explored the heterogeneity of the included studies using the Q test and I2 test and the publication bias using the funnel plot and Egger's test.

RESULTS

The overall absolute risks of acute kidney injury among older adults prescribed aminoglycosides and glycopeptide were 15.1% and 19.1%, respectively. Only 3 studies reported antimicrobial associated drug-induced liver injury. The funnel plot and Egger's tests did not indicate evidence of publication bias.

CONCLUSION

Older adults have a significantly higher risk of sustaining acute kidney injury when compared to the general adult population. Older adults prescribed aminoglycosides have a similar risk of acute kidney injury to the general adult population.

32

Antimicrobial Stewardship Activities in Public Healthcare Facilities in South Africa: A Need for Surveillance, Audit and Feedback

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BACKGROUND

"Optimise surveillance and early detection of AMR to enable reporting of local, regional and national resistance patterns to optimise empiric and targeted antibiotic choice," is a strategic objective of South Africa's Antimicrobial Resistance National Strategy.

OBJECTIVE

To explore challenges of current antimicrobial stewardship (AMS) activities and possible factors which might hinder the implementation, success and sustainability of these activities.

METHODS

Two-phased sequential mixed-methods study conducted amongst 18 community health centres, 10 referral- and 9 national central hospitals. Phase 1: Descriptive design with a self-administered questionnaire completed by one healthcare professional (HCPs) involved in AMS per facility. Phase 1 results informed Phase 2 (qualitative methodology): Ten focus group discussions; two in-depth interviews with HCPs. Discussions were recorded, transcribed verbatim, coded and analysed thematically.

Presenting author underlined.

RESULTS

Phase 1: 70.3% (n=26) response rate. Ten facilities (38.5%) undertook audits and 16 (61.5%) monitored antimicrobial consumption, using defined daily doses or duration of therapy. Only 41.2% (n=17) of facilities regularly reviewed and audited the choice and duration of antimicrobials for surgical prophylaxis. A microbiologist was accessible in 14 facilities (53.8%); however, only 11 (42.3%) received antibiograms on most common resistant organisms. Phase 2: Challenges to audit and feedback emerged as a theme, underpinned by lack of cultures taken, indications omitted for antimicrobial prescribing, not everyone acquiescent, lack of microbiology support and human resource constraints, negatively impacting surveillance.

CONCLUSION

Prescribing according to guidelines should be audited to address prescribing behaviour. Regular and constructive feedback will facilitate understanding of the reasoning for surveillance and regular audits.

33

The Role of the Pharmacist in Antiretroviral Stewardship in an Academic Hospital

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INTRODUCTION

Antiretroviral therapy (ART) is a noteworthy achievement and key to combat HIV. Studies showed positive outcomes, with regards to pharmacists implementing ART-stewardship-related interventions. South Africa has a proliferating ART programme roll-out and records large numbers of HIV-infected survivors. ART-stewardship promotes safe and effective ARV use, preventing treatment interruptions, drug-drug interactions, and major side-effects. Prophylactic treatment, to prevent opportunistic infections, is included in ARV stewardship. This study explored the role of clinical pharmacists in ART-stewardship.

METHODS

HIV infected patients on ART (>18 years), admitted to the internal medicine wards of an Academic Hospital, were included. Patient files were used to collect data on an ARV-stewardship assessment tool (ASAT). The appropriateness of patients' current ART-regimes and dosing were compared to South African guidelines. Drug-drug interactions were determined, using the HIV drug-drug interaction calculator of Liverpool University. The interventions identified described the role of clinical pharmacists in ARV-stewardship.

RESULTS

Thirty patient-cases were reviewed over a three month period. From these, 26 (86.7%) required intervention, amounting to 44 interventions (1.26 per patient). The majority of interventions included lack of immunological testing (27.3%), prophylactic treatment (20.5%) and treatment regimen specification (18.2%). Other interventions included non-adherence (11.4%), unnecessary treatment interruption (6.8%), drug-drug interactions (6.8%), and major side effects (4.5%). Findings are indicative of possible interventions and the role clinical pharmacists can play in ARV-stewardship.

