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# Journal Of Community Medicine And Primary Health Care

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THEME REPOSITIONING PUBLIC HEALTH IN A NEW POLITICAL DISPENSATION



AN OFFICIAL PUBLICATION OF THE ASSOCIATION OF PUBLIC HEALTH PHYSICIANS OF NIGERIA

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#### (b) Corporate Body/Organisation as Author

International Steering Committee. Uniform requirement for manuscripts submitted to biomedical journals. Br. Med. J. 1962; 284: 1766-1770

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What happened to growth monitoring? [Editorial]. Lancet 1992; ii: 149

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Hosmer DW, Lameshow S. Applied Logistic Regression. 2<sup>nd</sup> edition. New York: Wiley Series; 2004

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Adesanya CA, Parry EHO, Larbi EB. The heart and circulation. In: Parry EHO (Ed) Principles of Medicine in Africa. 2<sup>nd</sup> Edition, Oxford ELBS/Oxford University Press; 1984; 645-704.

# (c) Chapters with no authors

Respiratory Medicine. In: Tasker RC, McClure RJ, Acerini CL. (Eds). Oxford Handwork of Paediatrics, Oxford; 2010. 262-305

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Thind A, Mohani A, Banerjee K, Hagigi F. Where to deliver? Analysis of choice of delivery location from a national survey in India. BMC Public Health 2008; 8: 29 [cited March 21, 2009] Available from URL: http://www.biomedcentral.com/1471-2458/8/29)

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#### Prof. Kikelomo Ololade Wright, MBChB, MPH, MD, FMCPH

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#### WELCOME ADDRESS BY APHPN NATIONAL PRESIDENT

It gives great pleasure to welcome you all, on behalf of the Board of Trustees, National Executive Council (NEC) and the entire members of the Association of Public Health Physicians of Nigeria (APHPN), to this special 40th Annual Scientific Conference and General Meeting and Golden Jubilee celebration of APHPN tagged "Ondo 2024". I consider it a rare and special privilege to be in the driver's seat of our great Association at this time, as we celebrate the landmark age of 50 years. Half a century of existence and still waxing is worth celebrating in a grand style.

This year's conference theme is **"Repositioning Public Health in a New Political Dispensation"**. The present political dispensation in Nigeria has ushered in an avalanche of public health issues threatening the country's healthcare delivery system. There are many cracks visible in the health system building blocks. There is drastic depletion of the health workforce occasioned by brain drain, as many health workers have emigrated in drones from the shores of Nigeria for greener pastures abroad. The current socio-economic challenge impedes accessing healthcare for many citizens. Medical products including drugs remain out of reach for most citizens because of policies and sundry conditions that have prevented manufacturing companies from operating effectively in Nigeria. Healthcare, especially public health is danger in this present political dispensation. Therefore, without prejudice to the keynote speaker at this conference, I dare to say that repositioning public health in this political dispensation is an uphill task, but one that must be done.

Despite the numerous challenges facing public health practice in Nigeria, I can confirm that the attainment of a significant milestone of 50 years is a thing of joy for all members of APHPN. For half of century of existence, APHPN has been a major actor/player in the healthcare space in Nigeria. APHPN has always pushed and will continue to push for a better healthcare system in Nigeria through dedicated service delivery, advocacy, and stakeholder engagements. Having worked so hard for 50 years, we must celebrate ourselves. For this reason, one of the days in this conference has been dedicated to the golden jubilee celebration. We shall celebrate and honour with the Golden Jubilee award, our past leaders and members who have offered dedicated services to APHPN, including those who have distinguished themselves in their careers and have held or still holding positions of service to humanity and the medical profession. We shall also recognize and honour selected individuals who have offered dedicated public health service to the nation and organizations that have supported APHPN over the years. We shall tell the story of where we are coming from, where we are now, and the projections for the future. In all, the Golden Jubilee celebration promises to be a very memorable event. I sincerely thank the Chairman of the Golden Jubilee committee Prof. Vivian Omuemu and her team for the great effort they have put in to ensure a very successful Golden Jubilee celebration.

On behalf of the BOT and National Executive Council of APHPN, I express my appreciation to the Chairman of APHPN Ondo State Branch Dr. Demilade Ibirongbe and the Local Organizing Committee (LOC) of this conference, led by Dr. Isaac Aladeniyi. I sincerely register my gratitude to all organizations that have supported this conference – APIN Public Health Initiatives, Ave Health Sense, University of Medical Sciences, Ondo City, Shell Petroleum Development Company of Nigeria Ltd (SPDC), Strengthening Programming for Adolescents and Youths through Resource and Knowledge Generation and Link to Evidence (SPARKLE), Academy for Health Development, and Breakthrough ACTION Nigeria, and the Internation Committee of the Red Cross (ICRC).

I wish you all a very memorable conference and an exciting Golden Jubilee celebration.

Long live APHPN

Long live the Federal Republic of Nigeria

Prof. Alphonsus Isara

**APHPN President** 

#### WELCOME ADDRESS BY THE LOC CHAIRMAN

It is with utmost delight that I welcome you all to this year's Annual General Meeting and Scientific Conference, which marks the 40th edition and fortunately, coincides with the 50th anniversary of the Association. I welcome all the doyens of public health present at this meeting, the teachers of teachers, teachers and colleagues. I will not forget to also welcome the students among us, who have shown interest in participating in the conference, I want to reassure them that they have a lot of knowledge and lessons to take away from this conference.

This conference is coming up at an interesting time and with an interesting theme: Repositioning Public Health in a New Political Dispensation. Our country is at a crossroads, where incisive decisions have become necessary and those decisions must be of necessity include, the health sector too. Fortunately, the Honourable Coordinating Minister of Health & Social Welfare has set the tone for a holistic sector-wide reform with the Nigeria Health Sector Renewal Investment Program, with which the theme of this year's conference, so aligns.

Therefore, the conference presents sub-themes that are critical and far-reaching in their potential to make a systemic impact, as they address the very core of reforms that are needed in the health sector. We have arrayed plenary sessions that would challenge and provoke your mind to critique and provide solutions to some of the prevailing problems identified by erudite scholars. You would have opportunities to attend scientific sessions, where new research and innovative works would be presented. We equally have partners who are here to showcase their works and the outcomes of some of their interventions in health. I trust that you will participate in this conference with an open mind to permit the free flow of new ideas and best practices that have worked or are working.

The conference climaxes with the luncheon for the Golden Jubilee Celebration of the Association on Thursday. We will be taking you into a whole new experience at the foremost agro-resort facility in Ondo State, Nibanola Motherland Resort, where we shall be honouring fifty personalities and entities that have made their marks in the association, as well as in public health service, working for the common good of the people of Nigeria.

I will conclude my address by appreciating the shoulders that carried the clothes to make them fit. Foremost, I thank Professor Adesegun Olayiwola Fatusi, the Vice Chancellor of the University of Medical Sciences, Ondo, his commitment towards the success of this conference was total and unparalleled. I thank my State Chairman, Dr. Demilade Ibirongbe, who was an asset of no mean value to us, he was our compass at every crossroad. I appreciate Dr. Akinbinu Babatunde, great guy, Drs. Deboye Fayanju, Marius and Dr. Fgabemi, their commitment has brought the successes you will be witnessing at this conference. I want to also appreciate the strong women of the LOC, Dr. Olagbuji, who was everywhere with us, making great sacrifices, Dr. Toyin Adeyalo-Ogundare, an amazing lady who opened doors that some of us could not go near and Dr. Victoria Oladoyin, a great hardworking LOC Secretary.

Finally, I thank our committed partners, APIN public health Initiatives, SPARKLES, University of Medical Sciences, Ondo, SHELL, Malaria Consortium, JHPIEGO, Breakthrough Actions, Ondo State Contributory Health Commission, Dr. Femi Kuti, Dr. Jibayo Adeyeye, Dr. Victor Koledoye, Dr. Kene Terfa etc.

Eventually, this conference has begun, I trust that you will internalize all the beauty and pleasantness of this land as you explore and enjoy the ambiance of our friendly environment. Let me remind you, with utmost respect to the elders in the house, that "The kola nut stays longer in the mouth of those who appreciate the value." I welcome you once again.

#### Dr. Isaac Aladeniyi

# LOC Chairman

# Prevalence and Pattern of Gender-Based Violence among Students in a University in the Federal Capital Territory, Abuja, Nigeria

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# ABSTRACT

**Background:** Gender-based violence (GBV) is an increasing public health concern. Young persons are particularly at risk with an estimated 150 million girls and 73 million boys affected worldwide. GBV is fuelled by ignorance and adverse cultural or religious beliefs and practices. This study aimed at determining the prevalence and pattern of gender-based violence among university students in the Federal Capital Territory, Abuja, Nigeria.

**Methodology:** A descriptive cross-sectional study was used in this research. A multistage sampling technique was used to select 417 respondents. Socio-demographic characteristics, prevalence and pattern of GBV were obtained using a self-administered questionnaire. Data were analysed using IBM SPSS Statistics, version 25.0.

**Results:** Half (53.9%) of respondents were aged between 15 - 22 years of age and 52.3% of them were females, while 97.8% were single. The prevalence of Gender-based violence among respondents was 42.2%. A quarter (107 25.7%) had seen and witnessed gender-based violence, more than half 231 (55.4%) of students had perpetrated GBV, and 10.2% of those who experienced GBV reported it. Of the students 176 who experienced violence, 82 (46.6%) experienced physical violence, 56 (31.8%) reported emotional violence and 38 (21.6%) endured emotional and verbal violence. Of the students who experienced violence, 194 (46.5) experienced physical violence, 134 (32.1) reported emotional violence and 89 (21.4) endured emotional and verbal violence. Factors associated with GBV were socio-demographic characteristics, gender of the student, marital status, and religion. more respondents 72 (11.27%) within the age group 18 – 22 years had experienced GBV (statistically significant - $\chi 2 = 0.157$ , p = 0.042).) More singles 135 (32.4%) hat married 0 (0.0%) had experienced GBV (statistically significant - $\chi 2 = 0.157$ , p = 0.025), More Christians 126 (30.3%) than Muslims 9 (2.2%) had experienced GBV. (Statistically significant ( $\chi 2 = 3.4$ , p = 0.035).

**Conclusion**: This study shows a high prevalence level, most especially among female students of the university who had intimate partners.

**Recommendation:** There is a need to improve awareness, provide counselling centres for female students and also provide them post- violence treatment and counselling.

#### Keywords: Gender-based violence, Prevalence, Pattern and Students





# Practice of Menstrual Health and Hygiene Management Among Female Students Attending Government-Owned Secondary Schools in Jos North LGA, Plateau State, Nigeria

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# ABSTRACT

**Background**: Menstruation is the periodic shedding of the lining of a woman's uterus. Over an average period of four to six days, the uterine endometrial lining breaks down into menstrual blood. Menstrual health and hygiene management refers to access to menstrual hygiene products to absorb or collect the flow of blood during menstruation, privacy to change the materials, and access to facilities to dispose of used menstrual management materials. Inappropriate practice of menstrual health and hygiene management can negatively affect the quality of life of teenagers and their communities at large. This study was aimed at assessing the practices of menstrual health and hygiene management and the factors that influenced them among female students attending government-owned secondary schools in Jos North LGA Plateau State.

**Methodology:** A cross-sectional descriptive study design was used. Questionnaires were administered to 326 female students of government-owned secondary schools in Jos North, Plateau State between the ages of 10-19 years. 3 schools were selected from 26 government-owned schools in Jos North, Plateau State using a multi-stage sampling technique. Data was analysed using Statistical Package for Social Sciences (SPSS).

**Result:** The majority of the respondents 219(67.2%) were between the ages of 15-18 years. Of 326 respondents, 160(49%) were between Jss1-Jss3 and 168(51%) were between Ss1-Ss3, Majority of respondents 123(37.7%) attained menarche at 13years, 62(19%) at 12years, 61(!8.7%) at 14years, 30(9.2%) had not started menstruating, 19(5.8%) at 15years, 17(5.2%) at 11years, 8(2.5%) at 16years, 5(1.5%) at 10years and 19(0.3%) at 17years. Most 319(97.8%) had good practices of menstrual health and hygiene. Majority use sanitary pads 297(91.1%), 20(6.1%) use reusable clothes, 6(1.8%) use tissue paper, 3(0.9%) use disposable clothes. major method of disposal of absorbents for respondents was burning 206(63.2%), waste bins 58(17.8%), flushing 36(11%), washing 24(7.4%) and open dumping 2(0.6%).

**Conclusion:** The majority of the students had good practices of menstrual health and hygiene management but their schools lacked facilities for cleaning, privacy and disposal of used sanitary materials. Therefore, programs that educate students on these matters should be sustained.

**Recommendation**: Government should provide functional facilities for basic personal hygiene in public schools, including cleaning water supply, waste bins in toilets and school environments, toilets that proffer privacy and safety for use and soaps within facilities

Keywords: Practice, Menstruation, menstrual health, menstrual hygiene, menstrual hygiene management, Government secondary school



2





# Determinants of Adherence to Childhood Immunization Schedule Among Vaccine Hesitant Mothers in a Tertiary Health Institution in Ogun State, Nigeria

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#### ABSTRACT

**Background**: Childhood immunisation is an effective mode of primary prevention of communicable diseases in public health. Poor adherence to childhood immunisation schedules by vaccine-hesitant mothers has contributed to the resurgence of Vaccine-Preventable Diseases (VPD) due to poor immunisation coverage and suboptimal herd immunity. Vaccine hesitancy is a global public health emergency. Constructs of the World Health Organization Strategic Advisory Group Expert (SAGE) Framework on classifying determinants and well as the Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation (PRECEDE model) were utilised to explore the factors that influence adherence to childhood immunisation schedules among vaccine-hesitant mothers.

**Methods:** This study was a qualitative-retrospective study that involved face-to-face interviews conducted among identified nine vaccine-hesitant mothers whose children developed the complication of under-vaccination or un-vaccination. The interviews were audio-recorded, transcribed verbatim, checked and thematic analysis was done until data saturation was reached.

Results: Twelve themes emerged, which were fear of needles; experience with vaccine/ side effect of vaccine; health worker attitude; communication by health care professional at antenatal care and delivery; male partner support; family culture; mother's motivation; maternal mental health; lack of access to vaccination centre; knowledge about vaccine schedule; COVID 19 pandemic and its fear; religious inclination; and socioeconomic profile. Using the construct of the WHO SAGE model, the contextual and group influence were male gender roles, family culture, geographic barriers, communication, and influential leaders (religious leaders); the individual and group influences were fear of needles, vaccine safety, attitude towards vaccination, maternal motivation, experience with vaccinating child and knowledge about when to start baby on vaccination; the vaccine-specific issues were mode of vaccine administration (needle) and lack of communication by health care workers on when to commence vaccination. Using the constructs of PRECEDE model, the Predisposing factors were knowledge about when to start vaccination, attitude: fear of needles, experience with vaccine and vaccine side effects, fear of contracting COVID-19 in the health facility, motivation (vaccine not a priority), religious inclination; Reinforcing factors were social support from the male partner and family, health care worker communication style and health worker; attitude; whereas the Enabling factors were access to vaccination centre and funds for transportation to access vaccination.

**Conclusion:** Non-adherence to childhood immunisation schedule among these vaccine-hesitant mothers is the tip of the iceberg of what exists in the community. It is a public health problem because it wanes herd immunity and contributes to a resurgence of vaccine-preventable diseases.

**Recommendations**: This study recommends assessment to identify potential vaccine-hesitant parents during antenatal visits; early effective communication strategies by health professionals; adoption of telemedicine especially with the current shortage of health professionals or lock-down occur during a future pandemic; upscaling of social mobilisation and feasible government measures to address the threat. Health interventions should be tailored to match the identified WHO SAGE stratified contextual influences; individual or group influences; vaccine or vaccination issue influence and PRECEDE predisposing, reinforcing and enabling factors that determine adherence to childhood immunisation schedules among vaccine-hesitant mothers.

# Keywords: Poor adherence, Vaccine hesitancy, Vaccine-Preventable Diseases, SAGE framework, PRECEDE model



# Prevalence and Factors Associated with Depression and Substance Abuse Among Adolescents in Sagamu Local Government Area

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#### ABSTRACT

**Background:** Depression is an important non-communicable disease and it is a global public health concern. It is the most common mental health disease and ranks as one of the leading causes of morbidity and mortality among adolescents, yet its diagnosis and effective treatment could be missed or delayed due to its unusual presentation among adolescents. Adolescent substance abuse is a social ill and a public health challenge. Despite the myriad of negative consequences of substance abuse on the health and well-being of adolescents, the rising trend in illicit drug use among adolescents continues to attract global attention and is a public health concern worldwide. Therefore, depression and substance abuse among adolescents are recognized priority areas in adolescent health. This study aimed to determine the prevalence and factors associated with depression and substance abuse among adolescents in Sagamu local government area.

**Methods:** This study adopted a descriptive cross-sectional study design and a quantitative method for data collection. A sample of 414 senior secondary school students, using Fisher's formula and multi-staged sampling technique was used. A modified semi-structured interviewer-administered questionnaire was utilised to collect sociodemographics; depression (using modified patient health questionnaires for teenagers; substance use (National Institute on Drug Abuse questionnaire); and social support data. Data analysis was done using Statistical Package for Social Science (SPSS) Version 20.00.

**Results:** The result of this study showed that only a minority (7.8%) of the students met the criteria for the diagnosis of major depressive disorder, of which 4.1% had moderate depression. Age, gender, class, nature of family, number of close friends, and the school performance of respondents were not significantly associated with depression ( $\chi 2= 1.626$ , p=0.444;  $\chi 2= 3.159$ , p=0.075;  $\chi 2=2.505$ , p=0.386;  $\chi 2=0.591$ , p=0.744;  $\chi 2=0.132$ , p=0.688; and  $\chi 2=4.042$ , p=0.132 respectively). Also, only a minority (16.8%) of the respondents have used/abused drugs, with alcohol being the most used/abused (11.2%) substance. The identified factors associated with substance abuse in this study include peer influence, media influence, and the reason for use (stress from home, ease of availability of the drugs, desire to stay awake, poor academic performance). Only a few of the respondents have family members or friends who use drugs. A significant relationship was found between substance abuse, male gender and nature of family ( $\chi 2=9.046$ , p=0.003; and  $\chi 2=10.778$  p= 0.005 respectively).

**Conclusion:** The prevalence of depression and substance abuse among adolescents in Sagamu local government area was lower than what obtains in most parts of the country. Incidence of depression was higher among the younger adolescents, females, those from monogamous families, and adolescents with poor school performance, while the male gender and nature of family are associated with substance abuse.

**Recommendations:** Multi-disciplinary approach is needed to address this public health challenge. School-based mental health services should routinely screen for depression and substance abuse and initiate or refer for interventions; counsellors should be adolescents with life-coping skills; social workers can mediate family cohesion and social support; and the government should restrict access to illicit substances through enforcing policies on social media and pharmacy prescription.

#### Keywords: Depression, Mental health, substance abuse



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# The Influence of Dysfunctional Family on Academic Performance Among Secondary School Students in Sagamu Local Government

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# ABSTRACT

**Background**: A dysfunctional home is characterised by families including parents and their offspring not living harmoniously together due to separation, divorce, parent(s)' death or illegitimacy and where parents do not provide the necessary psychological, educational, socioeconomic, moral and spiritual needs of the children and household. A dysfunctional family is a public health challenge because a family is the basic unit where a child gains identity, discipline, moral education, and learns societal norms and values. Students from dysfunctional homes are more likely to suffer psychological problems, mental disorders, drug abuse, poor academic performance and school drop-outs. This study aimed to determine the influence of dysfunctional families on academic performance among secondary school students in Sagamu local government.

**Methods:** This is a descriptive cross-sectional study with quantitative methods for data collection. Ethical approval was obtained from the health institution. Consent was obtained from the school principals and parents or guardians and accent from students. A multi-stage sampling technique was used. Interviewer-administered validated questionnaires were used to obtain data on socio-demography, income of parent(s) or guardian, knowledge of dysfunctional family, social support, substance use and the effect of dysfunctional family on academic performance. Academic record performance was evaluated using school academic records. Data analysis was done using Statistical Package for Social Science (SPSS) Version 20.00.

**Results:** This study showed that 20.7% of the students are from dysfunctional families. About 34.6% of the students from dysfunctional families had less physically calm and emotionally stable records. There is an association between parental status and academic performance, punctuality and regularity in school; self-esteem; level of motivation; regular school fees payment and attentiveness (p=0.003, p=0.420, p=0.023, p<0.001, p=0.001, p<0.001 respectively). There is no association between single parents and academic performance (P = 0.577). There is no association between parental status and alcohol and illicit drug use (p=0.675).

**Conclusion:** Dysfunctional families have a negative influence on students' academic performance. Other factors like punctuality, regularity in school, emotional stability, motivation, attentiveness, and consistency in school fee payment influence academic performance.

