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NEW CHALLENGES



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WELCOME ADDRESS BY APHPN NATIONAL PRESIDENT

It is my pleasure to welcome you all, on behalf of the Board of Trustees, National Executive Council (NEC) and the entire members of Association of Public Health Physicians of Nigeria (APHPN), to the 39th Annual Scientific Conference and General Meeting of APHPN tagged “Port Harcourt 2023”.

The theme of this year’s conference is “**Public Health Practice: New Opportunities and New Challenges**”. There is no better time to discuss extensively the emerging challenges of public health practice in Nigeria, and thereafter, proffer actionable solutions that will drive policy formulation, implementation and evaluation in the country. The obvious challenges facing healthcare delivery in Nigeria include but not limited to the following: a very weak healthcare system, depleted human resources arising from massive brain drain especially in recent times, poor infrastructure, health insecurity (healthcare in danger), uncoordinated approach to healthcare, lack of political will on the part of government, etc.

In spite of the numerous challenges facing public health practice, there are new opportunities that can be tapped into in the quest for an effective and efficient public health practice that will culminate in a very resilient healthcare system in Nigeria. These opportunities have been well captured in the sub-themes of this conference. They include **digital innovation, research and entrepreneurship in public health practice, public health solutions to environmental pollution in Nigeria, sustainable financing of healthcare in Nigeria**, etc. Therefore, I encourage you all to participate actively in all the sessions of this scientific conference because there are many new opportunities/techniques to be learnt. I can confirm that participants at the pre-conference workshop relished the hands-on training in Environmental, Social and Health Impact Assessment (ESHIA).

APHPN will continue to push for a better healthcare system in Nigeria through advocacy, stakeholder engagements and capacity building of members. May I, on behalf of the Association, reiterate our call for the establishment of the Department of Public Health in all secondary and tertiary healthcare facilities in Nigeria.

On behalf of the National Executive Council of APHPN, I heartily express my gratitude to the BOT of APHPN for their support over the years. I strongly register my appreciation to the Local Organizing Committee (LOC) of this conference, led by our own Prof. Daprim Ogaji, for their dedication and commitment. I sincerely thank all the organizations that have supported this conference – Shell Petroleum Development Company of Nigeria, Rivers State Primary Health Care Management Board, APIN Public Health Initiatives, Africa Centre of Excellence in Public Health and Toxicological Research, University of Port Harcourt School of Public Health, Academy for Health Development, Breakthrough Action Nigeria, and Ave Health Sense. I am indeed very grateful to the International Committee of the Red Cross (ICRC) for the fruitful partnership with APHPN for the past six years.

I wish you all very exciting and memorable conference.

Long live APHPN

Long live the Federal Republic of Nigeria.

Prof. Alphonsus Isara
APHPN National President



WELCOME ADDRESS BY THE LOC CHAIRMAN

I was honored to be appointed chairman of the Local Organizing Committee (LOC) for the 39th Annual General Meeting and Scientific Conference (AGSM) of the Association of Public Health Physicians of Nigeria during the 38th session that held in Ilorin. As we witnessed similar change in baton between Kwara and Rivers almost a decade ago, this meeting in the Garden City is undoubtedly, home coming for many of our members who visited Port Harcourt in 2014 during the 30th Annual General Meeting & Scientific Conference, and who still relish in its unforgettable experiences.

On behalf of the LOC for the 39th AGSM of our great association, I warmly welcome all participants, visitors, and friends of the Association to this epoch-making event with the theme “public health practice: new challenges and new opportunities”.

A quick overview of the lineup of activities are the courtesy visits and preconference workshop on environment/health impact assessment, which held yesterday, this opening ceremony, plenaries and scientific sessions will hold in the next two days while the caucus meetings, strategic session, AGM, election and dinner will come up on Thursday. I encourage every member of the association to make plans to participate in all the exciting events lined up this week and adhere to all the housekeeping arrangements.

I am delighted to announce that the entire focus of this conference reflects the need of the time in Nigeria and the global scene. It is pertinent to state emphatically, that we have made sufficient arrangements for your safety and comfort throughout this event. So, be assured of your safety throughout this event by the Grace of God.

This 2023 conference provides us the opportunity to work together on bold ideas to make APHPN a collective for real impact by strengthening and diversifying our learning community, helping address new challenges to public health practice, building resilient healthcare and its sustainable financing in Nigeria. As the organizers, we have provided a platform for public health enthusiasts to debate on veritable approaches to driving digital innovations in healthcare delivery, supporting the reduction in the gap between evidence and action, empowering an inclusive community of health workforce and proffering public health solutions to the challenges of environmental pollution in Nigeria. Together we can move this agenda for equitable advancement of public health practice forward during this conference.

In addition to fielding a remarkable personality who had remained a consistent pillar of the Association for this year's Isaac Oluwole's Memorial Lecture, this conference had attracted several outstanding public health professionals and contemporary leaders for the various plenaries and scientific sessions. I once again, cherish this opportunity to welcome all the onsite and online participants to this AGSM from every part of the world and I hope you have an exciting experience throughout this event. Some of you may be aware that this is an election year for our national association as is for our country and these have been carefully captured in our planning. Take advantage of the ample networking opportunities and be part of the leisure activities during this event.

We have indeed come a long way as an association within the public health practice space and look forward to building on, and extending our achievements after this conference. Let's work together and show the power of our solidarity in driving health system strengthening to its logical endpoints – universal health coverage, health security and health system resilience for the benefit of the current and future generations of this great nation.



Finally, I offer my thanks to all those who helped made this event a reality – the Local Organizing Committee, APHPN Executives at the State and National levels, our resilient collaborators (especially the Shell Petroleum Development Company of Nigeria and the Rivers State Primary Health Care Management Board), sponsors (APIN Public Health Initiatives, Africa Centre of Excellence in Public Health and Toxicological Research, University of Port Harcourt School of Public Health, Academy for Health Development, Breakthrough ACTION and Ave Health Sense), donors, friends and all of you – and wish everyone a safe, pleasant, and productive scientific conference and annual general meeting!

Welcome and God bless you all.

Prof. Daprim Ogaji
LOC Chairman



APHPN/PH23/T1/001

Feasibility of Remission of Type 2 Diabetes Mellitus using a wholly Nigerian Dietary Intervention at University of Port Harcourt Teaching Hospital, Nigeria

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ABSTRACT

Background: The diagnosis of Type 2 Diabetes Mellitus is commonly associated with denial followed by a search for instant cure by spiritual intervention or herbal remedies. Poor enrolment and coverage of patients with Type 2 Diabetes worsens in the absence of effective implementation of extant health insurance policies as occurs in Nigeria, consequently, most treatments are paid for as out-of-pocket expenses, causing many with non-communicable diseases to go into poverty. The aim of this study was to evaluate the efficacy of a wholly Nigerian diet as a cheaper alternative in achieving remission of Type 2 Diabetes Mellitus.

Methods: Sixty participants were randomized into matched control (standard of care) and treatment (dietary caloric restriction intervention) groups. Participants were followed for 24 weeks and samples taken at baseline, midline and at the end of the study for analysis. Descriptive statistics was used for the socio-demographic characteristics. ANOVA was used to test the means. Confidence interval was set at 95% with significance at $p < 0.05$.

Results: While there was no change in mean HbA1c levels between baseline and at 6 months (8.390 ± 2.0242 compared to 8.140 ± 2.1229) in the controls, there was a statistically significant decrease in HbA1c value between baseline and at 6 months (7.617 ± 2.0773 compared to 6.017 ± 1.2301) in the intervention ($p < 0.001$). Also, there was significant weight loss in the intervention group (mean waist circumference decreased from 88.82cm to 80.0cm ($p < 0.001$) while BMI decreased from 26.76 to 22.77kg/m² ($p < 0.001$). Dietary intervention caused a remission of 3.5: 1 compared to control with no change in HbA1c at the end of the study and this finding was statistically significant ($p = 0.007$). The intervention group further showed that 61% of patients with controlled BMI had remission. These observed differences were statistically significant ($p = 0.025$). ANCOVA was done to investigate the effect of Dietary intervention on the HbA1c level of T2DM patients over the same period while controlling for the influence of control. ANOVA showed a significant difference in the mean HbA1c values amongst dietary intervention groups [$F(2, 86) = 7.839, p < 0.01, \text{partial } \eta^2 = 0.154$], while controlling for standard of care HbA1c. Post hoc tests showed a significant difference between group 1 (Initial visit) and group 2 (3 months) ($p < 0.05$) and groups 1 and 3 ($p < 0.01$). Comparing the estimated marginal means showed that the most drop in HbA1c was in group 3 (mean=6.01).

Conclusion: Caloric restriction appears to be an effective means of controlling type 2 diabetes mellitus.

Keywords: Dietary Intervention; Remission; HbA1c; BMI; Type 2 Diabetes.



Nutritional Status of Primary School Children in Kaduna North Local Government Area, Kaduna State, Nigeria

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ABSTRACT

Background: Primary school-age is time for a child’s physical growth, cognitive-intellectual development, and social adaptation. The 5 to 12-year-old is potentially vulnerable and prone to developmental problems, including effects of poor diet. The United Nations Children's Fund (UNICEF) reported in 2018 that 45% (3.1 million) children under-5 years in developing countries, die from malnutrition annually. One-in-six (i.e. 100 million) is underweight and one-in-four stunted. Poor nutrition adversely affects children’s ability to reach full potential and intellectual development. Foods native to Africa are healthy and nutritious, but unfortunately, diets provided children in these countries lack diversity. About 42.5%, 48.0% and 19.8% of children still suffer underweight (low weight-for-age), chronic malnutrition (low height for age) and acute malnutrition (low weight for height), with many found in socially and economically vulnerable communities. In Nigeria, school-age children constitute 23% of total population, making their nutritional needs of paramount importance. Paucity of data on nutritional status of children exists in Kaduna. This study generated some evidence on their nutritional status and impact on their overall health and development.

Methods: A descriptive cross-sectional study was conducted in public primary schools of Kaduna North LGA. Respondents were primary school pupils. Ethical clearance was obtained from Barau Dikko Teaching Hospital (BDTH) ethics committee (No. NHREC/30/11/21A). Data was cleaned and analyzed using IBM Statistical Package for Social Sciences (SPSS) version 26. Results were expressed as percentages and presented in tables. Categorical variables were described using frequencies and percentages, and continuous variables expressed as means and standard deviations. Chi square test of proportion was used to test for association. Level of significance was set at $p < 0.05$.

Results: Almost all pupils interviewed (99.6%) fell within the age range 9 to 12 years. Twenty-four hour dietary recall revealed that 39.6% of them had inadequate diet despite majority (88.4%) taking three square meals per day and engaging in sporting activities (82.9%). Nutritional status of pupils in this study was found to be generally poor due to relatively high levels of underweight (71.3%), wasting (47.3%), and stunting (24.7%). About half (58.5%) had health-related problems and majority (96.0%) performed poorly in previous term’s exams. Study showed statistically significant association between stunting and academic performance.

Conclusion: Public primary school children in Kaduna North had poor nutritional status resulting from poor dietary intake leading to poor academic performance. It is recommended that parents and Government address this as malnourished children are at higher risk of morbidity and mortality with dire effects on their health and overall wellbeing.

Keywords: Nutritional status; Primary school-age children; Academic performance; Kaduna.



APHPN/PH23/T1/004

Analysis of Rifampicin Indeterminate Results using Shewhart Control Charts: Implications for Patients and Tuberculosis Control Programme in Nigeria

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ABSTRACT

Background: Antimicrobial resistance is a growing global public health concern, and multidrug-resistant tuberculosis is responsible for roughly one-quarter of all antimicrobial-resistant infections-related deaths worldwide. In 2021, the 30 countries with the highest epidemiological burden of TB accounted for 87% of new TB cases, with eight of these countries accounting for two-thirds of new TB cases. Gene Xpert is a rapid, automated molecular test that detects multi-drug resistant tuberculosis using rifampicin as a predictor. It was recommended by the World Health Organization (WHO) in 2010 for national tuberculosis programs in developing countries; however, it has some limitations. Indeterminate Mycobacterium tuberculosis results indicate that the test was unable to determine whether the bacteria were rifampicin resistant. Indeterminate results impede early diagnosis, which is critical to TB control and may occur if Gene Xpert is not used correctly. Patients with false positive results are more likely to be started on second-line anti-TB drugs, which are typically toxic to patients and have financial consequences for the national TB program. The objective of this research was to ascertain whether the Gene Xpert process output at a tertiary facility in Port Harcourt, Rivers State, Nigeria, was under control and to ascertain whether any variations in the Gene Xpert results for Rifampicin indeterminate samples from the laboratory were due to common or special course variations. Shewhart's Control Chart, which has action limits, was used in this study to investigate the reasons behind indeterminate results.

Methods: The TB reference laboratory provided the Gene Xpert results, which were easily accessible in the DOTS clinic register. From 2017 to 2020, the data included the number of sputa taken per month and the number of indeterminate results observed in the same month. The P-charts were used to investigate the internal consistency of the laboratory GeneXpert results. P-charts are a type of control chart that is intended to be used with binomial data (yes or no) expressed as a proportion of the sample size. All analyses were performed using SPSS version 23.0.

Results: The proportion of Gene Xpert results that were indeterminate varied, with 58% exceeding the upper limit. Only 42% were within the control limit, in comparison. The majority of the laboratory results revealed an out-of-control signal by displaying points outside the control limits or non-random patterns of points known as special-cause variation, according to this study.

Conclusion: Some patients experienced delays or no diagnosis as a result of test failures caused by process errors. An upper and lower control limits, a special cause is unlikely. A portion of the indeterminate Gene Xpert results were out of control, which could be attributed to machine malfunctions, insufficient bacterial load, poor quality samples, operator errors, or faulty laboratory materials. Regular equipment checks by laboratory personnel, program sponsors, or leadership will be invaluable in achieving the desired results and initiating appropriate treatment. Statistical process control has been widely used in hospital performance monitoring and improvement and is increasingly being adopted for public health surveillance.

Keywords: Indeterminate Mycobacterium tuberculosis; Gene Xpert; Shewhart; Control Charts



Urban and Rural differences in Awareness of Reproductive Health Services among Adolescents in Communities in Rivers State

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ABSTRACT

Background: The World Health Organization (WHO) defines adolescents as people between the ages of 10-19 years. Low levels of awareness of reproductive health services (RHS) like reproductive health information, counselling, STIs, and HIV services exist. There is a need to correctly ascertain the rural and urban differences in awareness of reproductive health services among adolescents in Rivers State, Nigeria to provide information, that will help policymakers plan better age-appropriate reproductive health services for adolescents. This study determined and compared the level of awareness of RHS among adolescents in urban and rural communities in Rivers State, Nigeria.

Methods: A comparative cross-sectional study design was used. It employed a multi-stage sampling technique to survey 507 adolescents, 255 in urban and 252 in rural communities. A validated, structured interviewer-administered questionnaire was imputed into the Kobo toolbox and collected using android phones. Data analysis was done using IBM SPSS version 26. The dependent variable (awareness) was measured on a nominal scale. In measuring the overall awareness of reproductive health services, 11 questions were used such that above average (6-11) was categorized as good. Awareness of RHS was determined and compared using the chi-square test of independence difference in proportion.

Results: The median ages and interquartile ranges were 16.0 (14-19) and 14.0 (12-16) years for urban and rural respondents, respectively ($\mu=60.59$; $p<0.001$). One hundred and sixty-one (63.1%) of the urban and 155 (61.5%) of the rural respondents were females. Overall, 172 (67.5%) of urban respondents had good awareness of reproductive health services compared to 26 (10.3%) of rural respondents ($X^2=171.4$; $p<0.001$). Specifically, awareness for family planning services [212 (83.1%) versus 64 (25.4%)], sexually transmitted infection treatment services [170 (66.7%) versus 44 (17.5%)], ($X^2=127.04$; $p<0.001$), and HPV vaccine against cervical cancer (11.8% versus 3.6%). These differences in proportion were statistically significant ($X^2=12.5$; $p<0.001$). The main source of their information was in schools (urban 57% versus rural 40.2%). Factors shown to be associated with awareness were age, sex, education, marital status, being currently in school, occupation, and with whom they resided with.

Conclusion: Adolescents in the urban areas were more aware of RHS, compared with their rural counterparts. There is a need to promote information and education on RHS among adolescents, especially in rural communities. We must begin to redirect our efforts to target rural areas to bridge the knowledge gap.

Keywords: Adolescents; Awareness; Reproductive health service; Rivers State.



Prevalence and Correlates of Economic Abuse among Married Women in Anambra State

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ABSTRACT

Background: Economic abuse (EA) is a form of intimate partner violence (IPV) whereby perpetrators employ tactics to control their partners' ability to acquire, access and maintain economic resources thus threatening their economic security and potential for self-sufficiency. It poses a global public health challenge as it is significantly responsible for the persistence of IPV given that when survivors want to leave abusive relationships, they are less likely to do so, because they lack the means to cater for themselves and their children. The study assessed the prevalence and correlates of EA among married women in Anambra State, Nigeria.

Methods: This was a cross-sectional study conducted among 480 married women, selected by multistage sampling from communities in three Local Government Areas of Anambra State. Data was collected using structured interviewer-administered questionnaire. The dependent variable was experience of EA, while independent variables were socio-demographic characteristics and other forms of IPV such as emotional, sexual and physical abuse. IBM SPSS version 23 was used to perform statistical analysis and significance level set at $p < 0.05$. Frequency distribution of relevant variables was developed; means and proportions were calculated while associations between variables were tested using Chi-Square test. Independent variables that achieved statistical significance on bivariate analysis were included in the logistic regression model for multivariate analysis and their independent effect on the outcome variable was determined. Ethical clearance was obtained from the Nnamdi Azikiwe University Teaching Hospital Health Research Ethics Committee.

Results: The mean age of the respondents was 36.4 ± 8.9 years. About half of them (51.3%) had obtained secondary school education and only 2 (0.4%) had no formal education. Majority of them were Igbos and Christians (98.5% and 98.1% respectively). The one-year prevalence of EA was found to be 64.2% while that for emotional, sexual and physical abuse were 40.2%, 17.3% and 16.7%, respectively. The study findings revealed that while prevalence of EA reduced with increasing age, it increased with increasing number of living children and educational level attained. However, no relationship was established with monthly income. Logistic regression analysis indicated that EA was associated with other forms of IPV like physical abuse (AOR=2.049, 95% CI = 0.895 – 4.695, $p=0.090$), emotional abuse (AOR=2.667, 95% CI = 1.590 – 4.472, $p < 0.001$) and sexual abuse (AOR=4.880, 95% CI = 1.780 – 13.377, $p = 0.002$).

Conclusion: The finding that about two in three married women in Anambra State experienced EA in the hands of their partner within the past year with strong correlates like age and other forms of IPV buttresses the importance of heightening awareness about EA and empowering women in order to minimize victimization.

Keywords: Economic abuse; Intimate partner violence; Correlates; Prevalence; Anambra State.



Advancing Public Health Practice in Nigeria in 21st Century using Genomics and Bioinformatics

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ABSTRACT

Background: The importance of health in every society cannot be over-stressed. Health is a fundamental human right, multi-dimensional, central to the concept of quality of life and integral part of development. Public health has a key goal of ensuring the practice of primary, secondary and tertiary levels of disease prevention and other public health events. Public health today is faced with challenges from a number of factors such as globalization, emerging and re-emerging infectious diseases, antimicrobial resistance, disasters, etc. The development in COVID-19 management around the world identified the importance of genomics and bioinformatics. This paper is an overview of the application of genomics and bioinformatics in advancing public health practice in Nigeria, a country with a population of over 200 million people.

Methods: A narrative review was carried out using PubMed, African Journal Online and Google scholar databases. The studies included original researches, reports and reviews published in English Language between the period 2000 and 2022. Different combinations of search words were used which included, “public health”, “genomics”, “bioinformatics and its importance” and Nigeria. Ten of the twenty selected published articles were included in the review.