CONCLUSION

Clinical pharmacists as part of the interdisciplinary care team of HIV-infected individuals, have the ability to identify interventions needed to be implemented in order to contribute to ART stewardship.

POSTER PRESENTATIONS

Presenting author underlined.

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Assessment of Prescribers Adherence to Pneumonia Guidelines and its Determinants in an Ambulatory Care Clinic in Ghana: Findings and Implications for the Future

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BACKGROUND

Adherence to standard treatment guidelines (STGs) is seen as a pragmatic way to measure and improve the quality of future prescribing in ambulatory care to reduce morbidity, mortality and healthcare costs. The objectives of this study were to evaluate adherence to the Ghana STGs for the empiric antibiotic treatment of ambulatory community acquired pneumonia (CAP) in a region in Ghana and factors associated with it.

METHODS

A retrospective cross-sectional survey was conducted using a checklist to collect data from the hospital electronic database of all ambulatory patients managed for CAP from September 2018 to January 2019 who attended Keta Municipal Hospital, a primary healthcare facility. The data included socio-demographic details, payment type and clinical information. Prescriptions were assessed for adherence to the Ghana STG based on choice of antibiotics. A chi square test, Fisher exact test and multiple logistic regression were subsequently conducted.

RESULTS

A total of 1929 CAP patients were identified. The overall rate of adherence to the Ghana STG was 32.50% (n=627). Among our study participants, 62.50% were female, 41.84% were children (0 – 12 years), and 97.15% had a valid national health insurance status. Adherence was associated with the number of antibiotics prescribed, previous exposure to antibiotics, and some patients' clinical characteristics documented.

CONCLUSION

The rate of adherence to Ghana STG on ambulatory pneumonia management concerning the choice of antibiotics among the study population was sub-optimal. Efforts must be made to train and encourage prescribers to follow empiric guidelines to reduce inappropriate selection of antibiotics in resource-poor settings.

37

Trends in Output of Research in Clinical Prediction Models of Stroke Outcomes: A Bibliometric Analysis

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INTRODUCTION

Clinical models have been reported to predict stroke outcomes and, thus, significantly guide clinical decisions. This study aimed to describe the trends of research outputs in the field of clinical prediction models of stroke outcomes using bibliometric analysis.

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METHODS
A bibliometric analysis of publications in clinical prediction models of stroke outcomes indexed in the Scopus database was conducted to include publications from 2010 to 2019. We extracted the bibliographic information of the research outputs, including journals, authors, institutions, countries, citations, and journal metrics. The data obtained were analyzed descriptively. Mapping analyses were conducted using VOSviewer and presented as visualization network maps.

RESULTS
A total of 6,364 relevant publications in the field of clinical prediction models of stroke outcomes were identified. 'Stroke' was the most productive journal consisting of 679 articles and 20,385 citations. The most influential publications were from Lip et al. (2010). Also, Lip Gregory topped the list of most productive authors (78 articles, 8866 citations). The USA and China are the countries that dominate research productivity. Furthermore, Massachusetts General Hospital, USA, was the most productive institution (177 articles, 8843 citations)

CONCLUSION
Our study showed an exponential increase in research activities in the field of prediction models of stroke outcomes since 2010. The bulk of the publications are published in high-quality stroke-related journals and by high-income countries. More efforts are necessary to reinforce the research capacity in the field by developing more collaborative networks.

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Investigation of Analgesic Prescribing in a Private Healthcare Setting in South Africa During 2018

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BACKGROUND
Review of analgesic prescribing trends may provide useful information to cultivate improved pharmaceutical pain management.

OBJECTIVE
To analyse analgesic utilisation, particularly opioids, in South Africa.

METHODS
A cross-sectional retrospective drug utilisation study was conducted using a South African medical aid administrator database for 2018. Prescription records were extracted using the MIMS classification system. Patients 65 years and older were identified for further analysis, as the potential for co-morbidities and opioid side effects (like constipation) increases with increase in age. Microsoft Excel® 2010 was used for basic descriptive statistics.