**Recommendations:** To enhance the academic performance of students from dysfunctional families, school authorities should conduct background profile checks at enrolment, avoid stereotypes and make flexible school curriculum to accommodate these students. School counsellors, teachers and psychologists should provide emotional support to students from dysfunctional families. Parents should actively supervise their children's academics. Government and non-governmental organisations should prioritise scholarships for these groups of students. Extracurricular activities such as sports and hobbies could be used to engage students from dysfunctional families.

Keywords: Dysfunctional family, Academic performance, School drop-out





# Assessment of Housing Conditions, and the Public Health Implications Among the Residents of Enugu Urban Slum in Enugu Metropolis, Nigeria

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# ABSTRACT

**Background:** Housing remains a strategic social determinant of health and it is the second most important essential need of man after food. The quality of housing has major consequences for people's health as well as a substantial impact on the health system. A reasonable amount of time is spent in the house and even more, by the elders, the sick and the children. The principal function of a house is to protect us from the elements, and require that a home provide not only shelter, but also privacy, safety, and reasonable protection of our physical and mental health and in contrast a living facility that fails to offer these essentials through adequately designed and properly maintained interiors and exteriors cannot be termed "healthful housing." In Sub-Saharan Africa, a majority of urban dwellers live in slums with attendant health implications. This study assessed the housing conditions of the slum residents of Enugu metropolis and the public health implications.

**Methods:** This is a cross-sectional study of 459 slum residents of the Enugu metropolis. Data was collected using a pretested semi-structured interviewer-administered questionnaire and an observational checklist. Ethical clearance was obtained from the UNTH Ethics Committee (HREC). Data was analysed using IBM SPSS version 26. Data were summarised using mean and standard deviation; frequency and proportion as appropriate presented in tables and figures. The Chi-square test was used for association at p-value  $\leq 0.05$ .

**Results:** The population studied was 450 respondents. The mean age (SD) was 32.93(12.34) years. A higher proportion 180 (39.2%) were 18-27years, females 282 (61.4%), married 297 (64.7%), attained secondary education 273 (59.5%), Igbo 453 (98.7%), Christians 456 (99.3%) and self-employed 327 (71.2%). They demonstrated good knowledge of standard housing specifications 231 (50.3%) and the effects of housing conditions on health 297 (64.7%). Also, most lived in a room apartment 201 (43.8%) and cooked in separate kitchen 150 (32.7%) with gas cookers as a major source of heat supply for cooking 249 (54.2%). Sixty-three (13.7%) of them adopted unhygienic methods as toilet facilities. In higher proportion, 171 (37.3%) used pipe-borne water, and electricity as the major source of light 447 (97.4%). The most prevailing health condition was malaria/fever 258 (97.4%). Despite having pests and rodents-infested dwellings, only 156 (34.0%) had insecticides in the house. Equally, 132 (28.8%) of them lived with broken floors.

**Conclusion:** Although the slum residents had good knowledge of the public health implications of poor housing, the dwellings remained substandard.

**Recommendation:** There is a need for health campaigns against the poor living conditions in the slum.

#### Keywords: Housing and Health, Public Health, Implications, Urban Slums, Enugu



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# Knowledge, Perception, and Acceptability of Orange Health Insurance Scheme and Among Civil Servants in Ondo State Primary Health Care Development Agency

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## ABSTRACT

**Background:** In Nigeria and several developing countries, universal access to healthcare is poor. The reforms of government in the health sector in Nigeria have been designed to improve efficiency in both public and private healthcare markets and to cover the poor and vulnerable who have previously been marginalised. The launching of the Orange Health Insurance Scheme in Ondo State in 2005 was an attempt to correct these inadequacies in the nation's healthcare system. This study assessed the level of perception and acceptability of the Orange Health Insurance Scheme among staff members of the Ondo State Primary Health Care Development Agency.

**Methods:** This was a descriptive cross-sectional study design using a multi-staged sampling technique to select 372 staff members of Ondo State Primary Health Care Development Agency. Data was collected using a semi-structured self-administered questionnaire. This questionnaire assessed participants' socio-demographic characteristics, knowledge of Orange Health Insurance Scheme, perception towards the scheme, acceptability and willingness to pay for the program. Data was entered electronically in SPSS version 26. Univariate analysis was done by use of frequency tables for describing the socio-demographic characteristics. Appropriate bivariate analysis was carried out using Chi-square to determine the relevant association between variables. Variables that achieve statistical significance in bivariate analysis were included in the logistic regression model for multivariate analysis. The level of statistical significance was set at a p-value of less or equal to 0.05.

**Results:** The findings revealed that 314 (84%) of respondents were aware of the Orange Health Insurance Scheme and more than half of them 215(57.8%) had good knowledge of the scheme. The outcome of the study showed that 323(86.8%) of respondents had a high perception of the scheme. The majority 278(88.5%) of the respondents were willing to participate and pay for the scheme. Educational level was significantly associated with knowledge with higher educational attainment leading to better knowledge of the scheme (p-value: 0.003). Sex and marital status were also found to be significantly associated with participants' perception of the scheme. Female participants (p-value: 0.001) and those who were married (p-value: 0.005) displayed higher perception scores. Furthermore, the results also indicated that income is a significant factor influencing the acceptability of the health insurance scheme with those with higher income levels showing higher levels of acceptability (p-value: 0.001).

**Conclusion:** High awareness, high willingness to participate and fair knowledge of the Orange Health Insurance Scheme characterised the civil servants studied. Also, sex and marital status, educational level, and income influenced the perception, knowledge, and acceptability of the scheme.

**Recommendation:** The government should implement educational campaigns to increase awareness of the scheme, targeting individuals with lower educational attainment, to ensure widespread knowledge dissemination. Develop communication plans that are tailored to the needs and preferences of various demographic groups with a focus on married and female individuals. Also, they should put policies in place to make the scheme more accessible, especially for those with lower incomes. To guarantee fair access to health care services, this may involve alternate payment methods, income-based rate modification, or subsidy schemes.

Keywords: Acceptability, Civil servants, Health Insurance, Orange Contributory Health Insurance Scheme, Primary HealthCare Development Agency



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# Predictors of Infection Prevention and Control Practice Among Health Workers in Primary Health Centres in a Southwest State, Nigeria

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# ABSTRACT

**Background:** Infection prevention and control practices in healthcare settings are essential in reducing the risk of acquiring healthcare-associated infections (HAIs).<sup>1,2</sup> The challenges in Nigeria's primary health care system pose a significant threat to the adequate establishment and sustenance of the Infection Prevention and Control (IPC) program at the Primary Health Centres (PHCs).<sup>3</sup> There is a paucity of studies on IPC activities at PHCs, hence this study aimed to assess the predictors of IPC practice at the PHCs.

**Methodology:** The study was conducted in Ekiti state in southwest Nigeria. The study was a health facility-based cross-sectional survey, conducted among health workers. Data was obtained through a pretested, structured, self-administered questionnaire. The Leslie Fishers formula was used to calculate the sample size using the prevalence of 46.8% and using finite correctional formula and non-response rate, a sample size of 450 was estimated. A multistage sampling technique was used in the selection of eligible respondents. Data was analysed using the IBM SPSS version 27 at the level of significance of  $P \le 0.05$ .

**Results:** Four hundred and twenty respondents (93.3%) had good knowledge scores, and 408 (90.7%) and 436 (96.9%) respondents had good attitudes and good IPC practices respectively. Health workers in the urban health centres were less likely to have good IPC practice than those in the rural health centres (AOR=0.646, 95%CI=0.448–0.931). Also, those with IPC training were about twice as likely to demonstrate good IPC practice among the respondents (AOR=1.866, 95%CI=1.089–3.926). Furthermore, those with work experience above five years were about thrice more likely than those with experience less than five years to have good practice (OR=2.463, 95%CI=1.197–5.071). Likewise, respondents with good knowledge were about ten times more likely to have good IPC practice (OR=10.433, 95%CI=4.600–14.322), and those with positive attitudes were about four times more likely to have good IPC practice after adjustment. (OR=3.630, 95%CI=2.293–5.747).

**Conclusion:** Therefore, PHC management should routinely conduct pre-employment and periodic training of health workers at the PHCs. This will help to improve the knowledge and attitude of the workers and also develop their experience in infection control practice.

#### Keywords: Infection Prevention and Control, Primary Health Centre, Health Workers



# Factors Associated with Contraceptive Use Among Rural and Urban Female Adolescents in North Central Nigeria

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# ABSTRACT

**Background:** Contraceptive has long been recognized as a highly cost-effective public health intervention. Contraceptive could prevent up to one-third of all maternal deaths <sup>1</sup>. It could also reduce the number of unintended pregnancies that currently often end up with unsafe abortions among adolescents. Adolescence presents with life-threatening and sometimes fatal reproductive experiences due to risky sexual behaviours. There was a paucity of studies comparing factors associated with contraceptive use among adolescents in rural and urban areas hence this study aimed to determine the prevalence of contraceptive use among adolescents and assess the predictors of its use among them.

**Methodology:** This study was conducted in Abuja, Nigeria. It was a comparative community-based cross-sectional study conducted among adolescent girls (15 - 19 years). Pregnant adolescent girls were excluded from this study. Sample size was determined with the formula for comparing two proportions <sup>4</sup>, with the proportion of contraceptive use in the urban and rural as 53.0% and 39.0 respectively.<sup>5</sup> It was estimated to be 200 each in both urban and rural communities. A multistage sampling technique was used to select eligible participants and an interviewer-administered structured questionnaire was used to collect data, which was analysed using IBM SPSS version 26, at a p-value of 0.05. Ethical approval was obtained from the Health Research and Ethics Committee of the Federal Capital Territory (FCT).

**Results:** Out of 400 respondents, 74% (296) of respondents were 18-19yrs and 26% (104) were 15-17 years old. Table 2 shows the statistically significant associated factors with contraceptive use among the respondents, which included community types, age groups of the respondents and their culture. More respondents (47.1%) in urban areas were using contraceptives compared to 24.1% of those in rural communities. Also, 42.2% of respondents in the 15-17 years age group were using contraceptives than 22.4% in the 18-19 years age group. 43.3% of respondents with a culture that supported contraceptive use were using contraceptive use were twice more likely to use contraceptives than those without such a culture that supports the use. This was the only statistically significant predictor of contraceptive use among the respondents.

**Conclusion:** There is a need for the promotion of contraceptive use among adolescents in rural communities and the need to make the health facilities more adolescent-friendly to encourage adolescents' access to contraceptive use. The community should be well educated about the benefits of adolescent reproductive health, and adolescent adolescent-friendly culture should be promoted and integrated into their culture through advocacy.

#### Keywords: Adolescent girls, contraceptive, rural, urban





# Assessing the Performance of Routine Health Information System for RMNCAEH+N Quality of Care in Selected Healthcare Facilities in Ondo and Ekiti States, Nigeria

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# ABSTRACT

**Background:** Pertinent reproductive, maternal, newborn, child, adolescent, and elderly health plus nutrition (RMNCAEH+N) health indicators have remained unsatisfactory in the face of poor-quality healthcare services in Nigeria. Integral to efforts to improve RMNCAEH+N quality of care (QoC) is the functioning and quality of performance of the health management information system (HMIS) but there is sparse evidence on this. This study assessed the performance of routine RMNCAEH+N QoC data collection and use for decision-making at all levels of care in Ondo and Ekiti States of Nigeria.

**Methods:** Using the routine health information system performance diagnostic tool, a desk review of RMNCAEH+N registers and the National HMIS/health facility/monthly summary form (NHMIS/HF/MSF) was conducted in sampled public health facilities (N=169; Ondo State=117; Ekiti State=52) across selected local government areas in both States. Primary quantitative data was also collected from Officers-in-Charge/Medical Directors (or their designated representatives) of the sampled public health facilities. Data were analysed using descriptive statistics.

**Results:** Forty-eight (42.9%) health facilities in Ondo and 47.1% in Ekiti had stock-out of the NHMIS/HF/MSF in the 12 months preceding the survey. Seventy-one percent (Ondo) and 40.4% (Ekiti) of health facilities reported data accurately, 87.2% (Ondo) and 63.5% (Ekiti) had complete data, 99.1% (Ondo) and 96.2% (Ekiti) had consistent data, while 98.1% (Ondo) and 100% (Ekiti) reported data timely. Further, 99.7% (Ondo) and 99.9% (Ekiti) of newborns, and 84.4% (Ondo) and 88.7% (Ekiti) of postpartum women were discharged with accurately completed records. Also, 70.1% (Ondo) and 78% (Ekiti) of the facilities had quality improvement (QI) teams; 41.9% (Ondo) and 22% (Ekiti) of QI teams regularly extracted data, calculated, and visualised prioritised indicators; while 72.1% (Ondo) and 79.2% (Ekiti) regularly reviewed data and used it to make QI decisions.

**Conclusion:** The performance of RMNCAEH+N QoC data management system in terms of availability of reporting forms, data accuracy and completeness, and data use were suboptimal in both states.





**Recommendations:** Providing adequate resources for data collection and having well-trained and functional QI teams in all health facilities are fundamental to the quality delivery of RMNCAEH+N services.

Key words: RMNCAEH+N, Health Management Information System, Quality of Care, Quality Improvement, Performance



# Quality Of Life and Stigma among Persons Affected by Leprosy or Buruli Ulcer in Nigeria: A Community-Based Cross-Sectional Study

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# ABSTRACT

**Background:** Skin Neglected tropical diseases including leprosy and Buruli ulcer cause aesthetic and functional impairments due to late detection of the diseases. This study assessed the quality of life and stigma among persons affected by leprosy or Buruli ulcer in Nigeria.

**Methods:** This was a community-based cross-sectional study. It involved persons affected by leprosy or Buruli ulcer purposively selected from the ten local government areas in six Southern States. The SARI Stigma Scale was used to assess stigma while the WHOQOL-BREF questionnaire was used to determine the Quality of life. Chi-square test, Correlation analysis, Mann Whitney U, Kruskal Wallis tests and multivariate analysis using binary logistic regression analysis were used in the study. The level of statistical significance was determined by a p-value of <0.05.

**Results:** The mean age of the respondents was  $43.8\pm17.0$  years. A higher proportion of the respondents, 78.9% were affected by leprosy. Less than one-third of the respondents, 29.3% had a good quality of life. There was a strong negative correlation between overall stigma and overall quality of life, (n=635, r=-0.530, p<0.001). Predictors of good quality of life included having no formal education, (AOR=0.4, 95%CI: 0.2-0.7), being unemployed, (AOR=0.4, 95%CI: 0.2-0.7), having vocational training, (AOR=2.1, 95%CI: 1.1-4.1), being affected by leprosy, (AOR=4.3, 95%CI: 2.3-8.1) and having poor social support, (AOR=0.1. 95%CI: 0.05-0.2).

Conclusion: The quality of life of these individuals decreases as the level of stigma increases.

**Recommendation:** There is a need to continue community health education campaigns to change the existing stereotypes about diseases and provide strong social support for the affected individuals.

#### Keywords: Quality of life, stigma, leprosy or Buruli ulcer, Nigeria



# Comparative Assessment of Dental Caries among Pupils in Public and Private Primary Schools in Rivers State, Nigeria

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# ABSTRACT

**Background**: Oral health is very important to the overall health and well-being of all individuals. Dental caries is the breakdown of a tooth due to acids made by bacteria on the enamel surface, leading to caries. This study assessed and compared the prevalence and determinants of dental caries amongst pupils in public and private primary schools in Rivers State, Nigeria.

**Methods:** The study design used was comparative cross-sectional, recruiting 625 pupils in both public and private primary schools using a multi-stage sampling method. The study instrument was a semi-structured, pre-tested questionnaire adopted from WHO. Also, an intraoral examination was carried out by a dental surgeon to ascertain the presence of dental caries and the Decayed, Missing and Filled Teeth (DMFT) index. Descriptive and inferential statistics were computed using SPSS version 25.

**Results:** Participants were aged 9-11 with mean ages of 9.96+/-0.80 years and 9.61+/-0.70 years from public and private primary schools, respectively (t-test value=0.23, P-value=0.63). The prevalence of dental caries in public schools was 22.9% (95% CI=20.21-25.74) and in private schools, 21.8% (95% CI= 19.14-24.57). Also, DMFT was 6.2% (95% CI= 4.79-7.99) and 5.3% (95% CI= 3.95-6.91) among the public and private primary school pupils, respectively. The results showed that 34.1% compared to 38.2% of public and private school pupils, respectively, had good knowledge of dental hygiene (Chisquare test value=2.34, P-value=0.13). Regarding dental hygiene practice 10.6% and 2.1% of the pupils in the public and private primary schools, respectively, reported good practice (Chi-square test value=27.96, P-value=0.00). Also, DMFT was found to be higher as well. The public primary school pupils also had better dental hygiene knowledge and practice when compared to their counterparts in the private primary schools. Factors like the age of the students, the father's education, the type of toothpaste used and the sex of the child are associated with the occurrence of dental caries. Multivariate analysis revealed that respondents who do not use foamy (fluoride-containing) toothpaste were 3.07 times more likely to experience dental caries when compared with the respondents who use foamy toothpaste in public schools. Also, the respondents who clean their teeth haphazardly were 3.59 times more likely to experience dental caries when compared with the respondents who clean their teeth more frequently in public schools.

**Conclusion:** This study found a similar low prevalence of dental caries and DMFT indices in pupils in both public and private primary schools in Rivers State. Also, there were poor levels of knowledge and practice of dental hygiene with surprisingly higher good practice among public school pupils. Hence, oral health promotion programs should be intensified in the school health curriculum and both public and private primary schools should be treated equally during intervention programs.

#### Keywords: Dental caries, Primary school





# Perceived Factors Associated with Male Involvement in Maternal and Child Health Care Among Mothers in an Urban Community in Benin City, Nigeria

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## ABSTRACT

**Background:** To ensure improved maternal and child outcomes, the active participation of the male partner in reproductive health services along with their family partners remains pivotal. The proportion of male participation in maternal and child health activities in sub-Saharan Africa remains low, with pregnancy and childbirth being perceived as solely a woman's issue. This study identified the factors associated with male involvement in maternal and child health care in Evbuomore community, Edo State, Nigeria.

**Methods:** A descriptive cross-sectional study was done in an urban community, Evbuomore, Benin City, Nigeria, among 627 mothers selected using a multi-stage sampling technique. Ethical clearance for this study was obtained from the "Health Research and Ethics Committee Ministry of Health, Edo State" with reference number: HA.737/100. Data though based on self-reporting from the respondents were collected using a structured, interviewer-administered questionnaire adopted from a previous study. Pretesting of the data collection tool was done in Ekosodin community in Benin City. Data analysis utilised IBM SPSS version 25 software and a p-value < 0.050 was considered significant.

**Results:** The mean  $\pm$  standard deviation age of the mothers was  $31.9 \pm 9.1$  years. Most of the women, 586 (93.5%) were in a monogamous marriage, and 366 (58.4%) had  $\leq 2$  children. Almost all the women 606 (96.7%) reported that their spouses supported antenatal care and 432 (71.2%) of them paid antenatal fees. Also, 330 (54.5%) and 237 (39.1%) of the women mentioned that their partners accompanied them during antenatal visits and delivery respectively. Most of their spouses, 622 (99.2%) participate in childcare, 574 (91.5%) support exclusive breastfeeding, 618 (98.6%) encourage child immunisation, 314 (50.4%) take their child to school and 358 (57.6%) take their child to hospital when ill. Predictors of male involvement in maternal health were family type and monthly income, while those for involvement in child health care were monthly income and occupation of partners respectively.

**Conclusion:** Male involvement in maternal and child health care was good in the study area. Socioeconomic factors like occupation and monthly income were mainly the predictors of male involvement in maternal and child health activities. Community mobilisation and health education on the benefits of male involvement in reproductive health activities of mothers and children using social media including health talks by health caregivers could help to improve the participation of males in maternal and child healthcare activities.

# Keywords: Male involvement, Maternal and Child Health, Urban Community, Benin City, Nigeria



# Availability of Resources for Maternal and Newborn Delivery Care Practices in Private Health Facilities in Benin City, Nigeria

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# ABSTRACT

**Background:** The utilisation of essential delivery care services provided by skilled birth attendants can potentially prevent most maternal and neonatal mortality cases. In Edo State, Nigeria, more deliveries occur in private health facilities. This study ascertained the availability of resources for maternal and newborn delivery care practices in private health facilities in Benin City, Nigeria.

**Methods:** A descriptive cross-sectional study was done among 82 private health facilities selected through a multi-stage sampling method in Benin City, Edo State, Nigeria. Ethical clearance for this study was obtained from the "Health Research and Ethics Committee Ministry of Health, Edo State" with reference number: Ha.737/5/T<sup>1</sup>/001. Data were collected by three final-year medical students at the University of Benin using a structured, interviewer-administered observational checklist adapted from the National Primary Health Care Development Agency's Midwives Service Scheme Baseline Survey Tool 2010. Data were analysed using the IBM SPSS version 26 software. The skilled birth attendants were given health education on essential delivery care and appropriate referral after data collection.