Results: This showed that public health professionals and other experts have been looking for innovative, cut-edge methodologies and tools to advance public health practice. Currently, the entire human genome of about 3 billion base pairs and other genomes available for researchers, and genomics has revolutionized the concept of personalized medicine. Genetic epidemiology has brought a new perspective for improving research designs, disease prevention, diagnosis and patient management. The application of bioinformatics in public health includes: contact tracing, phylogenetics, vaccine and drug development, molecular epidemiology, biosecurity, risk and forensic analysis, among others. The advent of next-generation sequencing technologies created a revolutionary impact on human genomics study and it has become an essential tool in genetic and genomic analyses. Bioinformatics and genomics have contributed to understanding of infectious diseases, from disease pathogenesis and mechanisms, spread of antimicrobial resistance to host immune responses, among others. Several medical intervention approaches in the management of infection outbreaks exploits the application of genomics techniques to mitigate biosecurity threat. Therefore, public health professionals in collaboration with other experts can develop strategies to integrate genomics and bioinformatics in the various public



health subspecialties such as environmental and occupational health, reproductive and international health, health management and policy, biostatistics and epidemiology, among others. However, the anticipated challenges include poor knowledge and skills of genomics and bioinformatics among public health professionals, poor political will, leadership inadequacies, endemic corruption, inadequate human resource for health and their mal-distribution, poor opportunities for training and retraining of staff, policy somersault, brain drain, inter and intra-professional rivalry, poor critical infrastructures for genetic, poor collaborative research, molecular analysis and ethical issues.

Conclusion: Positive interactions between, public health, genomics and bioinformatics can enhance public health practice. Therefore, there is a need for collaboration among the various experts, provision of infrastructures and review of educational curricula to reflect current realities.

Keywords: Bioinformatics; Genomics; Public Health; 21st century; Nigeria



Gender Perspective in the Workplace: The Experience of Female Medical Doctors

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ABSTRACT

Background: Women are a considerable part of the population and contribute to every facet of life, with significant participation in all professions including defence services, technology, and astronomy. Despite such advancements by women, there is still gender bias in all walks of life including the medical field. Some specific problems are unique to female doctors and these challenges are presumed to be different and complicated in the way of professional responsibilities, night duties, academics, and administrative work. Other major challenges include career development and maintaining a balance between work and family. This study aimed to evaluate the opportunities, challenges, and job satisfaction of women doctors in the workplace.

Methods: This was a descriptive, cross-sectional study conducted among female medical doctors living in Rivers State. The study population consisted of 165 women doctors recruited via convenience sampling. Fully informed and appropriate consent of the participants was sought and obtained, and ethical approval was obtained before commencement of the study. Data was collected using a structured, self-administered questionnaire and analysed using Statistical Package for Social Sciences (SPSS) version 25. Results were presented as frequencies and percentages for categorical variables.

Results: The highest proportion of respondents were in the age groups 30-39 years 71 (43.0%) and 40-49 years 52 (31.5%). Sixty-two (37.6%) of them were resident doctors, 43 (26.1%) medical officers and 42 (25.5%) consultants. Eighty-five (51.5%) reported global satisfaction in their workplace while 69 (41.8%) admitted to career satisfaction. Fifty-two (31.5%) of the respondents felt that career opportunities for female doctors are restricted while 69 (41.8%) had been discouraged from commencing a particular speciality because of their gender. Most of the respondents agree that their career has limited the time available to spend with their family (74.5%) and their friends (78.2%) outside their working environment. The greatest challenges perceived by female doctors at work include poor work-life balance 123 (74.5%) and lack of career advancement opportunities 46 (27.9%). Other challenges reported included poor leadership opportunities, lack of respect and harassment. While 112 (67.9%) had experienced insubordination from a junior male colleague in the workplace, 75 (45.5%) had experienced some form of physical violence in the workplace (from staff or patients). One hundred and twenty (72.7%) had experienced some form of sexual harassment from both their male colleagues and male patients in the workplace, with 11 (6.7%) reporting frequent sexual harassment from their male colleagues. Forms of sexual harassment reported included verbal remarks of a sexual nature (sexist language, comments, jokes), unwanted touching, persistent and unwanted invitations of a sexual nature, gestures of a sexual nature, stalking (online or physical), messages of a sexual nature, sexual assault, and rape.

Conclusion: As the healthcare sector is becoming more demanding, it is crucial to pay adequate attention to the global satisfaction of its medical professionals. When there is a positive organizational culture and supportive environment at work and home, female medical professionals will be able to offer excellent medical care, be more efficient, and enhance the quality of patient care.

Keywords: Female doctors; Workplace; Challenges, Nigeria



APHPN/PH23/T1/012

Improving COVID-19 vaccination uptake in Jos-North and Jos-South Local Government Areas: A Strategic Partnership with the Community Medicine Department, Jos University Teaching Hospital

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ABSTRACT

Background: Despite the interventions and commitment in the COVID-19 campaign, the vaccination coverage in Plateau State remained low at 5% by the end of February 2022. With funding support from the US-Centers for Disease Control and Prevention, (US-CDC), APIN supported Plateau State COVID-19 response to achieve vaccination target of at least 70% of its eligible population. This study documented the impact of collaborations with academia in improving the acceptance, access, and uptake of COVID 19 vaccination services.

Methods: A vaccination campaign ran from 1st - 10th March 2022 adopting a comparative approach. APIN collaborated with the Community Medicine Department of Jos University Teaching Hospital (JUTH) to improve coverage. JUTH supported with the development of unified campaign message, selection of 10 densely populated communities for outreaches, and integrated COVID-19 messaging and vaccination into routine community health outreaches. Two LGAs, Jos North and Jos South were selected given their high percentages of unimmunized population and five (5) communities were randomly selected from each of the two LGAs based on their population for 10 days outreach. Leveraging on APIN's goodwill with the state Primary Health Care Board (SPHCB), vaccination teams were drafted into the outreach plan for on-the-spot vaccination with all logistics, data collection, and data validation support.

Results: Utilizing 5 vaccination teams, 250 eligible clients, 95 males (38%) and 155 Females (62%) received the 1st dose of COVID-19 vaccination during the 10-day outreach program. The community outreach method yielded higher result compared to the clinic based fixed post method in Jos North and South LGAs where 71 clients; 29 males (41%) and 42 Females (59%) were vaccinated within the same period.

Conclusion: Integration of COVID 19 vaccination into routine immunization yielded significant result. This collaboration provided community mobilization experts a platform to debunk myths and misconceptions about the vaccines. It afforded the state vaccinators the opportunity to learn effective mobilization skills from community medicine professionals. The vaccinators also learnt adaptation skills as the movement took them to villages and communities seldom visited. Strong collaboration with relevant health actors is critical in achieving improved COVID-19 vaccination acceptance, coverage and building resilient health systems.

Keywords: COVID-19 vaccination; Coverage; Community partnership; Collaborations; Medical Outreach



APHPN/PH23/T1/013

Food Safety and Hygiene: Knowledge and Practice among Undergraduates of University of Nigeria, Enugu Campus South East Nigeria

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ABSTRACT

Background: Unsafe and unhygienic food is a significant cause of morbidity and mortality globally. Food borne illnesses pose a great threat to the general population of which majority are young people. Everybody has risk of being exposed to food-borne illnesses, therefore safety of food ensures wellbeing and productivity. Practice of food safety and hygiene happens in the environment, from production to consumption. Food safety and hygiene practices are considered a very important principle in disease prevention and environmental contamination control. There is greater incidence of food-borne illnesses in developing countries as there seem to be an inadequacy and neglect towards the knowledge, and practices towards the harvesting, processing (including the use of unsafe water sources), storage, handling and consumption of food. About 420,000 people die every year due to eating contaminated food globally of which 125,000 are children under the age of five years. This study assessed knowledge and practice of food safety and hygiene among undergraduates in the University of Nigeria, Enugu campus, South-East Nigeria.

Methods: Descriptive cross-sectional study design with multi-stage sampling technique to select eligible 417 undergraduates was used. Data collection was done using structured, self-administered questionnaire and analysed using IBM-SPSS, version-26 but summarized using means, standard deviation, proportions and percentages. Chi-square and binary logistic regression were used. Level of significance was set at $p \leq 0.05$. Ethical clearance was obtained from University of Nigeria Teaching Hospital Health Research Ethics Committee.

Results: More than a half were females 238 (57.1%), mean age of 21.93 ± 2.39 years and lived on campus 345 (82.7%), most of them being single 409 (98.1%) and cooking their own food 257 (61.6%). Almost all the respondents 406 (97.4%) were knowledgeable about food safety and hygiene and more than half 241 (57.8%) had experienced food poisoning. Most of them 368 (88.2%) showed positive attitude towards food safety and hygiene and all of them 417 (100.0%) agreed that knowledge of food safety and hygiene is important to them. Majority 394 (94.5) exhibited good practice but half of them 214 (51.3%) do not wash hands after touching currencies. Significant determinants of good practice were sex, year of study and cooking habit. Being a male influences practice of food safety about 3 times more than being a female [AOR 2.98 95%CI: 1.256-4.969] but age, sex and faculty had no influence on food safety knowledge, attitudes and practices.

Conclusion: The respondents demonstrated good food safety knowledge and practice. There is the need to sustain and ensure food safety and hygiene among the undergraduates through regular public health campaign.

Keywords: Food safety; Food hygiene practices; Undergraduates; Enugu State.



APHPN/PH23/T1/O14

Descriptive Epidemiology of COVID-19 Pandemic in Kwara State, North-Central Nigeria (2nd April 2020-15th March 2021)

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ABSTRACT

Background: Over the years, illnesses of the severe acute respiratory syndrome have ravaged the entire globe and have placed great demands on the overall health system. COVID-19 is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The World Health Organization (WHO) named COVID-19 a global pandemic on the 11th of March 2020. Over 120 452 648 cases and 2 666 125 deaths due to the COVID-19 globally as of 15th March 2021. Nigeria had recorded 160 657 cases and 2 013 deaths attributable to COVID-19 as at this time. Kwara State was ranked 11th by the NCDC, with 3,015 confirmed cases and 51 deaths i.e., 1.87% of total COVID-19 cases and 2.5% of total COVID-19 deaths in Nigeria. The transition from the first to the second wave of COVID-19 in Nigeria necessitates a critical assessment of the epidemiology of the COVID-19 outbreak during these periods. As at the time of this study, there is no sufficient data describing the epidemiological characteristics of the COVID-19 pandemic during the first and second waves in Kwara State. This study aimed to describe COVID-19 Pandemic during the first and second waves in Kwara State, a North- Central State in Nigeria.

Methods: This study investigated COVID-19 cases and deaths in Kwara State between 2nd April 2020 and 15th September 2020 (first wave), and between 16th September 2020 and 15th March 2021 (second wave). Case definitions of COVID-19 as obtained from the Nigeria Centre for Disease Control (NCDC) was used. Data were extracted from patients' case notes and SORMAS. Data analysis was conducted using SPSS version 25.0.

Results

Overall, 3015 confirmed cases of COVID-19 have been identified in Kwara State as of 15th March 2021. The median age was 38 years and ranged between 24 days to 97 years. Also, 1056 (35%) were aged 25 – 39 years, 1695 (56.2%) were males. The case fatality rate was less than 2%. A total of 1064 (35.3%) symptomatic COVID-19 cases had been identified as of the reference date, among whom 696 (65.4%) were mild, 308 (28.9%) were moderate, and 60 (5.6%) were severe/critical cases. We identified a higher proportion of COVID-19 cases in urban LGAs in Ilorin, the Kwara State capital.

Conclusion: COVID-19 remains a public health problem and our findings validate the person-to-person transmission of the disease. Promotion of preventive measures like COVID-19 vaccine and good hygiene is recommended. Community engagement and sensitization should be promoted for the prompt detection of COVID-19 cases.

Keywords: COVID-19; Epidemiology; Pandemics; Nigeria



APHPN/PH23/T1/O18

Prevalence of Sexual Violence and Rape among Adolescents in Enugu State, South-East Nigeria

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ABSTRACT

Background: According to the World Health Organization (WHO) sexual violence is any sexual act, or attempt to initiate a sexual act using coercion, force, threat or surprise. It is a violation of human rights on the Rights of the Child (CRC). Conduct towards sexual and reproductive health is a necessary step to ensure that adolescents undergo a smooth change into adulthood. Most studies done in Nigeria on experience of sexual coercion amongst adolescents are in the west and northern parts of the country. This study, therefore, looked at the prevalence of sexual violence and rape among secondary school adolescents in a secondary school in Nigeria.

Methods: The study area was Enugu metropolis which is in South-east Nigeria. This was a mixed descriptive cross-sectional study. The sample size was 368 and respondents were selected using multi-stage sampling. A focus group discussion was done and the quantitative data were collected using a self-administered questionnaire. Pearson's chi-square test was used to measure the relationship between categorical variables and socio-demographic variables binary logistics was done for variables with statistical significance set at $p \geq 0.2$.

Results: The prevalence of sexual coercion among participants in the study showed that 48.4% experienced one form of sexual violence while 6% had been raped. Most of the participants had experienced sex before 41.3%. The mean age for the adolescents at their sexual debut was 11.29 ± 3.8 years however, only 18.4% of the participant who were sexually active used any form of contraceptives regularly. Logistic regression showed that adolescents who worked for pay had two times the odd of experiencing sexual coercion than adolescents who did not work for pay ($p < 0.001$). Participants who attended parties twice and more than twice had two times ($p = 0.001$) and four times ($p = 0.018$) the odds of experiencing sexual coercion, respectively than participants who did not attend parties.

Conclusion: There is a high prevalence of sexual violence and early sexual debut among the study population. Despite the awareness of contraceptives, only a few sexually active adolescents used them. There should be programs targeted towards increasing awareness of sexual and reproductive health as well as readily available help-lines provided for victims of sexual coercion.

Keywords: Adolescents; Sexual coercion; Rape; Secondary school; Enugu.



APHPN/PH23/T1/019

Experience of Ondo State HIV Surge Program using ASPIRE Strategy: An analysis of the Fiscal Year 2022

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ABSTRACT

Background: Over the last three decades, Human Immuno-Deficiency Virus (HIV) remains a compelling public health threat leading to concerted efforts aimed at achieving epidemic control globally. The collaborative efforts aligns to the three United Nations Programme on HIV/AIDS (UNAIDS) 95-95-95 goals and the ten of the seventeen Sustainable Development Goals (SDGs) for improved health service delivery. In addition, these concerted efforts expressly resonate the HIV/AIDS response, aimed at achieving epidemic control globally. However, Nigeria is the third country with the highest burden of people living with HIV (PLHIVs) among other countries in the globe, as expressed by United Nations Office on Drugs and Crime (UNODC) in 2018. Furthermore, the Nigeria National AIDs Indicator and Impact Survey conducted in 2018 reported HIV prevalence to be 1.4%, with over 1.9 million persons on antiretroviral treatment (ART), and Ondo State is one of its south western states. In achieving epidemic control, early HIV diagnosis facilitates responsive ART commencement and considerably decreases HIV transmission to other persons, improves their quality of life and reduces HIV-associated morbidity and mortality. In summary, identifying PLHIVs in the state is critical to achieving HIV epidemic control in the state and country at large. “ASPIRE” stands for Active Case finding, Sub-population focus, Prevention surge, Innovative data systems, Revamped program integration and Extensive stakeholders’ engagement. This study describes Ondo State’s experience using the consolidated strategies coined “ASPIRE” for its HIV Surge program.

Methods: “ASPIRE” is an approach coined to drive a client-centric, age-specific, gender-sensitive, integrative, and culturally diverse system for improved program service delivery and sustainable wins across the three UNAIDS HIV targets. ASPIRE approach is a pool of consolidated strategies which built on existing strategies and wins over the years, as well as lesson learnt from program implementation strategies. Data from the Fiscal year (FY22) {October 2021 to September 2022} were analysed using Microsoft excel and presented in charts and tables.

Results: In FY 22, a total of 7058 newly identified clients were enrolled in ART, with a matching increase in treatment growth. Ondo State's treatment saturation improved from 53% as at the end of FY 21 (September 2021) to 78% in FY 22 of the same period, with a corresponding unmet need of 5,948 clients. Treatment saturation increased for all age bands in the FY, still the paediatrics and adolescent sub-population accounts for 39% of the treatment gap. Additionally, Interruption in treatment (IIT) and viral suppression improved to 0.3% and 94% respectively. There was also improvement in indicators’ performance across the three UNAIDS 95s for all sub-populations.

Conclusion: The ASPIRE model offers a comprehensive and integrative HIV prevention, treatment and care services without compromising fidelity and quality of program service delivery. Age-specific and sex-specific interventions should be considered to close the gap in the paediatric and adolescent sub-populations.

Keywords: ASPIRE; HIV; Antiretroviral treatment; Interruption in treatment.



The Stray Bullet to the Head: An Emerging cause of Traumatic Brain Injury in a Niger Delta State

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ABSTRACT

Background: Bullet injuries to the head are no longer uncommon in our environment, as insecurity continues to rise. However, a “stray bullet”- defined as a bullet that, after being fired from a firearm, hits an unintended target - is a rare, but slowly emerging cause of head injury. It is a hitherto unreported cause of head injury in our environment. The aim of this study was to report the peculiar cases of Traumatic Brain Injury (TBI) from stray bullets in a Niger Delta State and raise awareness about this phenomenon.

Methods: The study reviewed 6 patients over a four-year period. Adults and children of both sexes with TBI from stray bullets were included in the study. All the patients neither heard the gunshots nor saw the person who fired the gun. Only those who had brain computed tomography scans and/or skull x-rays were included in the study.

Results: Two out of three (67%) of the injuries were seen in male patients, with a male to female ratio of 2:1. Of the six patients reviewed, one was of paediatric age (16months). All but two patients sustained the injuries within their houses or compounds, while two patients were walking on the street when the incident occurred. The patients reported immediate episodes of loss of consciousness and three patients had recovered full consciousness at the time of presentation to the Accident and Emergency Department. They all had regained consciousness fully at discharge. Brain imaging carried out revealed that of the six patients, three had intracranial locations of the bullets, two had bullets lodged outside the cranium, within the scalp and one of the patients suffered a concessional injury from the bullet grazing his scalp. All patients had surgical debridement of the bullet wound, and four out of the six patients had surgical removal of the bullets, with one patient undergoing craniotomy and evacuation of an associated acute subdural haematoma. All patients but two had no residual neurologic symptoms. Of the two with neurological symptoms, one who had hemi-body paresis, improved over a 6-month period and the other patient, the paediatric patient who had gait ataxia, was lost to follow-up.

Conclusion: As traumatic brain injuries from firearms and missiles can occur in our environment, it is important to note that aerial firing of live rounds for whatever reason, is a live-threatening practice that should be discouraged. Laws should be put in place to discourage the use of live bullets in civilian population and security operatives should be discouraged from shooting into the air for demonstrations.

Keywords: Stray bullet; Traumatic brain injury, Niger Delta.

APHPN/PH23/T1/O23

Improving Knowledge and Practice of Home Management of Malaria among Caregivers of Under-fives: The Effect of Training Ward Development Committees in Anambra State, Nigeria

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ABSTRACT

Background: Malaria is a well-defined disease in which parasites of the genus *Plasmodium* are transmitted to humans through the bite of female anopheles mosquito. Children aged under-five years are the most vulnerable group affected by malaria. In 2018, they accounted for 67% (272,000) of all malaria deaths worldwide. Malaria is the leading cause of death among children under-five years in Africa. Globally, Nigeria has the highest number of malaria cases. Caregivers recognize fever in children first and seek care. This study assessed the effect of using trained Ward Development Committee (WDC) in improving the knowledge and practice of home management of malaria among caregivers of under-fives in Anambra State.

Methods: A quasi-experimental study design involving study and control groups was used. A multi stage sampling technique was used to select 360 caregivers in two local government areas of Anambra State, Nigeria. Mixed method of data collection was done using questionnaire and focus group discussion guide. Data was analyzed using IBM-SPSS, version-23 for quantitative data; summarized using means, standard deviation, frequency and proportions. Chi-square test and logistic regression were used. Significance level was set at $p \leq 0.05$. Miner Lite v2.0.6 was used for qualitative data. Ethical consideration was obtained from the University of Nigeria Teaching Hospital Ituku-Ozalla Health Research Ethics Committee.