RESULTS
Of the 300,942 analgesic products dispensed to 72,081 patients, 59.54% were opioid-containing analgesic products and 26.75% were paracetamol/codeine combinations. Paracetamol, excluding its use in combinations, was the analgesic most frequently dispensed (29.80%; n=89,670). Almost half (45.87%; n=82,199) of the analgesics available without a prescription (over-the-counter) were opioid-containing analgesics; nearly 70% of those contained codeine. Apart from paracetamol, caffeine and meprobamate were frequently prescribed in combination with codeine. The median age of those who received opioid-containing analgesics were 40 years (IQR=26-49). The database contained predominantly males, therefore, the majority (65.98%) of the opioid-containing analgesics were dispensed to males. Patients 65 years and older (n=43) who were commonly prescribed opioids were frequently on anti-rheumatic agents (12.35%), ACE inhibitors (7.68%) and thyroid therapy (7.36%). Only 10 patients received constipation-relieving drugs.

CONCLUSION
Analgesics most frequently utilised were paracetamol as a single ingredient and the codeine/paracetamol combination. Future studies should establish clinical indication of analgesic use to evaluate appropriateness of treatment.

POSTER PRESENTATIONS

Presenting author underlined.

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Influenza Vaccines Unavailable to South African Healthcare Workers Caring for the Elderly

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BACKGROUND

Vaccination of healthcare workers (HCWs) against influenza is vital for influenza infection control in healthcare settings, where high-risk patients such as the elderly are frequently exposed to HCWs. However, there are limited data on influenza vaccination uptake by HCWs caring for the elderly.

OBJECTIVE

To investigate influenza vaccination uptake and reasons for vaccination decisions amongst HCWs caring for the South African elderly.

METHODS

A descriptive study across all nine South African provinces. A self-administered structured questionnaire was completed by 360 HCWs at 18 community health centres and 27 public- and private sector old age homes. Data were captured using Microsoft Excel® and imported to Epi Info™ 7 for descriptive statistical analysis. Ethics approval and permission to conduct the study at the facilities were obtained. All participants provided informed consent.

RESULTS

The response rate was 76.7% (276/360). Although 61.2% (169/276) of respondents received at least one dose of influenza vaccine prior to 2018, influenza vaccination uptake for 2018 was 33.3% (92/276). Of those not vaccinated in 2018, the main reason was stock unavailability at their facilities (42.39% [78/184]), while 33.15% (61/184) reported reasons related to vaccine hesitancy (i.e. the delay or refusal of an available vaccine) and 24.46% (45/184) stated that the influenza vaccine was not offered to them by their employer.

CONCLUSION

Influenza vaccination uptake by HCWs caring for the elderly was sub-optimal. The unavailability of the vaccine was the main reason for non-vaccination. Interventions that will increase influenza vaccine access and acceptance amongst HCWs are required.

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Antimicrobial Prescribing Patterns Among Children and Adolescents Receiving Cancer Chemotherapy in the Private Health Sector of South Africa

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BACKGROUND

Treatment modalities used in the management of children with cancer compromise their immunity, predisposing them to several infectious episodes requiring the use of antimicrobial agents. There is however a paucity of information on the antimicrobial prescribing patterns among these patients.

Presenting author underlined.

OBJECTIVE
This study aimed at investigating the antimicrobial prescribing patterns among patients aged younger than 19 years diagnosed with, and on treatment for, cancer in a section of the South African private health sector.

METHODS
A cross sectional study design was used in this study. Medicine claims data spanning 1 January 2008 to 31 December 2017 from a nationally representative Pharmaceutical Benefit Management (PBM) company in South Africa were queried to identify antimicrobial agents prescribed using the Monthly Index of Medical Specialties (MIMS) classification system. Data were analysed descriptively.

RESULTS
A total of 173 participants were included in this study. A total of 458 antimicrobial agents were identified in reimbursed claims of the study population during the study period. Beta lactams (49.1%), Sulphonamides and combinations (14.2%), and erythromycin and other macrolides (10.7%) were the top three most frequently prescribed, whilst tetracyclines (1.1%) were the least prescribed antimicrobial class. Amoxycillin/ Clavulanic acid combination was the most frequently prescribed beta lactam.

CONCLUSION
There were variations in the classes of antimicrobials prescribed for the study population, with penicillins being the most frequently prescribed. With chemotherapy-induced febrile neutropenia commonly observed in children on cancer treatment, more stringent antibiotic stewardship programs should be instituted in childhood and adolescent cancer care to curb antimicrobial resistance.