**Results:** Skilled birth attendants were available in many of the health facilities, 74(90.2%) had doctors, 77(93.9%) had nurses and 71(86.6%) had midwives. The majority, 47 (57.3%) had  $\geq$  4 maternity beds, 75 (91.5%) had  $\leq$  3 delivery beds, and 58 (70.7%) had rooms with both auditory and visual privacy. More than half, 56 (68.3%) administer oxytocin injection, 49 (59.8%) use partographs, and 74 (90.2%) practise thermal protection of neonates. Drugs and consumables needed for maternal and newborn care were available in most of the health facilities such as ergometrine 47 (57.3%), oxytocin 64 (78.0%), intravenous fluids 63(76.8%), gloves 72 (87.8%) and all had cotton wool, syringes and disinfectants.

**Conclusion:** The private health facilities in Benin City, Nigeria, have staff who are adequately skilled in essential delivery care services. The facilities are adequately supplied with drugs and equipment for delivery care. However, more skilled birth attendants are required. A framework for regular inspections, skilled birth attendants' employment and training including procurement plans to ensure sustained availability of equipment for regular essential delivery care services at the facilities should be implemented by the government to reduce the burden of maternal and newborn morbidity and mortality.

# Keywords: Maternal and Newborn Health, Essential Delivery Care Services, Quality of Care, Skilled Birth Attendants, Private Health Care Facilities, Benin City



# Prevalence and Pattern of Suicidal Ideation and Behaviour Among Patients with Chronic Heart Failure and Chronic Kidney Disease in Nigeria

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# ABSTRACT

**Background:** Suicide which means deliberate taking of one's own life is a significant health issue, on the increase and deserves attention. Rates of suicide vary worldwide, a prevalence of 15-20% has been found in depressed patients and within-country prevalence rates of 3.2%, 1.0% and 0.7% for lifetime prevalence of ideation, plan and attempt respectively in Nigeria. Ill-health, poses a serious mental health challenge and can easily tilt patients to depression and suicide. Several studies have found an increase in the likelihood of suicidal ideation and attempts in patients who have central nervous system (CNS) dysfunction as well as patients with general medical disorders. Some studies have reported an increase in suicide among patients with chronic illness are not frequently assessed for depression and suicide. This study therefore aimed to determine the prevalence and pattern of suicidal ideation and behaviour among patients with chronic heart failure and chronic kidney disease in Nigeria.

**Methodology:** A cross-sectional study among 72 Cardiology and 54 Nephrology out-patient clinics of the University of Ilorin Teaching Hospital, Ilorin, Kwara State, in Nigeria was conducted. All eligible patients who attended the clinics were recruited consecutively. A disease-specific, structured questionnaire and Scale for Suicidal Ideation and suicide item of Beck's Depressive Inventory (BDI) were adapted and administered to all consenting patients. Both descriptive and inferential analyses were done using IBM, SPSS version 26, reporting the prevalence and pattern of suicide. The level of significance was set at a p-value of <0.05 at a 95% confidence interval. Ethical approval was obtained from the UITH Ethical Review Committee.

**Results:** Almost half of respondents from both groups (45.8%, CHF: 48.1%, CKD) were between 45-64 years. More than half were males CHF (51.4%) and CKD (66.7%) while higher proportions were married CHF (72.2%) and CKD (74.1%). More than one-third of CHF (36.1%) and CKD (46.3%) had more than secondary education with 27.8% (CHD) and 44.4% (CKD) earning between #30,000 and #100,000 monthly. The Becks suicidal index (BSI) reported 28.4% CHF and 3.7% CKD medium risk to high risk. The Becks Depressive Index (BDI) showed a mild mood disturbance in CHD (62.5%) and CKD (46.3%), and moderate to severe depression in CHF (15.3%) and CKD (3.7%) while those with borderline depression were (22.2%) and (50.0%) which was statistically significant (p-value 0.002). Age group, marital status, educational level and type of employment were factors significantly associated with suicide among CHD and CKD patients, however, only the marital status of CKD was seen to have a significant association with depression (using BDI)

**Conclusion:** This study establishes moderate suicidal ideation, plan and attempt among CHD and CKD patients with CHD having higher prevalences than CKD. The findings show that the prevalence of depression and suicide among patients with CHD and CKD is higher than in the general population. It is recommended that patients with chronic illness should undergo routine suicidal and depression screening in Nigerian hospitals for an early diagnosis and prompt management.

Keywords: Suicidal Ideation, Chronic kidney disease, Chronic heart failure





# Treatment Outcomes for HIV Patients on Three HAART Regimens in South East Nigeria: A Comparative Study

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#### ABSTRACT

**Background:** Human Immunodeficiency Virus (HIV) infection is responsible for a major public health problem. Highly Active Antiretroviral Therapy (HAART) is key to its management. This study compared the treatment outcomes for three HAART regimens - TLD, TLE and TL/LPV/r.

**Methods:** A total of 330 patients (110 per group) were studied. Data were analysed and compared between groups. A 5-parameter scoring system was used to compare the performance of the regimens.

**Results: The m**ean age was 44.7 (±10.7) years. Participants with normal BMI were 41.8%, overweight 33.3%, obese 20.9% and underweight 3.9%. Normal haemoglobin level 58.8%. Mean baseline CD4 count 389.9 ± 293.7. Adherence to TLD 90.0%, TLE 89.1% and TL/LPVr 62.7%. TLD group showed the most clinical improvement having the most patients in stage 1 after one year, 108 (99.1%). Viral suppression at 6 months for TLD 86.4%, TLE 86.4%, TL/LPVr 50.0% and at 12 months, TLD 90.0%, TLE 91.8%, TL/LPVr 88.2%, (p <0.001). Factors associated with WHO clinical stage 1 at 6 months were age  $\geq$ 35 years for TLD and female sex for TLE, and with viral suppression at 6 months were good adherence for TLD and TL/LPVr and female sex for TLE. Good adherence was associated with viral suppression at 6 months and 1 year. Predictor of WHO stage 1 at 6 months was female sex, OR 0.483 (95% CI 0.238 – 0.980). Predictors of viral suppression at 6 months were good adherence, odds ratio OR 6.911 (95% CI 3.768 – 12.676) and being currently married, OR 1.826 (95% CI 1.036 – 3.217).

**Conclusion:** TLD performed best with a score of 14, TLE 13, TL/LPVr 5, out of a maximum score of 15.

**Recommendations:** TLD should be considered for all patients, except for any contraindication. Factors associated with non-compliance with TLD can be studied.

Keywords: HIV, HAART, Treatment, Outcomes, Dolutegravir





# Knowledge, Utilization and Satisfaction with The Delta State Contributory Health Scheme Among Staff of Delta State University Teaching Hospital, Oghara

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# ABSTRACT

**Background:** The Delta State Contributory Health Commission is a Healthcare Financing organization established by the Delta State Government to ensure access to quality healthcare services for all residents of Delta State irrespective of their socioeconomic status. It aims to achieve the United Nations' Sustainable Development Goal 3 in 2030. Delta State contributory health scheme, despite being an evidence-based program with policies that have attempted to improve on the shortcomings of other insurance schemes in the country still has less than 25% participation from the formal and informal health plans combined which means the government still pays completely for most of the users. There is inadequate knowledge, awareness, and capacity regarding an insurance-based health system in Nigeria's geographical location. Hence, the knowledge, utilisation and satisfaction with the scheme by DELSUTH staff were assessed.

**Method:** It was a descriptive cross-sectional study among 322 respondents using a researcheradministered questionnaire. Data from the study was analysed using the Statistical Package for Social Sciences (SPSS, v. 25). Ethical approval was obtained from DELSUTH.

**Result:** Most of the respondents were females (51%), married (82%), with 42% within the modal age group of 41-50 and 87.9% had a tertiary level of education. Fifty-one percent had good knowledge, while 63.2% had negative perception and 71.7% had good utilisation. However, 56.1% were unsatisfied with the scheme. Age (P=0.01), Marital status (P=0.001) and occupation (P=0.001) are associated with knowledge. Sex (P=0.010) and occupation (P=0.001) are associated with utilisation, while, age(P=0.001), sex(P=0.002), level of education(P=0.004) and occupation(P=0.001) are associated with satisfaction of the scheme.

**Conclusion:** Most study participants had good knowledge of the scheme. However, the utilisation was poor and majorities were unsatisfied with the scheme. An awareness program on the importance of DSCHS should be organised to ensure proper utilisation of the scheme. Above all, healthcare workers should be encouraged to show empathy with patients while discharging their duties to encourage the use of the scheme.

Keywords: DSCHS, health services, health workers, knowledge, satisfaction, utilisation





# Estimating Health Care Cost and Effects Among Urban Households in Rivers State Nigeria

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### ABSTRACT

**Background:** Most health systems are confronted with high demand but have limited budgets with which to provide necessary services. The cost of obtaining healthcare continues to be a major challenge in low- and middle-income countries due to low health insurance coverage. This study aimed to estimate the cost of healthcare and its effects among urban residents in Rivers State, Nigeria

**Methods**: This community-based descriptive cross-sectional study was conducted among 624 respondents residing in Urban settlements in Rivers State who were recruited using a multi-stage sampling technique. Data was obtained using a semi-structured interviewer-administered questionnaire. Data was analysed using IBM Statistical Product and Service Solution version 25 and Atlas TI version 8, mean, median and standard deviation was done for descriptive statistics and Chi-square, binary logistics regression for inferential statistics, Thematic analysis was used to analyse the FGD

**Results:** The respondents in the Urban region of Rivers State Nigeria spent an average of \$90.7 on healthcare,16.3% experienced catastrophic health expenditure with 12.7% living below the poverty line following healthcare expenditure in the past year. The residents experience several consequences of healthcare costs ranging from sacrificing money meant for other needs to pay for healthcare, selling assets, having their wards drop out of school, borrowing and death of loved ones.

**Conclusion:** The cost of obtaining healthcare among urban residents appears to be on the high side, due to the various direct medical and non-medical costs that accompany the process of accessing healthcare. A community-based insurance scheme will alleviate the suffering due to the high cost of healthcare among residents in urban communities in Rivers State, Nigeria.

#### Keywords: Healthcare Cost, Consequences, Urban areas, Rivers State





# Patient Satisfaction to Call Bells in University of Benin Teaching Hospital, Benin City, Edo State

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# ABSTRACT

**Background:** The efficient execution of therapeutic interventions and prompt attention to patient concerns, are significantly linked to patients' satisfaction with care and overall quality of care. Patients' use of call bells and hospital staff's responsiveness to them are two interconnected concepts that may have an impact on patients' safety and satisfaction. Patients often have a variety of needs including toileting assistance, intravenous medication problems, and pain relief amongst others that demand the attention of healthcare staff. The inability to ask for and receive assistance by using a call bell may result in hospital-acquired harm and studies have found that more calls for assistance were related to less fall-related patient injuries per 1000 patient days with longer average response time to call bells having an association with poor patient satisfaction. Results of patient satisfaction surveys provide invaluable feedback to health managers about patients' perception of the quality of care offered to them. Hence the need to assess patients' perception of and satisfaction with the call bell system in-patient wards in the University of Benin Teaching Hospital (UBTH), Benin City, Edo State.

**Methods:** A descriptive cross-sectional study design was utilised involving 44 patients receiving care across eight wards where a call bell system had been recently installed at the University of Benin Teaching Hospital. Participants included all patients in wards with available and functional call bells who consented to be part of the study. Very ill patients and patient relatives were excluded. Data was collected using a questionnaire that sought information on the use of the call bell; common time of use, major reason for use, frequency of use, response of caregivers to call bell queries and overall satisfaction with the call bell. IBM SPSS version 24.0 statistical software was used for analysis with statistical significance set at p<0.050.

**Results:** Almost two-thirds, 63.6% (n=28) of respondents were female while five (62.5%) of eight wards with call bells were female wards. More than half, 23 (52.3%) of respondents rarely used the call bells with 6 (13.6%) of respondents regularly using the call bells. Over three-quarters, 78.4% of respondents used the call bells at night and the most common reason for using the bell was to indicate a pressing need for assistance to urinate or defecate 19 (41.9%). More than half, (54.6% of respondents reported a response time of more than 3 minutes while 2 (4.6%) never got a response; 5 (79.5%) reported having their queries resolved in 5 minutes or less of using the call bells. Overall, the majority, 76.2% of patients were either satisfied or very satisfied with the response of staff to the call bell.

**Conclusion: The m**ajority of patients were satisfied with the response of staff to the call bell. Technology when used appropriately has the potential to improve patient satisfaction and ultimately improve patient outcomes. Training and retraining of healthcare workers will be imperative for improving response time to improve the quality of care and patient recovery rates.

Keywords: Patient Satisfaction, Call bell system, Response time, University of Benin Teaching Hospital, Benin City





# Waiting Time and Patient Satisfaction in Out-Patient Clinics in a Tertiary Health Institution in Southern Nigeria

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# ABSTRACT

**Background:** Patient waiting time is the time that elapses between a patient's arrival at the outpatient department and his/her entry into the consulting room and it is a critical metric for evaluating individual patient experience in any healthcare setting. Longer waiting times are a significant cause of dissatisfaction with care in any healthcare setting. Long wait times can exacerbate poor clinic experiences, missed or postponed appointments, treatment delays, and/or suboptimal adherence to treatment, and ultimately have major effects on the effectiveness of health care systems. An assessment of patient waiting times can furnish critical stakeholders with data for informed decision-making and service optimization as well as identify strategies for improvement. The survey was carried out to assess patient waiting time and their satisfaction with the waiting time at the Obstetrics and Gynaecology and Medical Outpatient clinics of the University of Benin Teaching Hospital.

**Methods:** A descriptive cross-sectional study design was utilised involving 218 patients awaiting care across two outpatient clinics at the University of Benin Teaching Hospital, Benin City, Edo State. The study population included patients who presented in the Obstetrics & Gynaecology and Medical Outpatient clinics who consented to be part of the study. Data was collected using a modified patient satisfaction questionnaire, while client waiting times were computed by extracting waiting time for outpatients in the clinics in April 2022 via the Rapid Medic Electronic Medical Records. Waiting time was taken as the difference between time logged in at registration in the Records office of the clinic and the doctor's consultation. IBM SPSS version 25.0 statistical software was used for analysis with statistical significance set at p<0.050 and 95% confidence interval. The data was presented in prose, tables and figures.

**Results:** The median waiting time from the front registration desk to the doctor's consultation was 1 hour 30 minutes (Range: 4 minutes to 6 hours 50 minutes) and from the nurses' station to the doctor's consultation was 1 hour 24 minutes (Range: 3 minutes to 5 hours 33 minutes). About three-quarters, 74.7% of patients were either satisfied or very satisfied while less than one-tenth, 8.4% reported being dissatisfied or very dissatisfied with the care received at the O/G clinic. Conversely, two-thirds, 66.6% of patients reported being dissatisfied or very dissatisfied or very dissatisfied with the waiting time at the O/G clinic. More than one-third, 37.6% reported being dissatisfied or very satisfied or very satisfied with the care received at the clinic. Long waiting times, poor attitude of health care workers towards patients, poor attendance from health care workers and low HCW to patient ratios were the reasons reported for the low satisfaction.

**Conclusion:** Average waiting time was over one hour with patient satisfaction with waiting time being low, however, the majority of patients were satisfied with the medical care received. There is a need to bridge these factors influencing patient satisfaction with innovative interventions such as schedule booking systems with effective monitoring and evaluation.

# Keywords: Waiting time, Satisfaction, Client, Patient, University of Benin Teaching Hospital, Benin City





# Seasonal Malaria Chemoprevention as a Sustainable Platform: The Journey So Far

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# Corresponding author: Olusola Oresanya; Email: <u>o.oresanya@malariaconsortium.org</u> ABSTRACT

**Background:** In 2012, WHO policy recommended Seasonal Malaria Chemoprevention (SMC) as a malaria preventive strategy for children under 5 years across Sahel countries. This recommendation was revised in 2022 to provide greater flexibility in the adaptation of malaria strategies based on specific local context and epidemiology, not just on geographical restrictions. This paper aims to showcase the Malaria Consortium's contribution to the successful implementation of SMC and the versatility of SMC as a sustainable integration platform for the delivery of critical interventions targeted at the reduction of under-5 mortality.

**Methodology:** SMC is a community-based intervention of intermittent administration of a combination of two antimalarials (Sulphadoxine-Pyrimethamine and Amodiaquine - SPAQ) to children aged 3 - 59 months during peak malaria seasons (i.e. administration of SPAQ monthly for 4-5 months during the rainy season) initially only to Sahel states and then an expansion to more states due to the revision of the policy recommendations. Furthermore, showing the adaptability of the SMC platform for other essential childhood interventions.

Results: Malaria Consortium (MC) provided technical and logistical support to National Malaria Programmes across Africa to implement high-quality SMC campaigns following her successful pilot study conducted in 7 LGAs across 3 Sahelian states in Nigeria (2013-14) and 160,000 children were reached. By 2014, 8 Sahelian Countries were implementing SMC and almost 2.5 million children were reached and by 2022, SMC was implemented in 19 countries (majorly, Sahelian countries of West & Central Africa), targeting around 49 million children. In addition, the Malaria Consortium supported Nigeria's SMC policy adoption in 2014 and the successful SMC implementation scale-up from 7LGAs in 3 states (2013-2014) to implementing in 7 of the 9 Sahel states (2014 - 2020) reaching 15 million children. Also, following NMEP stratification exercise expanding SMC intervention states from 9 to 21 states, the Malaria Consortium was part of the consortium reaching 28.9 million children (2023). Due to the high SMC coverage and acceptability, Malaria Consortium had successfully supported SMC integration with distribution of insecticide-treated nets campaign in Jigawa and Kano states and Lipidbased Nutrient Supplements (LNS) campaign in Niger State achieving 85% coverage. Furthermore, Malaria Consortium is currently implementing state-wide integration of Vitamin A Supplements (VAS) with SMC - the 3<sup>rd</sup> phase of an implementation research - which has recorded a significant VAS coverage boost (83%) as against the baseline coverage (1.2%) since the implementation research commenced in 2019. Also, MC is leveraging on SMC for the delivery of a preventive dose of Azithromycin to children aged 1-59 months to protect against 3 childhood killer diseases – malaria, pneumonia, and diarrhoea.

**Conclusion:** SMC has been demonstrated to be a versatile and sustainable community-based integration platform that can successfully deliver essential childhood interventions.

**Recommendation:** SMC should be sought as a viable and potential delivery strategy for RTS, S/ASO1E malaria vaccine.

Keywords: Seasonal Malaria Chemoprevention, Under-5 mortality, Community-based Interventions, Policy, Nigeria



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# Perennial Malaria Chemoprevention (PMC) Implementation Research: An Example of the Catalytic Project That Would Inform Policy Adoption and Possible Scale Up to Improve Access

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# ABSTRACT

**Background:** Nigeria has the highest burden of malaria in the world accounting for 27% and 31% of global malaria cases and mortality respectively with 80% of these burdens among children under 5 years. To accelerate malaria elimination goals, World Health Organization (WHO) recommended Perennial Malaria Chemoprevention (SP-PMC) – the administration of a full course of an effective antimalarial treatment (Sulphadoxine-Pyrimethamine) to children at risk (10 weeks - 24 months) at specific timepoints (using Expanded Programme of Immunization (EPI) schedule as a guide) - in areas with moderate-to-high malaria transmission in Africa. However, Nigeria had not adopted the SP-PMC policy despite evidence from three African Countries showing that SP-PMC delivered through the EPI provided overall protection against malaria in the 1<sup>st</sup> year of life with no impact on the efficacy of EPI vaccine and having the potential of preventing approximately 6 million cases of malaria and saving thousands of lives yearly in Africa. PMC Effect study is implementation research being conducted by the Malaria Consortium through funding from the Bill and Melinda Gates Foundation in collaboration with national (FMOH, NMEP, NPHCDA, NIMR) and international (London School of Hygiene & Tropical Medicine & Northwestern University) institutions. The objective of the study is to assess the operational feasibility and effectiveness of implementing SP-PMC via multiple touchpoints.

**Method:** PMC Effect study is currently being conducted in eight (8) local governments (80 wards) in Osun State. This study adopted a two-arm cluster-randomized controlled trial and nested case-control study design. The PMC intervention is designed to deliver a core regimen of six paediatric doses of SP-PMC to children 10 weeks to 15 months of age at EPI scheduled touchpoints, plus additional monthly doses at non-scheduled monthly intervals up to age 18 months. The dispensary units are public primary care health facilities in the intervention arm of the study. Coordination of implementation of the study within intervention and control arm wards takes place at the LGA level.