Results: At baseline, comparable proportions of respondents in study and control groups, had good knowledge of home management of malaria, (HMM), ($p=0.520$), good attitude towards HMM, ($p=0.150$) and good practice of HMM, ($p=0.900$). At post-intervention, a significantly higher proportion of respondents in the study group had good knowledge of HMM ($p=0.038$), good attitude towards HMM, ($p=0.001$) and good practice of HMM, ($p=0.002$) when compared with the control group. Predictors of good knowledge were primary education and below, (AOR=0.17, 95%CI: 0.05-0.58), secondary education, (AOR=0.65, 95%CI: 0.27-0.96), being married, (AOR=6.06, 95%CI: 1.33-27.60). Predictors of positive attitude were primary education and below, (AOR=0.09, 95%CI: 0.03-0.32) and having attained secondary education, (AOR=0.52, 95%CI: 0.19-0.84).

Conclusion: Community-based intervention through training of caregivers by WDC significantly improved the knowledge and practice of home management of malaria.

Keywords: Home management of malaria; Knowledge; Practice; Ward Development Committee; Caregivers; Anambra State.



APHPN/PH23/T1/024

Parents and Caregivers' Perceptions about Content and Channels of Communication on Immunization Service Messages in Anambra State, Nigeria: Implication for Action

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ABSTRACT

Background: Effective communication is key to ensuring that some barriers to childhood vaccination are tackled, leading ultimately to improved vaccination coverage globally. Most times the source and content of information fail to deliver the necessary information that will help parents make proper decision on their child's vaccination. This study explores the perception of communication messages and the different channels used in delivering messages on vaccination in their locality, among parents/caregivers in Anambra State, Nigeria.

Methods: A descriptive cross-sectional study was conducted in three Local Government Areas (LGAs) from each senatorial zone in Anambra State among parents/caregivers with children aged range 0 – 59 months. Multistage sampling method was used to select the units to study and the sample size was calculated using Cochran formula. Validated Interviewer-administered questionnaire (electronic) was used for data collection which was analyzed using IMB SPSS version 23. It was validated by pre-testing. Descriptive analysis was done and reported as frequency, percentages, mean and standard deviation where appropriate. Chi square test was used for association between characteristics of parents/caregivers with knowledge as well as perception on key messages on immunization at $p < 0.05$. Ethical consideration was dully observed.

Results: A total of 320 parents/guardians were studied. Their mean age was 32.03 (7.40) years with majority 209 (65.3%) aged 25 to 34 years. Higher proportion of the parents/guardians were females 289 (90.31%), had tertiary education 191 (59.7%), civil/public servants 121 (37.8%) followed by trading 98 (30.6). The sex of the children were approximately equal females 157 (49.1%) and males 163 (50.9%). Overall knowledge was very high 306 (95.6%). Majority 216 (67.5%) of the respondents only received the key immunization messages during campaigns. Most, preferred channel of delivery was through religious groups 273 (85.3%), followed by town announcers 270 (84.4%). Overall, 175 (54.7%) were positive on messages given during Immunization campaigns. Higher proportion agreed that immunization messages are better reinforced if both parents are targeted 309 (98.6%). There were statistically significant association of overall knowledge with age ($p = 0.043$), sex ($p = 0.006$), educational level ($p < 0.001$) and occupation ($p = 0.001$).

Conclusion: This study revealed that the most preferred source of information or delivery channel on immunization were religious groups and health workers. It also revealed that immunization messages were clearly understood by parents. Parents/caregivers' perceptions of immunization messages can influence social change and increase immunization uptake. Both parents of the children should be targeted whenever immunization messages are to be disseminated.

Keywords: Knowledge; Perception; Communication messages; Channels; Vaccination
Parents/Caregivers



APHPN/PH23/T1/025

Perception of Safety, Efficacy and Willingness to Receive COVID-19 Vaccines among Urban Residents of Ibadan, Oyo State South Western Nigeria

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ABSTRACT

Background: The introduction of COVID-19 vaccine was associated with myths and conspiracy theories with concomitant reduction in projected uptake, with less than 3% of Nigerians vaccinated. Most viruses are preventable through use of antiviral vaccinations. COVID-19 vaccines such as Astrazenca are now being used to stop the high rate of morbidity and mortality. Certain reactions occur after a COVID-19 vaccination which are redness, pain or swelling round the injection site, fever, headache and allergic shocks in severe cases. This study was conducted to determine the perception and safety, efficacy and willingness to receive the vaccine among urban residents of Ibadan, Oyo State, South-Western Nigeria.

Methods: Multi-stage sampling procedure was used to select 422 respondents. A structured interviewer-administered questionnaire was used to elicit information on respondent's socio-demographic characteristics, knowledge and perception of safety, efficacy and willingness to receive COVID-19 vaccines. Data collection was done through structured interviewer administered questionnaires using a 5-point Likert scale and informed consent obtained. Data processing was done through a scoring system of 50% and above regarded good for knowledge, perception, and willingness, while score below 50% regarded poor for knowledge, perception and willingness. Data was analyzed using Statistical Package for Social Science (SPSS) software version 22 and presented using descriptive statistics.

Results: Respondents' mean age was 28.3 (± 7.9) years, 217 (50.9%) were females. Two hundred and eleven (49.5%) had tertiary education and 49.8% were married. Majority 403 (94.7%) knew about COVID-19 and TV was major information source. Four hundred and sixteen (97.7%) had good knowledge of COVID-19, 300 (70.4%) had poor perception of which 400 (93.9%) of them were willing to take the vaccine. Most of the participants 302 (70.9%) claimed that COVID-19 vaccine is safe.

Conclusion: From the result of the study, the respondents had positive perception towards the COVID-19 vaccine and about half of the respondents were willing to take the vaccine than get infected by the virus. Socio-demographic characteristics of the respondents were some of the reported factors influencing their willingness to take vaccine. There is need to intensify public health awareness to improve actual vaccination uptake.

Keywords: COVID-19 vaccine; Knowledge; Perception; Willingness; Uptake.



APHPN/PH23/T1/O26

Client satisfaction with quality of maternal healthcare services in selected primary healthcare facilities in Cross River State, Nigeria: A rural-urban comparison

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ABSTRACT

Background: The increasing number of maternal deaths in developing countries is a major global health concern. Most causes of maternal deaths are preventable through provision of quality maternal health services. Client satisfaction is an important indicator for measuring healthcare quality from user perspective, but there is paucity of data from maternal health services users in Cross River State. This study compared client satisfaction with maternal health services in selected urban and rural primary healthcare facilities in Cross River State, Nigeria

Methods: This was a cross-sectional survey among mothers of babies 0–6 weeks accessing child immunization services in selected primary healthcare facilities in Cross River State from October to December 2020. Using the formula for comparing two independent groups, a minimum sample size of 340 mothers (170 per arm) was estimated. Multistage sampling technique was used to recruit respondents. Data were collected using a pre-tested interviewer-administered questionnaire. The data was analyzed using SPSS version 23. Frequencies were compared at 5% significance level using Chi square test. Aggregate scores >50% indicated satisfaction with structure, process and outcome services, using Avedis Donabedian's domains of care.

Results: The mean age of the respondents was 26.51±5.78 years. Overall satisfaction was 67%, significantly higher in the urban than rural areas [69.8% vs 63.7%, (p<0.001)]. Specifically, there were higher scores in the urban than rural areas for structure (64% vs. 52%, p<0.001), process (70% vs. 67%, p=0.004) and outcome (96% vs. 91%, p=0.001) components of maternal health services.

Conclusion: The study revealed lowest satisfaction for structural attributes than other attributes, and lower satisfaction in the rural areas for all the attributes. Areas with gaps identified included electricity and water supply, bed/bed nets, ITN, window nets, toilets and bathrooms. Also, staff adequacy, drugs cost and availability, laboratory investigations and cost of services (more in rural compared to urban). Interventions targeting improvement of structural attributes are recommended, and for all attributes in the rural areas.

Keywords: Quality; Client satisfaction; Maternal health services; Avedis Donabedian; Primary healthcare facilities; Cross River State



APHPN/PH23/T1/029

Prevalence and Factors associated with Occupational stress among health workers in a tertiary institution in South-south Nigeria.

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ABSTRACT

Background: Globally, occupational stress has been on the increase especially among health workers following the advent of frequently recurring public health emergencies and increased healthcare needs. This study sought to determine the prevalence, level and identify factors associated with occupational stress among health workers in Federal Medical Centre, Yenagoa.

Methods: It was a descriptive, cross-sectional study involving 224 randomly selected healthcare workers in Federal Medical Centre, Yenagoa. Using a pretested, validated and self-administered questionnaire, data on socio-demographic characteristics, occupational history and stress were obtained from respondents. Occupational stress was assessed using the Karasek Job Demand-Control-Support tool which comprise of 17 questions in 3 domains, measured on a 4-point Likert scale. Responses were coded and entered into Statistical package for scientific solution (SPSS) version 23 which was used for data cleaning and analysis. Categorical data which include socio-demographic characteristics, professional cadre, work schedule and responses to items on the questionnaire were summarized as frequencies and proportions. Continuous variables like age of participants, duration of work life, domain scores from the Karasek job stress (DCSQ) were summarized using mean/standard deviation and median/range. Responses were assessed, scored and summed according to the domains. Median scores were determined for all domains. Using median scores as threshold, respondents were grouped as having high- and low-stress in different domains. Occupational stress was defined as high-stress in any domain. The proportion of respondents with occupational stress was calculated to obtain prevalence. Factors associated with occupational stress were identified by Chi-square test. Significance level was $p < 0.05$.

Results: Mean age of respondents was 39.3 ± 7.4 years. Majority were women (63.9%), from Ijaw ethnic group (62.7%) married (77.0%) with tertiary education (50.4%). Occupational groups included nurses (41.8%), doctors (21.3%), health attendants (23.8%), laboratory scientist (8.2%) and pharmacists (4.9%). Prevalence of occupational stress was 66.4%; least among pharmacists (50.0%) but highest among health attendants (81.0%). Among the 162 health workers who experienced occupational stress in this study, it was identified that 45.8% of them experienced severe forms of occupational stress. Level of education ($p=0.040$), income level ($p=0.001$), duration of work-life ($p=0.037$), and professional cadres among doctors ($p=0.019$), were associated with occupational stress. Perceived stressors by health workers were shortage of staff, inadequate working equipment, poor remuneration and high patient load.

Conclusion: Prevalence of occupational stress was high in this study. Upward review of remuneration by employers, increase in staff strength, putting policies in place to encourage bonding of health workers and creating a more supportive work environment are strategic interventions that will reduce occupational stress among health workers in Federal Medical Centre Yenagoa.

Keyword: Occupational stress; Health workers, South-south Nigeria.



APHPN/PH23/T1/030

Level and Elements of Satisfaction among Patients on Antiretroviral therapy enrolled in Differentiated care in South-South Nigeria

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ABSTRACT

Background: The World Health Organization (WHO) recommendation to “test and treat all” HIV-positive individuals resulted in a 38% fall in new HIV infections and related deaths by 2017. Clients need to access ART within a service delivery model that meets their needs and expectations through different packages of differentiated care. The WHO differentiated model of care is a client-centred strategy that simplifies and adapts HIV services to accommodate the preferences and demands of various groups of people living with HIV (PLHIV) while reducing unnecessary burdens on the health system. This encourages retention in care and viral suppression, especially in developing countries by improving the quality of care and access to treatment for PLHIV. Patient’s satisfaction occurs when patients feel their needs are being met by the service they receive in health institutions in spite of their undifferentiated background and expectations. The level of satisfaction of these devolved clients with the community pharmacy services has not been evaluated. This study aimed to ascertain the level of satisfaction of PLHIV on differentiated care and to identify the elements that affect their overall satisfaction.

Methods: A cross-sectional descriptive study of 130 stable PLHIV ≥18 years who presented at the ART clinic of Rivers State University Teaching Hospital (RSUTH), Port Harcourt, for 6-monthly follow up. Participants were selected using a systematic sampling method. The main elements of satisfaction of PLWHIV in this study were: spending enough time with pharmacists, being shown courtesy and respect by pharmacy staff, constantly receiving adherence counselling and information on drug therapy. Ethical approval was obtained from the ethical board of RSUTH (RSUTH/REC/2021052). Structured interviewer-administered questionnaires were used.

Results: Of the 130 respondents, women, married persons, and those that had attained tertiary education formed the highest preponderances with 56.2%, 51.5% and 60% respectively. Overall satisfaction was 93.9% with a female preponderance (73%), tertiary education and those that have been on ART for more than 10 years (100%). Spending enough time with the pharmacist and being shown courtesy and respect by pharmacy staff were the highest elements of satisfaction by the younger and middle-aged participants while in the eldest age group (≥60years), it was constantly being given medication adherence counselling.

Conclusion. Differentiated model of care in community pharmacies has provided good patient satisfaction and quality of care in PLHIV in Rivers State and so should be encouraged in other areas.

Keywords: HIV; Antiretroviral therapy; Differentiated care; Patient satisfaction.



APHPN/PH23/T1/O31

Clustering of Non-Communicable Diseases Risk-related Behaviours: A Cross-sectional Study of In-school Adolescents in a Southern Nigerian State

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ABSTRACT

Background: Non-communicable diseases (NCDs) are sometimes described as lifestyle diseases because many of their risk factors are behavioural and modifiable. These behavioural risk factors are particularly patterned during adolescence, which is a significant phase in the life cycle of NCDs. This study assessed the simultaneous presence of NCDs risk-related behaviours, and the association of these risk-related behaviours with socio-demographic factors among in-school adolescents in a southern Nigerian State.

Methods: A cross-sectional study design was employed to assess the NCD risk-related behaviours (smoking habit, alcohol consumption, inadequate intake of fruits/vegetables and physical inactivity) among 607 students age between 10 and 19 years selected by multistage sampling technique. Data was collected using an interviewer-administered structured questionnaire adapted from the WHO STEPS questionnaire. Descriptive and inferential analyses was done using the IBM SPSS version 22 software. Statistical significance was set at $p < 0.05$.

Results: The mean age of the students was 14.7 (SD = 1.52) years, over half of the students 347 (57.2%) were females, 341 (56.2%) were urban residents. Clustering of two, three, and four NCDs risk-related behaviours was found among 280 (46.1%), 91 (15.0%), and 10 (1.6%) of the students, respectively. Clustering of two simultaneous NCDs risk behaviours was mainly observed among adolescents who were urban residents (AOR=1.86; 95%CI: 1.34–2.57). Clustering of three simultaneous NCDs risk behaviours was mainly observed among adolescents who were aged 15–19 years (AOR=1.76; 95%CI: 1.10–2.81). Clustering of four simultaneous NCDs risk behaviours was mainly observed among male adolescents (AOR=12.41; 95% CI: 1.56 – 98.55).

Conclusion: There is a co-occurrence of NCD risk factors among in-school adolescents in the study location. Age, sex and place of residence were significantly associated with simultaneous occurrence of risk factors for NCDs. Indeed, urban residence (two risk factors), increasing age (three risk factors) and being male (four risk factors) were significant predictors of occurrence of NCDs later in life among these adolescents. We recommend further strengthening of the school health education and school health service components of the National school health programme to improve information on NCD risk, and carry out primary prevention to these adolescents. Furthermore, revisions to Adolescent health policies should integrate the imperative of NCD prevention in designing interventions for this target population.

Keywords: Adolescent Health; Non-communicable diseases; Simultaneous risk behaviours.



APHPN/PH23/T1/034

Effects of a Community-Driven Educational Intervention on Caregivers' Knowledge and Practice of Childhood Immunization in Rural Communities of Rivers State

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ABSTRACT

Background: The Alma-Ata Declaration of 1978 emphasized the significance of active community participation in the provision of primary health care services. Some factors for the low immunization coverage are community-based especially those without community participation. Current community engagements focus on communication activities such as the use of town announcers and community mobilizers without actively involving communities. Poor parental knowledge of immunization has been identified in several studies as the most frequent and often reported barrier to childhood immunization. Limited information exists on the usefulness of community-driven educational intervention in improving caregivers' knowledge and practice of childhood immunization in rural communities of Rivers State. The study aimed to assess the effect of a community-driven intervention on caregivers' knowledge and practice of routine childhood immunization in rural communities of Rivers State.

Methods: A simple randomized controlled intervention study was conducted among caregivers with children aged 0 to 6 weeks in sixteen (16) rural communities of Rivers State. A total of 368 caregivers in both the intervention and control groups were enrolled in the study through a multistage sampling method and randomized into either the intervention or control group by simple 1:1 randomization and followed up for 9 months. The intervention was a structured health education training on immunization delivered by community volunteers to caregivers in the intervention group, while the control group did not receive any education on immunization. Data were collected with a pretested, structured, interviewer-administered questionnaire adapted from another study. Responses on knowledge and practice were scored one mark for each correct answer and zero for each incorrect answer and summed up. Scores of 0 to 3 were classified as poor, 4 to 6 as fair, and 7 to 10 as good. Effect size of the intervention was determined with Cohen W. Data analysis was done with SPSS 25. Univariate analysis was performed and the data presented as frequency tables. Comparisons between groups, pre-and post-interventions were performed with Student t-test of independent sample means for continuous variables. The Pearson Chi-square test and Fischer's exact test were used for statistical significance testing. A p-value less than or equal to 0.05 was considered statistically significant at a 95% Confidence Interval.

Results: There were 153 mothers in the intervention group and 148 in the control group. Their mean ages were 30.2 ± 7.9 years (intervention group) and 31.9 ± 10.1 years (control group). Good knowledge of immunization was significantly higher in the intervention group, 114 (65.9%) compared to the control group, 98 (59.0%) ($X^2=7.55$, $p=0.02$), and higher level of good practice of immunization in the intervention group, 139 (80.4%) compared to the control group, 97 (58.4%) ($X^2=21.93$, $p<0.001$). The effect size for improvement in knowledge was small (Cohen W=0.2) and for the practice of immunization medium (Cohen W=0.4).



Conclusion: Structured community-driven immunization education significantly improved caregivers' knowledge and practice of childhood immunization. It is therefore, recommended that community members be given basic immunization education training to improve caregivers' knowledge and practice of childhood immunization.

Keywords: Community-Driven Educational Intervention; Caregivers; Knowledge; Practice Childhood Immunization



Risk and Protective Factors influencing Condom Use among Adolescents in Rivers State

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ABSTRACT

Background: The reproductive health behaviours of adolescents can have lifelong impacts that can either be negative or positive. The WHO defines adolescents as people between the ages of 10-19 years. Adolescents tend to have early onset of sexual intercourse, low use of contraception, and high adolescent pregnancy rates. To prevent STIs, HIV, and other harmful consequences of unprotected sexual contact like unwanted pregnancies, school drop-out, and abortion effectively, more research is needed in a culturally relevant context. It was necessary to assess the factors influencing condom use among adolescents in Rivers State.

Methods: A cross-sectional study design was used. The sample size was derived based on Cochran's formula for sample size calculation for cross-sectional study, using an estimate of condom use among adolescents in secondary school of 31.3% from a similar study in South-South, Nigeria, providing for a further 10% allowance for non-response rate and applying a design effect of 1.8. A multi-stage sampling technique and a structured interviewer-administered questionnaire were used to survey 671 adolescents in communities in Rivers State. Data were analyzed with IBM SPSS version 26. Chi-square (χ^2) test analysis was performed to test for association in proportions between explanatory variables and condom use. Bivariate and multivariate logistics regression models were also used to determine the odds of association between the various factors and condom use.