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Prescribing Patterns of Antivirals for Systemic Use During 2019 in a South African Private Healthcare Setting

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BACKGROUND
The Covid-19 pandemic in South Africa in 2020 had an impact on the number of annual influenza cases. Investigating the prescribing patterns of antiviral products before the pandemic will provide baseline information for further comparative studies during and after the pandemic.

OBJECTIVE
To analyse the prescribing patterns of antiviral products for systemic use during the year before the Covid-19 pandemic started.

METHODS
A retrospective cross-sectional drug utilisation study on a section of the private healthcare system in South Africa for 2019 was conducted. Products in Anatomical Therapeutic Chemical (ATC) subgroup J05 (antivirals for systemic use) were analysed.

RESULTS
A total of 117984 antiviral products for systemic use were prescribed to 16388 patients. Antivirals for the treatment of HIV infections (combinations) (J05AR) accounted for 84.55% of products, followed by non-nucleoside reverse transcriptase inhibitors (J05AG) and protease inhibitors (3.12%). Remdesivir was not available in 2019. Prescribing trends over the 12 months followed the same pattern for all subclasses of J05, except for oseltamivir (J05AH02). The number of prescriptions for oseltamivir were higher from May to September, peaking in June 2019. In Southern Africa, the influenza season typically starts in May/June and continues into August/September. This coincided with the period in which oseltamivir was prescribed.

CONCLUSION
The prescribing of systemic antiretroviral products remained stable during 2019, except for oseltamivir which peaked during the annual influenza season. The study serves as a baseline to compare 2020 prescription patterns with, during which oseltamivir was used as an empiric treatment for Covid-19.

POSTER PRESENTATIONS

Presenting author underlined.

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Increased Serum Creatinine in Patients Taking Tenofovir in Combination with Dolutegravir: Queries to the National HIV & Tuberculosis Health Care Worker Hotline in South Africa

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BACKGROUND

In December 2019, dolutegravir was included in South African antiretroviral therapy (ART) guidelines. Dolutegravir decreases creatinine clearance due to renal transporter inhibition but is not nephrotoxic. Tenofovir may cause renal injury.

OBJECTIVE

To describe renal adverse drug events (ADEs) in patients taking tenofovir with dolutegravir reported to the National HIV & Tuberculosis Health Care Worker (HCW) Hotline.

METHODS

We assessed all renal ADEs queries in patients taking tenofovir with dolutegravir from Jan 2020-Feb 2021.

RESULTS

There were 25 queries concerning adults with serum creatinine (SCr) above normal range and/or estimated glomerular filtration rate<50 mL/min/1.73m². Nine had recently commenced first-line ART: tenofovir/lamivudine/dolutegravir (TLD) fixed dose combination. Sixteen were already on tenofovir-containing ART, and regimen was changed to include dolutegravir. In 1, renal dysfunction developed secondary to dolutegravir-induced liver injury. In 1, rifampicin was implicated in renal dysfunction. Three initiated TLD with pre-existing renal impairment, which worsened in two. Tenofovir was removed in 24, with dolutegravir continued in 22. ART change increased pill burden in 21.

Four queries concerned adolescents with 32%-111% increase in SCr from baseline on switch to TLD, 1/4 previously on tenofovir. All continued TLD as creatinine clearance remained in normal range.

CONCLUSION

Timeous diagnosis of tenofovir-induced renal injury is important in settings with limited access to dialysis. However, drug-substitution due to renal transporter effects without renal injury may result in increased pill burden and decreased adherence. HCWs in resource limited settings require guidance regarding investigation and management of serum creatinine increase in patients receiving tenofovir with dolutegravir.

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Disposal of Unwanted Medicines in Patients' Homes in a South African District – What Patients Know Versus Their Practice

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BACKGROUND

Patients have unwanted medicines in households. Home storage leads to accidental/inappropriate use, while disposing in municipal waste-bins, sewage systems and domestic burning is common. These techniques result in medicine trace amounts in water for drinking. South African regulations are not clear on patients post healthcare facility handling of unwanted medicines.