**Expected outcomes:** Data obtained will be analysed and used to provide evidence on the impact of SP-PMC on malaria burden, related clinical outcomes, and its operational feasibility. The evidence will be used to inform the final PMC strategy and drive policy formulation and its roll-out. This study will also be used to drive the uptake of EPI among children under 5 years. A final impact assessment will take place after 24 months of implementation in the state.

**Conclusion**: The findings of this study will inform Nigeria's health policymakers' decision-making on the adoption and scale-up of SP-PMC thereby reducing malaria-related mortality and morbidity among children under 5 years.

Keywords: Perennial Malaria Chemoprevention; Under-five children; Expanded Programme on Immunization; Feasibility and Effectiveness; Nigeria





# Uptake of Edo State Health Insurance Scheme by Civil Servants in Benin City, Nigeria

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#### ABSTRACT

**Background:** Financial constraints have always been a major limitation in the delivery and utilisation of quality health services. Universal health coverage (UHC) was introduced so that all people can have access to the essential health services they need without suffering financial hardship. Despite more than two decades of operation of the National Health Insurance Scheme and its decentralization to the states, coverage remains very low in Nigeria at less than 5% while Private Health Insurance (PHI) covers below 1% of the of the populace. To achieve UHC for its citizens and residents, the Edo State government established the Edo State Health Insurance Scheme (EDOHIS) in 2019 and made it compulsory for all state civil servants. There is a dearth of documented information on the uptake of EDOHIS among civil servants in the study area, therefore this study assessed the level of acceptance and uptake of EDOHIS and its determinants among civil servants in Benin City, Nigeria.

**Methods:** A cross-sectional study design was carried out among 519 Edo State civil servants selected from the 28 Ministries, Departments and Agencies (MDAs) using a two-stage cluster sampling technique. Data was collected using a pre-tested, structured self-administered questionnaire (online Google form) and analysed using IBM SPSS version 25. Ethical approval and informed consent were obtained before data collection. Univariate, bivariate and multivariate analyses were done. The level of statistical significance was set at p < 0.05.

**Results:** The mean age of the respondents was  $43.4\pm8.7$  years. The majority, 477 (91.9%) had enrolled in EDOHIS. Reasons given by non-enrolees were narrow policy options 20 (47.6%), do not fall ill often 19 (45.2%), religious reasons 4 (9.5%), no benefits 4 (9.5%) and already enrolled with NHIS 2 (4.8%). The majority 390 (81.8%) of the enrolees had used the scheme to access healthcare and 288 (73.8%) of them were satisfied with EDOHIS services. Reasons given by those who have not accessed care since enrolment were the inability of the scheme to cover all their health needs 36 (41.4%), allocated health facility is far 30 (34.5%), not being sick 27 (31.0%), and poor quality of allocated health facility 13 (14.9%). The determinants of enrolment were being female (AOR=0.386, 95% CI=0.187–0.799, p=0.010); Christian (AOR=3.443, 95% CI=1.167–10.158, p=0.025) and married (AOR = 4.100, 95% CI=2.022–8.315, p=0.001).

**Conclusion:** The study showed that there is a high level of uptake of the scheme among the respondents with the majority of the users being satisfied with the services received. The Edo Health Insurance Commission (EDOHIC) should continue to provide enlightenment campaigns to ensure reinforcement of uptake.

#### Keywords: Civil servants, Health Insurance, Uptake, Satisfaction, Edo State, Nigeria





# Perception and Use of Telemedicine During Covid-19 Pandemic by Residents in Benin City: Matters Arising

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# ABSTRACT

**Background**: To mitigate the transmission and effects of COVID-19, non-pharmacological interventions were initially implemented including social distancing. This limited healthcare access and health agencies worldwide have therefore begun exploring the possibilities that telemedicine provides in using technology to improve access to healthcare. Although telemedicine is not novel in Nigeria, its uptake is yet to gain traction due to challenges including limited access to technology, poor internet infrastructure, limited healthcare budgets, high infrastructure costs, cultural barriers, lack of awareness, fear of privacy and confidentiality breaches, and impersonation due to quackery, medico-legal issues and willingness to pay for telehealth services. This study was therefore conducted to assess the perception, use and factors influencing the adoption of telemedicine services among residents in Benin City, Edo state.

**Methodology:** A descriptive cross-sectional study design was utilised and a multi-stage sampling technique was used to select respondents. The study population comprised residents who were 18 years and above and who gave their consent to participate in the study. Data collection was done using a structured self-administered questionnaire and analysed using IBM SPSS software version 25.0. A p-value of <0.05 was considered statistically significant.

**Results**: The mean age of respondents was 26.9±7.1 years and the majority 289 (70%) had tertiary education. About two-thirds 192 (61.5%) of the respondents had good knowledge and 168 (53.8%) had a good attitude towards telemedicine respectively. Age (p = 0.038), sex (p = 0.045) and level of education (0.009) of respondents were found to be statistically associated with knowledge of telemedicine respectively. Religion (p = 0.009), ethnicity (p = 0.001) and level of education (p = 0.035) of respondents were found to be statistically associated with the perception of telemedicine respectively. Less than half 122 (39.1%) of the respondents had ever used any telemedicine medium. Phone call was the most used telemedicine medium by 57 (46.7%) followed by video calls at 52 (42.6%) and social media at 40 (32.8%) respectively. A majority 106 (86.9%) of the respondents used telemedicine because it reduced waiting time at the hospital. The major challenges encountered during online consultation include long waiting times 26 (25.7%), delayed responses 19 (18.8%) and network difficulties 18 (17.8%). Most 90 (73.8%) of the respondents affirmed that the duration of their telemedicine consultations was adequate. Most 97 (79.5%) reported that the doctor was thorough with his/her questions and 109 (89.3%) stated that their privacy was respected. The prevalent factor influencing the utilization of telemedicine was network challenges during online consultations in 81 (42.6%) of respondents. Level of education and income were statistically associated with the knowledge of telemedicine (p<0.005).

**Conclusion**: Most of the respondents had an overall good knowledge and positive attitude towards telemedicine. The practice of telemedicine was poor and influenced by factors such as cost, convenience and accessibility.

**Recommendation**: There is a need to improve awareness of telemedicine as well as improve supporting technologies for utilisation of telemedicine services and review local policies to encourage telecommunication companies to help improve access to telemedicine services.

ALTHY CUSAID MOMENTUM Inpiego Land Contactum C

#### Keywords: COVID-19, Benin City, Pandemic, eHealth, Telemedicine



# Prevalence of Reported Symptoms among Petrol Pump Attendants in Jos Metropolis

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# ABSTRACT

**Background:** Over the past decades, urbanisation globally has led to an increase in the number of people who use automobiles. The concomitant rise in demand for petroleum products has brought about an increase in the number of petrol stations constructed as well as pump attendants who man the pumps during the refuelling of vehicles. These petrol pump attendants are exposed regularly to petrol vapour containing hydrocarbons such as benzene. The presence of even small quantities of these hydrocarbons in the bloodstream has been reported to cause damage to various organs. Petrol may enter into the bloodstream by way of inhalation (especially in warmer climates), ingestion, or absorption from the skin. This study therefore was conducted to assess the prevalence of reported symptoms among petrol pump attendants in Jos Metropolis, Plateau State, Nigeria.

**Methods:** A descriptive cross-sectional study was conducted using quantitative methods. Total sampling was carried out to include all 114 fuelling stations in the Jos metropolis. Simple random sampling by balloting was done to select 2 participants at each fuelling station, giving a total of 228 participants. After obtaining consent, data was collected using a semi-structured interviewer-administered questionnaire and subsequently analysed using Statistical Product and Service Solution (SPSS) version 23.

**Results:** Overall, 56.6% of respondents reported symptoms. Respiratory symptoms were reported among 16% of respondents, 31% reported ocular symptoms, while 16.7% had dermal symptoms. Among the females, 12.3% had irregular periods, while 7.4% reported recent changes in their menstrual flow since commencing work at the fuelling station. There was a higher prevalence of symptoms among those who worked longer hours, those who had been employed for longer, and those who had not undergone pre-employment health checks. Statistically significant relationships were found between the presence of symptoms and health checks, alcohol use, cigarette use, as well as the number of years of work as a petrol pump attendant. A confidence level of 95% and a p-value of  $\leq 0.05$  were used.

**Conclusion:** This study assessed the prevalence of various symptoms experienced by petrol pump attendants at work. The findings indicate that more than half of the respondents had symptoms. This suggests that continuous hazardous exposure to petrol fumes could lead to adverse health events which could affect the productivity of these workers. Interventions should therefore be geared towards preventing hazardous exposure to these petrol fumes.

**Recommendation:** Employers should implement and enforce workplace policies that reflect their commitment to ensuring the safety and health of petrol pump attendants at work.

#### Keywords: Petrol Pump Attendant, Hazardous Exposure, Nigeria



# Understanding Disrespect and Abuse During Facility Based Childbirth: A Study of Knowledge and Attitudes among Women in Esan Central Local Government Area, Edo State, Nigeria

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# ABSTRACT

**Background:** The global concern over the violation of women's fundamental rights to dignified, respectful, and non-violent healthcare during pregnancy and childbirth underscores the need to explore the often overlooked aspects of women's knowledge and attitudes towards disrespect and abuse (D&A) during facility-based childbirth. This study assessed the knowledge of and attitude towards D&A among women who had facility-based childbirth in Esan Central Local Government Area, Edo State.

**Methods:** Employing a mixed-methods approach, a descriptive cross-sectional study was conducted among women who gave birth in a health facility within the preceding 18 months. Respondents were selected using a multi-stage sampling technique. Data collection involved interviewer-administered semi-structured questionnaires and a focus group discussion. Respondents' knowledge was assessed using 14 questions, with a score of >50% categorised as good knowledge. Attitude was assessed with 9 statements on a 5-point Likert scale with a score of  $\leq$ 60% categorised as acceptance of D&A. Quantitative data were analysed using SPSS version 21.0, while thematic analysis was utilised for qualitative data. Chi-square test and binary logistic regression were used to determine associations between sociodemographic characteristics and the outcome variables with a significance level set at p < 0.05.

**Results:** A total of 614 women with a mean age ( $\pm$ SD) of 30.0 ( $\pm$ 6.1) years participated in this study. Three hundred and fifty-five (57.8%) respondents had good knowledge of D&A and 304 (49.5%) of the respondents had an attitude that accepted D&A. Being ever married increased the likelihood of having good knowledge of D&A (AOR = 2.253, CI = 1.456 - 3.486, p<0.001), while increasing age (AOR = 0.958, CI = 0.921 - 0.996, p = 0.032), having formal education (AOR = 0.200, CI = 0.073 - 0.550, p = 0.002), and good knowledge of D&A (AOR = 0.104, CI = 0.067 - 0.161) decreased the likelihood of acceptance of D&A. Being employed (AOR = 4.011, CI = 1.448 - 11.110, p = 0.008) increased the likelihood of acceptance of D&A. Qualitative findings revealed the acceptance of coercive measures such as shouting or slapping when a mother is uncooperative during the second stage of labour to ensure compliance.

**Conclusion:** The study reveals the gaps in knowledge and attitudes regarding D&A among women in the studied area. Formal education and good knowledge of D&A reduced the acceptance of D&A during facility-based childbirth.

**Recommendation:** Continuous sensitization efforts on D&A alongside education of women on their rights during childbirth is imperative to ensuring respectful maternity care.

Keywords: Disrespect and Abuse, Facility-based Childbirth, Knowledge, Attitudes, Women's Rights

ALTHY CUSAID MOMENTUM Inpiego Land Contactum C





# Factors Influencing HIV Testing Uptake among Adolescents in Rivers State

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#### ABSTRACT

**Background:** The HIV prevalence rate in Rivers State is 3.8%, which is higher than the national prevalence of 1.4%. Adolescents' low acceptance of testing services, despite their availability, presents obstacles to successful preventative and treatment initiatives. This makes it a critical issue; HIV testing uptake plays a pivotal role in preventing the spread of HIV/AIDS. We considered it important to assess the factors that influence HIV testing uptake in these adolescents.

**Methods:** A cross-sectional study and a multi-staged sampling technique were used to survey 671 adolescents using an interviewer-administered questionnaire that was analysed using IBM SPSS version 27. The Chi-square ( $\chi$ 2) test was utilised to assess the association between the independent variables and HIV testing uptake. A multivariate logistic regression model was used to ascertain the size and direction of the effects of predictors adjusting for confounding. The details of the ethical approval are UPH/CEREMAD/REC/MM78/040.

**Results:** The median age of the respondents was 18 years, 356 (53.9%) were females, 56 (8.4%) had no formal education, 215 (32.0) had senior secondary education, and 338 (50.4%) resided in rural areas. Less than half of the adolescents 296 (43.8%) have ever been tested for HIV. Education, current attending school, and educational level of the father were associated with HIV testing uptake. Specifically, those with tertiary and secondary education were 0.25 and 0.30 times less likely to have had an HIV test done (aOR=0.25, 95% CI: 0.17-0.37, p=0.001), and (aOR=0.30, 95% CI: 0.14-0.63, p=0.001) compared to those with no formal education. It showed lower odds of HIV testing uptake among adolescents in school (aOR=0.29, 95% CI: 0.17-0.48, p=0.001) compared to those out of school. Furthermore, adolescents who are exposed to mass media often and occasionally were 3.02 times (aOR=3.02, 95% CI: 1.45-6.28, p=0.003), and 1.40 times (aOR = 1.40, 95% CI: 0.79-2.49, p=0.247), more likely to have HIV testing uptake compared to those who never.

**Conclusion:** The percentage of the respondents who have ever been tested for HIV is less than half. There is a need for governments and stakeholders to implement strategies that promote early and routine HIV testing and emphasise the importance of regular HIV testing as a preventive measure.

ALTHY CUSAID MOMENTUM Inpiego Land Contactum C

#### Keywords: HIV Testing Uptake, Factors influencing, Adolescents, Rivers State



### An Assessment of the Knowledge, Attitude and Practice of COVID-19 Preventive Measures among Residents of Oghara, Delta State

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#### ABSTRACT

**Background:** Since its appearance in 2019, the coronavirus has presented a considerable challenge to public health. It was first identified in December 2019 in Wuhan, China, and quickly spread globally, leading the World Health Organization (WHO) to declare it a pandemic in March 2020. Key features of COVID-19 include its high transmissibility, primarily through respiratory droplets from infected individuals, and its wide range of clinical manifestations. While many cases are mild or asymptomatic, some individuals experience severe respiratory illness, leading to hospitalisation and, in some cases, death. Low-income countries have poor knowledge, attitudes and poor practice of COVID-19 preventive measures therefore this study aims to evaluate the knowledge, attitudes, and practice of preventive measures against COVID-19 among Oghara community residents in Delta State, Nigeria.

**Methods:** It was a descriptive cross-sectional survey conducted among 304 permanent residents of Oghara selected through a multi-stage cluster sampling technique. Data was collected using a researcher-administered questionnaire and analysis was done using IBM SPSS version 26.0. Chi-square was used to determine if the association found was statistically significant and logistic regression was used to assess the strength of the association between the variables under study. Ethical clearance was obtained from the Health Research Ethics Committee of Delta State University Teaching Hospital.

**Results:** The mean age of respondents was 30.6 (±11.8) years. The majority of the respondents were female (54%), Christians (92.8%), traders (25.0%) and 56.6% had tertiary education. Out of 304 respondents, 74.3% had good knowledge while 25.7% had poor knowledge of COVID-19 preventive measures. A vast majority (94.4%) had a positive attitude towards COVID-19 preventive measures while 5.6% had a negative attitude. Those with good practice of COVID-19 preventive measures constituted 61.5%, while 38.5% exhibited poor practice. Age ( $X^2 = 11.41$ ; p = 0.044), education ( $X^2 = 19.71$ ; p <0.001), occupation ( $X^2 = 23.35$ , p = 0.001), knowledge of COVID-19 preventive measures ( $X^2 = 4.64$ , p = 0.031), attitude towards COVID-19 preventive measures ( $X^2 = 10.97$ , p = 0.001) were significantly associated with practice of COVID-19 preventive measures.

**Conclusion: The m**ajority of the study participants had good knowledge and a positive attitude toward COVID-19 preventive measures. Although most of the respondents had good practice of COVID-19 preventive measures there is still room for improvement.

**Recommendations:** Based on the study findings, a focused health education and community engagement programme designed to strengthen knowledge, attitude and practice of COVID-19 preventive measures is recommended to improve and sustain community response to the threat of COVID-19.

Keywords: Attitude, COVID-19 Preventive Measures, Knowledge, Practice





#### A Comparative Study on Prevalence and Patterns of Unintentional Home Injuries Among Urban and Rural Children Under Five in Plateau State, Nigeria

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#### ABSTRACT

Background: Worldwide, unintentional home injuries (UHI) in children pose a significant public health challenge. The highest prevalence occurs in the early years of life, affecting both rural and urban children. Low and middle-income countries face a higher burden, with childhood injuries causing over 5.8 million deaths annually and contributing to 11.2% of Disability-Adjusted Life Years (DALYs). This study aimed to assess the prevalence, types and patterns of UHI among under-fives in Plateau State, Nigeria.

**Methods**: A comparative cross-sectional study was conducted using quantitative methods. A systematic sampling technique selected 494 caregiver/child pairs in proportion to size from rural and urban communities. The study instruments included a structured interviewer-administered questionnaire and checklists collected via ODK toolkit. The questionnaire had sections on socio-demographics, the child's medical history, household characteristics and parental supervision attributes profile. Statistical Analysis using SPSS version 26 included descriptive statistics and chi-square ( $p \le 0.05$ ).

**Results**: The overall UHI prevalence among under-fives was 25.5%, with no significant difference between rural (27.1%) and urban (23.9%) areas (p=0.409). Falls were the commonest injury in both rural (58.2%) and urban (55.9%) areas, with no significant difference (p=0.388). The most common UHI based on place was out in the compound/garden 36 (53.7%) in the rural areas which was lower than 35 (59.3%) in the urban areas. UHI was lower inside the house [kitchen, bedroom, living, others, etc.] in 31 (46.3%) of the rural areas when compared to 24 (40.7%) in the urban respondents. UHI was more prevalent during the day, especially in the evening time in rural areas which is lower than 31 (34.8%) as compared to 23 (39.0%) in urban areas and least at night in those with UHI which was higher in rural respondents 3 (4.5%) than in 0 (0.0%) urban areas. The rural and urban respondents' patterns of UHI did not differ significantly based on place (p=0.352) and time (p=0.201).

Conclusion: Both areas showed high UHI prevalence with falls being the most common types of UHI emphasising the need for community initiatives.

**Recommendation**: Governments should implement targeted prevention strategies for falls and conduct community-based educational programs to raise more awareness about injury risks in both areas.

#### Keywords: Unintentional Home Injuries, Under-fives, Urban, Rural, Patterns





## Pattern and Predictors of Interpregnancy Interval among Mothers in Dobi Community of Gwagwalada, Abuja

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#### ABSTRACT

**Background:** Interpregnancy interval (IPI) refers to the time between the end of one pregnancy and the beginning of a subsequent one. A multitude of factors contribute to IPI. The woman can influence some of these factors, but not all of them. The study aims to investigate patterns and explore the factors related to the interpregnancy interval among women in Dobi, Gwagwalada, Abuja.

Methods: A mixed-method study was conducted in Dobi community in Gwagwalada between September and October 2021, involving mothers, fathers, and healthcare professionals. Questionnaires, FDGs and KII guides were used to collect data. For the quantitative study, a multistage sampling technique was used. In the first stage, the Dobi town was randomly selected from the three accessible settlements in Dobi ward. While at the second stage, a systematic sampling technique was used. A sampling fraction of <sup>1</sup>/<sub>2</sub> was derived from the calculated sample size of 381 and a total of 817 households. The first household was randomly selected and every second household with an eligible mother was interviewed using a pretested questionnaire. In a household with more than one eligible mother, only one was randomly selected and interviewed and where there was no eligible mother, the household was skipped and the immediate one studied. For the qualitative study, twelve mothers each from the short, optimum and long interpregnancy interval categories were purposively selected for the three Focus Group Discussions as well as twelve husbands each for three Focus Group Discussions, respectively. Then, five healthcare workers were also purposively selected from the health facilities in the community for Key Informant Interview. A male and female healthcare worker responsible for antenatal and family planning services in the public facility, and two males and one female healthcare worker from the three private facilities in the community that offer antenatal and family planning services were interviewed.

**Results:** Findings were a mean age of 33.66 ( $\pm$ 7.142) years and an age at marriage of 20.96 ( $\pm$ 3.445) years, with 92% of the mothers above the age of 18. About 50% of the mothers had IPI less than 24 months. The father's degree of education (p value=0.037) and perceived optimal IPI (AOR=0.176; CI: 0.043-0.720; p value=0.016\*) were the only independent predictors of short interpregnancy interval. Sociocultural and socioeconomic reasons were said to be largely responsible for the choice of IPI. The reasons for not using modern methods of contraception were primarily due to a lack of male involvement/refusal and side effects. Other factors mentioned by participants included physical inaccessibility, misinformation, and misconceptions about family planning methods.