Results: Out of the 671 adolescent respondents, 313 (46.7%) have had sexual experiences. The proportion of sexually experienced respondents who used condoms was 192 (61.7%). The study showed lower odds of condom use among adolescents in school (cOR=0.6, 95%CI: 0.36-0.97, p=0.03) compared to those not; higher odds among adolescents whose mothers have post-secondary education (cOR=2.7, 95%CI: 1.15-6.49, p=0.02) than those with primary or lower education. Adolescents with no fathers (cOR=2.6, 95%CI: 1.3-5.4, p=0.009) and those who do not discuss sex-related matters with their mothers (cOR=2.7, 95% CI: 1.3-5.6, p=0.008) were more than two times more likely to use condoms. Adolescents who go to parties often and occasionally were 7.37 times (cOR=7.37, 95%CI: 2.29-22.72, p=0.001), and 1.99 times (cOR=1.91, 95%CI: 1.16-3.13, p=0.011), were more likely to use a condom compared to those who never went, at the bivariate level. After adjusting, it showed lower odds of condom use among adolescents who often go to parties (aOR=0.2, 95%CI: 0.4-0.6, p=0.005) compared to those who never went.

Conclusion: Adolescents' use of condoms was influenced by a variety of socio-demographic, individual, family, and community-related factors. Therefore, improving adolescents' condom usage in Rivers State may benefit from coordinated interventions aimed at removing barriers to use. SRH programmes targeting barriers and facilitators of condom use should target multiple levels that incorporate a locally relevant understanding of the barriers and facilitators to condom use among adolescents. Adolescents need to be supported to adopt and maintain protective behaviours.

Keywords: Adolescents; Condom use; Barriers; Facilitators; Rivers State



APHPN/PH23/T1/039

Menstrual Hygiene Practices and Associated Factors among Secondary School Students in an Urban LGA of Nigeria's Niger Delta

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ABSTRACT

Background: Menstruation is a vital component of the reproductive lives of secondary school girls. However, maintenance of good menstrual hygiene practices remains a challenge for school girls in most developing countries including Nigeria. This study aimed to determine menstrual hygiene practices and associated factors among senior secondary school girls in Rivers State, Nigeria.

Methods: A descriptive cross-sectional study was conducted among girls attending co-educational public secondary schools in an urban area of Port Harcourt. Sample size was determined using the formula for calculating sample size for a single proportion. A prevalence of good menstrual hygiene practice of 25% from a previous study was used (Varghese et al. 2015), confidence interval of 95%; an acceptable difference of 0.01 and a design effect of 2 bringing the minimum sample size to 144. A two-stage probability sampling method was used to select eligible and consenting girls from one of the randomly selected schools. A structured self-administered questionnaire was used to obtain information. Data was analyzed using SPSS version 26 and summarized using means, standard deviation, frequency, and proportions then presentation in charts and tables. Good menstrual hygiene practice was analyzed by giving 1 point to each of the following - those that use disposable sanitary pads; those that change at least twice a day; those that wash their hands before and after changing their menstrual materials; those that wash their genitals at least once a day; those that washed genitals with soap and those that dispose of their used menstrual materials appropriately. A score of 5 and above was considered good menstrual hygiene practice while less than 5 was considered poor menstrual hygiene practice.

Results: The mean age of the respondents was 15±1 years. Use of toilet paper at home and away from home was reported in 6.3% and 20.1%, respectively while that of sanitary pads was 74.3% and 53.5% respectively. More than half (57.6%) of respondents washed and reused menstrual materials during their last menstrual flow. About 54.2% of the respondents changed their menstrual materials at least twice on the heaviest day of their flow. Handwashing before and after changing menstrual material was practiced by 60.4% of the respondents. Forty-three percent of those who used disposable pads disposed them into the toilet. Overall, 62.5% of the respondents engaged in good menstrual hygiene practices and students who use toilet paper to absorb menstruation were twice more likely to engage in good menstrual hygiene practices (OR=2.19; 95%CI=0.43 – 6.36)

Conclusion: This study discovered several gaps including the use of inappropriate materials to absorb menstrual blood, improper disposal of menstrual waste, poor hand and genital washing among others. There is an obvious need to provide menstrual commodities in schools and public places as well as educate young girls on good menstrual hygiene practices. More research is indicated on the factors responsible for the differences observed in the menstrual hygiene practices at home and away from home.

Keywords: Menstrual Hygiene; Practices; Associated Factors; Secondary School Students; Niger Delta



APHPN/PH23/T2/001

Fundamental Data Base for the Establishment of an Ideal Primary Health Care and Health for All Programme: A Case Report of the Okeigbo Programme

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ABSTRACT

Background: The Nigerian experience of primary health care (PHC) implementation in the past three and a half decades falls short of key principles related to the Alma Ata declaration, with consequent poor performances. Community medical or health services should start with the complete knowledge of the entire population concerned; however, no programme in Nigeria had fully done so, to the best of our knowledge. In taking off as Nigeria's first specialist medical University, University of Medical Sciences (UNIMED) Department of Community Medicine had the objectives to practice all components of disciplinary public health and community medicine, going beyond the tertiary preventive and social medicine and its other community-oriented only (non-statutory) services. A key element of the sustainable PHC model is the operation of a system that is based on actual and not an estimated denominator for the focal population. This necessitated the conduct of enumeration area (EA) demarcation and house numbering update, de jure census, and health survey of Ward 7 of the Oke-Igbo community to create a fundamental data base for this program.

Methods: The process involved the university establishing partnerships with the State, the communities and the Ile-Oluji/Oke-Igbo Local Governments (LGA) for implementation of sustainable PHC programme in ward 7 of the LGA -in whose superintendence, the implementation of statutory community medical and health care belongs. Key processes leading to the generation of fundamental data base for the establishment of an ideal PHC-HFA included selection of the community and identification of the political ward, stakeholders' engagement, conduct of EA demarcation, up-date PHC house numbering, conduct of de-jure census and health survey, and engagement and placement of a statutory community nurse-midwife and integration of community and clinic-based services, with placement of at-risk-register. Resources for the conduct of these activities came through the combined effort of the Oke-Igbo community, the university technical team, the National Population Commission and the LGA management.

Results: The partnership led to the GIS mapping and PHC numbering of all the houses in the ward as well as the de-jure census of the entire households therein. This process allows all the denominator populations for all the statutory and other community health services to be given in the community, to be known from the start for any meaningful health planning. It allows also the at-risk register to be placed for all the chronically ill subjects for their home and work-place-based care as community health care means, and in preparation for community rounds. A total of 1,309 households were listed for the de jure census, of which 1219 (89.6%) could be contacted for the de jure census and health survey. Overall, 2,483 individuals were listed in the 35 enumeration areas that constitute the Okeigbo Ward 7 population.

Conclusion: The community itself could be engaged to willingly and fully fund an entire health programme that would bring Health for All, with only technical and very minimal financial implication for the university. It is hoped that other medical schools can learn from the exercise for the benefits of their communities.

Keywords: Disciplinary public health and community medicine; Partnerships; Health for All.



APHPN/PH23/T2/002

Quality of Drug Prescription and Dispensing Practices in University of Port Harcourt Teaching Hospital

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ABSTRACT

Background: Rational use of drugs is advocated by the World Health Organization because of its importance in ensuring patients' health, safety, economy and quality of life. Irrational drug use which manifests as inappropriate prescriptions, poly-pharmacy, and others, have severe consequences for patients and the community at large. It is pertinent to identify errors in drug use pattern and institute ways to promote rational drug use. This study evaluated the quality of prescription and dispensing practices and provided evidence for the improvement on the quality of drug use in University of Port Harcourt Teaching Hospital (UPTH).

Methods: A retrospective, prospective and cross-sectional quantitative study was conducted at UPTH using the WHO core prescribing indicators. A cluster sampling method with clinical units as sampling frame was used to select 10 clinics and their attached pharmacies from all clinical units in the hospital. Six hundred prescriptions retained at the pharmacy from June to November 2021 were selected randomly to evaluate the various prescription indicators. Prospectively, 330 patient encounters from the 10 clinics were directly observed to evaluate the patient care indicators and 48 prescribing doctors selected from the 10 clinics in the hospital formed the respondents for the evaluation of the factors affecting doctor's prescribing practices. Study instruments were the WHO/INRUD drug use form, structured checklist, questionnaire and stop watches. Descriptive analysis was performed using Statistical Package for the Social Sciences (SPSS) version 25 and comparison was made with established indicators of rational drug use.

Result: From the prescription sheets, all the prescriptions had the patient's name, sex, and doctor's signature, only 53.5% had patient's age well written and none of the prescriptions had a space for patient's diagnosis. A total of 2023 drugs were prescribed in 600 prescriptions. The average number of drugs per encounter was 3.4 ± 1.9 . The proportion of encounter with antibiotic and injection was 40.2% and 24.8%, respectively. The proportion of drugs prescribed by generic and from an essential medicine list (EDL) of UPTH was 43.6% and 97.1%, respectively. The average consultation time was 17.5 ± 8.0 minutes, average dispensing time was 7.7 ± 3.8 minutes, 99.8% of the drugs were adequately labelled and 82% of the patients had adequate knowledge of their drug doses. Almost (93.3%) in the essential drug list were available at the pharmacy and there was no copy of the EDL in any consultation room. Only 43.7% of the doctors had adequate knowledge of rational drug use, over 50% showed good prescription practices. Drug availability and cost of drugs were preponderant factors that affecting prescribing influencing patterns.

Conclusion: The study shows low compliance with WHO prescribing indicators and good compliance with patient care indicators. There was a degree of rational drug use among the prescribing doctors, however, brand prescription, poly-pharmacy and antibiotics over-use were major problems. The study recommended policy/guideline formulation, adequate training, and monitoring to promote the rational use of drugs.

Keywords: Prescription practice; Prescription pattern; WHO indicators; Rational drug use; Teaching hospital, Nigeria.



APHPN/PH23/T2/007

Is Governance a Binding Constraint over Context? A Comparative Analysis of Subnational Implementation of National Maternal and Child Health Programmes in a Multilevel Government

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ABSTRACT

Background: Historically, Nigeria has persistent poor maternal, neonatal and child health (MNCH). Sub-national disaggregated outcomes also show wide variation across states. Whilst some states perform better than national averages, other poorly performing states pull down national level averages. Health policy implementation in some federal decentralized countries means health care responsibilities are spread across various levels of government, leading to complexities in the process. This is further complicated in developing countries, where there are resource constraints and weak health systems, which may constrain collaboration across levels of government, towards a policy implementation mandate. In Nigeria's federal system of government, States are the federating units. Hence, formal decisions on health policy implementation are made at the state level and are the units of analysis for health care outcome evaluation. This study explores three MNCH programmes (Midwives Services Scheme [MSS], SURE-P/MCH and Saving One Million Lives Programme for Results [SOML PFR]), to understand how the multi-level governance (MLG) structure influenced the implementation in two states, over a decade (2009-2019), focusing at states' (subnational) responses to national level MNCH policies.

Methods: The study was conducted in Anambra and Ebonyi states in southeast zone which were selected based on their MNCH context and past performance in MNCH using a set of output indicators. In addition, national level data was gathered in Abuja-the federal capital territory (FCT) where health policy making is domiciled. Analysis was guided by the Consolidated Framework for Implementation Research (CFIR), which has five domains (intervention characteristics; outer setting; inner setting; characteristics of the individuals involved and the process of implementation). Document reviews (69) and in-depth interviews (19 national, 25 sub-national) were conducted, and information triangulated between November 2018-July 2019.

Results: Both states did not implement programmes as set out in the policy documents and implementation manuals due to an underlying disconnect in the existing political and MLG structure, which influenced state responses, despite a wide variation in socio-economic and MNCH context in both states. A key implemented gap (in MSS and SURE-P/MCH), was in staff remuneration, where both states did not pay their counterpart staff salaries and did not integrate these staff into the states at the end of the programme. In SOML PFR, deviations from the programme indicators were as a result of mis-procurements in both states. Across the MSS and SURE-P/MCH, subnational stakeholders cited their inadequate engagement by national stakeholders as a major influence on the response pattern. In the SOML PFR, Anambra State faulted the design of the programme which they perceived as unfavourable to the state, whilst in Ebonyi State, the governor, who has the executive powers appears not to have been adequately mobilised to align with the programme primary objectives.

Conclusion: Transfer of national initiatives to lower levels in a MLG can distort the programme design and impact the entire process and outcomes. Mitigating these needs to commence very early in the policy process. Decentralized policy making and implementation requires strong coordination mechanisms across government levels and should be explored in further research.

Keywords: Multi-level government; Decentralisation; Policy implementation; Maternal and child health; Comparative analysis.



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Quality of Drug Prescribing and Dispensing Practices in Primary Healthcare Centres, Obio-Akpor, Nigeria

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ABSTRACT

Background: Irrational drug use remains a major issue in developing countries in terms of access to quality, safe and affordable primary health care, hence this study used the World Health Organization and the International Network for the Rational Use of Drugs (WHO/INRUD) core drug indicators to assess the quality of prescribing and dispensing practices in Primary Health Care Centres (PHCCs) in Obio-Akpor Local Government Area in Nigeria.

Methods: This facility-based descriptive cross-sectional study covered 10 PHCCs, 1300 prescriptions, 3805 medications from August to October 2021 which were selected by random sampling approach to evaluate prescribing indicators while direct observation of 325 patient encounters was used to evaluate the patient-care indicators. Twenty-three prescribers completed the self-administered questionnaire for assessment of the factors affecting prescribing practices. Study instruments were the WHO drug indicator form, WHO model drug list, Nigerian Primary Health Care Essential Drug List and a structured self-administered questionnaire. The Statistical Package for the Social Sciences version 22 was used for descriptive data analysis and the performance assessed using composite indices such as Index of Rational Drug Prescription (IRDP), Index for Rational Patient Care Drug Use (IRPCDU), index of Rational Facility-Specific Drug Use (IRFSDU) and the index of Rational Drug Supply (IRDS).

Results: The mean age of prescribers was 33±5.4 years (range 26–45 years) while for patients in the retrospective study was 17.7±18.9 years (range 0-90 years). More of the prescribers were females (65.2%), singles (82.6%), medical officers (95.7%) and been in practice between 1 to 5 years (47.8%). Only 5 (21.7%) out of 23 prescribers were able to correctly define RDU and 6 (26.1%) had received training on RDU in their practice years. A total of 3805 medications were prescribed for the 1300 encounters giving 2.9 (± 1.3) medications prescribed per encounter. Prescriptions in generic forms were 70.6% and 75.6% of drugs prescribed were from the Nigeria essential medicine list for PHCCs. Encounters with antibiotics and injectables included in the prescriptions were 62.6% and 22.3%, respectively. Antimalarial, antihypertensive, and anti-diabetic medications were prescribed in 43.8 %, 9.6 % and 1.7 % of the cases, respectively. Most (91.6 %) of the recommended drugs were dispensed, 98.2% of the drugs dispensed were appropriately labelled, and 95.5 % of the patients had adequate understanding of their drug doses. The pharmacy stocked 88.7% of the key medications, and all PHCC had a copy of the EDL.

Conclusion: There was evidence of irrational drug use practices like poly-pharmacy, brand prescription, and abuse of antibiotics. The implementation of more effective training of the PHCC workers, promotion of effective monitoring and adherence to rational drug use is needed for improvement of the safety, quality and affordability of primary health care in Nigeria.

Keywords: Drug prescribing; Drug dispensing; Quality indicators; Rational drug use; Primary healthcare, Nigeria.



APHPN/PH23/T2/009

Capacity Assessment of Primary Healthcare Centres in Port Harcourt Local Government Area, Rivers State, Nigeria

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ABSTRACT

Background: Healthcare service delivery of an immense benefit to the populace requires the availability of adequate infrastructure, diagnostic medical equipment, drugs, and well-trained medical personnel. In Nigeria, poor funding and mismanagement often characterize healthcare service delivery. Presently, most of the PHC facilities in Nigeria lack the capacity to provide essential healthcare services thereby, affecting coverage and quality of healthcare services. This study aimed to determine the capacity of Primary Healthcare centres in Port Harcourt Local Government Area (LGA) compared to the national standard.

Methods: It was a cross-sectional study of all primary healthcare centres in Port Harcourt LGA. A questionnaire was administered to all heads of facilities, a checklist was used for direct observation of materials, humans, organizations, and resources. This was compared with the national minimum standard for primary healthcare in Nigeria. Winpepi Statistical software was used and the p-value was 0.05. Data was analyzed based on Donabedian, Avedis., 1988 evaluation model of structure- material resources (facilities, equipment), human resources (number and qualification of personnel), and organization structure (medical staff organization).

Results: Port Harcourt LGA had a total of fourteen primary healthcare centres. Out of the 14 PHCs, 13 of them were functional (92.9%). The 14 PHCs had a total of 203 health professionals male-16 (7.9%), female-187 (92.1%). Doctors- 20 (9.9%) who were also heads of facilities; nurses-65 (32.0%), pharmacist- 1 (0.5%), laboratory scientists-13 (6.4%), pharmacy technicians-18 (8.9%), laboratory technicians-7 (3.4%), Junior Community Health Extension Worker (JCHEW)-16 (7.9%), Senior Community Health Extension Worker (SCHEW)-44 (21.7%), Community Health Officer (CHO)- 16 (7.9%), Village Health Workers-3 (1.5%). Essential outpatient services, immunization, counseling/health promotion, outreach, water and sanitation, essential drug list, effective record maintenance systems, family planning, prenatal, infant welfare, and delivery were all being effectively provided by 13 of them (92.9%). The statistical significance of equipment and human resources predicted efficient healthcare delivery. The results showed that 12 (85.7%) of the facilities met Nigeria's primary healthcare requirements.

Conclusion: Using the National Standard as a benchmark, health care service delivery is at its best in primary health care centres in Port Harcourt LGA of Rivers State. However, there is a need to enhance nutrition, catering services, a two-way referral system, and equipment maintenance.

Keywords: Human resources; Health infrastructure; Primary healthcare; Quality of care.



APHPN/PH23/T2/O10

Perceptions and Factors affecting Utilization of Primary Health Care Services in a predominantly Urban Community in South-South Nigeria

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ABSTRACT

Background: Primary Health Care is the cornerstone of a sustainable national health system for the attainment of universal health coverage. There is a growing lack of confidence in the health system at the grassroots level as evidenced by poor demand for health services at the primary level of care. This study assessed the perceptions and factors affecting the utilization of primary health care services in a predominantly urban community in South-South Nigeria.

Methods: This descriptive cross-sectional study was done in Egor, Benin City, Nigeria. A structured, interviewer administered questionnaire was distributed to 371 heads of household who were selected using multistage sampling method. The questionnaire was adapted from a previous study carried out in Edo State, Nigeria. Ethical approval to carry out the study was obtained from the Research and Ethics Committee of the University of Benin Teaching Hospital, Benin City, Nigeria. The data were analyzed using IBM SPSS version 25, the level of significance was set at $p < 0.05$.

Results: Majority of the respondents were males 191 (51.6%). Slightly more than half of the respondents 195 (52.5%) were in the age group of 35-49 years. Less than half of the respondents had utilized primary health care services, 171 (46.1%). Only a quarter, 42 (24.6%) perceived the services utilized were satisfactory. The major factors perceived by the respondents resulting in poor utilization of PHC services in the LGA include long waiting time 82 (48.0%); lack of diagnostic facilities 34 (19.9%); and lack of essential drugs 31 (18.2%). Immunization, 45 (26.3%), child, 39 (22.8%) and maternal, 32 (18.7%) health care services were the most utilized. Sex ($p=0.004$), religion ($p=0.003$), marital status ($p=0.035$), family type ($p=0.020$) and occupational skill level ($p=0.025$) of household heads were associated with the utilization of PHC services in the LGA. Sex ($p=0.027$, OR: 0.599; 95%CI: 0.38-0.94), religion ($p=0.033$, OR: 2.246; 95%CI: 1.066-4.735), and occupation ($p=0.027$, OR: 2.437; 95%CI: 1.106-5.367) were the socio-demographic predictors for the utilization of health services in the study locale.

Conclusions: The utilization of the primary health care services was low, and the perception of services utilized was not satisfactory. Perceived factors from the respondents such as time spent waiting for treatment, inadequacy of available services and hours of operation largely infringed on level of use of the PHC services. Non-utilization of PHC services could lead to unmet health needs, delays in receiving appropriate care, inability to get preventive services and hospitalizations that could have been prevented. The identified challenges to utilization of health services will give insight to the Local Government Health Authority on prospective solutions needed to strengthen the primary health care system. Also, improved community engagement and participation could enhance health services access and uptake.