OBJECTIVE

To investigate patients' knowledge and information provided by healthcare professionals regarding safe household disposal practices of unwanted medicines.

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METHODS
Descriptive and quantitative study with a final sample of 171 conveniently selected patients at 16 randomly selected PHC clinics in two Tshwane districts. Microsoft Excel™ was used for data capturing and analysed using analysed using Statistical Package for the Social Sciences (SPSS) version 24 in consultation with a statistician.

RESULTS
Patients reported having unused medicines at home (74.9%). 59.1% reported not checking medicines expiry dates stored at home. Disturbingly, 5.8% of patients stored their expired and non-expired medicines together. Majority of patients received their medicines from primary healthcare clinics (95.5%) and pharmacies (52.0%). 64.9% reported not knowing how to dispose their unwanted medicines, 95.3% attributed this to lack of counselling by healthcare professionals. Returning unwanted medicine to clinics (26.3%) was proposed as an ideal practice for disposing, however, only 7.0% reported returning unwanted medicines. Level of education did not affect returning of unwanted medicines to clinics (low, 12.3%; high, 13.4%).

CONCLUSION
Patients reported to be using incorrect medicine disposal techniques. Hence, we advocate for strategies to educate patients and healthcare professionals regarding safe and correct medicine disposal techniques.

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Disposal of Unwanted Medicines at Primary Healthcare Clinics in a South African District – Need for Formal Training of Healthcare Professionals

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BACKGROUND
Disposing of medicines within healthcare facilities is the responsibility of healthcare professionals (HCP) in South Africa. Furthermore, regulations stipulate that medicines should not be disposed of in surface water. However, literature reports disposal of healthcare waste in the sewage, which harms water systems.

OBJECTIVE
To determine knowledge and practices of HCPs on safe disposal of unwanted medicines and information provided by HCPs to patients regarding safe disposal practices.

METHODS
Descriptive study conducted amongst 165 HCPs at 16 primary healthcare clinics in two Tshwane Districts. Data was entered into Microsoft Excel™ and analysed using Statistical Package for the Social Sciences (SPSS) version 24 in consultation with a statistician

RESULTS
1.2% of participants in study sites were pharmacists. Per profession, more pharmacist assistants (42.1%) and professional nurses (23.9%) participated in destruction of medicines in facilities. Overall, HCPs reported to be counselling patients either always (27.9%) or sometimes (43.0%) regarding safe disposal practices. However, HCPs perceived home incineration (31.9%) and flushing into the sewage (30.5%) as correct disposal methods. 9.9% reported not knowing the correct medicine disposal method even though 90.3% reported to be familiar with the waste disposal SOP, furthermore, 71 % of HCPs reported not having received training on the safe disposal of medicines while 18.3% received informal training and 11.0% formal training.

CONCLUSION
There is an urgent need to educate HCPs regarding appropriate waste disposal of medicines. Integration of medicine waste disposal in the formal training of HCPs will better equip them to inform patients of safe disposal practices.

POSTER PRESENTATIONS

Presenting author underlined.

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Perceptions and Preparedness of South African Final Year Pharmacy Students Regarding the Practical Application of Pharmacoeconomics

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BACKGROUND

With the move towards universal health coverage, expenditure related to medicines and pharmaceutical services has become an important consideration to the South African (SA) healthcare system. Future use of pharmacoeconomic evidence would require critical analysis and interpretation of pharmacoeconomic research results as important skills of pharmacists.

OBJECTIVE

To assess SA final year Bachelor of Pharmacy (BPharm) students' level of understanding of pharmacoeconomic concepts, and their application in medicines management; identify students' perceptions of the relevance of pharmacoeconomics in medicines management; ascertain the level of students' preparedness to practically apply pharmacoeconomics; determine students' need for additional pharmacoeconomics education.

METHODS

A quantitative, cross sectional, descriptive study. Data were collected in a self-administered questionnaire survey among final year, undergraduate pharmacy students in SA, over 12 months. Data were captured in MS Excel® and analysed descriptively. All participants provided informed consent.