**Conclusion:** The prevalence of short IPI was high and the major factor was related to family planning services such as lack of male involvement/refusal of usage of family planning services and the burden of contraception was solely borne by the woman, even for the native methods of contraception.

**Recommendation:** These include raising awareness about the importance of optimal IPI through the use of modern contraceptive methods and providing these methods at little/no cost by CBOs, NGOs, and the government, as well as improving male involvement through formal education systems, services that accommodate males, and a male-friendly service environment.

Keywords: Inter-pregnancy Interval, Modern Contraceptive Methods, Male Involvement, Awareness, Factors, Practice, Family Planning





#### How Prepared are our Facilities to Implement Respectful Maternity Care (RMC) Charter? Findings from Facility Assessment in North Central Nigeria

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#### ABSTRACT

**Background:** High-quality pregnancy and delivery care has been identified as one of the strategies to reduce the unacceptably high maternal and perinatal mortality and morbidity. RMC is an effective strategy for improving the quality of care experienced by women during facility-based childbirth. It preserves their rights to safe, dignified, consented, confidential and non-discriminatory care. Almost 99% of all births in high-income and upper-middle-income countries benefit from skilled birth attendance whereas only 68% and 78% in low-income and lower-middle-income countries respectively experience such. Some of the factors that discourage women from seeking facility-based childbirth that will afford them SBA include poor quality of care, disrespect, mistreatment and abuse, inadequate medical supplies and poor accountability of the health systems. This study conducted facility-based assessment of implementation of RMC in North-Central, Nigeria

**Methods:** This is part of a larger cross-sectional study conducted in FCT and Kwara State, North Central Nigeria. A total of eighteen health facilities (HFs) comprising 2 tertiary, 4 secondary, 4 private, and 8 primary health care centres offering basic and comprehensive emergency obstetrics care were selected through multi-stage sampling technique. A validated observational checklist was used to assess implementation of RMC during labour cases. Ethical approval was obtained from the National Health Research Ethics Committee with approval number NHREC/01/01/2007. Data was analysed using SPSS version 24.0. Chi Square and Fisher's Exact test were used to test for significance which was predetermined at a p-value of < 0.05 at a confidence interval of 95%.

**Results:** Out of 18 health facilities assessed, only 3 (16.7%) were observed to physically restrained women during labour and the difference observed is not statistically different between the HFs, 14 (77.8%) of the facilities did not allow women in labour to drink or eat. Use of analgesia was found in 7 (38.9%) HFs. Eleven (61.1%) of the HFs allowed women to have companions with them during labour, with more of the PHCs (62.5%) allowing companions. Only 10 (55.6%) facilities had consent forms available in the labour room. This difference observed was statistically significant, p =0.008<sup>F</sup> with more of the PHCs (87.5%) not having consent forms. Only 5 (27.8%) of all the HF had consent forms signed, and only one of them (20%) was signed by the woman in labour, the remaining 80% were signed by their spouses. In 4 (22.2%) out of the facilities, women in labour were not covered and only 3 were covered with hospital drapes the remaining were covered with personal clothing. Eleven (61.1%) HFs had a skilled birth attendant with the woman during delivery, however this difference observed is not statistically significant.

**Conclusion:** There is sub-optimal implementation of RMC observed among the different categories of health facilities with gaps in the delivery of respectful care for women opting for facility-based delivery. All components of the RMC charter must be fully implemented to ensure women in labour experience



improved quality of care to encourage better health facility utilisation in subsequent pregnancies and even among their peers.

#### Keywords: Health Facility Assessment, Respectful Maternity Care Charter, North-Central Nigeria





#### Prevalence of Female Genital Mutilation (FGM) Among Women in Aba, Abia State

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#### ABSTRACT

**Background:** Female genital mutilation (FGM) refers to all procedures involving partial or total removal of the female genital extalia, and/or injury to the female genital organs for non-medical reasons. It is a practice that violates the rights of girls and women. The fifth sustainable development goals (SDG) seek to abolish all harmful practices including FGM by the year 2030. Cases of FGM are seen in health facilities in Aba from time to time without appropriate documentation of its prevalence in the city. It was therefore necessary to assess the burden of the problem among the population by studying women of reproductive age who could have been victims and also presently care givers who are saddled with the care of their female children who are also potential victims of FGM. The aim of the study was to determine the prevalence of Female genital mutilation (FGM) among women in Aba, Abia State.

**Methods:** This was a descriptive, cross-sectional study carried out among women above 18 years in Aba, Abia State, selected using multi-stage sampling technique. Data was collected using a self-administered/interviewer-administered, pre-tested and semi-structured questionnaire and analysed with statistical package for social science (SPSS) software program version 20

**Results:** A total of 480 women participated in this study. Majority of the study participants (34.6%) were between 18-27 years of age, majority of respondents (89.0%) have heard about FGM, and most heard about it from family and friends (85.7%). Prevalence of FGM among the respondents was (47.9%). Among our respondents, 65.4% (170) reported that none of their daughters were circumcised. Most of the respondents; 67.7% (325) opined that FGM is practiced due to cultural belief. Statistically significant association was found between age (0.0001), level of education (0.0001), marital status (0.0001), and the prevalence of FGM.

**Conclusion:** The study found out that there was good knowledge of FGM among respondents, although FGM still remains a widely prevalent practice in Aba. Our study showed that there is a decline in the prevalence among the daughters of respondents. The practice was also found to be more prevalent in the communities within the slums of Aba. Health education of women and family members on this harmful practice across the State to bring about behavioural change is the key to achieving the SDG Goal 5, Target 5.3 focused on eliminating all harmful practices, such as child, early and forced marriage and female genital mutilation.

#### Key Words: Female, Genital, Mutilation, Circumcision, Women, Aba





# Knowledge and Uptake of the Covid-19 Vaccine Amongst Students of Tertiary Institutions in Oghara, Delta State

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#### ABSTRACT

**Background:** Coronavirus disease, caused by the beta coronavirus, is a global health emergency that began in Wuhan City, China, in 2019. As of January 2022, there have been 364,191,494 confirmed cases and 5,631,457 deaths worldwide. In Nigeria, 253,023 cases have been confirmed and 3,135 deaths have been recorded in the 36 states and the Federal Capital Territory with Delta state recording 2617 cases of COVID-19 as of February 2022. The COVID-19 vaccine was introduced in March 2021, and the FDA has approved several vaccines. However, vaccine hesitancy is a top global health risk with contributing factors such as misinformation, rapid rollout, safety concerns, potential adverse effects, and conspiracy theories. Although several studies have attempted to investigate the uptake of the vaccine in Nigeria, evidence is scarce among tertiary students. Higher education settings and communal living could be a factor in the rapid spread of COVID-19. Students are also thought to be change agents and have a greater impact on society. Therefore, assessing the knowledge and uptake of the COVID-19 vaccine amongst these students would help inform decisions towards reducing the spread of the disease. The main objective of this study was to assess the knowledge and uptake of the COVID-19 vaccine among students of tertiary institutions in Oghara.

**Methods:** A descriptive cross-sectional study design was employed to collect relevant data from 354 participants drawn from three tertiary institutions in Oghara using a multistage sampling technique. Data collection was done using a pre-tested semi-structured questionnaire as the primary research tool consisting of questions to gather the required information from respondents. The questionnaire was validated to ensure face validity and content validity by experts who reviewed the contents of the instrument. The data was analysed using IBM-SPSS version 26. Chi-square was used to test for significant relationships between groups with a level of significance set at p<0.05. Ethical approval was obtained from DELSUTH.

**Results:** The majority of the respondents were between the ages of 21-25(58.1%) with females constituting 55%. Seventy-one percent of the respondents had good knowledge of the COVID-19 vaccine. Only 20.2% had been vaccinated while 79.8% were unvaccinated. Among those unvaccinated, 58.8% were not willing to be vaccinated and the majority (28.2%) stated side effects of the vaccine as a reason for hesitancy. Good knowledge about the COVID-19 vaccine(P=0.048), having previous exposure to IEC on the COVID-19 vaccine(P=0.024) and having a perception of efficacy(P $\leq$ 0.001) were significantly associated with the uptake of the COVID-19 vaccine.

**Conclusion:** The majority of students of tertiary institutions in Oghara have good knowledge of the COVID-19 vaccine however uptake was poor. More effort should be invested in providing accurate information about vaccines while mitigating misinformation.

#### Keywords: COVID-19, Vaccination, Vaccine uptake, Health Information



# The Pattern and Distribution of Cancers Among Patients Accessing Tertiary Health Institutions in Plateau State

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#### ABSTRACT

**Background:** Cancer is a Non-Communicable Disease (NCD) and one of the leading causes of death globally. However, it has been observed that Low- and Middle-Income Countries (LMIC) are gradually recording a disproportionately higher incidence of cancers, considering the higher-income countries have a higher burden of the disease. In addition, there is limited quality cancer data from Nigeria contributing to the Global Cancer Registry. This is important for effective public health intervention. This study therefore aimed to identify the pattern and distribution of cancers among patients accessing tertiary health institutions in Plateau State.

**Methods:** This was a cross-sectional study using secondary data (1997-2022) from public and private tertiary health facilities in Plateau State from the cancer registry in the Histopathology and Forensic Medicine department of the Jos University Teaching Hospital. The survey collected data on a sample of individuals from 0 to 99 years old in Plateau State. The data set was analysed using the Statistical Product and Service Solutions (SPSS) version 23.0.

**Results:** A total of 7190 entries were made. The age range was 0-99 years with an average age of  $48.2\pm17.9$  years. Within the 25 years, the period between 2015 and 2019 had the most entries. The age group with the highest incidence of cancers was 35-64 years (57.9%). Cancer incidence was highest among females (58%), married individuals (87.1%), non-indigenous tribes (40.5%), and business owners (22.6%). The genito-urinary system had the highest number of cancer cases (32.2%), while the most common type (morphology) of cancer was carcinomas (79.8%). Tumour differentiation showed that 80% were unknown. The surgical unit recorded the most cancers (45.8%) and the commonest primary management modality was surgery (77.2%).

**Conclusion and recommendation:** The incidence cases and pattern of cancers in Plateau State are comparable to national and global findings. The increasing number of cases in the tertiary hospitals in Plateau State reflects the need for more accessible cancer care facilities for patients in the rural areas and the neighbouring states. Cancer control programmes should therefore be domesticated in Plateau state.

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#### Keywords: Cancer, Pattern, Distribution, Tertiary Health Institution, Plateau State





### Acceptability, Willingness, and Use of Pre-Exposure Prophylaxis (PREP) to Prevent HIV Transmission Among Female Sex Workers in Lagos State

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#### ABSTRACT

**Background:** Female sex workers (FSWs) face a disproportionate risk of HIV infection, emphasising the importance of effective prevention strategies. Pre-exposure prophylaxis (PrEP) has emerged as a highly effective preventive measure, holding the potential to significantly reduce HIV incidence among this key population. This study aimed to assess the willingness to use and the current utilisation of PrEP among FSWs in Lagos. To determine the willingness to use Pre-exposure Prophylaxis (PrEP) among female sex workers (FSWs) in Lagos and to assess the proportion of female sex workers (FSWs) currently using Pre-exposure Prophylaxis (PrEP) in Lagos.

**Methodology:** This was a descriptive cross-sectional study involving 310 FSWs in Lagos and was conducted using a multi-stage sampling technique and a venue-day-time approach for participant recruitment. Employing a mixed methods approach, validated questionnaires were administered through interviews, and in-depth interviews were conducted for more nuanced data.

**Results:** The mean age of respondents was 26.8 years, with a range of 19 to 40 years. The overall HIV knowledge was high, with only 0.6% of respondents unaware that the HIV virus causes AIDS. Approximately 54% demonstrated good knowledge of PrEP, and 68% expressed high acceptability, with 80% indicating a willingness to use PrEP. However, only 25.5% had previously used PrEP. Bivariate analysis revealed a statistically significant association between the average number of clients and knowledge of PrEP (P value 0.001). Factors such as religion, ethnicity, educational qualification, age at which sex work commenced, and the average number of clients per month showed statistically significant associations with the acceptability of PrEP (P values 0.014, 0.002, 0.001, 0.003, and 0.007, respectively). Moreover, religion and ethnicity were found to be significantly associated with the willingness to use PrEP (P values 0.005 and 0.008). In-depth interviews uncovered a preference for injectables and a willingness to visit health centers for PrEP services.

**Conclusion:** The study underscores a positive attitude toward PrEP among female sex workers in Lagos. However, the low actual uptake indicates the necessity for targeted interventions to enhance utilisation. Efforts should focus on addressing specific factors influencing knowledge, acceptability, and willingness to use PrEP among this vulnerable population.

Keywords: Female Sex Workers, HIV Prevention, Pre-Exposure Prophylaxis (Prep), HIV Knowledge, Lagos, Nigeria



## Prevalence and Pattern of Obstructive Sleep Apnea Among Undergraduate Students at Higher Institutions in Kwara State, Nigeria

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#### ABSTRACT

**Background:** Sleep is a very important physiologic process which is necessary to maintain a state of well-being. Obstructive Sleep Apnea (OSA) is prevalent among all age groups with variations in presentation and severity. It is often underreported, especially among young people in the LMICs. This study assessed the prevalence and pattern of OSA among undergraduate students in llorin using both Epworth and Stop Bang tools.

**Methods:** A campus-based study was conducted among undergraduate students in Kwara State. A total of 1,048 eligible students were selected from Kwara State College of Education, Polytechnic and University of Ilorin using a multistage sampling technique. Epworth Sleepiness Scale (ESS) and Stop Bang Questionnaire (SBQ) were adapted, validated, and administered. Both descriptive and inferential analyses were conducted, reporting the prevalence and factors associated with OSA. The level of significance was set at a p-value of <0.05 at a 95% confidence interval. Ethical approval was obtained.

**Results:** The mean age of respondents was  $21\pm 2.69$ . More than half 60.5% of the respondents were females, 92.4% were Yorubas and only 1.9% were married. The mean hours of sleep per day was 7.7 hours. A quarter (34.4%) take stimulants (caffeine) to keep awake. Abnormal sleepiness was reported in 14.41% while 85.59% had normal sleepiness using ESS. With the SBQ, 95.2% had a low risk while 4.8% had a moderate to high risk of OSA. Sleep disorder was significantly more in males. Religion, increasing levels of study, presence of chronic disease, smoking and caffeine were significantly associated with average and abnormal sleepiness using ESS, whereas female gender, religion, presence of chronic disease, smoking, use of sedatives and caffeine were significantly associated with OSA using SBQ.

**Conclusion:** The sleep disorder tools show a moderate prevalence of sleep disorder and some important associated risks of OSA among undergraduate students. Increasing age and level, male gender and religion were seen to be independent predictors of sleep disorders among the students. There is a tendency to become a big burden with an increase in age, therefore health promotion and prevention interventions are recommended early to students to create awareness of OSA risks, preventing OSA at an older age.

#### Keywords: Sleep apnea, Undergraduate students, Epworth Sleepiness Scale, Stop Bang tool



#### Towards Universal Health Coverage: Examining Level of Multisectoral Contributions for Ensuring Primary Health Care Services at the Community Level in Nigeria

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#### ABSTRACT

**Background**: Multisectoral plans and actions are one of the component strategies of primary health care, for achieving health and well-being to specifically address the social determinants of health at the community level. Most communities in Nigeria have well-organised traditional and other formal structures for the provision of multisectoral services. Nigeria has multisectoral aspirations for health and captures this in Health in All Policies (HiAP) policy directions in various high-level policy documents in the country. However, there is a paucity of information on the level of multisectoral involvement to promote health at the community level. This paper provides new knowledge on what multisectoral activities for health are undertaken at the community level and what can be done to strengthen them, towards achieving universal health coverage in Nigeria.

**Methods:** Conceptually, the study was guided by the Expanded Health Systems framework (EHSF) which recognises potential combinations of collaborations between the non-health sector and other societal partnerships (CSOs, NGOs, community groups and informal health providers), to directly contribute to community health or indirectly through one or more social determinants of health. A qualitative cross-sectional case study of three contextually different states in northern (Kano) and southern (Akwa Ibom and Anambra) states was carried out to explore previous and current levels of multisectoral collaboration (MSC) activities for health at the community level. Data was collected through 115 in-depth interviews and focus group discussions with policymakers (health and non-health sectors), formal and informal health providers, community leaders, community groups (service users) and relevant documents reviewed to aid data triangulation. Thematic data analysis was undertaken, guided by the EHSF.

**Results:** Several community and household-level activities were identified as having multisectoral actions on health. The majority of activities were primarily initiated by the health sector and/or their partners, whilst others were initiated by non-health sectors (Education, Environment, Agriculture, Security, Women's Affairs, Social Welfare, Nutrition, Water, Sanitation and Hygiene-WASH), or communities. Activities contributed to the health security of communities, directly or indirectly, through improving one or several social determinants of health (SDH). The majority of activities that involved seeming collaborative engagements with non-health sectors were not backed by any explicit non-health sectoral policies or guidelines, rather, were organically initiated and developed to support health security. The support of community leaders and groups facilitated the initiation and sustenance of multisectoral activities whilst inadequate funding was the major constraint.

**Conclusion and Recommendation:** Well-resourced and planned multisectoral collaboration (MSC) for health at the community level is important for harnessing resources both within and outside the health sector that will be used to enhance the health security of communities. Such MSC is potentially a powerful tool for strengthening primary health care, towards UHC and achieving SDG3. This needs to be done through explicitly intentional policy reforms and their implementation, through identifying, promoting, and co-financing MSC actions.

### Keywords: Multisectoral Collaboration, Community, Health Security, Social Determinants of Health

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### Determinants of Complete Vaccination Among Children 12 – 23 Months Old in North Central Nigeria: A Review of a National Survey

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#### ABSTRACT

**Background:** Childhood vaccination is a critical public health intervention, especially for children under five. It has significantly reduced morbidity and mortality from vaccine-preventable diseases (VPDs) worldwide. The World Health Organization (WHO) recommends a comprehensive childhood immunisation schedule to protect children against a range of infectious diseases. However, incomplete vaccination remains a challenge, particularly in sub-Saharan Africa, including Nigeria. This incomplete coverage contributes to a higher burden of VPDs. Understanding the factors influencing complete vaccination rates in North Central Nigeria is crucial to develop targeted interventions that address the unique challenges in this region and improve national vaccination coverage. This study therefore aimed to assess the determinants of complete vaccination among children 12 - 23 months old in North Central Nigeria.

**Methodology:** Data for this study was obtained from the 2021 Nigeria Multiple Indicator Cluster Survey (MICS) database. Data on vaccination in children 12-23 months were extracted and vaccination completeness assessed as well as factors influencing vaccination completeness using frequencies, chi-square tests and logistic regression. Analysis was carried out using the Statistical Package and Services Solution (SPSS) Version 23.0 software. P-values  $\leq 0.05$  were considered statistically significant.

**Results:** One thousand, one hundred and forty-four children were included in the study of which 598 (52.3%) were males. Three hundred and eighty-three (33.5%) of the mothers had no formal education with 272 (23.8%) being in the poorest wealth index. Majority (70.9%) resided in the rural area. A total of 467 children (40.8%) had complete vaccination status with 77 (59.2%) having incomplete status or being unvaccinated. Children of mothers with higher education are almost four times likely to have complete vaccination compared to those whose mothers had no formal education (AOR: 3.9; 95% CI: 2.3-6.6). Similarly, children of the richest parents are three times more likely to have completed vaccination compared to those from the poorest parents (AOR: 3.0; 95% CI: 1.7-5.5).

**Conclusion:** This study highlights the disparity in complete vaccination rates among children aged 12-23 months in North Central Nigeria. Despite exceeding the national average, the complete vaccination rate falls short of the WHO's recommended coverage and highlights the ongoing challenge of incomplete vaccination in the region. This finding aligns with previous research indicating sub-optimal vaccination coverage in sub-Saharan Africa. Furthermore, the analysis revealed a significant association between maternal education as well as household wealth with complete vaccination. Children from wealthier households and those with mothers having higher education were more likely to be fully vaccinated. These disparities suggest a need for targeted interventions to address socioeconomic barriers to vaccination access. These findings underscore the importance of addressing social and economic factors alongside traditional vaccination campaigns.

**Recommendations:** The government and development partners should develop programs focused on educating mothers, particularly in low-literacy and low-income communities, about the importance of complete vaccination and addressing vaccine hesitancy. Also, the government as well as development partners should explore options for financial assistance to reduce vaccine-related costs for underprivileged families.