Keywords: Health services; Utilization; Primary Health Care; Household heads; Southern Nigeria



Contraceptive Knowledge and Utilisation among Sexually Active Adolescents in Selected Secondary Schools in Jos, Plateau State

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ABSTRACT

Background: The adolescent period is a very critical phase of life marked by physical, psychological, hormonal and cognitive changes which causes them to develop behaviours and establish patterns as regards sexual activity. Many adolescents engage in risky sexual behaviours which predispose them to unintended pregnancies and sexually transmitted diseases which are related to maternal mortality. The aim of the study was to assess the level of knowledge and factors affecting the utilization of contraceptives.

Methods: This was a cross-sectional study conducted among 198 adolescent in two secondary schools in Jos North Central Nigeria. A multistage sampling technique was used to select the study participants and a self-administered structured questionnaire was used to collect data among male and female senior secondary students. EPI-info version 3.5.4 was used to analyze the data where descriptive statistics was performed and chi-square was used to compare variables. Statistical significance was based on a $p \leq 0.05$.

Results: The mean age of the respondents was 16.2 ± 1.6 and 109 (55.1%) of them were middle aged adolescents. One hundred and ten (55.6%) were females and 88 (44.4%) were males. Majority 126 (63.6%) of the respondents were aware of contraceptives but only a third 55 (27.7%) of them had good knowledge on contraceptives. Of those that had good knowledge, 19 (17.3%) were females and 8 (9.1%) were males and this difference was not statistically significant ($p=0.118$). Discussion with parents was a factor that was associated with knowledge of contraceptive; those that discussed with good knowledge were 14 (22.6%) while those that did not were 13 (9.6%) and this difference was statistically significant ($p=0.03$). About half of them were sexually active but only 36 (38%) of the sexually active respondents had used contraceptive. Out of the sexually active respondents that had used contraceptive 19 (52.8%) of them were males while the females were 17 (47.2%) and the difference was not statistically significant ($p=0.466$). Nineteen (52.8%) of the sexually active respondents said contraceptives were easily accessible. Condom was the most frequently used contraceptive method 32 (89%) followed by emergency contraceptive pill 3 (8%) and oral contraceptive pill 1 (3%).

Conclusion: Contraceptive knowledge among adolescents in Jos was poor and the utilization of the different methods of contraception was also poor among the sexually active adolescents. There is therefore a need for contraceptive awareness among adolescents and measures should be employed to improve contraceptive knowledge such as including it in the secondary school curriculum and its utilisation among adolescents in Plateau State.

Keywords: Adolescents; Contraceptive; Utilization.



APHPN/PH23/T2/O13

Human Resources for Primary Health Care in the Federal Capital Territory, Abuja: Implication for a Resilient Health System

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ABSTRACT

Background: Human resources for health is a major determinant of a resilient health system. With the other five building blocks, they work together for effective and efficient health service delivery. The objective of this study was to determine available human resources for health at the PHC centres in the FCT and the implication it has on having a resilient health system.

Methods: We conducted a human resources audit in the PHC centres over a period of one month (November-December 2022) in all the 62 ward health facilities in the FCT. Staff benchmark for PHC centres was obtained from the National Primary Health Care Development Agency's minimum standard for primary health care document. Assessment tool was adapted from the Minimum Service Package for PHC checklist developed by the National Primary Health Care Development Agency, WHO and other partners. Data was analysed using excel spreadsheet and presented as simple descriptive statistics.

Results: None of the 62 health facilities visited had the minimum number and mix of human resources required. The available permanent staff was 560 representing 26.8% of the required minimum number. About half of the workers at the facilities were volunteers. Of the available cadres required, pharmacists and doctors were the least available, 5 (8%) and 3 (5%), respectively. Nurses/midwife 44 (18%), medical record officers 14 (23%). However, CHEWs were 25% in excess.

Conclusion: There is a human manpower shortage, both in terms of availability and type at the PHC level in the FCT. The CHEWs only are in excess of number, their main role being in the community and they do not provide skilled birth deliveries. Well-trained and human resources are paramount for building a resilient health system. With only a quarter of the required workforce available, building such a system could be but a mirage. The government needs to collaborate with other sectors such as education, health, finance, and the private sector to urgently address the human resources gaps in the health sector. The volunteers should be screened and those qualified be employed immediately.

Keywords: Human resource; Resilient Health system; FCT.



Levels of Inpatient and Outpatient Satisfaction with Services in Secondary Health Facilities in Rivers State, Nigeria

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ABSTRACT

Background: Patient satisfaction is an important outcome measure in evaluating the quality of health services. It influences outcomes of care and drives cost-effectiveness for hospitals. Much attention had not been given to secondary healthcare research in Rivers State so, this study assessed the levels of patient satisfaction at public secondary health facilities in Rivers State.

Methods: This descriptive cross-sectional study recruited 170 inpatients and 692 outpatients from selected zonal hospitals with proportionate allocation of participants. The Taro Yamane's simplified for sample size was applied and doubled for design effect. Data was collected using structured, self-administered questionnaires on patient demographics and satisfaction with services (medical records, payment, nursing, doctors' consultation, pharmacy, laboratory, radiology, maternity, accident & emergency, blood bank, theatre, admission, and discharge) on a 5-point Likert scale and transformed to percentages using IBM SPSS version 25. Satisfaction was rated as proportion of those who were satisfied or very satisfied in the Likert scale. The research ethics committees of the University of Port Harcourt and the Rivers State Hospitals Management Board granted approval for this study.

Results: There were 111 (65.3%) female inpatients and 486 (72.0%) female outpatients. The median age of the participants were 35 years (IQR: 21 years) & 37 years (IQR: 21 years) for inpatients and outpatients, respectively. In-patient satisfaction levels for services ranged between 22.3%-96.1%. Blood bank and radiology services were the lowest, while maternity services were the highest rated. Bori zonal hospital had the lowest satisfaction level of 7.4% for blood bank services while satisfaction with radiology services was lowest at Ahoada and Degema zonal hospitals (0.0%). Outpatients' satisfaction ranged between 60.9%-90.7% and doctors' consultation was the highest while payment services were the lowest. Satisfaction with payment services was lowest at the Bonny Zonal hospital with only 32.8%. The global satisfaction level was 90.6% for inpatients. Bori zonal hospital scored the highest at 96.3% while the Ahoada zonal hospital was the lowest at 87.5%. For outpatients however, the average global satisfaction was 85.6% for outpatients. It was lowest at the Bonny zonal hospital which had 84.6% and highest at the Degema zonal hospital with 92.1%. The median performance rating of the hospitals on a scale of 0-10 was 8 for both inpatients and outpatients.

Conclusion: Although patient satisfaction levels were generally high, with inpatients having higher global satisfaction levels than outpatients in all the zonal hospitals, they were very low with the blood bank, radiology and laboratory investigations done within the hospitals. There is a need for further investigation and improvements in diagnostic services at the secondary level of care in Rivers State.

Keywords: Patient satisfaction; Health services; Secondary health facilities; Rivers State, Nigeria



Determinants of Inpatient and Outpatient Satisfaction in Secondary Health Facilities in Rivers State, Nigeria

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ABSTRACT

Background: The Donabedian structure-process-outcome framework depicts core dimensions of healthcare quality. These organizational factors, along with patient demographics, influence patient satisfaction, which is a proxy for quality of care. Determining their level of influence would enhance efficiency through focused intervention in service improvement. This study assessed the determinants of inpatient and outpatient satisfaction in public secondary health facilities in Rivers State.

Methods: A descriptive cross-sectional design using structured, self-administered questionnaires fielding patients' demographics, satisfaction with structure, process, and outcome dimensions of healthcare quality on a 5-point Likert scale was used. A total of 170 inpatients and 692 outpatients from 5 zonal hospitals were recruited consecutively. Responses were converted to percentages and the median scores for structure, process and outcome were used in the multivariate ordinal logistic regression analysis for determinants of global satisfaction at 95% confidence interval and $p \leq 0.05$ significance level. IBM SPSS version 25 was used for statistical analysis. Ethical approval was from the Research Ethics committees of the University of Port Harcourt and the Rivers State Hospitals Management Board.

Results: A total of 170 inpatient and 692 outpatient questionnaires were analyzed and the response rate was 96.1% for inpatients and 94.1% for outpatients. The median age was 35 years (IQR: 20.8) and 111 (65.3%) were females. Outpatients had a median age of 37 years (IQR: 21.0) and 486 (72.0%) were females. For inpatients, being single (OR=0.01, $p=0.016$) was associated with significantly lower satisfaction compared to those that were previously married (widowed, divorced). Inpatients with no level of education were less likely to be satisfied than those with tertiary level of education (OR=0.01, $p=0.030$). In-patients who were of the Ijaw ethnicity were less likely to be satisfied than those of other ethnicities (excluding Ibo, Ogoni, Ibibio/Efik/Annang) (OR=0.11, $p=0.042$). On the other hand, being admitted for acute illness (OR=14.138, $p=0.035$) was associated with significantly higher satisfaction compared to those admitted for chronic diseases. Higher satisfaction rating with process or outcome increased the likelihood of overall inpatient satisfaction (OR=7.20, $p=0.031$ & OR=54.075, $p<0.001$, respectively). Among outpatients, routine visits were associated with lower satisfaction compared to chronic disease patients (OR=0.45, $p=0.049$). Higher ratings on satisfaction with structure, process, or outcome increased the likelihood of overall outpatient satisfaction (OR=1.478, $p=0.026$; OR=1.671, $p=0.013$ & OR=9.741, $p<0.001$, respectively). Outcome of care was the most important determinant of satisfaction for both inpatients and outpatients, but it was more influential amongst inpatients.

Conclusion: Both individual and organizational factors were determinants of patients' overall satisfaction. Focused intervention within the remits of the health system will improve patient-centered care and system resilience.

Keywords: Patient satisfaction; Determinants; Secondary health facilities; Rivers State; Nigeria



APHPN/PH23/T2/O21

Exclusive Breastfeeding and Anthropometric measurements in Children under 24-months in a Semi-Urban Community in Delta State, Nigeria

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ABSTRACT

Background: Breastfeeding is one of the most effective ways to ensure good health, proper growth and development, as well as increased chances of survival in the child. The World Health Organization (WHO) recommends exclusive breast feeding for the first six months of life. This practice provides tremendous dietary, health and psychological benefits both to the mothers and their infants and is strategic to reducing hunger, poverty, and gender inequality while improving health, education and sustainable consumption (Sustainable Development Goals (SDG) 1, 2, 5, 8, 12). This study aimed to determine the prevalence of exclusive breast feeding and its relationship with anthropometric measurements in children under 24-months in Oghara community, Delta State.

Methods: A cross-sectional analytical study was carried out using a structured interviewer-administered questionnaire to mothers of 422 eligible children. The data was analyzed using IBM Statistical Package for Social Sciences (SPSS) program Version 26.0. Results were presented using tables and charts. Descriptive statistics for categorical variables including socio-demographic parameters, such as age group, marital status, mother's level of education and mother's occupation, were represented in frequencies and percentages while numerical variables including age, weights, height/length, occipito-frontal circumference and mid upper arm circumference were summarized as mean and standard deviation. Inferential statistics were done using Chi squared test and Independent sample t-tests. A p-value of ≤ 0.05 was considered to be statistically significant.

Results: Majority (90%) of the mothers had heard of exclusive breast feeding however only 8.3% practiced it. The mean age of the children was 13.25 ± 6.08 months. When adjusted for age, the mean weight ($p=0.003$), height ($p=0.003$), occipito-frontal circumference ($p=0.002$) and the mid upper arm circumference ($p=0.001$) was higher in children that were exclusively breastfed compared to those that were not.

Conclusion: The prevalence of exclusive breastfeeding was low in the study area. The growth parameters of children who were exclusively breastfed was better than those that were not across age categories. Targeted health promotional activities, setting up breastfeeding support groups and engaging community stakeholders to improve uptake of exclusive breastfeeding practice is recommended.

Keywords: Anthropometric measurements; Exclusive breastfeeding; Under 24-months children; semi-urban.



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ABSTRACT

Background: Quality postnatal care is a necessity in the continuum of care for mothers and newborns for timely intervention, management or referral to higher levels of care. The objective of this study was to assess the quality of postnatal care (PNC) services amongst mothers with children below 12 months in Edo State with a view to improving maternal and newborn health outcomes.

Methods: A descriptive cross-sectional study was carried out in six local government areas in Edo State. The study population comprised mothers (15-49 years) with children below 12 months of age (who participated in the community survey and exit interviews), healthcare providers, relevant stakeholders and health facilities. Multistage sampling technique and stratified sampling technique were used to recruit the mothers and healthcare providers, respectively. All postpartum women attending PNC clinic in the selected health facilities were recruited for the client exit interview. Pre-tested interviewer-administered questionnaires and observational check lists were adapted from the World Health Organization Quality of Life Assessment Bref (WHO QoLBref) tool, Jipi's Postnatal Satisfaction with Nursing care (JPSNQ) tool and WHO antepartum and postpartum care quality assessment tool. Key informant guide was used to collect qualitative data. Ethical approval was obtained from the UBTH Ethics and Research Committee (Protocol number: ADM/E.22/A/Vol. VII/14762). Categorical data were expressed using frequency tables and charts following univariate analysis. Bivariate analysis was used to show the relationship between the socio-demographic variables and the outcome variables (facility readiness, content of care, client satisfaction and health-related quality of life) using Chi-squared test or Fisher's exact test. Binary logistic regression was done to identify the significant predictors and the level of significance was set at $p < 0.05$.

Results: The respondents comprised 900 mothers and 347 clients for the community survey and exit interview, respectively and 10 stakeholders for the key informant interviewers. Also, 71 health facilities were assessed for operational capability using observational checklists. More than two-thirds, 53 (74.6%) of the health facilities had good facility readiness, 37 (52.1%) of which were primary level health facilities. Thirty-nine (54.9%) of the health facilities provided poor quality of care based on the content of their services. Over three-quarter 262 (75.5%) of the mothers had poor satisfaction towards postnatal care services received during the postnatal period. A high health-related quality of life was perceived by mothers in the social 834 (92.7%), environmental 709 (78.8%) and physical 682 (75.8%) domains. The main predictor of both health facility readiness and quality of content of care was health facility location.

Conclusion: The study showed that majority of the health facilities were facility-ready for delivery of postnatal care, however there was poor quality of postnatal care as a result of poor content of care. Majority of the mothers had poor satisfaction with the postnatal services received and most perceived they had a high health-related quality of life. Capacity building and supportive supervision is therefore needed to improve the quality of postnatal service delivery in Edo State.

Keywords: Postnatal care; Health-related quality of care; Client satisfaction; Newborn; Edo State.



APHPN/PH23/T2/O27

The New Public Health Order and Agenda 2063: Strategy for more Resilient Public Health Systems in Africa

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ABSTRACT

Background: The New Public Health Order, espoused by the Africa CDC, aims to strengthen African public-health systems and give Africa a louder voice in the global health discourse. The SARS-CoV-2 pandemic reinforced the need for the new public health order in Africa that is capable of coping with 21st century disease threats. The pandemic saw a rise in global protectionism and vaccine nationalism that put Africa at the receiving end of limited access to vaccines. This brought realization of the urgent need for Africa to invest in its healthcare systems as a means to economic development. “Agenda 2063: The Africa we want” provides a framework for inclusive, sustainable development and collective prosperity on the African continent. Aligned with the aspirations of Agenda 2063; the blueprint and master plan for transforming Africa into the global powerhouse of the future, the strengthening of African public health institutions and development of the Public Health Workforce is critical. However, little is known about the African Agenda 2063 and the New Public Health Order. This paper seeks to raise awareness of these existing policy documents and suggest ways to domesticate the operationalization of the New Public Health Order in Nigeria.

Methods: A critical analysis of the New Public Health Order in the context of Africa's Agenda 2063.

Results: The African agenda 2063 comprises seven aspirations as follows: A prosperous Africa, based on inclusive growth and sustainable development; An integrated continent, politically united, based on the ideals of Pan Africanism and the vision of Africa’s Renaissance; An Africa of good governance, democracy, respect for human rights, justice, and the rule of law; A peaceful and secure Africa; Africa with a strong cultural identity, common heritage, values, and ethics; An Africa whose development is people-driven, relying on the potential offered by people, especially its women and youth and caring for children; An Africa as a strong, united, resilient, and influential global player and partner. Analysis of the strategy with regards to resilient health systems showed that Aspirations 1, 4 and 6 of the Agenda 2063, are congruent with the four pillars of the New Public Health Order, which prescribe strengthening of continental and national public health institutes; development of the public health workforce; improved vaccine and drugs manufacturing; increasing domestic investments in health and development of respectful public-private partnerships as critical elements to addressing current and future public-health priorities on the continent.

Conclusion: The New Public Health Order is a holistic multi-pronged approach that will strengthen the health systems in Africa. Besides operationalizing, this can lead to the development of stronger health systems and achieving the African Agenda 2063. Nigeria can key in by strengthening the Nigeria Centre for Disease Control and Prevention (NCDC); training, upskilling and deploying the community health extension workers (CHEWs); fostering respectful partnerships and prioritizing and incentivizing local diagnostics and vaccine research and production. The Federal Government of Nigeria can also promote innovative domestic financing mechanisms including public-private partnerships. This will help build a resilient health system that is capable of fighting future epidemics.



Keywords: Agenda 2063; Health systems; New Public Health Order; Africa CDC; Nigeria Centre for Disease Control.



APHPN/PH23/T2/O28

Assessment of Health-related Quality of Life in Tuberculosis Treatment Centers in a Local Government Area in Southern Nigeria

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ABSTRACT

Background: Studies from Rivers State have demonstrated high burden of drug resistance among pulmonary tuberculosis (PTB) patients and declining cure rate despite adequate treatment retention and highly effective directly observed treatment short-course. All this may have been influenced by treatment decisions based solely on the clinical expertise of the provider and best clinical evidence excluding the clients' perception of how the disease or its treatment affect their health. This study determined the perception of the clients on how pulmonary TB disease or its treatment affect their health, which could impact on treatment outcomes among PTB clients in treatment centers in Obio/Akpor LGA of Rivers State.

Methods: A total of 225 adult clients with PTB were recruited by systematic random sampling method from each of the 8 randomly selected centers out of 40 active treatment centers in Obio/Akpor LGA of Rivers State. The Short Form 36 was used to collect responses which were grouped into 8 domains yielding 2 summary measures. Scores ≤ 49 were classified as poor, 50-74 relatively favourable and scores ≥ 75 as good. Categorical data were presented as frequencies and proportions using tables and pie charts while quantitative data were presented as means and standard deviations.

Results: The mean age of respondents was 36.3 (SD 9.4) years, with majority 65 (31.3%) in the age group 28-37 years. Respondents in intensive phase (2 months or less) of treatment contributed 116 (55.8%) of the study population with vast majority of respondents 168 (80.8%) having productive cough at diagnosis while 71.6% of them were bacteriologically diagnose. Specific domains mean scores ranged from 34.9 \pm 33.7 (role physical) to 61.8 \pm 11.9 (general health) while physical component summary (PCS) and mental component summary (MCS) recorded 53.35 \pm 16.79 and 51.11 \pm 12.26, respectively. The overall HRQoL mean score for the study was 55.2 (\pm 3.6) with an undesirable score of 20.7%.

Conclusion: Pulmonary tuberculosis patients in treatment centers in Obio/Akpor LGA had poor to relatively favourable HRQoL mean scores. The low scores recorded in role physical and emotional domains may be attributed to emotional and physical stress due to illness that may have affected respondents in carrying out various tasks. Lower MCS scores found in this study may be due to improvement of physical problems over the mental aspect for patients on anti-TB medications. Strengthening counselling practice may help improve support for the clients in coping with the disease and the effect of its treatment.

Keywords: Health-related quality of life; Pulmonary Tuberculosis; Treatment centres; DOTS, Nigeria.