RESULTS

Five of nine universities consented to students' participation in the study. Student response rate was 38.1% (189/496), with 26.7% (46/172) of students having a good understanding of basic pharmacoeconomic concepts. Pharmacoeconomics application in SA was perceived relevant by 87.5% (140/160) of students, 47.0% (79/168) felt they were not prepared to practically apply pharmacoeconomics in medicines management, and 86.7% (137/158) wanted to acquire additional pharmacoeconomics knowledge.

CONCLUSION

Although final year BPharm students' perceptions of the relevance of pharmacoeconomics were positive, results showed a gap in students' level of understanding of pharmacoeconomics. Addressing this gap during undergraduate education may increase students' preparedness to apply pharmacoeconomics in practice.

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Establishing an Antibiogram for the Acute Care Unit of Katutura Intermediate Hospital

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BACKGROUND

Antimicrobial resistance continues to be on the rise globally. There are no antibiograms to guide the appropriate empiric use of antimicrobials in the Katutura Intermediate Hospital (KIH). An antibiogram is needed .

METHODS

This was a retrospective study. Culture and sensitivity results for patients admitted to the acute care unit of KIH from June 2019 – June 2020 were used. WHONET statistical software version 5.6 was used for analysis. After establishing the antibiograms, recommendations of antibiotics for empiric therapy were made.

RESULTS

6115 isolates were analysed. Most isolates were from adults (77.8%). . Top three gram-positive isolates from adults were: staphylococcus epidermidis, Staphylococcus haemolyticus, and Enterococcus faecalis. These isolates were sensitive to Ampicillin (100%), Linezolid (100%), and Vancomycin (98%). Top three gram-negative isolates, were Escherichia coli, Klebsiella pneumonia, and Pseudomonas aeruginosa. These were sensitive to Colistin (100%), Amikacin (96%) and Tigecycline (95%). In paediatrics, the top three gram-positive isolates, were Enterococcus faecium, Staphylococcus epidermidis, Staphylococcus hemolyticus, and Enterococcus faecalis. The isolates were sensitive to Cefoxitin (100%), Fusidic acid (100%), vancomycin (100%), linezolid (100%), rifampicin (100%), and teicoplanin (100%). The top three gram-negative isolates, were Klebsiella pneumonia, Pseudomonas aeruginosa, Escherichia coli and Enterobacter cloacae. They were most sensitive to Amikacin (100%), Ertapenem (83%), and Cefepime (79%).

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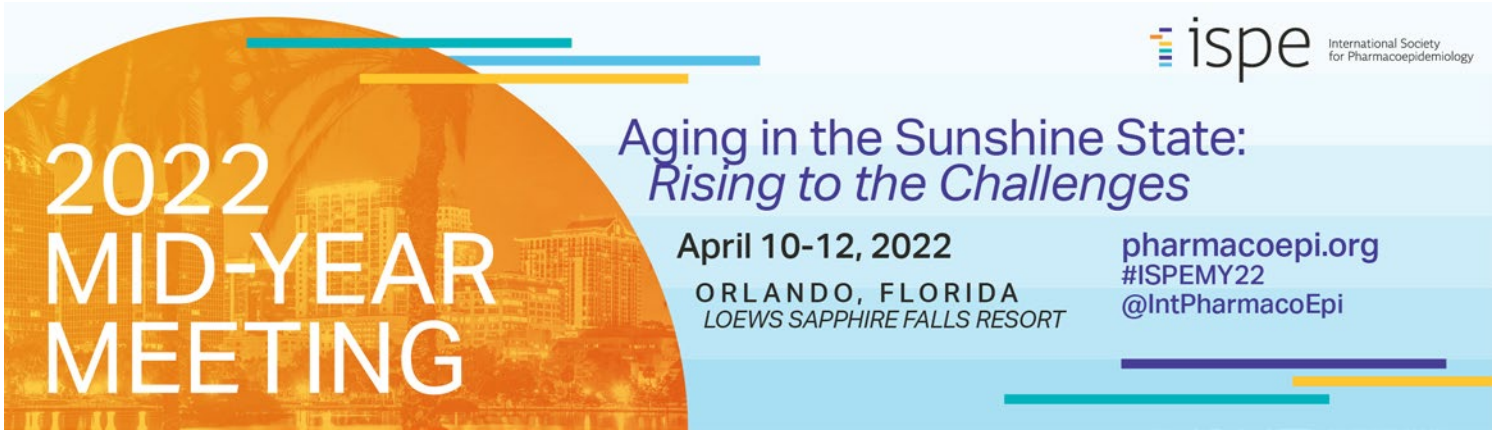

CONCLUSION

No single use of the tested antimicrobials could be recommended. Recommendation for empiric therapy were: Ampicillin and Colistin for adults, and fusidic acid and Amikacin or Tigecycline for paediatric patients. Stewardship program and unit specific antibiograms need to be developed at the hospital.