Keywords: Incomplete Vaccination, North Central Nigeria, Socioeconomic Disparities



#### Contraceptive Use and Factors Associated with Maternal Knowledge on Family Planning among Antenatal Clinic Attendees in a Primary Health Care Facility in Rivers State, Nigeria

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#### ABSTRACT

**Background:** Family planning is a cost-effective public health practice that safeguards women against high-risk pregnancies, unintended pregnancies, unsafe abortions, and sexually transmitted diseases, including HIV/AIDS. It lowers maternal mortality by employing a variety of contraceptive techniques. The study aimed to assess factors associated with knowledge and practice of modern contraception among mothers who attended antenatal clinics at the Model Primary Health Care Centre, Pott Johnson, Port Harcourt, Rivers State.

**Methods:** A descriptive cross-sectional study of 284 mothers who attended antenatal clinics at the Model Primary Health Care Centre was conducted between June and August 2022. Data was collected using semi-structured, interviewer-administered questionnaires, and IBM SPSS version 25 was used for data analysis.

**Results:** One hundred and seventy-eight (178, 62.7%) mothers were between the ages of 21 and 30 years, with a mean age of  $26.8 \pm 4.6$  years. 209 (73.6%) mothers agreed that family planning was beneficial. Thirty-seven (37, 13.0%) mothers had poor knowledge, 69 (24.3%) had fair knowledge, and 178 (62.7%) had good knowledge of family planning. The injectables (214, 49.1%) were the frequently used methods. Age, marital status, educational status, occupation, and antenatal clinic attendance were associated with the level of family planning knowledge. However, only marital status and antenatal clinic attendance were predictors of maternal knowledge of family planning.

**Conclusion:** The proportion of mothers with poor and fair knowledge of family planning is high. Taking injectables might be more convenient than other methods; hence, the higher preference.

**Recommendation**: The high proportion of mothers with poor and fair knowledge of contraception requires concerted efforts to improve the contents of health talks on family planning in the health facility, as well as the use of mass media and active community involvement in family planning education.

Keywords: Family Planning, Contraception, Knowledge, Practice





## Maternal Privacy and Companion of Choice During Labour: Perspectives of Healthcare Workers in North-Central Nigeria

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#### ABSTRACT

**Background:** In Nigeria, the pursuit of safeguarding maternal dignity and ensuring companionship during labour/childbirth faces a formidable challenge posed by inadequate facilities and personnel. Despite the clear benefits of labour companionship, which have been found to improve maternal and perinatal outcomes, little attention is paid to this, as many health facilities still don't honour labour/ delivery companionship. Health system conditions and constraints, including the lack of the resources needed to provide women with privacy, are hindrances to the provision of Respectful Maternity Care. This study explored the perspectives of healthcare workers (HCWs) in North Central Nigeria regarding maternal privacy and choice of companionship during labour.

**Methods:** A descriptive cross-sectional study. The multistage sampling technique was used to select 331 HCWs. The quantitative data was collected from the HCWs involved in care during labour and delivery utilising the KoboCollect App. The qualitative data was from 37 In-depth interviews among HCWs at 18 different health facilities in Federal Capital Territory (FCT) and Kwara State in North-central Nigeria. Analyses were done using SPSS version 25.0 (quantitative) and NVIVO (qualitative) statistical packages, and data was presented using tables and quotes.

**Results:** The Mean age of the respondents was  $40.4\pm 9.1$  years. The female respondents were 262(79.2%). The nurses /midwives had the highest number of respondents, 157 (47.4%), while the doctors had 123 (37.2%), and the CHO/CHEWs had 51 (15.4%). More than three-quarters of the HCWs (81.6%) indicated that most times, during labour, women in their health facilities were in an open ward with multiple beds divided by curtains/screens. About 60% of HCWs did not allow any companion of choice. Our findings showed HCWs complained that the design of the labour wards makes it difficult for them to enable companions of choice at birth and also to maintain privacy because the labour rooms and the arrangement of beds are such that mothers are exposed, and privacy is almost impossible.

**Conclusion:** This study revealed that inadequate HCWs and poorly designed/small labour wards are issues in maintaining maternal privacy and respecting the presence of companionship during labour. The findings underscore the importance of ensuring the dignity, privacy, and emotional support of women during childbirth through systemic reforms and investments in healthcare infrastructure and staffing. By addressing these challenges, policymakers and healthcare providers can work towards improving maternal outcomes and enhancing the overall birthing experience for women in Nigeria and beyond.

### Keywords: Maternal Privacy, Companion of Choice, Labour, Healthcare Workers, Health Facilities





# Burnout and Its Associated Factors Among Health Workers at Federal Medical Centre Yenagoa, South-South Nigeria

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#### ABSTRACT

**Background:** Burnout is a syndrome resulting from chronic workplace stress. It has become a vital challenge in the health sector, especially in poorly resourced settings. This study aimed to determine the prevalence, level and identify factors associated with burnout among health workers in Federal Medical Centre (FMC), Yenagoa.

**Methods:** A descriptive cross-sectional study design involving 224 randomly selected respondents. Using a pretested validated, self-administered questionnaire, sociodemographic data and occupational history were obtained from respondents. Burnout was assessed using Maslach burnout inventory (MBI), with 22 items divided into three domains,9 items were used to measure EE, 5 items to assess DP, and 8 items to evaluate PA, the responses to these items were based on the frequency with which the participants experience these feelings on a 7-point Likert scale, ranging from 0 indicating 'never' to 6 indicating 'every day.' Maximum obtainable scores in the EE, DP and PA were 54 points, 30 points and 48 points respectively, while the minimum score was zero for all the domains. SPSS version 25 was used for data analysis. According to the MBI rating, a participant is exposed to occupational burnout if he/she has a high score ( $\geq 27$ ) in the EE domain. A high score ( $\geq 10$ ) in the DP subscale and a low score ( $\leq 33$ ) in the PA domain. Participants were classified as suffering from burnout when all the above conditions in the 3 domains were satisfied. The frequency and proportion of burnout were estimated to obtain its prevalence among the participants. Burnout was investigated using the Chi-square test of proportion. The level of significance was set at p Value <0.05.

**Results:** The mean age of respondents was  $39.3\pm7.4$  years. The majority were women (63.9%), from the Ijaw ethnic group (62.7%) married (77.0%) with tertiary education (50.4%). Occupational groups include nurses (41.8%), doctors (21.3%), health attendants (23.8%), laboratory scientists (8.2%) and pharmacists (4.9%). Prevalence of burnout was 13.9% in this study, of the 34 respondents who experienced burnout, 15.6%, 27.1%, and 57.3% had severe, moderate, and mild forms respectively. The singles, separated or divorced mostly experienced burnout (p–0.042).

**Conclusion:** The prevalence of burnout was high, the marital status of the health care workers was found to be significantly associated with the occurrence of burnout among them, and findings from the study showed that being married /cohabiting was a protective factor of occupational burnout.

**Recommendation:** Therefore, marital relationships as a form of social support that health workers enjoy should be encouraged. Policymakers can plan social supports like sports clubs/ recreational activities etc. that can create healthy relationships between health workers.

#### Keywords: Burnout, Health Workers, South-South, Nigeria





# Incidence and Intensity of Catastrophic Health Expenditure among Diabetic Patients in Kaduna State, North-Western Nigeria

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#### ABSTRACT

**Background:** Diabetes Mellitus (DM) is considered to be one of the medical emergencies of the 21st century, as it not only seriously affects the physical and mental health of patients, but also pushes some patients and their households into poverty, and is a threat to social and economic development. High out-of-pocket expenses for diabetic care can cause households to incur catastrophic expenditures, especially in lower socioeconomic groups which in turn can push them into poverty. Assessment of Catastrophic Health Expenditure for individuals with diabetes has often been neglected. This study therefore examines the incidence and intensity of Catastrophic Health Expenditure (CHE) among diabetic patients in Kaduna State, Nigeria.

**Methodology**: A cross-sectional study was conducted among adult diabetic outpatients in three tertiary health facilities in Kaduna State. A total of 500 respondents were selected using a multistage sampling technique. Data were collected through semi-structured interviews. Descriptive statistics was conducted using mean and standard deviation (for normally distributed continuous data) and median and interquartile range (for skewed data). Simple frequencies and percentages were reported for categorical data. Data were presented in the form of tables and charts using Microsoft Office Excel 2016. The Chi-square test was performed to assess the existence of an association between sociodemographic variables and CHE. The level of significance ( $\alpha$ ) was set at 0.05 and a p-value was generated.

**Results**: About a quarter (24.9%) of the respondents were aged 50-59 years of age with a mean age of 52.6 $\pm$ 14. Two-thirds (64.8%) earn less than 50,000 naira monthly with a median monthly income of 65,000 naira. The study found a high incidence of CHE among diabetic patients, with 57% experiencing it. The intensity of CHE, as measured by Mean Positive Overshoot, was found to be 23.4%. Borrowing money from friends and relatives was the most common coping strategy (34.8%). Muslims were almost twice as likely to incur CHE as Christians (p = 0.048). Civil servants were 87% less likely to experience CHE compared to the unemployed (p = 0.001). Patients with diabetes for 10 years or more were more than twice as likely to experience CHE (p = 0.045). Ethical approval was obtained from the Health Research Ethics Committee of Ahmadu Bello University Teaching Hospital Zaria (ABUTH/HREC/203/2021). Verbal informed consent was obtained from the respondents.

**Conclusion**: The study found that the majority of the diabetic patients had CHE, and the intensity of CHE was also found to be high. The study also found that the majority of diabetic patients resort to borrowing from families and friends to cope with the financial burden of diabetes. Being a Muslim, being a civil servant and being a diabetic 10 years and above are predictors of CHE.

**Recommendation**: It is recommended that the Kaduna State government should ensure health insurance coverage and other social safety nets including exemption from user fees for both formal sector and non-formal sector diabetic patients to protect them from Catastrophic Health Expenditure.

Keywords: Catastrophic Health Expenditure, Health Insurance, Diabetes



### Uptake and Determinants of Maternal Immunization: A Proxy of the Utilization of Maternal Health Services in a Rural Community in Rivers State Nigeria

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#### ABSTRACT

**Background:** Maternal vaccination, particularly tetanus/diphtheria immunisation, is critical to healthcare service delivery in Nigeria. It plays a crucial role in safeguarding pregnant women and their infants against vaccine-preventable diseases like tetanus. However, poor uptake of tetanus/diphtheria immunisation, particularly in rural areas where 57.5% of Nigerians live, has persisted. Also, evidence shows low utilisation of health services in rural areas. This study aims to determine the uptake of maternal immunisation as a proxy of health service access and utilisation among women of childbearing age in a rural community in Rivers State, Nigeria. This will provide insight into service access and utilisation of maternal health services and reasons for the low uptake of immunisation.

**Methodology:** The study was conducted in Kegbara Dere, a rural community in Gokana Local Government Area, Rivers State, Nigeria. Since 1998, the K. Dere community has played host to the University of Port Harcourt and its teaching hospital as a rural health posting site for medical students and resident doctors. A descriptive cross-sectional design was used to survey 439 women of childbearing age. The most recent rural health household enumeration captured 2,116 households in K Dere, distributed among 27 village clusters. Data was collected using a semi-structured questionnaire administered via an electronic-based mobile device, Kobo Collect®. The data was then exported as an SPSS file, cleaned, recoded, and analysed in SPSS version 25. Both summary and inferential statistics were presented.

**Results:** The mean age of study respondents was 29.9 years; most were married (65.4%), not literate (70.8%), unemployed (78.1%), and farmers (53.5%). Only 26.4% of the women had received at least two doses of tetanus/diphtheria immunisation. Women who are fully immunised were found to have significantly higher odds of utilising the health facility (aOR, 95% CI: 5.042, 1.562-16.27; p=0.007). Being of younger age, nuclear family type, having health insurance, and being booked for antenatal care (ANC) had higher odds (aOR, 95% CI: 1.966, 1.036-3.73, p=0.036; 1.675, 1.045-2.684, p=0.032; 4.021, 1.237-13.068, p=0.021; 2.802, 1.035-0.758, p=0.0431 respectively) of being fully immunised for tetanus/diphtheria.

**Conclusion:** This study provides valuable insights into the prevalence of maternal immunisation and health service utilisation in a rural Nigerian community. Nexus was established between immunisation status and utilisation of maternal health services. Factors such as age, family types, health insurance and ANC registration can determine utilisation of maternal health services.

**Recommendation:** Addressing the determinants of low immunisation coverage is essential to improve maternal and child health outcomes.

Key Words: Maternal Immunisation, Tetanus/Diphtheria Immunisation, Utilisation of Maternal Health Services





#### Treatment Satisfaction, Adherence and Clinical Outcomes in Patients Managed for Hypertension in a Tertiary Hospital in Port Harcourt

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#### ABSTRACT

**Background:** Hypertension is a prevalent chronic condition with substantial negative impacts on cardiovascular health if not adequately managed. Hypertension is one of the main non-communicable diseases and the main factor in cardiovascular disease-related fatalities globally. Understanding the relationship between treatment satisfaction, adherence and clinical outcome is important for optimising the management of hypertension. Medication adherence among hypertensives are as low as 35.1% in Nigeria. Some Nigerian studies have found treatment satisfaction among hypertensives in Nigeria to be low. Some studies have found satisfaction and medication adherence to be associated with blood pressure control. This study aims to determine treatment satisfaction, adherence and clinical outcomes in patients managed for hypertension in a tertiary hospital in Port Harcourt.

**Methods**: This was a descriptive, cross-sectional study with the recruitment of consecutive hypertensive patients attending the cardiology and medical outpatient clinics at the University of Port Harcourt Teaching Hospital (UPTH). Validated treatment satisfaction and the Morisky adherence scales were used to collect data on treatment satisfaction and adherence from 340 hypertensive patients respectively. Clinical outcomes were determined by normotensive status and absence of complications from hypertension. Ethics approval was obtained from the UPTH Ethics Committee. The internal consistency reliability of treatment satisfaction and adherence scales were assessed by Cronbach's alpha coefficient. Descriptive and inferential analyses were conducted using SPSS version 27.0 and p-values <0.05 were considered significant.

**Result**: The Cronbach's alpha for the treatment satisfaction and adherence scales were 0.753 and 0.758 respectively. More respondents were male (55%), married (56.2%), educated (68.8%) and self-employed (65%). More patients had diuretics (65.9%), calcium channel blockers (65.9%), ACE Inhibitors (48.2%) and Angiotensin II Receptor Blockers (37.9%) included in their antihypertensive regimen. The majority had good control (72.9%), no medication side effects (71.8%), and no secondary complications (68.5%). Most were satisfied with the current treatment (92.6%) and reported good adherence (57.4%). While respondents who expressed satisfaction with the current hypertensive treatment significantly had good control ( $X^2$ =15.5, df=1, P<0.001), those with good adherence were not ( $X^2$ =3.6, df=1, p = 0.058).

**Conclusion**: Our study found high treatment satisfaction and moderate medication adherence among hypertensives in the UPTH. The majority of hypertensives had good control. There was a significant positive relationship between treatment satisfaction and treatment outcomes. We conclude that treatment satisfaction plays a significant role in therapeutic optimization in the management of hypertension.

**Recommendations:** Focused interventions to support patient-centred care and patient education are necessary to address the multifaceted aspects of hypertension management and enhance overall outcomes in patient care.

Keywords: Hypertension, Treatment Satisfaction, Adherence, Clinical Outcomes





#### Pattern and Reasons for Utilisation of Non-Formal Places of Delivery in a Rural Community in Southern Nigeria: Learning Points for Optimising Maternal Health Care

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#### ABSTRACT

**Background:** The use of maternal health care in formal and informal settings is associated with mother and newborn health outcomes. The choice of birth place remains a significant risk for maternal mortality in rural communities. Delivery at non-formal places has been described as a major contributor to maternal mortality. In sub-Saharan Africa where 66% of global maternal mortality occurs, only 56% of all births take place in health facilities compared to 90% in Europe and the USA. In Nigeria, in spite of the enormous resources committed towards provision of formal place of delivery, only 36% of births are delivered in health facilities. Finding out the main reasons behind rural residents' choice of a non-formal place of delivery and where they go for delivery could serve as learning points for optimising maternal health care. This study sought to find out where mothers who use non-formal places of delivery go and the main reasons for their choice.

**Methodology:** A descriptive cross-sectional study design was used to collect data from 499 women of childbearing age in Kegbara Dere, a rural community in Gokana Local Government Area, Rivers State. An electronic-based mobile device, Kobo Collect® was used to administer a semi-structured questionnaire. Data was then exported as an SPSS file, cleaned, recoded, and analysed in SPSS version 25. Descriptive statistics was used to analyse data and results presented in charts and tables.

**Results:** Majority of the mothers were illiterate (72.9%), married (64.7%), of nuclear family setting (54.6%), and an average age of 30.1 years. Most of the mothers had at least 3 children (77%), about a quarter (18.6%) were pregnant, out of which 47.8% intend to get pregnant in the near future. Most women delivered their last child at the traditional birth attendant (TBA) (40.8%) followed by church (28.7%), home (25.9%) and farm and others (4.6%). Birth place intention for future deliveries where TBA (59.2%), Church (36.8%) and others (4%). Cost was the top reason for choosing a birth place followed by methods of payment, safety concerns and service quality.

**Conclusion:** Most women who use non-formal places for childbirth delivered or intend to deliver in the TBA followed by the church. Cost, method of payment, safety concerns and service quality were the top reasons for choosing a birth place.

**Recommendation:** Approaches adapted to encourage the utilisation of the formal health delivery services should consider the main reasons for the use of non-formal places of delivery.

Key words: Pattern, Non-formal places of delivery, Utilisation, Maternal Health Care, Southern Nigeria



# Knowledge, Attitude and Actions Towards Adverse Drug Reaction By Health Workers in a Nigerian Teaching Hospital

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#### ABSTRACT

**Background:** Adverse drug reactions (ADRs) as unintended and harmful responses to medications taken as recommended, are a major public health concern worldwide. ADR is a specific type of adverse event where there is a demonstrated causal relationship between the medication and the event. ADRs are common problems faced by physicians worldwide daily, but approximately 95% of cases are not reported globally. The study assessed the reporting and actions of healthcare workers towards ADRs in a teaching hospital in southern Nigeria.

**Methodology:** Descriptive cross-sectional survey among 362 permanently employed health workers in the University of Port Harcourt Teaching Hospital. Semi-structured, multidimensional, and validated self-administered questionnaires were used to collect data. A summated threshold score > 80% adapted from Bloom's cut-off point criteria indicated good knowledge or a positive attitude toward ADR reporting. Descriptive analysis was conducted with the IBM Statistical Package for the Social Sciences, version 26. The research ethics committee of the University of Port Harcourt Teaching Hospital approved the study.

**Result:** A total of 350 questionnaires were retrieved, giving a response rate of 96.6%. Most of the respondents were male (60.8%), married (35.4%), aged 30-40 years (45.7%), medical doctors (34.5%) and had practiced between 1-5 years (45.7%). While 25.7% had never encountered ADR, 8.5% admitted seeing more than 10 patients with ADR weekly. Commonest symptoms included nausea/vomiting (42.0%), itch/rash (30.8%) and dizziness/headache (30.0%). More providers expressed awareness of the formal ADR reporting process (55.7%), reported ADR (66.0%), and mainly gave verbal reports (47.2%). Propensity for reporting was underpinned by the seriousness (71.7%) and unusualness (31.1%) of the ADR. Management action included no action (37.1%), treatment at patient cost (35.7%), or treatment at the provider's cost (27.1%).

**Conclusion:** Health workers in UPTH were largely aware of ADRs, with a moderately positive attitude towards ADR reporting. Most patients with ADRs were offered treatment.

**Recommendations:** However, there is a need for regular mandatory education and training on ADRs concept among UPTH health workers, while continuous public enlightenment and awareness campaigns on spontaneous reporting of ADRs is advocated to enhance reporting rate and patient safety.

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#### Keywords: Knowledge, Attitude, Action, Adverse Drug Reaction, Health Workers



#### Factors Influencing Access and Utilisation of Primary Health Care Services in a Rural Community in Southern Nigeria: Clients Perspectives

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#### ABSTRACT

**Background:** Utilisation of health services is a measure of the target population's use of healthcare services. It offers insightful information on the need for and accessibility of healthcare services and aids in assessing how well healthcare systems perform in providing for the demands of the general population. Over half of Nigeria's population resides in rural areas. The ward health system proposes at least a primary healthcare facility within each ward in the country. Despite this, the utilisation of primary healthcare services in rural communities in Rivers State has been recorded to be as low as 44%. Meanwhile, reports of poor utilisation of the PHC have also remained a recurring theme in the rural posting reports of medical students at the University of Port Harcourt. This community-based study sought the perspectives of community members on the factors that influence their access and utilisation of primary healthcare services.

**Methodology:** A descriptive cross-sectional study design was used to evaluate the factors influencing access and utilisation of health services in Kegbara Dere in Gokana Local Government Area of Rivers State. Data was collected from 620 participants using an electronic-based (Kobo Collect®) semi-structured questionnaire. Open-ended questions were used to obtain perspectives of clients on aspects of PHC services that they were most satisfied or dissatisfied with for those who use the PHC while for those who do not use the PHC, we sought information on the main reasons for their choice. Data was exported and coded with descriptive and inferential analyses conducted using IBM Statistical Package and Service Solution (SPSS) v25. Statistical significance was set at  $p \le 0.05$ .