Satisfaction with HIV Care: Comparative Assessment between HIV Clients in Community Pharmacies and Specialty Clinics in Rivers State Nigeria

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ABSTRACT

Background: Decentralization is a major HIV care strategy that was implemented in 2016. Its aims are to improve the availability and accessibility of HIV care by devolving HIV care services from tertiary health facilities to peripheral centers such as HIV community pharmacies. Meanwhile, since roll out to community pharmacies in 2016, no evaluation has been conducted to assess the satisfaction of HIV clients to the best of our knowledge. This study assessed and compared the satisfaction of stable HIV clients receiving services at community pharmacies and specialist HIV clinics in Rivers State, Nigeria.

Methods: A comparative cross-sectional study design involving 174 clients in community pharmacies and 174 clients in specialty clinics was carried out. A two stage sampling technique was used in recruiting participants for the community pharmacies group while for the specialty clinics systematic simple random sampling technique was used. Clients' satisfaction was measured using Patient Satisfaction Questionnaire (PSQ 18) and dichotomized into satisfied and not satisfied. Chi square test was used for analysis of "Strongly agree" and "agree" responses while Mann-Whitney U test was used to compare client's satisfaction scores between facilities.

Results: Clients attending community pharmacies showed higher mean ranks compared to specialty clinics in the general satisfaction ($p < 0.001$) and financial aspect ($p < 0.001$) domains while the specialty clinics clients demonstrated higher mean in the interpersonal manners ($p = 0.012$) and time spent with providers ($p < 0.001$). Overall, 65.5% and 72.3% of participants were satisfied with HIV care in specialty clinics and community pharmacies, respectively with a gap of 6.8% in favour of community pharmacies ($p = 0.117$).

Conclusion: The study found higher level of overall client satisfaction for HIV care services received at community pharmacies compared to the specialty clinics. This finding may suggest that satisfaction is tied more to the ability of the system to meet the expectations of the clients and not merely on technical quality or the sophistication of the facility. Clients of community pharmacies were more satisfied with financial aspect and general satisfaction domains. While the clients of specialty clinics were more satisfied time spent with the provider and interpersonal domains. This findings emphasizes the need for confirmation of this hypothesis using analytic design to inform further decentralization to the remaining LGAs in Rivers State.

Keywords: HIV clients; Clients' satisfaction; Specialty clinics and community pharmacies; Nigeria



APHPN/PH23/T2/O30

Prevalence and Correlates of Health Seeking Behaviours among Staff Members in a Tertiary Hospital in Bayelsa State

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ABSTRACT

Background: Health seeking behaviour (HSB) is the action people take towards seeking their own healthcare through provided health services. Having a healthy human resource for health should invariably translate to an improved overall health system as they form the fulcrum of any health system for delivering quality healthcare. They are wrongly presumed to have good health seeking behaviour though most of them indulge in casual medical consultation, self-prescription and self-medication. This study assessed the level and factors influencing healthcare seeking behaviour of staff in a tertiary hospital.

Methods: A cross-sectional descriptive study conducted in November 2021 and minimum sample size was calculated using the Cochran formula for cross-sectional study. Simple random sampling was used to select participants from all departments in the hospital and proportionate allocation was done based on the population of each department. A pretested, structured, self-administered questionnaire adapted from previous studies was used to collect data from respondents. Collected data were cleaned, coded, and entered into IBM Statistical Product and Service Solutions (SPSS) version 24.0. The relationship between health seeking behaviour (dependent variables) and socio-demographic characteristics, health need, health facility and service utilization factors (independent variables) was investigated using the Chi-square test of proportion. The level of significance was set at $p\text{-value} < 0.05$.

Results: Of the 300 participants selected for the study, 288 completed the questionnaires, giving a response rate of 96%. The mean age of the respondents was 41.5 ± 7.8 years. The male to female ratio was 1:1.8 with 36.1% males and 63.9% female, 31.3% were nurses followed by doctors (14.2%). Factors that deter health workers from seeking health care were long waiting time and delays (52.4%), workload and no spare time (24.3%), huge financial cost (20.5%), fear of confidentiality (19.1%). Prevalence of good health seeking behaviour was 19.4%. Poor health seeking behaviour was statistically associated with profession ($p=0.003$), not seeking a doctor when ill ($p=0.001$), self-medication and the belief that it was helpful as well as the belief that one's knowledge as a health worker was sufficient enough to treat self. ($p < 0.001$).

Conclusion: The health seeking behaviour amongst the healthcare workers was poor. Self-medication was high and most of them altered their prescription. Pharmacists, doctors and nurses had the highest proportion of poor health seeking behaviour as compared with other cadre of the health work force. Policies and measures should be instituted to restrict the tendency to self-medicate, the hospital authorities should embark on an enlightenment campaign to educate its work force on the need for proper health seeking behaviour.

Keywords: Health seeking behavior; Tertiary hospital; Bayelsa State.



APHPN/PH23/T2/O31

Assessment of Data Demand and Use for Health Systems Strengthening across APIN Supported Facilities in Oyo State

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ABSTRACT

Background: Timely and adequate use of quality data generated at health facilities are fundamental to health systems improvement. Data is an area within healthcare that is still fast expanding, especially as more healthcare providers continue to move their practices, and data management to online platforms or portals. In Nigeria, health data are transmitted from service delivery points (SDP) to the State and National levels without sufficient utilization at the SDPs for informed health decisions. It is believed that healthcare workers (HCWs) do not fully understand the need to analyze and use health data generated at SDPs for decision making towards improved health outcomes. This study assessed the demand and use of facility data for health systems strengthening among HCWs.

Methods: A cross-sectional study was done that utilized multistage sampling technique to select 304 HCWs at 37 supported ART/PMTCT health facilities in Oyo State. Data were collected using structured questionnaires that elicited information across four domains of site level data management: facility data management plan, data visualization (paper-based and electronic), data review and data use for informed decision. Data was analyzed using SPSS version 27 and presented using charts and tables.

Results: Three hundred and four HCWs were interviewed with a minimal response rate of 98.4% across all the variables. Sixty-four (21.4%) reported presence of facility management plan. About half 178 (59.5%) reported that they analyze and displayed their facility indicator performance in facility notice boards in form of run charts and graphs, none had electronic data visualization within facility premises. Two hundred and nineteen (73.2%) reported that they have facility data review meetings monthly or quarterly. Only one-third (32.8%) admitted that their facilities utilize facility level data for informed decision. Of note was that all facilities reported that they submit data to the LGA and state.

Conclusion: Results from this study showed a gap at the facility level in utilizing data to improve health systems at SDPs. Therefore, there is a need to strengthen the health information aspect of the health system building block as data-driven decision making will not only improve the health system performance but also allow for more efficient use of limited resources.

Keywords: Health systems strengthening; Health data; Service delivery points; Healthcare providers.



APHPN/PH23/T2/036

Improving Youth Development through National Youth Development Index: Technical Planning and Public Health Implication

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ABSTRACT

Background: Globally, youths are a major demographic group, and their overall development is central to national development. Investment in youth development is an investment in the country's future. To drive effective advocacy and intervention efforts on youths and young people, it is essential to measure and track the health, development, and well-being of the youth through evidence-based approaches. Nigeria generates several youth-related datasets that are not optimally used for tracking youth development, programming, and policies. To address this gap, a National Youth Development Index (NYDI) was developed as part of the 'Strengthening Programming for Adolescents and Youths through Resource and Knowledge Generation and Link to Evidence' (SPARKLE) Project, a three-year project supported by the Ford Foundation and anchored by the University of Medical Sciences Ondo City. We hereby describe the process and outcome regarding the development of the country's first-ever NYDI.

Methods: The development of the NYDI commenced with an initial thorough literature review of the available youth index and associated indicators for tracking youth health and development globally. National datasets relevant to youth development were also reviewed along with national youth-related policies. The preliminary index was developed using the framework based on the standard process of composite indicators and the National Youth policy as a guide and available national indicators. Finally, the index was subjected to two rounds of expert and stakeholders (government, non-governmental and international development partners) review to arrive at the final NYDI.

Results: The NYDI developed through the above process is the first NYDI in Nigeria and consists of six domains: education and skills development, health and well-being, employment and economic activities, political and civic participation, peace and security, gender equality and inclusion. In addition, it comprises nine subcomponents and 34 indicators for tracking youth health and development.

Conclusion: The development of the NYDI through a combination of experts, technical processes, and stakeholders promotes the acceptability of the NYDI. The NYDI will provide an objective measure of the trajectory of youth development and the basis for advocacy nationally and sub nationally and contribute to improved health and development of youths and young people in Nigeria through effective evidence.

Keywords: Adolescents; Demography; National Youth Development Index; Nigeria.



APHPN/PH23/T2/038

Assessment of Lassa fever Epidemic Preparedness of Health Institutions in Oyo State

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ABSTRACT

Background: Epidemic preparedness constitutes all activities that have to be undertaken from the national to the health facility levels to be ready to respond effectively to disease outbreaks. The elements of an epidemic preparedness include routine surveillance. Lassa fever is an acute viral hemorrhagic fever caused by Lassa virus. Lassa fever is endemic in West Africa including Nigeria with about 300,000 to 400,000 cases annually with approximately 5,000 deaths. Oyo state recorded an outbreak in 2012 with 50% case fatality rate due to poor preparedness. Also, a case was recorded in 2020. This study aimed to assess the knowledge, standard infection control practices and epidemic preparedness of health institutions Oyo State towards controlling the spread of Lassa fever.

Methods: The study was conducted in Oyo State, Nigeria which has 4, 430 and 721 tertiary, secondary and primary healthcare facilities, respectively. A mix method was used to elicit information from the respondents. Participants in this study comprised of selected healthcare coordinators/Medical officers of Health (PHCC/MOH), Local Government Disease Surveillance and Notification Officers (DSNOs), Monitoring and Evaluation officers for the qualitative aspect of the study. The respondent of the key informant interview was the Oyo State Epidemiologist. The sample size of the study was estimated using the Yamane formula. A total of 135 respondents participated in the study with response rate of 98.5%. Participants were selected using purposive sampling technique. A validated self-administered questionnaire was used to obtain data from the selected health workers. Knowledge was assessed using a scale of 30 variables with a cut off of 15.

Results: Fifty-seven percent of the respondents had good knowledge of Lassa fever, 48% had received training on Lassa fever surveillance while 67.7% of them had training on epidemic preparedness. Only 25 (18.5%) had office supplies and funds allocation while 94 (69.6%) had epidemic preparedness response team. Thirty-two (97.0%) had surveillance system by DSNOs, 69 (51.1%) had good practice (scored 19-26) while 66 (48.9%) had poor practice (scored ≤ 18).

Conclusion: There was good knowledge of Lassa fever, practice and preparedness among the healthcare workers but with significant gaps. There is need for constant training of healthcare workers. Adequate funding by government and other stakeholders is sacrosanct for the effective combat against Lassa fever epidemic.

Keywords: Epidemic preparedness; Lassa fever; Health workers; Health institutions.



APHPN/PH23/T2/039

Community Involvements and Engagements in the Delivery of Sustainable Primary Health Care

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ABSTRACT

Background: Community engagement is not exactly a new strategy in public health delivery. However, the concept of community involvement and engagement gained prominence in the public health arena following the 1978 Alma Ata declaration that states that people have a right to participate individually and collectively in the planning and implementing of their health care. Community engagement then became the sine qua non of Primary Health Care (PHC) and Health for All (HFA) up to the point of self-ownership and self-reliance. Without an authentic PHC, the entire national health system will be inappropriate. This paper aimed to describe the different institutionally organized models of doing this, including those initiated by the different leaderships from the various communities.

Methods: Sustainable PHC model was initiated by the Department of Community Medicine of the University of Medical Sciences through the Institute of Community Health Innovation and Development (ICHIAD) created by the university for this and other purposes. The project has four feasible models of sustainable PHC and showcases how well-coordinated community engagement can evolve to ensure sustainable PHC. Case reports of some of these engagements (successful and unsuccessful) with the community leaders with whom they were started took place. As a result, the project ensured a well-coordinated community engagement at every stage of involvement with the King of Okeigbo in Ile-Oluji/Okeigbo LGA.

Results: Project implementation began with GIS area mapping of Ward 7 chosen by the Oba-in-Council. This was followed by the updated local government PHC department compatible house numbering updates, the ODK-based house and de-jure census of the community, the setting up of the at-risk and home visiting register, the launch of the programme in the town and the commencement of community rounds by the statutory community nurse-midwife selected by them from among their people and employed by the university. In addition, other initial and further consultations and community engagement have started in three additional LGAs by us, and one from the Ose LGA by the community leadership and independent indigenes, to implement a similar project with all major stakeholders participating in the process.

Conclusion: A well-coordinated community engagement is fundamental to the success and sustainability of all community development initiatives, such as sustainable Primary Health Care. The human and financial resources mobilized and made available by the community leadership for various activities of the PHC operation demonstrate the enormous potential capacity inherent in the community that could be harnessed to further their developmental trajectory, both in the health and non-health sectors. Community engagement is crucial to the effective implementation of sustainable PHC as it facilitates self-ownership and self-reliance.

Keywords: Community Engagement; Primary Health Care; Ownership; Sustainability.



APHPN/PH23/T2/040

Knowledge, Attitude and Willingness of Traditional Healers towards Disease Surveillance and Notification of Selected Notifiable Diseases in Ibadan Metropolis

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ABSTRACT

Background: Traditional healers remain a first point of contact by the populace despite the widespread patronage of orthodox medicine in our communities. Therefore, formal incorporation of traditional healers into surveillance system is expected to improve the effectiveness of reporting of notifiable diseases. This study therefore aimed to assess the knowledge, attitude and willingness of traditional healers to identify and report notifiable diseases among clients presenting at their practice.

Methods: One hundred and thirty-seven traditional healers selected by snowballing techniques were interviewed in a cross-sectional study after obtaining their informed consents. Diseases assessed were epidemic prone diseases (Cholera, Measles, Dengue Fever, Cerebrospinal Meningitis, Shigellosis, Lassa fever, Avian Influenza, Ebola Virus Disease, and Yellow Fever), diseases targeted for eradication (Poliomyelitis, Leprosy, Dracunculiasis, Neonatal Tetanus and Lymphatic Filariasis) and other diseases of public health importance (Malaria, Acquired Immunodeficiency Syndrome and Onchocerciasis). Respondent's knowledge of signs and symptoms of notifiable diseases were assessed on point scales on which cut off for good knowledge is 58/117. Attitude was measured on a four-point Likert scale on which 5/7 was the cut off for good attitude. Willingness to report these diseases was measured on a five-point Likert scale. The cut off was 8/10 for high willingness.

Results: Majority of the respondents 123 (89.8%) were married, 99 (72.3%) were males. Only 40 (29.2%) of the respondents have heard about disease reporting, 115 (84%) do not know where to report. Only about 14 (10%) of the respondents have ever reported any, 89 (65%) had good attitude towards reporting of notifiable diseases. Majority, 123 (89.8%) were willing to report notifiable diseases, 132 (96%) had poor knowledge of the signs and symptoms of selected notifiable diseases.

Conclusion: Majority of the respondents had good attitude and were willing to report notifiable diseases. They should be incorporated into the state surveillance structure. Training and retraining on identification and reporting of notifiable diseases and a reward system for the traditional healers are recommended.

Keywords: Disease reporting; Notifiable diseases; Traditional healers; Ibadan.



APHPN/PH23/T2/042

Models of University-Assisted Primary Health Care in Nigeria: The University of Medical Sciences, Ondo City Programme

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ABSTRACT

Background: Primary health care (PHC) is the modern bottom-up management approach to the delivery of professional community medical and health care; and is the function of the lowest tier of public governance anywhere. In Nigeria, this is the local government area (LGA) council. There have been previous efforts toward university-assisted health for all (HFA) activities; such as the Ibarapa project at the University of Ibadan, the Malumfashi project of Ahmadu Bello University, etc. However, none of these has been successfully implemented with statutory community-based nurse-midwives and the full engagement of the LGA. This paper highlights the 5 different models of university-assisted PHC/HFA of the University of Medical Sciences, Ondo-City (UniMed) and explores how the University had set out to demonstrate the absolute practicability of the bottom-up, community-owned and sustainable PHC and its health for all (HFA) services in Ondo State. The 5 models and the most fully developed and already working PHC/HFA programme in the Ward 7 of Okeigbo town in the Ile-Oluji/Okeigbo LGA is presented in this paper; with the evidence-based data thereof.

Methods: The present situation in Nigeria is that universities and/or their teaching hospital belong to the tertiary level of government services. Therefore, to go beyond (and obviously below) tertiary preventive and social medical practice aspects of their disciplinary public health and community medicine specialization in practice will require clear collaboration with the state and local governments in whose jurisdiction PHC services belong. This is the approach adopted in the design and implementation of the models of PHC of this project, described in this paper.

Results: The UniMed 5 models of university-assisted PHC/HFA at LGA levels are: 1-The full professional community medical and health services (the Okeigbo Ward 7 model); 2-Community health/PHC services as may best be provided within the given state or region that the department is physically present in but without statutory employment in the PHC services; 3-Community medical assistance and partnership for the entire political ward or LGA in which the department has no physical presence and would need the financial input of the LGA or community involved to get there; 4-Other consultant community medical and health assistances and collaborations to political wards, LGAs, states or beyond, outside Ondo State requiring higher costs by such LGAs or communities for our involvement there and 5-Community medical assistance and partnership for non-statutory communities anywhere else. This study provides alternative models of an efficient university-assisted PHC/HFA programme, with good evidences of strong community ownership and participation in the implementation of an integrated community and facility-based PHC/ HFA services. It demonstrated the possibility of generation and use of baseline and routine data for evidence-based approach to planning and operation of “whole-community” services and for calculation of ‘rates’ and not ‘ratios’ of community health indices; e.g., birth, death, marriage, divorce.

Conclusion: It is expected that other medical schools and teaching hospitals may be persuaded to do as the UniMed is doing, as the programme covers imaginable difficult issues involved in PHC/HFA in the country.

Keywords: Community-owned; Health for all; Primary health care; Sustainable; Okeigbo.



APHPN/PH23/T2/O44

Determinants of Brucellosis Transmission in Slaughtered Cattle and Abattoir Workers in Ilorin, Kwara State

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ABSTRACT

Background: Brucellosis is one of the most common global zoonoses of public health importance with about 500,000 new cases annually. The extent of public health impact is largely unknown because of misdiagnosis. This study aimed to assess the determinants of brucellosis transmission in abattoir workers and slaughtered animals in Ilorin, Kwara State and also to provide data for active surveillance and improve diagnosis for prompt action.

Methods: A cross-sectional study was conducted among abattoir workers and cattle slaughtered at the Ilorin Metropolitan Abattoir. Adult male and female abattoir workers aged ≥ 18 years who agreed to participate in the study were recruited using a randomized sampling approach to ensure adequate and proportional representation. A structured interviewer administered questionnaire was used to collect information on socio-demographic characteristics of participants, knowledge and practice of abattoir workers. Blood was collected from the jugular vein of every fifth cattle slaughtered in our presence. Information on the age, sex, breed and place of purchase was gotten from the butchers. Sample size was estimated using the Leslie formula, $n = Z^2 \times pq/d^2$ (Kish and Leslie 1965).

Results: Overall, 189 abattoir workers and 394 cattle were recruited and screened. Mean age of the workers was 40.7 ± 14.5 years and 127 (67.2%) were males; while mean age of the slaughtered animals was 4.7 ± 1.2 years and 376 (95.4%) were females. The prevalence of brucellosis among the abattoir workers of ages 21-30 and >60 years was 47.6% and 58.3%, respectively. Butchers who had been slaughtering for over 30 years had sero-prevalence of 58.3% while those with length of occupation less than 5 years had 12.2%. Slaughtered cattle aged 5-7 years had sero-prevalence of 12.7 while younger ones between 2-4 years had 6.3%. Sero-prevalence in cattle of the white Fulani breed was 10.1% while Sokoto Gudali breed had 7.7%.