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Assessment of the Second and Third '90' Strategies to End HIV/AIDS Pandemic at Secondary Care Hospitals in a Senatorial District, North-Central Nigeria

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BACKGROUND

The 90-90-90 strategy was put in place to end the HIV pandemic. Dearth of information on the status of the 90-90-90 strategy in North-Central Nigeria has attracted concerns.

OBJECTIVE

To assess the status of the second and third "90" strategies to end HIV/AIDS pandemic at secondary care hospitals, in a senatorial district in North-Central Nigeria.

METHODS

This multi-center cross-sectional retrospective study was conducted in three secondary care hospitals. Data were abstracted from 310 eligible HIV patients' medical records and HIV programme records. A pilot study was conducted in another HIV treatment center. Categorical data was expressed as frequencies and percentages. Chi Square test was performed to explore relationship between demographic, clinical and treatment variables; and viral load suppression. Level of significance was set at $P < 0.05$. Study's ethical approval was obtained from the State Ministry of Health Ethical Review Committee (MOH/KS/EU/777/291).

RESULTS

Proportion of diagnosed HIV patients on antiretroviral medicines were 89.6% of which 75.5% had viral load suppression. Antiretroviral treatment regimen of patients with high viral load suppression were tenofovir+lamivudine+efavirenz or tenofovir+lamivudine+dolutegravir. Some of the results of viral loading tests (7.7%) were not available. Participants' duration of diagnosis was significantly associated with viral load suppression ($P < 0.05$)

CONCLUSION

Proportion of diagnosed patients on ART and viral load suppression were sub-optimal. Eligible patients should be switched to ARTs that are associated with optimum viral load suppression. Viral load tests should be done as at when due and results documented.

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Investigating Isoniazid Prevention Therapy Completion Rate among Adult HIV Patients on Antiretroviral Therapy and its Effectiveness in Preventing Tuberculosis at Katutura Hospital, Namibia

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BACKGROUND

TB which is the main cause of death amongst HIV infected patients. Use of isoniazid prevention therapy (IPT), according to the World Health Organisation, reduces the risk of developing TB by almost 60%. Whereas Namibia adopted IPT use in 2005, there were no documented studies on its effectiveness in preventing TB, which was the main purpose of this study.

METHODS

This retrospective quantitative study was done with secondary data analysis using the software Statistical Package for the Social Sciences (SPSS) version 22.0. The sample size constituted all HIV positive adults seen between 1 January 2014 to 31 December 2018. Multiple logistic regression was used to identify predictors of tuberculosis.

RESULTS

Out of 9443 patients, 63.3% were females, and 3864 (41%) had used IPT with only 1988 (21.1%) having completed at least six months of IPT. The TB prevalence rate was 9.9% and of 95 patients that died 32.6% had TB. The odds of developing TB were close to three times higher in those that hadn't used IPT: OR=2.7 (95%CI: 2.2-3.4). Males were 2.6 (95%CI:2.1-3.2) times more likely to develop TB.

CONCLUSION

The Use of IPT was associated with decreased rates of tuberculosis among PLHIV at Katutura ART clinic. This suggests that there is a need to put all PLHIV on IPT.

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Incidence of Adverse Drug Effects of Dolutegravir Among HIV Infected Patients at Katutura State Hospital, in the Khomas Region, Namibia: A Cross-Sectional Study

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INTRODUCTION

Dolutegravir (DTG) based regimens have superior efficacy, and durability compared with other first-line regimens. However, the safety of DTG is not documented for patients in Namibia. This study, therefore, aimed at studying DTG-associated adverse effects, and to identify the predictors of these adverse effects.