**Results:** The average age of respondents was 34.3 years with the majority being females (54.6%), married (55.1%), with post-primary education (73.4%). Over 97% (605) of respondents travel less than 30 minutes to the primary health centre on foot, 60% (367) of respondents make use of the primary health centre in the community while those who do not use the PHC utilise the chemists (68.1%), traditional homes (14.6%), private hospitals (9.8%) and churches (5.1%). More people (49.6%) were dissatisfied with PHC services with staff absenteeism, poor staff attitude, long waiting time, drug cost and stock-out topping the list. Those with post-primary education had four times more odds of using the PHC (aOR, 95% CI: 3.632, 2.46-5.364, p<0.001).

**Conclusion:** Most community members had excellent access to PHC services, however, this has not translated into equivalent utilisation probably because of the influence of dissatisfying factors.

**Recommendation:** Addressing dissatisfying factors identified by community members may improve utilisation.

Keywords: Access, Utilisation, PHC, Rural Communities, Southern Nigeria, Client Perspective





### Why Are ANC Mothers Not Returning for Delivery at the PHC: Exploration of Low Utilisation of Delivery Services in a Rural Community in Rivers State

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#### ABSTRACT

**Background:** Evaluation of facility-based data indicated a gap of 10:1 between antenatal clinic registration and delivery in a Primary Health Center in a rural community in southern Nigeria. We sought to find out why women were not returning for delivery and what could be done to close the gap.

**Methodology:** This study was a qualitative study carried out in Primary Health Centre, Kegbara Dere, Gokana LGA, Rivers State. We conducted three Focus Group Discussions using topic guides among 32 women that were purposively selected on three different ANC days. Interviews were recorded, transcribed and analysed using thematic content analysis.

**Results:** The mean age of the respondents was  $28\pm6.2$  years. The majority were married (18, 60%), literate (23, 71.6%) and uninsured (29, 90.6%). Concerning preferred place for delivery, the gross majority intended to deliver in TBA and maternity followed by PHC and church. Key consideration for choosing a delivery place was trust for personnel followed by safety concerns and cost. Majority of mothers said that if they are to deliver in the PHC, it would be because of good professional care, safety and loss of children in non-formal places of delivery. On the reason for not using the health facilities, a proportion said nothing will convince them to deliver in the PHC, others ranked their reasons from low cost of service and absence of payments by instalment to unavailability of staff at night and cultural reasons. On what the facility could do to encourage PHC-based delivery, they recommended lower cost of service, payments by instalment, community sensitization, friendly staff and availability of staff. One of respondents said that she prefers to deliver in the church as people will be praying for her during labour while several others cook and care for her. Meanwhile, another mother was of the opinion that at the TBA, they are allowed to pay in kind using farm crops making it easier for most women to access care.

**Conclusion:** This study demonstrates the reasons for the gap between ANC registrations and actual utilisation of the community's PHC for delivery. Having the skilled birth attendants to be resident in the PHC will enhance trust in the healthcare workers and facility thereby improving utilisation

**Recommendations:** Health policy makers and managers need to pay attention to these issues if they would be successful in closing the gap between ANC and delivery.

#### Key words: ANC, Delivery Services, Utilisation, Rural Community



### Where Are the Mothers Going to Deliver: A Study of Birth Place Preference and its Determinants in a Rural Community in South-South Nigeria

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#### ABSTRACT

**Background:** Despite the enormous resources committed towards the provision of health facilities, 61% of births still occur in non-formal places of delivery in Nigeria. This study sought to find out the birthplace preference and its determinants among women of childbearing age in a rural community in South-South Nigeria.

**Methodology:** Using a descriptive cross-sectional study design, 606 women of childbearing age in Kegbara Dere, a rural community in Rivers State were recruited using a cluster sampling method. A semi-structured e-questionnaire was used to collect data and analysed in SPSS version 25. Descriptive and analytical statistics were carried with statistical significance set at  $p \le 0.05$ . Results were presented in charts and tables.

**Results:** Most of the mothers were unable to read (417, 68.8%), were married (375, 61.8%), and lived in nuclear family settings (347, 57.3%). Their average age was 29.6 years.

The majority of the mothers (528, 87.1%) had at least a child, out of which about a fifth (120, 19.8%) have lost a child. About 89.2% (471) delivered in non-formal places in their last pregnancies while 60.1% (223) of those planning to deliver in the future intend to deliver in non-formal places. Among women who have had least one birth, illiteracy, uninsured, unemployment, parity>3, history of child mortality, and had their child die in non-formal places had significantly higher odds of delivering in non-formal places {aOR (95% CI): 6.338(1.856-21.641); 9.023(1.708-47.672); 4.127(2.131-7.991); 4.645(1.315-16.408) & 0.009(0.001-0.079) respectively}. For those with intention to deliver in the future, illiteracy and higher parity showed significant association with delivery in non-formal places {aOR (95% CI): 1.805(1.148-2.84) & 3.943(2.077-7.489) respectively}. Half of the mothers recommended lower service costs and staff availability especially at night to improve PHC utilization.

Conclusion: Most women prefer to deliver in non-formal places in the community.

**Recommendations:** Addressing the determinants identified in the study, especially the availability of staff and cost of service may improve facilities-based deliveries.

Keywords: Birthplace Preference, Non-formal Places of Delivery, Formal Places of Delivery, Determinants, Rural Community, Southern Nigeria

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#### Knowledge and Attitude Towards Cervical Cancer and Uptake of Cervical Cancer Screening Among Female Undergraduate Students in a Private University in Nigeria

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#### ABSTRACT

**Background:** Cervical cancer has been a significant public health issue, mostly in developing countries. It is the fourth most common cancer among women globally and the second most common cancer among women in Nigeria, with its significant contribution to the cancer burden across all cultures and economies. The main agent implicated in the development of cervical cancer is the Human Papillomavirus (HPV), an extremely common virus transmitted through sexual intercourse. The other risk factors include early onset of sexual activities, having multiple sexual partners, prolonged use of oral contraceptives, and smoking of cigarettes. About 90% of cases of cervical cancer and deaths occur in low- low-middle-income countries (LMICs). It causes the most frequent cancer death among women between the ages of 15 to 44 in Nigeria. Despite the high burden of cervical cancer in Nigeria, the country is yet to commence a vaccination programme for HPV at a national level Most cervical cancer cases are diagnosed late leading to poor outcomes, particularly in Sub-Saharan Africa and other LMICs due to limited access to cervical cancer preventative measures. So, this study aimed to assess the knowledge of cervical cancer and attitude towards cervical cancer prevention strategies.

**Methods:** This was a cross-sectional study among undergraduate female students at Babcock University, Southwest Nigeria in 2023. A self-administered questionnaire was used for data collection from 255 respondents selected using a multistage sampling method. Data was entered and analysed using IBM SPSS version 23. Chi-square and logistic regression were done. At a 95% confidence interval, a p-value < 0.05 was considered statistically significant. Ethical approval was obtained from the Babcock University Health Research Ethics Committee and written informed consent was obtained from the study participants.

**Results:** A total of 169 (66.3%) of the study participants were between the ages of 21-25 years. More than half (56.1%) of the respondents had good knowledge of cervical cancer, while 62.7% had a favourable attitude towards cervical cancer prevention strategies. However, only 26.7% and 36.1% of the respondents had received the HPV vaccine and screened for cervical cancer respectively. Some of the reasons for not screening and not receiving the HPV vaccine include cost, lack of awareness of centres where these services are available, and low-risk perception of having cervical cancer. Factors found to be associated with acceptance of cervical cancer screening were knowledge (OR= 15; 95% CI 0.149 -0.524; p=0.0001), and having received HPV vaccine in the past, (OR=29; 95% CI 3.151-1.654; p=0.0001),

**Conclusion:** The study revealed a good knowledge of cervical cancer and attitude towards cervical cancer prevention strategies. The uptake of cervical cancer screening was low and most of the participants had not received the HPV vaccine. There is a great need to increase awareness of cervical cancer among female undergraduate students and promote cervical cancer screening and other prevention services at an affordable cost in all healthcare facilities to achieve the elimination of cervical cancer.

Keywords: Cervical Cancer, Screening, Prevention Strategies, Human Papillomavirus Vaccine, Knowledge, Attitude, Female Undergraduate Student





#### Prevalence and Determinants of Vaccine Hesitancy Among Pregnant Women in Ondo City, South-West, Nigeria: A Hospital Based Cross-Sectional Study

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#### ABSTRACT

**Background:** Vaccine-preventable diseases account for about one-quarter of Nigeria's under-five mortality. Vaccine hesitancy, which is as old as vaccines, is a significant contributor to low vaccination coverage and poses a considerable burden on a child's health. It impedes control of vaccine-preventable diseases. Vaccine hesitancy is defined as a delay in acceptance or refusal of vaccines despite the availability of vaccination services. In many countries, including Nigeria, vaccine refusal has been linked to disease outbreaks. Mothers are very instrumental in the progress of childhood vaccination as they are, most of the time, the primary caregivers of the children. Thus, we assessed the prevalence and determinants of vaccine hesitancy among pregnant women in Ondo City, South-West Nigeria.

**Methodology:** A hospital-based cross-sectional study was conducted among 345 pregnant women attending antenatal clinics at UNIMEDTHC Ondo City. Participants were selected using systematic random sampling techniques. A pretested self-administered modified Parent Attitude about Childhood Vaccines (PACV) questionnaire was used to collect data, which was analysed using IBM SPSS Ver 21.0. The chi-square test was used to test bivariate associations, while binary logistic regression was used to assess the determinants of vaccine hesitancy. A p < 0.05 was considered statistically significant.

**Results:** The mean age of participants was  $29.22 \pm 5.04$  years, and the overall prevalence of vaccine hesitancy was 32%. Based on the domains, only 15.4% of the respondents were hesitant due to vaccination behaviour, 38.6% for safety and efficacy, and 49.6% were hesitant due to general attitude and trust for care providers. Ethnicity, religion, employment status, and age of pregnant women were significant determinants of vaccine hesitancy. Younger pregnant women (odds ratio [OR], 2.53; 95% confidence interval CI, 1.04–7.70) were more likely to be hesitant than older ones, also pregnant women of Hausa extraction (OR, 1.51; 95% [CI], 1.20–5.01) Additionally, employed pregnant women and those of the Muslim faith were more likely to be hesitant.

**Conclusion:** A significant proportion of pregnant women in this study were vaccine-hesitant. The foremost reasons for vaccine hesitancy are the perceived concerns about the safety and effectiveness of vaccines, and general attitude and lack of trust. Policies and programs aimed at improving vaccination behaviour, addressing safety and efficacy concerns, and building trust in service providers can reduce vaccine hesitancy.

#### Keywords: Determinants, Hesitancy, Pregnant, Women, Vaccine



#### Awareness of Rotavirus Diarrhoea and Vaccine Acceptability among Mothers of Children 0-23 Months in Ondo City, Nigeria: A Hospital-Based, Cross-Sectional Study

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#### ABSTRACT

**Background:** Childhood diarrhoea remains a significant health problem for under-five children globally. Of the deaths from diarrhoea in children, rotavirus is a common and leading cause. Nigeria has the highest rotavirus mortality globally, highlighting the magnitude of the threat posed by rotavirus diarrhoea to children in the country. Identifying rotavirus diarrhoea from other causes is challenging due to the need for laboratory test confirmation, which is not readily available. This underscores the necessity for a first-line preventive strategy like vaccination. Access to vaccines at no cost does not necessarily guarantee vaccine uptake by those who require it. This study thus assesses the awareness of rotavirus diarrhoea and vaccine acceptability among mothers of children 0-23 months at a tertiary health facility in Ondo City, Nigeria.

**Methods:** The study was cross-sectional in design and was conducted among 309 mothers of children aged 0–23 months who attended the child welfare clinic of a tertiary hospital. Participants were selected using simple random sampling techniques. IBM SPSS version 22.0 was used for data analysis. Frequency and percentage distributions were used to indicate socio-demographic variables. Pearson chi-square test was used to assess the associations between socio-demographic characteristics, awareness of vaccine and vaccine acceptability among mothers. P<0.05 was considered statistically significant.

**Results:** Only 5.2% of mothers ever heard of rotavirus diarrhoea, and 16.2% had ever heard of the rotavirus vaccine. Most mothers (80.6%) were willing to let their children receive the rotavirus vaccine. The acceptability of the rotavirus vaccine had a statistically significant association with marital status (p=0.010), with a higher proportion of married mothers (82.3%) willing to allow their children to receive the vaccine. It also had a significant association with maternal education, with a higher proportion of mothers with secondary education and higher (82.6%) willing to have their children vaccinated (p=0.019) and with maternal occupation (p=0.011) and religion (p=0.043). However, maternal age (p=0.064), child's age (0.601) and gender of the child (p=0.268) had no statistically significant association with willingness to accept the vaccine.

**Conclusion:** This study found poor awareness about rotavirus-induced diarrhoea and the rotavirus vaccine recently added to the country's national immunization schedule. However, a high proportion of the mothers were willing to vaccinate their children against rotavirus. This emphasizes the need for healthcare providers to increase awareness about the availability of the rotavirus vaccine and other vaccines in the national immunization programme.

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#### Keywords: Awareness; Acceptability; Children; Diarrhoea; Rotavirus; Vaccination





#### Assessment of Knowledge, Attitude, and Practice Conflict Resolution among Healthcare Workers in a Tertiary Health Institution, Edo State, Nigeria

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#### ABSTRACT

**Background:** Conflict resolution plays a crucial role in the healthcare setting, significantly impacting patient care standards, teamwork dynamics, and the overall job satisfaction of healthcare professionals. Effectively addressing conflicts is vital for nurturing a workplace environment that values respect and collaboration. Neglecting to manage conflicts can escalate tension and stress, fostering a negative atmosphere at work and potentially leading to burnout among professionals. Such situations can detrimentally affect productivity and even compromise patient outcomes. Many healthcare professionals lack formal training in conflict resolution, resulting in a deficiency of essential knowledge and skills needed to effectively manage and resolve disputes. Without adequate training in conflict resolution, healthcare workers may struggle to address disagreements in a constructive and coordinated manner. Exploring conflict resolution among healthcare professionals is crucial due to its positive impact on various aspects of the work environment, including patient care outcomes, job satisfaction, teamwork dynamics, organizational culture, and legal considerations. The objective of this study was to evaluate the knowledge, attitudes, and practices of conflict resolution among healthcare workers, as well as to identify factors that can help prevent conflicts at a tertiary health institution in Edo State, Nigeria.

**Methods**: A descriptive cross-sectional study was carried out among healthcare workers at Edo Specialist Hospital in Benin City, Edo State. Participants were selected using a stratified random sampling technique. Ethical approval for the study was obtained from the Edo State Ministry of Health (HA/737/23/D/09210187). Data were collected from participants using structured interviewer-administered and self-administered questionnaires. Subsequently, the collected data underwent cleaning and analysis using Stata version 16. Results were presented in the form of percentages, tables, and charts. Categorical variables were described using frequencies and percentages, while continuous variables were expressed as mean and standard deviations. The Chi-square test of proportion was employed to examine associations, with statistical significance set at P<0.05.

**Results:** The average age of the respondents was  $35.04\pm8$  years, with 161 (73.2%) being females. Among them, 97 (44.1%) were Nurses, 39 (17.7%) were Doctors, 31 (14.1%) were Pharmacists, 29 (13.2%) were Laboratory scientists, and 24 (10.9%) were Paramedics. A considerable portion of the participants, 178 (80.9%), had received training in conflict resolution. Additionally, 174 (79.0%) demonstrated good knowledge of conflict resolution, while 109 (49.5%) exhibited poor attitudes toward conflict resolution. The majority (64.1%) cited communication breakdown as the primary cause of conflict resolution. Furthermore, slightly over half of the participants (55.0%) displayed inadequate practice in conflict resolution. The study found significant associations between education, professional roles, training, and knowledge of conflict resolution.

**Conclusion:** This study underscores the paramount importance of conflict resolution skills in the healthcare setting. There is a need for constructive approaches to conflict resolution, emphasizing open communication and active listening. Equipping healthcare workers with the knowledge and tools





necessary for addressing conflicts at the workplace will enhance job satisfaction and teamwork among the staff and ultimately improve patient care and outcomes.

#### Keywords: Conflict, Conflict Resolution, Healthcare Workers



### Food Preservation and Cassava Processing Methods Among Women: Narratives from Rural Communities in Delta State, Nigeria

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#### ABSTRACT

**Background:** Food additives have become increasingly important in the food production process. The use of food additives has been linked with various health issues, such as food allergies and cancers. The World Health Organisation (WHO) stated that about 98% of food safety burden comes from underdeveloped nations. Consumers have gravitated towards high-energy food with a distinct flavour and reduced preparation time, which has profound negative implications on the health of man. Thus, the study assessed the proportion of mothers who used food additives and the types used.

**Methods:** This cross-sectional study was carried out among mothers, 15-64 years old, and was conducted in two purposively selected rural communities in Ukwuani LGA, Delta State, in October 2022. The communities were Ededei and Akuko-uno. Questionnaires were used to elicit information on their socio-demographic profile, varying methods of preserving bean grains and cassava fermentation process. Statistical Package for Social Sciences version 22 was used for data analysis. Descriptive and inferential statistics were computed, with the statistical significance set at p < 0.05.

**Results:** The mean age of the 386 respondents was  $37.9\pm12.8$ years; 64.5% admitted that weevil infestation of beans posed a challenge to them, of which 28.9% did nothing about it. Measures applied by 71.1% of respondents to confront the challenge included using dry pepper as a preservative (43.5%), sun-drying of bean grains (34.5%), application of insecticides (17.5%) and other strategies (8.47%) such as using salt or flour as preservative. Those that manipulated cassava to hasten softening to Akpu (cassava swallow) were 56.7%. The manipulations were either physical (33.3%), chemical (63.0%), or both (3.7%). Physical measures included applying hot water to the soaked cassava; chemical manipulation consisted of using insecticides, detergents, or herbs. Manipulation by the addition of detergents accounted for 34.3%. Manipulation of the normal cassava fermentation process was commoner among women 35 years and above ( $\chi^2 = 0.94$ ; p=0.33).

**Conclusion:** Almost half of the respondents use at least one measure to control pests in their food materials, whilst about one-fifth used insecticides to tackle the menace of weevil infestation of their crops. About one-third added detergents to soaked cassava to hasten the fermentation process to Akpu. Public enlightenment campaigns to promote safer food preservation and processing methods and pest management techniques should be the focus of health education programmes.

#### Keywords: Food Safety; Pest Control; Food Additives



### Assessment of Infant Feeding Practices Among Mothers Attending the Family Health Unit of a Tertiary Care Centre in Port Harcourt, Rivers State

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#### ABSTRACT

**Background:** Optimal infant feeding practices (IFP) are essential for their survival, growth, and development. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend early initiation of breastfeeding within 1 hour of birth, exclusive breastfeeding for the first 6 months of life, breastfeeding on demand, no use of bottles, teats or pacifiers and introduction of nutritionally adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond. According to national surveys, there is a concerning trend of low exclusive breastfeeding (EBF) rates in Port Harcourt, Rivers State despite the well-known benefits of optimal IFP, Thus, this study aimed to assess the infant feeding practices of mothers as well as the anthropometric status of infants attending the family health unit in a tertiary care centre in Port Harcourt, Rivers State.

**Materials and methods:** A descriptive, cross-sectional study was carried out in the Family health unit of the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Rivers State that employed the systematic sampling technique. About 241 mothers with children aged 0-12 months were recruited into the study. A pretested semi-structured interviewer-administered questionnaire adapted from the WHO/UNICEF standardized questionnaire on infant and young child feeding practices was used to collect data. Data was then exported into a Microsoft Excel spreadsheet, cleaned and analysed using Statistical Product and Service Solutions (SPSS) IBM Version 27. Tables were used for data presentation and inferential statistics was done using Chi-square. Ethical approval was obtained from the University of Port Harcourt research and ethics committee.

**Results:** The majority, 207(85.9%) of respondents, had good knowledge of infant feeding practices, 149(61.8%) respondents practiced exclusive breastfeeding for the first two days after delivery of their babies, 95(66.4%) respondents with infants 0 - 5 months practiced exclusive breastfeeding and 74 (75.5%) respondents met the minimum meal diversity for infants above 6 months. The prevalent infant feeding practice was ever breastfed, 241(100%). 'Height for age z-score (HAZ) (p=0.030)' was the only anthropometric measurement found statistically significant with exclusive breastfeeding in infants (0-5 months).

**Conclusion:** Most mothers in this study exclusively breastfed their babies (in the first two days postdelivery and 0-5 months). The study also found that exclusive breastfeeding in babies 0-5 months was linked to better growth.