Conclusion: The sero-prevalence of brucellosis was highest in older butchers >60 years with over 30 years of slaughtering experience compared to younger ones. This suggests that prolonged exposure to cattle blood and body fluids during slaughtering can be implicated in brucellosis transmission. Age and length of occupation (slaughtering) were significant determinants of brucellosis transmission in abattoir workers. Use of personal protective equipment proved to be protective against infection with brucellosis; although the knowledge and attitude towards its use was poor among the workers. It is recommended that health education should be routinely done for the abattoir workers to improve their knowledge on brucellosis. Joint sensitization of physicians and veterinarians on the need for detailed brucellosis patient and animal information for effective management.

Keywords: Abattoir; Brucellosis; Zoonosis; Ilorin.



APHPN/PH23/T2/045

Association between Length of Exclusive Breastfeeding and Prevalence of Diarrhoeal Diseases among Children attending Immunization Clinic in a Tertiary Hospital in South-South Nigeria

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ABSTRACT

Background: Appropriate breastfeeding practices are fundamental to ensuring optimal growth and prevention of diarrhoeal diseases in children. This study aimed at determining the association between the length of exclusive breastfeeding practice of mothers and prevalence of diarrhoeal diseases of children 1 to 24 months of age attending the immunization clinic in Federal Medical Centre, Yenagoa, South-South, Nigeria.

Methods: A descriptive cross-sectional study was conducted. Systematic random sampling method was used to select 170 mothers and data collected using structured interviewer administered questionnaire from May to June, 2022. Data was analysed using the Statistical Package for the Social Sciences (SPSS 23). Level of significant was placed at p-value ≤ 0.05 .

Results: The study had 100% response, with mothers between 25 to 34 years of age being 67.1%, 93.5% being fully married and 60.6% with tertiary level of education. Children 1-4 months and 5-9 months of age were 51.2% and 28.8%, respectively. All the mothers breastfed their children. Out of these, 102 (60%) practiced exclusive breastfeeding (EBF), out of which 62.7% stopped EBF < 6 months while 37.3% did EBF for ≥ 6 months. The prevalence of diarrhoeal diseases among children that had EBF < 6 months was 20.3%, while those EBF for ≥ 6 months were 5.3%. Generally, diarrhoeal diseases prevalence among the children was 13.6%, (dysentery=6.5%, acute watery diarrhoea=7.1%). Both age at stopping EBF < 6 months and given expressed breast milk with cup and Spoon were statistically significantly associated with diarrhoeal diseases in the children (p=0.038 and p=0.050, respectively).

Conclusion: This study confirmed the importance of exclusive breastfeeding for the first 6 months of life and hygiene in feeding children. It's therefore recommended that mothers, families, health workers and the government must all play their roles to ensure implementation of proper breastfeeding practices by mothers, especially the baby friendly hospital initiative.

Keywords: Breastfeeding; Diarrhoeal diseases; Mothers; Children; Prevalence; Nigeria.



APHPN/PH23/T2/047

Prevalence and Associated Factors of Pulmonary Tuberculosis among HIV/AIDS Patients on Antiretroviral Therapy in a Tertiary institution in South-South Nigeria

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ABSTRACT

Background: Tuberculosis (TB) is a contagious disease caused primarily by bacteria (*Mycobacteria tuberculosis*). It primarily affects the lungs and is known as pulmonary tuberculosis (PTB), but it can affect other organs as well. The majority of tuberculosis patients live in low- and middle-income countries, but the disease can be found anywhere. As far as we are aware, few studies have been conducted on the prevalence of tuberculosis among PLHIV taking ART for longer than six months in the south-south region of Nigeria. The objective of the study was to determine the prevalence and associated factors of TB among HIV/AIDS patients on ART in Federal Medical Centre Yenagoa, Bayelsa State.

Methods: A hospital-based cross-sectional study was conducted among 230 HIV-positive clients on ART for at least one year. Systematic sampling technique was used to select participants. Data was collected using a structured questionnaire, patient's care card and HIV register. Data were coded and entered directly into IBM SPSS version 25 software which was used for data cleaning and analysis. Categorical variables were analyzed and presented as frequencies and percentages, while continuous variables were summarized using mean and standard deviation. Association between the independent variable was investigated using Chi-square test of proportion. Binary logistic regression analysis was conducted to obtain the odd ratio of TB among the different categories of the independent variables.

Results: Our findings showed 12.6% of people living with HIV on ART had TB. Associated factors included primary education (OR 4.95, $p=0.001$), working in farming (OR 13.8, $p=0.018$), and having a history of smoking (OR 2.7, $p=0.019$), ambulatory functional status (OR 7.37, $p=0.047$), WHO clinical stage (stage III - O.R 9.9, $p=0.001$, stage IV - OR 8.3, $p=0.25$), CD4 count (OR 2.7, $p=0.02$), viral load less than 20 copies (OR 3.0, $p=0.006$), packed cell volume less than 30% (OR 11.3, $p=0.001$), ART TDF/3TC/EFZ (OR 38.4, $p=0.001$, second line OR 19.6, $p=0.001$), isoniazid preventive therapy (OR 23, $p=0.007$), and patients with poor drug adherence (OR 4.23, $p=0.03$).

Conclusion: The current study showed a high prevalence of tuberculosis among HIV-positive people taking ART. Therefore, it is important to promote public awareness, community engagement, and TB screening among HIV-positive patients. Additionally, the entire country should implement large-scale investigations on the prevalence of TB/HIV co-infection and related factors.

Keywords: Pulmonary Tuberculosis; HIV/AIDS; Factors; Prevalence.



Examining Gender Differences in Quality of Experienced Care in an Out-Patient Department of the 82-Division Military Hospital in Southeast Nigeria

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ABSTRACT

Background: The World Health Organization highlighted gender as a factor that influences quality of care and health outcomes. Health equity is critical in improving health for whole populations and it's one of the enabling factors in working towards achieving Universal Healthcare Coverage. Studies showed that differential service access and experience to healthcare exists therefore sex-disaggregated data is vital to provide evidence of access and utilization of service in a population. Furthermore, Increase in coverage of health services, should be accompanied by evidence to show progress in reducing inequalities among populations as men and women use health care differently. Conversely, UHC is based on the principles of equity and Gender inequality remains a critical challenge in the Nigerian Health system. Therefore, gender as a driver of inequalities should be actively considered and addressed as SDG 17.18 recommends a significant increase in the availability of high-quality, timely and reliable data disaggregated by gender and other drivers of inequality to operationalize the pledge to 'Leave no one behind'. This study aimed to identify the gender gap in experienced quality of care and level of satisfaction for Quality Improvement in 82-Division military hospital, Southeast Nigeria.

Methods: A cross-sectional-descriptive study was done among 441 out-patients of 82-Division-Hospital with a systematic sampling method of data collection applied consecutively over a month. The Quality of Care through the Patient's Eyes (QUOTE) instrument with 6-domains of care (Financial Access, Interpersonal Care, Fairness of Care, Effectiveness of Treatment, Adequacy of Care and Technical Care) for quality improvement and a scoring method was adopted. Data analyzed using SPSS version 20.0 and bivariate analysis was done with level of significance set at 0.05.

Results: Financial access domain revealed slight gender variations of female vs male with an average score of 65.5% vs 62.3% ($\chi^2=1.257$, $p=0.533$). Out of six domains of quality assessed; fairness of care; 42.8 % vs 39.2% ($\chi^2=1.726$, $p=0.422$), adequacy of care; 48.5% vs 40.1% ($\chi^2=3.746$, $p=0.154$), technical care 51.5% vs 49.5% ($\chi^2=3.055$, $p=0.217$) were of average quality while effectiveness of treatment 78.6% vs 78.3% ($\chi^2=1.608$, $p=0.447$) and interpersonal care 74.7% vs. 80.2% ($\chi^2=3.246$, $p=0.197$) were of good quality. Overall quality of care had a mean score of 84.1 ± 13.3 accounting for 65.5% vs 62.3% ($\chi^2=1.257$, $p=0.533$) with the overall level of satisfaction of 64% vs 69.8% ($\chi^2=1.570$, $p=0.210$). Although satisfaction with waiting-time 71.5% vs 81.0% ($\chi^2=5.050$, $p=0.025$) was statistically significant, waiting time was not associated with gender 90.8% vs 86.3% ($\chi^2= 2.725$, $p=0.256$).

Conclusion: There were no significant gender gaps in the quality of experienced care and level of satisfaction. Effectiveness of treatment and interpersonal relationship domains were of good quality. Thus, the military supports gender-equality in healthcare and these findings will serve as a baseline for further evaluation of sex-disaggregated data for quality improvement.

Keywords: Quality of care; Satisfaction; Gender difference; Experience care; Military.



APHPN/PH23/T2/052

Practice of Personal Hygiene amongst Primary School Pupils in Calabar, Nigeria: A Cross-Sectional Study

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ABSTRACT

Background: Communicable diseases are increasingly becoming a burden among school children as a result of poor personal hygiene practices and sanitary conditions that are below standard. This remains a public health concern in developing countries like Nigeria. Poor hygiene-associated diseases such as diarrhoea, are regarded as the deadliest killers of young children. The school-age is a formative age where the foundation for good personal hygiene can be laid. Furthermore, the usefulness of peer-group effect in personal hygiene practices cannot be over-emphasized. We undertook this study amongst school children to determine the practice of personal hygiene and identify gaps through which targeted interventions can be recommended.

Methods: We conducted a cross-sectional study of 324 primary school pupils in Calabar, Nigeria. A structured, interviewer-administered questionnaire was employed using a multistage sampling technique to obtain information from the respondents. Overall personal hygiene practice was graded as poor (1-6), fair (7-12) and good (13-18). The respondents were also inspected to assess the level of personal hygiene using an observational checklist. Statistical analysis was done using IBM SPSS version 22. Descriptive statistics such as frequency, percentages, mean and standard deviation were used to describe the variables, and chi-square was used to test the significance of association between two categorical variables.

Results: A total of 324 pupils with a mean age (SD) of 10 (1.8) years completed the study. More than two-thirds of the pupils had good personal hygiene practices while 30.6% had poor personal hygiene practices. Most of the pupils (90.4%) washed their hands after eating, 88.6% washed their hands after going to the toilet and 70.4% washed their hands after playing. The most significant barrier to personal hygiene was the lack of peer encouragement with 50% not having encouragement from their peers, followed by lack of access to soap (22.2%) and running water and/or hand washing bucket (15.7%). There was a statistically significant relationship between school type, mother's level of education and level of personal hygiene ($p < 0.05$).

Conclusion: This study shows an overall good practice of personal hygiene amongst primary school pupils in Calabar, Nigeria. However, our research also revealed key barriers to good practice of personal hygiene like lack of peer encouragement. Findings from this study suggest a need for concerted efforts involving parents, schools, non-governmental organizations and the government. These efforts may include regular hand-washing campaigns, focused health education, and provision of WASH facilities in schools and at homes.

Keywords: Personal hygiene; Hand washing; School-age children; Practice



APHPN/PH23/T2/057

Male Involvement in supporting Family Planning Service Uptake by their Female Partners during the COVID-19 Pandemic in Selected States in Nigeria

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ABSTRACT

Background: Family planning (FP) contributes to improved maternal and child health and national development. Uptake however, remains sub-optimal in many developing countries. Prior to the pandemic, men's roles in promoting FP uptake in Nigeria had been established and interventions to encourage this were implemented with documented successes. The extent to which the COVID-19 pandemic, affected family planning service delivery and uptake as well as the gains from various interventions to improve family planning uptake are still being investigated. We assessed the roles of males in supporting access to FP services by female partners during the COVID-19 pandemic. Findings could identify additional opportunities for interventions to promote continued uptake of FP in situations where health service provision is disrupted.

Methods: A cross-sectional study was conducted in India, Nigeria, and Tanzania. Findings from the study sites in Nigeria (Ibadan, Kwara, and Kano) are presented. In each of the states, one rural/peri-urban and one urban Local Government Area (LGA) were selected. Three Focus Group Discussions (FGDs) were conducted in each LGA – one among female clients (19 – 48 years) selected from a high-volume Primary Health Care (PHC) centre, one with the male partners of these women and one FGD with women (19-48 years) selected from within the community. In addition, five to six in-depth interviews (IDIs) each were conducted with female clients selected from the PHCs and their male partners. All interviews and discussions were recorded and subsequently transcribed. Data were organized using ATLAS.ti and analysed.

Results: Two hundred and forty-two respondents (147 women and 95 men) participated. About half of the participants had at most secondary education and 23.2% had post-secondary education. The mean ages of the female and male participants were 30.8 ± 7.6 and 38.4 ± 13.4 years, respectively. Many respondents experienced difficulties accessing FP services during the pandemic. More women in Oyo and Kwara mentioned that the decision to utilize FP was jointly made by them and their partners, while in Kano, the male partner often made the decision. Some roles played by men included providing consent and money for their partners to access FP, accompanying their female partners to health facilities to obtain family planning services, driving their partners to the health facility or patent medicine stores when facilities were closed. More males in Kano reported playing some role in facilitating FP uptake by their partners. Some men played no role (more in Oyo and Ilorin), while others explained that their partners did not require FP during the pandemic. Responses from the women largely corroborated the men's accounts.



Conclusion: Respondents generally experienced difficulties accessing family planning services during the pandemic. Many males supported their partners to obtain family planning services, and this could be an indication of the success of previous interventions promoting male involvement in family planning in Nigeria. We recommend additional interventions to further promote male involvement, and interventions to ensure availability of family planning services during pandemics and other emergencies be instituted.

Keywords: Male involvement; Male partner support; Family Planning; COVID-19



APHPN/PH23/T3/006

Perception, Knowledge and Satisfaction with Tertiary Institution Social Health Insurance Programme among Students of University of Abuja, Abuja Nigeria

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ABSTRACT

Background: The Federal Government of Nigeria, through National Health Insurance Authority, (NHIA), formerly known as National Health Insurance Scheme (NHIS) implemented the Tertiary Institutions Health Insurance Programme (TISHIP) in order to ensure access to quality healthcare by every tertiary institution student in the country while protecting parents and guardians from financial hardship of huge medical bills. A good knowledge of these services will improve uptake of these services and prevent dissatisfaction. Similarly, satisfaction with the services will lead to more utilization of the services. The purpose of the study was to assess the perception, knowledge and satisfaction with NHIS/TISHIP services among students of the University of Abuja, Abuja, Nigeria.

Methods: It was a descriptive cross-sectional study, conducted among 330 undergraduate students of University of Abuja selected using multistage sampling technique. The study population was identified in clusters (ten faculties including College of Health Sciences), then simple random sampling was used to select one department in each faculty, and individual participants were also selected by simple random sampling technique using lottery method to select participants from a pool of total number of students in each department, then administer questionnaires to all willing and consenting students until the calculated sample size was completed. Data was collected using interviewer-administered questionnaires, entered into Microsoft excel spreadsheet and imported into SPSS version 25. Data was cleaned and analysed using IBM SPSS version 25. Questions on perception, knowledge and satisfaction were scored and categorized into good and poor using 50% as the cut-off value. Chi-squared test and Fisher's exact test were used to test associations between categorical variables. Associations with p-value <0.05 were considered statistically significant.

Results: A response rate of 95.5% was recorded from a total of 315 participants interviewed. Males were 135 (42.9%), age ranged between 17 to 69 years, with a mean of 21.70 (3.24) years. About 174 (55.2%), 204 (64.8%) and 170 (54%) had a good perception, knowledge and satisfaction respectively with NHIS/TISHIP services offered in the University. There was a statistically significant association between faculty of study and perception as well as satisfaction. Faculty of Law had the best perception and Veterinary Medicine the least. In terms of satisfaction, College of Health Sciences was most satisfied and Management Sciences the least. Satisfaction was also significantly associated with gender, with the males more satisfied than the females, (OR=1.4, p=0.021. There was no association between other socio-demographic characteristics and perception, knowledge and satisfaction.

Conclusion: The study showed good perception, knowledge and satisfaction with NHIS/TISHIP services among students in University of Abuja compared to what obtains in other tertiary institutions. This implies good uptake of the services with room for improvements in knowledge and improvement in enrolments of students through orientation programmes and health education sessions.

Keywords: NHIS/TISHIP; University students; Perception; Knowledge; Satisfaction



APHPN/PH23/T3/008

Sustainable Health Care Financing for Nigeria

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ABSTRACT

Background: In 1987, the United Nations Brundtland Commission defined sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Achieving sustainable healthcare financing in any country involves the interaction of several actors and contributions from different sources and their differences determine the sustainability of healthcare finances. This paper aimed to determine and analyze the factors that influence the long-term sustainability and predictability of health care.

Methods: This review was conducted by a broad search of literature using keywords such as “sustainable health care financing”, “Health care financing in Nigeria”, “Nigeria current expenditure on health”, “Tax-based revenue”, via a broad criteria search engines and databases such as Medline, PubMed, Google scholar, PLOS, and Lancet commission were searched. Original searches were made between the 17th and 30th December, 2021, and a total of 10 papers were generated and included in the review. Only papers published in English were reviewed and to generate information for the review, studies between 2012 and 2021 were considered and findings included were review articles (Literature, systematic and meta-analysis review articles), research articles, brief reports, as well as grey literature.

Results: A total of 10 papers were reviewed and it was noted that from the different sources of financing for healthcare in Nigeria, tax-based revenue and out-of-pocket funding (83% of the population) were the major sources which were also on the same level with the country's budgetary outcome on a causal chain leading back to the underlying social and political determinants. The major factors that were observed to influence the long term sustainability included the economic growth, tax revenue, grants, and sustainable policies, while these factors also influenced the predictability of health care financing in Nigeria. Other important factors included committed donors funding, private sectoral and public health insurance.

Conclusion: An improved tax-based revenue and a more inclusive social health Insurance scheme will help achieve a sustainable health care financing in Nigeria not forgetting that a more transparent and accountable government budgetary spending and a private sectoral taxation will keep the imbalance between budgetary spending and the results seen. A balance of the actors and sources of healthcare finance can aid increasingly prolonged support to healthcare financing, and a reduction in out-of-pocket expenditure which has tilted many into poverty, ultimately improving the overall outlook of health in Nigeria.

Keywords: Sustainable healthcare financing; Review; Expenditure; Nigeria.



APHPN/PH23/T3/010

Readiness to Adopt Artificial Intelligence Systems for Health Interventions in Developing Countries: Findings from Four States in Nigeria

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ABSTRACT

Background: Artificial Intelligence has been identified as the future of all sectors including health. Artificial intelligence can be used to improve the speed and accuracy of diagnosis, treatment, and support for diverse public health interventions. However, despite the widespread adoption of such systems in the developed world, the speed of adoption of these technologies is slow in developing countries. This study aimed to investigate the awareness and readiness of clinicians, senior management personnel and healthcare organizations to adopt artificial intelligence systems of electronic medical records (EMR), medical decision-making support systems (MDSS) and Telemedicine (TM).

Methods: A descriptive cross-sectional study involving 1201 health providers selected through two-stage stratified sampling across 36 facilities in four states in Nigeria. Data was collected using self-administered electronic questionnaires set in android tablets between May and July 2021, Descriptive and inferential statistics were employed.

Results: Response rate was 98%, representing 1177 participants, 48% were males, 50.8% had spent less than 10 years in practice, 65% were clinical staff, 72.1% had beginner to -intermediate computer literacy, 58.4% worked in public facilities, 60.7% of the facilities received < 50 patients daily. Hospital administration and government were reported as responsible for adoption of a new technology (51.2 and 36.9% respectively). Almost all participants (96-98%) were willing to adopt all the AIs. Adoption readiness for EMR was associated with knowledge [5.72(1.29-25.38)], perception, and critical organizational factors including change management, business culture and communication. Readiness to adopt MDSS was associated with good perception, good benefit and critical success factors. Telemedicine on the other hand was associated only with perceived benefits and critical success factors. [28.41(9.92-81.41)] and [6.43(2.15-19.24)]. Nigeria is currently in the early stages of adoption of the Digital health interventions and AI. Hospital administration and government were reported as responsible for adoption of a new technology There was a high degree of willingness to adopt (WTA) of all three interventions. Adoption readiness for EMR was associated with knowledge, perception, and critical organizational factors including change management, business culture and communication. Readiness to adopt MDSS was associated with good perception, good benefit and critical success factors. Telemedicine on the other hand was associated only with perceived benefits and critical success factors.