DESIGN, SETTING, & TARGET POPULATION

The study was a cross-sectional design, HIV infected adults who were receiving DTG-based ART for at least 3 months, attending Intermediate Hospital Katutura antiretroviral clinic. Data sources were the Electronic Dispensing Tool (EDT) and patient files. The independent variables were patient demographic, and clinical variables. The dependent variable included adverse drug reactions.

RESULTS

This study included 401 patient care booklets. Of the [n=401], 71% were female. There average age was 42 years; but the males were significantly older by 4.3 years ($p<0.001$). The patients who had received previous ART before DTG had spent on ART a mean period of 53.3 (SD:24.6) months and that females had spent a longer time on ART than males. Many patients were in a pre-hypertensive state (19.4%), while some already had hypertension. There was a 3.4kg rise in weight in a mean period of 4.1 months. Most of the patients' VL was <1000 copies/ml. (92.8%, n=372).

CONCLUSION

Within a period of four months the weight of the patients increased by 3.4kg. Continued monitoring of the weight is advised.

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Psychotropic Medication Use Among Older Adults Assisted In A Brazilian Primary Care Setting: Prevalence And Associated Factors

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BACKGROUND

Psychotropic medications (PM) use among older adults has been associated with adverse events such as falls, cognitive impairment, delirium, and hospitalization. Assessing the use of PM can contribute to the development of effective and safe prescription strategies.

OBJECTIVE

To determine the prevalence of psychotropic medication use and associated factors among older adults assisted in a Primary Health Care (PHC) facility, Sorocaba, SP, Brazil.

METHODS

Cross-sectional study involving people age≥65 years assisted in PHC facility Maria do Carmo between January and March of 2020. Data was collected through interviews with the older patients and/or caregivers. PM was defined as medicines acting on the nervous system (ATC code N00) excluding anesthetics (N01), analgesics/antipyretics (N02B). The association between PM use and independent variables (sex, age, education, smoking, comorbidities, polypharmacy, and hospitalization) was analyzed by Poisson regression.

RESULTS

A total of 125 patients was interviewed, 27.2 % (CI95% 19.3 - 35.1) had at least one PM prescribed. The most frequent PM was clonazepam (4.8%), followed by fluoxetine (4.8%) and amitriptyline (3.2%). In the multivariate analyses, female sex (PR = 2.31; 95%CI 1.04-5.13; p=0.04) and medical diagnosis of depression (PR= 2.04; 95%CI 1.02-4.08; p=0.043), were associated with the use of PM.

CONCLUSION

In this sample, the results highlight a high prevalence of PM use, especially among women with the diagnosis of depression. The implementation of practices such as close monitoring, rational *deprescribing* of psychotropics, and use of nonpharmacological interventions when possible *can* help prevent adverse events and ensure the older population a safe pharmacotherapy.

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Establishment of the African Medicines Agency: Progress, Challenges and Regulatory Readiness

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ABSTRACT

Insufficient access to quality, safe, efficacious and affordable medical products in Africa has posed a significant challenge to public health for decades. In part, this is attributed to weak/absent policies and regulatory systems, a lack of competent regulatory professionals in National Medicines Regulatory Authorities (NMRAs) and ineffective regional collaborations among NMRAs. In response to national regulatory challenges in Africa, a number of regional harmonisation efforts were introduced through the African Medicines Regulatory Harmonisation (AMRH) initiative to, among others, expedite market authorisation of medical products and to facilitate the alignment of national legislative frameworks with the AU Model Law on Medical Products Regulation. The goals of the model law include to increase collaboration across countries and to facilitate the overall regional harmonisation process. The AMRH initiative is proposed to serve as the foundation for the establishment of the African Medicines Agency (AMA). The AMA will, as one of its mandates, coordinate the regional harmonisation systems that are enabled by AU Model Law domestication and implementation. In this paper, we review the key entities involved in regional and continental harmonisation of medicines regulation, the milestones achieved in establishing the AMA as well as the implementation targets and anticipated challenges related to the model law domestication and the AMA's establishment. This review shows that implementation targets for the AU Model Law have not been fully met, and the AMA treaty has not been ratified by the minimum required number of countries for its establishment. Furthermore, we provide recommendations for future research.

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