**Recommendation:** Health workers are encouraged to have one-on-one interaction with the mothers during antenatal or postnatal visits to debunk myths and misconceptions that may discourage infant feeding, and to exclusively breastfeed their infants (1<sup>st</sup> 2days, 0-5months) for optimal child growth

#### Keywords: Infant Feeding Practices, Exclusive Breastfeeding, Anthropometry



# Assessment of the Implementation of Respectful Maternity Care Charter in North-Central Nigeria (FCT and KWARA State)

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#### ABSTRACT

**Background:** Respectful Maternity Care (RMC) charter describes ten universal rights of women and newborns during facility-births that promote safety, dignity, privacy, consent and access to essential information and interventions during intrapartum and postnatal periods. As a signatory to RMC charter, it is expedient to assess the level of implementation by key stakeholders for sustainability, impact and scale up of RMC charter-compliant care in Nigeria.

**Methods:** This was a mixed-method cross-sectional study, participants were stakeholders in healthcare (Healthcare workers, Administrators, Project Managers, Policy makers) in North-Central Nigeria (Federal Capital Territory and Kwara State). Multistage sampling technique was used to enrol participants from 18 healthcare facilities (Primary, Private, Secondary, Tertiary) and Ministry officials in rural and urban areas.

**Results:** Awareness of RMC charter was 34.7%, commonest source of information was on-the-job training (41.7%) while 31.3% had attended RMC charter training. Knowledge was low (0-5 rights) in 81.7%, average (6-9 rights) in 11.3%, high (10 rights) in 7.0% and highest for Right to privacy and confidentiality (25.2%). Awareness (p=0.004), knowledge (p=0.623) and training (p=0.004) were significant between learning and non-learning sites. Qualitative interviews showed lack of policy document on RMC charter and practice was at the discretion of the staff. Most health facilities were poorly equipped for the implementation of RMC charter.

**Conclusion:** There are deficiencies in the knowledge, implementation and capacity to offer RMC charter-compliant care at health facilities in North-central Nigeria.

**Recommendations:** There is a need for domesticated policy document, information, education and communication materials, advocacy, community engagement and staff training on RMC charter. Health facilities require basic facilities (water, stable power supply, equipment), adequate staffing and structural modifications to enhance the implementation. Governments should strengthen identified enablers and address the barriers to implementation, improve healthcare financing, coordinate regular staff training and supportive supervision of RMC charter-related services.

Keywords: Quality of care, Respectful Maternity Care charter, Implementation, Stakeholders; North-Central Nigeria

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#### Socio-Demographic Correlates of Age at First Marriage Among Male and Female Nigerian Youths Using Survival Analysis Approach

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#### ABSTRACT

**Background**: Child marriage is a major global health and development challenge. Child marriage refers to any formal marriage or informal union between a child under the age of 18 years and an adult or another child, and it is regarded within the framework of the United Nations as a harmful practice that violates, abuses and impairs human rights. This study assessed the prevalence, patterns and Sociodemographic correlates of early marriage among male and female Nigerian youths aged 15-29 years.

**Methods**: The study involved the use of the survival analysis method for the secondary analysis of the 2018 Nigeria Demographic and Health Survey data and with visualization through spatial analysis.

**Results**: The prevalence of early marriage was 27.7% for women, ranging from 8.4% in the southeast to 47.2% in the North-west region. The prevalence was 1.9% among men and ranged from 0.5% in the southeast to 3.1% in the North-east region. Among women, secondary and tertiary education reduces the risk of early marriage by 58% (HR=0.42, 95% CI=0.39-0.45) and 76% (HR= 0.24, 95% CI=0.70 - 0.80) respectively compared with those without a formal education. Among men, secondary and higher education reduces the risk of early marriage in men by 26% (HR=0.74, 95% CI = 0.59-0.92) and 55% (HR=0.45, 95% CI= 0.32-0.61) respectively. Being Hausa/Fulani, living in a rural setting, low wealth index and younger age at first sex are significantly associated with an increased risk of early marriage among both men and women. However, knowledge of modern contraceptives and religious affiliation are associated with the timing of marriage only among women.

**Conclusion**: In the current study, about 3 in 10 women and 1 in 50 men aged 15-29 years married before age 18, and men have a considerably higher age at first marriage compared to women. Among both men and women, those with the following characteristics are more likely to marry early – location in the northwest and northeast regions, non-urban residence, less education, and lower socioeconomic groups. In addition, ethnicity, religious affiliation and knowledge of contraceptives are also significantly associated with the age of marriage among females. Nigeria's rate of early marriage is high and there is a need to intensify efforts to reduce the high rate. The findings from this study can contribute to strengthening evidence-based actions by designing interventions that take into consideration various correlates of early marriage, particularly those that are modifiable.

Keywords: Early marriage, Child Marriage, Age at First Marriage, Survival Analysis, Nigeria





#### Nutritional Status of Children Aged Under Five Years in a Rural Community in Kaduna State, Northwestern Nigeria

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#### ABSTRACT

**Background**: Malnutrition remains a major public health problem linked to nearly half of the deaths in under-fives with significant developmental, economic, social, and medical consequences. It accounts for more than 41% of the deaths that occur annually in children from the ages of six to twenty-four months in developing countries, which is approximately 2.3 million children. In Nigeria, up to 37% of children aged 6-59 months are malnourished, with the burden of malnutrition highest in the Northern part of the country and despite interventions, the progress in tackling the problem remains slow. The study assessed the nutritional status of under-five children in a rural community in Northwestern Nigeria.

**Methodology:** A cross-sectional study was conducted in Biye, a rural community in Kaduna State, using a multistage sampling technique to select 105 mother-child pairs in October 2023. Using a semistructured interviewer-administered questionnaire comprising sociodemographic characteristics of the respondents, nutrition, and feeding practices, information was collected from the mothers and anthropometric measurements comprising mid-upper arm circumference, weight, and length/height were taken for the children. Weight was measured using a digital weighing scale, height using a stadiometer, and a measuring tape was used for measuring upper arm circumference. The Z-score was calculated using WHO Anthro software and was categorized into the following: severely stunted/underweight (< -3 SD); stunted/underweight (-3 SD to < -2 SD); normal -2 SD and above and overweight (> +1 SD).

**Results**: Sixty-three percent of the children were malnourished (MUAC<12.5cm) with 52.1% severely malnourished (MUAC<11.5cm). Up to 32% of the children were underweight, with 17.1% being severely underweight. Approximately 10% of the children were overweight, 53% of the children were stunted, and up to 32.3% were severely stunted.

**Conclusion:** The high prevalence of underweight, stunting; and severe malnutrition in the area is alarming. The Kaduna State Government and development partners should as a matter of urgency develop a more holistic, cost-effective, and responsive intervention strategy to address the situation.

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#### Keywords: Children Under-five, Nutritional Status, Stunted, Underweight



## Mental Health of Children and Adolescents Living With HIV/AIDS in Enugu, Nigeria: A Cross-Sectional Survey

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#### ABSTRACT

**Background:** The care landscape for children and adolescents living with HIV/AIDS has historically centered predominantly on managing the physical manifestations of the disease. However, as our understanding of holistic healthcare evolves, there is a growing recognition of the importance of addressing the mental health needs of this vulnerable population. In this study, the primary objective was to delve into the prevalence rates of psychiatric disorders, suicidal tendencies, and patterns of health-seeking behaviour among children and adolescents grappling with HIV/AIDS.

**Methods:** This cross-sectional study enrolled 288 participants aged 9–19 years living with HIV/AIDS in Enugu State, Nigeria. Spanning eight weeks, data collection took place at HIV Clinics within four healthcare facilities offering anti-retroviral therapy services in the Enugu metropolis. Employing a semi-structured interviewer-administered questionnaire, researchers gathered information across three key domains: socio-demographic characteristics, mental health disorders, and health-seeking behaviours. The questionnaire, designed by the researchers, was adapted from the Mini International Neuropsychiatric Interview (MINI), ensuring a comprehensive assessment framework.

**Results:** Among the cohort, a significant portion (24.3%) exhibited symptoms indicative of a mental disorder, with 10.8% reporting suicidal tendencies. Furthermore, more than half (53.1%) expressed a perceived need for therapy, yet a concerning disparity emerged, with only 35.8% actively seeking help for their mental health concerns. Noteworthy correlations were found between feelings of inferiority when compared to peers in school or family settings and the presence of mental illness and suicidal ideation. Additionally, individuals acknowledging the necessity of therapy or recognizing its potential efficacy were more likely to report suicidal tendencies.

**Conclusion:** This study serves as a reminder of the pervasive mental health challenges faced by children and adolescents living with HIV/AIDS in Enugu. Suicidal tendencies emerged as the predominant mental health issue, although predominantly low-risk. Other notable conditions included generalized anxiety disorder and major depressive disorder. Despite the fact that majority of participants regularly attend HIV clinics, a glaring gap persists in recognizing and addressing their mental health needs.

**Recommendations:** The findings underscore the imperative to broaden the scope of care provided to children and adolescents living with HIV/AIDS, extending beyond mere physical health management. Efforts must be intensified to integrate mental health support seamlessly into existing healthcare frameworks. This necessitates initiatives such as heightened awareness campaigns aimed at destigmatizing mental illness within this demographic and the establishment of dedicated centres equipped to provide tailored mental health services. By fostering an environment conducive to open dialogue and proactive help-seeking behaviour, we can collectively work towards mitigating the burden of mental health challenges among this vulnerable population.

Keywords: Mental Health; Children and Adolescents; HIV-AIDs; Suicidality; Help-seeking





# Knowledge of Childhood Diarrhoea and Home-Based Care Practices in a Rural Community in Northern Nigeria

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#### ABSTRACT

**Background:** Childhood diarrhoea is a major public health problem especially in developing countries due to varied socioeconomic and environmental challenges. Globally, there are nearly 1.7 billion cases of diarrhoea diseases and 760,000 deaths in children under five every year. A national survey conducted in Nigeria showed that diarrhoea diseases constituted the second biggest killer of children in the country after childhood pneumonia and is responsible for an estimated 16% of childhood mortality. The homebased care, an essential component of the integrated management of childhood illness, is a cost-effective public health strategy to prevent complications and death from diarrhoea diseases. However, this strategy will only be beneficial if the home-based caregivers have the requisite knowledge for the management of childhood diarrhoea diseases. This study was conducted among caregivers of underfive children in Gangara, a rural community in North-western Nigeria, to determine the pattern of home-based care for under-five diarrhoea disease, assess the knowledge and practice of the mothers/caregivers and determine the factors affecting standard home-based care practices for under five diarrhoea in this rural community.

**Methods**: A descriptive cross-sectional study among 244 mothers/caregivers of under-five children in a rural Gangara community between July and August 2022 using the cluster sampling technique. A cluster was defined as a household selected among a list of all 400 households in the community. The outcome variables were the knowledge grade for diarrhoea, while the explanatory variables were the socio-demographic characteristics of the caregivers. Data were analysed with Statistical Package for Social Sciences (SPSS) version 26. The level of statistical significance was set at p<0.05.

**Results:** All the respondents were female 244 (100%); the mean age was  $29.02 \pm 6.902$ . The majority 244 (99.6%) were Hausa, petty traders 136(55.6%) with only primary education (41.0%). The knowledge score for the mode of transmission of diarrhoea and danger signs for dehydration were 70.5%, and 47.5% respectively. One-third of the caregivers could not identify sunken eyeballs 79 (32.4%) and tearlessness 110 (45.1%) as signs of dehydration. The common diarrhoea home-based care practices were the use of ORS (98.8%), herbal concoction, (48.8%) salt sugar solution (17.6%) and herbs 119 (48.8%). Some caregivers would treat under-five diarrhoea at home with Lomotil 115 (47.1%) ciprofloxacin 44 (18%) and metronidazole (34.8%). Only 54 (22%) caregivers would go to the hospital immediately they noticed symptoms of diarrhoea.

**Conclusion:** The knowledge of diarrhoea was poor and most home-based care practices were unconventional. Hence, the high burden of diarrhoea diseases in the community.

**Recommendation**: The LGA health authorities should facilitate continuous health education programs on diarrhoea diseases in this community.

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Keywords: Caregiver; Under-fives; Diarrhoea; Home-based; Knowledge, Northern Nigeria





## Optimizing Primary Healthcare Experience: Assessing Client Satisfaction in Kaduna State, Northwest Nigeria

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#### ABSTRACT

**Background:** Client satisfaction is a multidimensional construct focusing on clients' perceptions and evaluations of the treatment and care received. It is one of the variables affecting the outcomes of healthcare and the use of health services. Hence, the level of clients' satisfaction is one of the mechanisms used in measuring the quality of healthcare service delivery and addressing clients' expectations was found to be associated with high client satisfaction and better health outcomes.

**Methodology:** A cross-sectional descriptive study was conducted in Kaduna State, Northwest, Nigeria. A sample size of 217 was determined using Fisher's formula, at p-value, reliability coefficient, confidence interval, and degree of freedom of 0.83, 1.96, 95%, 0.05, and 16% respectively. The study population comprised clients and caregivers accessing healthcare in PHC centres owned by the Kaduna State Primary Health Care Development Board (PHCDB). A multi-stage sampling technique was used to randomly select eligible respondents, who comprised of clients and caregivers accessing care in public PHC facilities in Kaduna State, who have accessed at least a PHC service in any of the PHCs in the State were included in the study, while those with mental health problems, severe acute illnesses, and those with hearing or speech difficulty that may limit or hinder their ability to hear or respond to the data collection process were excluded. A semi-structured, interviewer-administered questionnaire was administered by trained research assistants, and the data collected was analysed using SPSS version 23.0. Clients' satisfaction with PHC was assessed using a set of 27 questions across four (4) major domains based on a 5-point Likert Scale. An average combined composite score of 1 to 5 was expected for each question based on the responses obtained. Using the average respondents' combined composite score, clients' satisfaction with PHC services was assessed. Respondents with an average combined composite score of > 3 were considered to be satisfied with PHC services, while those with a combined composite score of <3 were considered to be dissatisfied with PHC services provided. Descriptive statistics were conducted using mean and standard deviation. Simple frequencies and percentages were reported for categorical data. Appropriate statistical tests: Student t-test, Paired t-test, and Chi-square test of association were used to examine the association between dependent and independent variables. Predictor variables that showed significant association with the outcome variables were further subjected to logistic regression analysis, to determine factors that affect clients' satisfaction with PHC services. Statistical significance was determined at an alpha level set at 0.05 at a 95% confidence interval. Data was presented in the form of tables and charts using Microsoft Office Excel 2016.

**Results:** Thirty-one percent of the respondents were satisfied with PHC services in Kaduna State with a mean composite satisfaction score of  $3.78 \pm 0.67$ . Age, ethnicity, level of education, and occupational status were factors affecting clients' satisfaction with PHC services among the respondents.

**Conclusion:** Clients' satisfaction with PHC services in Kaduna State, Northwest Nigeria was fair. Healthcare providers were recommended to improve their attitude bearing in mind clients' peculiarities.

#### Keywords: Clients, Satisfaction, PHC Services, Northwest Nigeria





#### Predictors of Exclusive Breastfeeding Among Female Lecturers in Rivers State Nigeria

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#### ABSTRACT

**Background**: Breastfeeding, culturally practiced in most societies worldwide is an effective public health measure to prevent the development of nutritional disorders in childhood. Optimal health benefit however is derived from the practice of exclusive breastfeeding (EBF): feeding newborns exclusively on breastmilk in the first six months of life and up to two years along with complementary household foods. EBF rate is still low in developing countries and below the global target of 90% recommended by UNICEF/WHO. The practice of EBF varies among the different populations and occupations of mothers. In sub-Saharan Africa, it has been reported to be between 23.7% - and 56.5% in the general population and 61.7% among women in academia in Rivers State Nigeria. This study looked at predictors of EBF among female lecturers in Rivers State Nigeria.

**Methodology**: This is a descriptive cross-sectional study among 381 female lecturers in Rivers State Nigeria selected by multistage sampling method. Sociodemographic information, knowledge, history, and practice of EBF were collected. Data was analysed using IBM SPSS version 22 and presented in frequency tables. Bivariant statistical analysis was done using the Chi-square test and binary logistic regression analysis with P < 0.05.

**Results**: The mean age of participants was  $40.21 \pm 6.641$  years, 168 (75.7%) had good knowledge of EBF while 117 (52.7%) practiced it. Social support (X<sup>2</sup> = 7.961, P = 0.005), duration of breastfeeding (X<sup>2</sup> = 43.379, P < 0.0001) and method of feeding baby when at work (X<sup>2</sup> = 14.721, P = 0.001) were associated with EBF practice. Predictors of EBF were the duration of breastfeeding and the method of feeding the baby when at work. Mothers who breastfed their babies for six months were 13 times more likely to have practiced EBF than those who breastfed for over 12 months (OR = 12.93, 95% CI = 1.605 - 104.144). Mothers who expressed breastmilk for baby when at work were two and half times more likely to have practiced EBF than those who left formula milk (OR = 2.576, 95% CI = 1.297 - 5.115)

**Conclusion**: We found that about half of the female lecturers in Rivers State Nigeria practiced EBF while the duration of breastfeeding and method of feeding the baby when at work predicted the practice of EBF.

**Recommendation**: We recommend that family members and spouses, employers of nursing mothers and the government should support women to exclusively breastfeed through flexible work schedules and an increase in maternity leave period.

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#### Keywords: Exclusive, Breastfeeding, Support, Practices, Lecturers, Rivers State, Nigeria



### From Evidence to Action: Scaling-Up Quality of Care Implementation Across Life Course in Five Phase II Scale-Up States in Nigeria

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#### ABSTRACT

**Background**: Improving the quality of care is fundamental in reversing the poor maternal, newborn, and child health (MNCH) indices in Nigeria. The USAID-funded MOMENTUM Country and Global Leadership (MCGL) MNCH quality of care (QoC) project led by Jhpiego and partners provides targeted technical capacity and development assistance (TCDA) to the Government of Nigeria through the Federal ministry of health (FMoH) to strengthen and advance MNCH QoC implementation. Through this support, Nigeria has attained a national equity in scope by scaling up QoC implementation from 12 QED network states to a total of 24 states in two phases. Expanding quality of care to cover the entire life course that is, reproductive, maternal, newborn, child, adolescent, elderly plus nutrition (RMNCAEH+N QoC) as prescribed by the technical working group requires evidence to drive actions

**Methods:** FMoH in collaboration with MCGL MNCH QoC project convened a 5-day national workshop with the RMNCAEH+N QoC TWG which comprised of national primary health care development agency (NPHCDA), implementing partners, academia, professional associations, national and sub-national program coordinators to develop a checklist for baseline assessment of availability and provision of services on each of the 17 core domains of RMNCAEH+N QoC. The checklist was scripted in a web-based open data collection Application (Kobo Collect). The assessment was held between July and September 2023 across 15 (3 per state) selected referral health facilities located in the central senatorial districts of the five-phase II states namely: Osun, Imo, Kwara, Nasarawa and Cross River.

**Results:** Of the 80% minimum benchmark set for each of the 17 core domains of RMNCAEH+N QoC, two-thirds (67%) of the referral facilities scored above 80% in family planning services, 53% in maternal health (antenatal care service) and 33% in maternal health (essential & emergency-services). More than one quarter scored above 80% in child health-services (27%), effective referral systems-services (27%); while equal proportions scored above 80% in health infrastructure and space management (26%) and health information system services (26%). At least one-fifth scored above 80% in infection prevention & control & WASH (20%) and adolescent and youth-friendly health services (20%). Very few scored above 80% in human resources for health (13%); gender-based violence services (13%); sick and small new-born care services (13%); essential new-born care services (7%), maternal perinatal and child deaths surveillance and response services (7%). None scored at least 80% on elderly health care, nutrition services and facility leadership and governance structure for quality improvement.





**Conclusion:** All the services on the 17 core domains of RMNCAEH+N QoC were available across all the 15 referral facilities in the five states, however service provision varies greatly with the least performance in elderly health care, nutrition services, facility leadership and governance structure for quality improvement. Strengthen these referral facilities in terms of structure and processes will equip them with a safe and supportive environment for delivering RMNCAEH+N QoC services.

**Recommendations:** Using evidence-based data to drive action is fundamental for targeted state advocacy to engender resource mobilization and optimization of QoC implementation across life course (RMNCAEH+N) in Nigeria.

Key words: RMNCAEH+N; Quality of Care; QoC Data; MCGL QoC; State Scale-up







# THE 40<sup>TH</sup> ANNUAL SCIENCTIFIC CONFERENCE AND 50<sup>TH</sup> ANNIVERSARY OF THE ASSOCIATION OF PUBLIC HEALTH PHYSICIANS OF NIGERIA (APHPN)



Group photograph of APHPN members at the Golden Jubilee celebrations which held at Nibanola resort.