Conclusion: This study suggests a high degree of readiness to adopt AI at individual levels. However, critical success factors need to be carefully thought out and put in place to ensure organizational level adoption. We recommend adequate training, development at individual level and integration of such systems at organizational level to ensure holistic adoption for ultimately improved patient diagnosis, treatment and general management.

Keywords: Artificial Intelligence; Electronic Medical Records; Medical decision-making support systems; Readiness to Adopt; Telemedicine.



APHPN/PH23/T3/O11

What is the Risk of Developing a Severe Form of COVID-19 Infection among Adults who currently Smoke Compared to Ex-Smokers? Protocol for a Systematic Review and Meta-Analysis

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ABSTRACT

Background: The Severe Acute Respiratory Syndrome Coronavirus is the pathogen responsible for the coronavirus disease that began in the Chinese province of Hubei in 2019 (COVID-19) (SARS-CoV-2). COVID-19 risk factors include demographic factors such as age and gender, as well as lifestyle choices. Tobacco use continues to be a major public health concern; it is the single most preventable cause of death worldwide, and it has been linked to a variety of illnesses, including cancer, cardiovascular disease, and respiratory disease. Current smoking is a known risk factor for chronic health conditions and poor COVID-19 outcomes. Because it is known that the lungs recover after quitting smoking, evidence on the severity of COVID-19 infection in current and former smokers should be investigated to help guide smoking cessation programs. The purpose of this systematic review was to compare the risk of severe disease (defined as ICU admission, mechanical ventilation, and death) in current smokers to ex-smokers, including e-cigarette use, and to assess the effect of comorbidities on the outcome of ex-smokers and current smokers with COVID-19 progression.

Methods: This protocol for a systematic review and meta-analysis follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocol (PRISMA-P) 2015 Checklist and has been registered with PROSPERO 2022 under the registration number: CRD42022368552. To determine eligibility criteria, the PICO (Population, Intervention/exposure, and Comparator, Outcome, and Study design) framework will be used. Admission to the Intensive Care Unit (ICU) or High Dependency Unit (HDU), use of mechanical ventilation, or death determined the severity of COVID-19 infection. We'll employ an observational study design answer the research question. Between December 31, 2019, and February 22, 2023, an electronic search for pertinent articles will be conducted across several databases including PubMed, Embase, and the Cochrane CENTRAL. Additionally, the reference list will be manually searched. There will be both qualitative and quantitative analyses. For dichotomous outcomes, an odd ratio with 95% confidence intervals will be extracted from each study as the effect measure. A fixed effect model will be used for quantitative analysis when the studies are sufficiently similar and the I^2 is less than 50%. In cases where there is heterogeneity ($I^2 > 50%$), the random effects meta-analysis method will be used to pool the effect measure.

Conclusion: This meta-analysis and systematic review will provide evidence of the dangers of smoking during the COVID-19 pandemic. While writing this protocol, the PRISMA-P reporting guidelines were strictly followed. The review's methodological strength is that study selection and data extraction will be carried out by two independent reviewers, with a third person intervening if a disagreement arises. This systematic review may have a limitation in that it will use an observational study design that does not prove causality.

Keywords: Current smoking; Ex-Smokers; COVID-19; Progression; Outcome



APHPN/PH23/T3/016

Digital Health Innovations: Piloting the Visualize and Get It (VIGIT) System among Public Health Physicians in Nigeria

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ABSTRACT

Background: Digital technologies are currently integral to daily living, and the world's population is interconnected. While there is immense scope for use of digital health solutions, its application to support the healthcare workforce and improve the health of populations remains largely untapped in developing countries. Digital health can help make health systems more efficient to deliver quality, sustainable, and affordable care. In line with the 38th APHPN Ilorin 2022 communique, the national leadership approved the piloting of this special project. This study assessed how Telecom Digital Cash Flow can circulate among Public Health Practitioners to improve and enhance the quality of their work through a 6-month pilot of the VIGIT system implemented to create awareness of telecom products available for public health practice and train participants on the use telecom products.

Methods: Data was collected with a self-administered questionnaire which gathered data from the members of APHPN on their knowledge of the VIGIT system, use of the components of the system and, outcome from the use of the system or its components as well as money made. There was a webinar session on Zoom in May 2022 to educate and provide opportunity for participants to register for the system with follow-up emails to branches. A survey was conducted among public health physicians using a self-administered online questionnaire and data analysed using SPSS software.

Results: A total of 67 people (61% male and 38% female) responded to the questionnaire from 16 State APHPN chapters, of which 45 respondents (67.2%) heard of the VIGIT System. About half of the respondents 31 (68.9%) were part of webinar series in May, 2022. Out of the respondents that heard of VIGIT, 19 (42.2%) used the components of VIGIT and the most duration of use is 6 – 7 months by 7 (36.8%) respondents. The main component used is My Wallet Shop 18 (94.7%) with majority of them 14 (73.7%), making some form of income from it. More than half of the respondents 10 (52.6%) who have used the components of VIGIT found it easy to use. In terms of satisfaction from use of the VIGIT system, 11 (57.9%) were very satisfied. Among the respondents who heard about VIGIT 16 (84.2%) recommended the use of the VIGIT system.

Conclusion: Although there was knowledge of the VIGIT system, the actual use of the system was low. Some APHPN members signed up for at least one of the components of VIGIT and made money from it. There is need for more awareness and participation among Public Health Physicians.

Keywords: VIGIT; Digital Health; My wallet Shop; Sustainability.



APHPN/PH23/T3/O23

Comparative Assessment of the Prevalence of Respiratory Symptoms among Women in Rural and Urban Communities in Esan West Local Government Area, Edo State, Nigeria

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ABSTRACT

Background: Cooking is a critical domestic function carried out in most homes. Many homes in both urban and rural areas in Nigeria rely on biomass fuels for cooking activities. Though other members of the household engage in cooking, women commonly top the list in many homes in Nigeria. Studies have shown that majority of households in Nigeria rely on biomass for energy. Burning of fossil fuels, including biomass, in homes contributes to indoor air pollution. The aim of this study was to assess and compare respiratory symptoms among women using different kinds of cooking fuels in rural and urban communities in Edo State.

Methods: A comparative descriptive cross-sectional assessment of 100 rural and 100 urban women who cook with different fuel types was carried out in selected communities in Esan West LGA, Edo State. The sample, calculated by using the formula for determining minimum sample size when comparing two independent populations, was selected from households in two simple random sampling stages. Data (including self-reported symptoms over the preceding 12 months) was collected with a modified European Community Respiratory Health Survey (ECRHS) questionnaire and analyzed using IBM SPSS Statistics version 21. The ECRHS questionnaire was initially designed for asthma. In this work, it was modified to exclude questions that were detailed for asthma assessments. Chi square was used to test association between place of residence and use of cooking fuels, and between cooking fuel types and preponderance of respiratory symptoms.

Results: The mean age of respondents was 48.8±15.1 years (rural: 52.7±15.9 years; urban: 44.8±13.0 years). Majority (87%) of rural women used wood for cooking versus 50% among urban women. A significant difference in the use of gas was observed among rural (5%) and urban (36%) women ($X^2=38.857$, $p<0.001$). Dry cough, productive cough and shortness of breath (28%, 21% and 17% respectively) were the commonest symptoms among rural women whereas shortness of breath, dry cough and chest tightness (8%, 6% and 6% respectively) were the commonest in the urban group. Overall, majority of rural respondents (81.3% versus 18.7%) had significantly higher number of respiratory symptoms ($X^2=6.793$, $p=0.009$).

Conclusion: Higher dependence on biomass fuels for cooking among rural women is significantly associated with higher prevalence of respiratory symptoms. Strategies to promote the use of more friendly energy sources for cooking can improve women's respiratory health.

Keywords: Biomass, indoor air pollution, respiratory symptoms, cooking fuel, women's health.



APHPN/PH23/T3/O30

Assessment of Safety Practices and Associated Factors among Automobile Mechanics in Yenagoa, Bayelsa State

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ABSTRACT

Background: Automobile mechanics are constantly exposed to a number of physical, chemical, biological and psychosocial hazards that put them at risk of a variety of health issues, some of which could be serious and life-threatening when working based on their various work descriptions and automotive specialties. Exposure to these hazards can however be minimized by adherence to necessary safety guidelines among the workers. This study assessed the practice of safety measures and the associated factors among automobile mechanics in Yenagoa, Bayelsa State.

Methods: This study was conducted for a period of 7 months among 212 automobile mechanics in Yenagoa, the capital city of Bayelsa State in South-South Geo-political Zone of Nigeria using a cross-sectional, descriptive design. Using multistage sampling technique eligible respondents were administered a structured questionnaire to elicit responses to answer the research questions. Statistical Package for Social Sciences software was used to obtain descriptive and inferential statistical package at the 5% level of significance. Bivariate analysis and logistic regression were done.

Results: This study showed that 115 (54.2%) of the automobile mechanics practiced required safety measures while working. These practices included proper identification of job hazards (77.4%), identification of the respective control measures (71.7%), interest in receiving safety training (86.8%), amongst others. Age (OR: 2.917, 95%CI: 1.29-6.62), specialty (OR: 2.957, 95%CI: 1.52-5.76), years of experience (OR: 0.264, 95%CI: 0.14-0.50) and attitude towards the use of the safety measures (OR: 0.254; 95%CI: 0.06-1.13) were significantly associated with the practice of these safety measures.

Conclusion: Slight majority of the respondents in this study put certain safety measures into practice while working and this practice was associated with certain factors. It is however essential that continuous training and retraining be conducted to properly orientate them regarding the sustained use of safety measures while at work.

Keywords: Automobile mechanics; Practices; Safety measures; Associated factors; Yenagoa.



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Knowledge, Attitude and Practice of Control Measures of Global Warming among Residents of Gwagwalada, Abuja, Nigeria

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ABSTRACT

Background: Global warming is a long-term rise in the average temperature of the earth's climate system. It is a major aspect of climate change and has been demonstrated by direct temperature measurements and by measurement of various effects of the warming. Even though, it is interchangeably used with climate change, the two have distinct meanings. Climate change includes both global warming and its effects. The impact of global warming ranges from storms and flood, which leads to displacement, mortality; shortage of food supply leading to malnutrition; heat which leads to morbidity or mortality; vector biology which leads to infectious diseases; air pollution which leads to respiratory diseases to civil conflicts leading to displacement, morbidity or mortality. This study assessed the knowledge, attitude and practice of control measures towards global warming among Gwagwalada residents.

Methods: A descriptive cross-sectional study was conducted among residents of Gwagwalada between May and August 2021. A multistage sampling technique was used in the selection of 282 respondents. A structured, self-administered questionnaire was used to collect data on demographic attributes, knowledge, attitude and practice of control measures of global warming after verbal informed consent was obtained. The data collected was cleaned, coded and entered into the computer, using SPSS version 23 for analysis. Data was summarized using frequencies and percentages and presented in tables and prose. Attitude and practice were scored. Chi-square test was used to test for associations between categorical variables. P-value < 0.05 was considered statistically significant.

Results: Majority of the respondents were within the age group of 15-24 (41%); 53.2% were males and 77 % were Christians, while 53.2 % had tertiary education. Majority of the respondents (80.2%) have heard of global warming, and the major source of information was television (24%). Forty-nine percent of the respondents believed that the change occurring is excessive temperature change, while the 69% believed the issue of global warming is man-made. Twenty-one percent, 67.6% and 87.4% said deforestation is the major cause of global warming, flooding has increased, and caused a change in the pattern of rainfall, respectively. Seventy-nine percent of the respondents had good attitude, while 94.2% had good practices. There was a significant relationship between level of education, religion and knowledge, but only level of education had significant relation for both attitude and practice of control measures.

Conclusion: Overall, participants had good knowledge, attitude and practice. The level of education was associated with knowledge, attitude and practice of control measures. Some recommendations included to improve the literacy level of the populace through formal education systems and creating more awareness about global warming.

Keywords: Global warming; Climate change; Control measures; Flooding; Deforestation; Nigeria



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Micro-albuminuria: An Early Biomarker of Kidney Disease among Residents in Rural Oil and Non-oil Producing Communities in Rivers State

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ABSTRACT

Background: Micro-albuminuria is a precursor and early biomarker for chronic kidney disease, a huge but neglected public health problem with a global prevalence estimated between 8-16%, and leads to catastrophic health expenditures for individuals, families, and communities. Chronic environmental exposure to nephrotoxins from crude oil exploration activities is an emerging health issue and has been strongly implicated in the multi-faceted etiology of kidney disease. However, there is a paucity of data on the occurrence of early kidney disease in rural communities in Rivers State. This study was aimed at comparing the prevalence of micro-albuminuria in rural oil and non-oil producing communities in Rivers State.

Methods: This was a community-based comparative cross-sectional study done in Kegbara Dere an oil-producing community with high contamination from crude oil spillages and Omerelu, an upland non-oil-producing community in Gokana and Ikwerre Local Government Areas, respectively. The sample size for comparing proportions between two populations was used. A total of 760 eligible participants were recruited from households using multi-stage random sampling. Kidney disease was assessed semi-quantitatively using reagent strips for micro-albumin and creatinine. Random morning spot urine samples were collected from the study participants for the determination of micro-albuminuria. The testing and reading time for micro-albumin and creatinine were within 30 and 60 seconds, respectively. Micro-albuminuria (albumin-creatinine ratio (ACR) of 3-30mg/mmol was considered positive for kidney disease. Data entry will be done using Microsoft excel and analyzed using the Statistical Package for Social Sciences (SPSS version 25) Chi-square test was used to compare the prevalence of micro-albuminuria among the two communities. Ethical approval was obtained from the University of Port Harcourt. Permission was sought and gotten from the traditional community chief and informed consent was obtained from the study participants.

Results: The socio-demographic characteristics of the study participants showed that the minimum and maximum ages of the patients in the study was 18 years and 102 years, respectively. The mean ages of patients were 44.96±12.7 years and 47.30±17.5 years among the residents in the oil-producing community and in the non-oil-producing community, respectively. There was a female preponderance among the study respondents. 51.8% of the females were in the oil-producing community while 69.2% were in the non-oil-producing community. The difference observed in their sex category was statistically significant ($\chi=23.99$; p value=0.0001). The prevalence of micro-albuminuria among residents in the oil-polluted & non-oil polluted communities were 40.8% and 26.6% respectively. The difference in the prevalence of micro-albuminuria among the study groups was statistically significant ($X^2 = 17.176$, p=0.0001).

Conclusion: There was a higher prevalence of micro-albuminuria in the oil-producing community compared to the non-oil-producing community. This study could serve as a baseline study for renal assessment in these communities and highlights the need for relevant



stakeholders to use a multi-sectoral approach for further investigation, early diagnosis, and subsequent surveillance of renal disease in the oil-bearing communities

Keywords: Biomarker; Kidney disease; Micro-albuminuria; Prevalence.



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Prevalence of Medication Adherence and Factors affecting Adherence among Elderly Patients in the Out-patient Department of University of Benin Teaching Hospital, Edo State

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ABSTRACT

Background: There is a rising number of the elderly aged 65years and above globally. This age group usually have increased risk of developing chronic non-communicable diseases and comorbidities. These illnesses may require chronic medications and the concurrent use of multiple medications. Thus, there is a high risk of medication non-adherence which poses major challenges in their healthcare management, socioeconomic levels and quality of life. This study measured the proportion of medication adherence and explored factors affecting adherence among the elderly patients in the outpatient department of the University of Benin Teaching Hospital, Benin-City.

Methods: The study was a descriptive cross-sectional study involving 264 respondents randomly selected from the elderly registered patients in the outpatient department. The 8-item Morisky Medication Adherence Scale (MMAS-8) was adopted to assess their level of medication adherence as high, medium or low. Data analysis was done using SPSS 25 version. Univariate analysis was done to assess the distribution of the variables. Bivariate analysis was used to determine significant associations using Chi squared test and Fisher's exact test. A *p*-value less than 0.05 was considered statistically significant. Ethical approval was from the University of Benin Teaching Hospital Ethics and Research Committee.

Results: Mean age was 73.23 years (SD: 66.95 – 79.51) and there were more males (54.2%). Over half (55.3%) of them had comorbidities. Eighty-three (31.4%) of the respondents had high adherence to medications, 95 (36.0%) had medium adherence, while 86 (32.6%) had low adherence. Statistical predictors of adherence included their average monthly income, number of chronic diseases, type of health insurance (social/private), presence of caregiver, opinion about clinic consultations, satisfaction with doctors counselling, severity of symptoms at onset of treatment, severity of symptoms now, perception of effectiveness of drugs, presence of side effects, drug availability in pharmacy, use of herbal medication, perception of health condition as spiritual, expectation that current treatment will improve health and whether they receive adequate financial support. Factors such as age, sex, marital status, level of education, skill level, duration of treatment, number of drugs taken daily and number of episodes of daily medication were found not to be statistically significant.

Conclusion: The low prevalence of medication adherence found among the elderly patients in this study were found to be significantly associated with their perceptions about their diseases, the competencies of medical care, and their prescribed drugs, and the availability of social aids. Therefore, deliberate steps like counselling during clinic visits and encouraging registration into available social insurance services are needed to mitigate these identified factors.

Keywords: Elderly; Medication adherence; Prevalence; Associated factors; UBTH; Edo State



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Level and Determinants of Occupational Stress amongst Doctors in University of Port Harcourt Teaching Hospital

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ABSTRACT

Background: The increasing global trend of occupational stress (OS) where job-related factors affect the physician's psychological or physical state, result in substantial revenue loss from decrease staff efficiency, payments of claims and litigations. High level of OS can lead to burnout, depersonalization, cardiovascular abnormalities, back pain etc. This effect is noted to cause errors diagnostic error, medication error, decision making errors. This study determined the level and determinants of occupational stress amongst doctors of University of Port Harcourt Teaching Hospital.

Methods: This cross-sectional study was conducted among 362 doctors working in various clinical departments in the hospital who were recruited using stratified random sampling. Respondents completed the 46-item occupational stress index (OSI) scale each having a 5-point response scale. The OSI was conceptualized as a function of 12 subscales (role overload, role ambiguity, role conflict, unreasonable group and pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, unprofitableness and strenuous working conditions) with 2 to 6 items in each subscale. Eighteen of the 46 items which were negatively keyed were reversed before item scores were transformed into percentages, summated to form the OSI subscales and total scale scores. Descriptive involved calculation of mean along with the 95% confidence intervals while inferential analyses involved bivariate and multivariate regression, were done using Statistical Package for the Social Sciences (SPSS) software version 25 and p-values ≤ 0.05 were considered significant.

Results: Item nonresponse rate ranged from 0.6 to 5.85%, the Cronbach's Alpha for the entire OSI scale was 0.85. More respondents were aged 30-39 (53.3%), female (53.3%), married (68.1%) and from the surgery department (41.7%). Overall level of occupational stress was 48.5% (95%CI: 47.6-49.2) with unprofitability (66.3%, 95%CI: 63.0-68.5) and role overload (64.1%, 95%CI: 62.7-65.9) as domains contributing highest to the OSI while least contributors were under participation (40.2%, 95%CI: 38.2-42.0) and powerlessness (42.2%, 95%CI: 40.3-44.5). From the bivariate analysis, increasing number of dependents ($p=0.006$), being a permanent staff ($p=0.031$) were associated with highly levels of OS while doctors working in community medicine departments reported 4.61% (95%CI: 0.38-8.83; $p=0.033$) less OS than those in surgery. Those involved in training ($p=0.024$) and research ($p=0.001$) reported significantly less OS than those who did not. From the multivariate analysis, only those involved in research reported 3.51% less OS than those who did not ($p=0.04$).

Conclusion: This study elucidated the levels and determinants of occupational stress among doctors in a teaching hospital. The observed high level of OS among doctors in the teaching was more because of a faulty reward system and role overload. Appropriate measures should be taken to remedy discrepancies in these domains due to the critical roles doctors place in providing quality and safe care.

Keywords: Occupational stress; Occupational stress index; Doctors; Determinants; Teaching hospital, Port Harcourt



