

## Abstracts of Proceedings

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A101

#### Increasing access to child health services in resource-limited settings: experiences with the Obio Community Health Insurance Scheme

Nte AR<sup>1</sup>, Fajola AO<sup>2</sup>, Fakunle BA<sup>2</sup>, Adibe N<sup>3</sup>, Ehigiegba A<sup>4</sup>

<sup>1</sup>Department of Paediatrics, College of Health Sciences, University of Port Harcourt <sup>2</sup>Community Health, Shell Petroleum Development Company, Port Harcourt <sup>3</sup>Obio Cottage Hospital, Port Harcourt <sup>4</sup>Department of Obstetrics and Gynaecology, College of Medicine, University of Benin, Benin

**Background:** Nigeria's 2010 Under-five mortality rate of 143/1000 live births and 64% of the population living below \$1.25/day highlight the need for increased access to quality care for all, especially the U5s of whom only 23% received antibiotics for pneumonia and <50% appropriately treated for diarrhea and malaria.

In 2010, Shell, as part of its social performance initiatives in host communities, collaborated with Rivers State government, to upgrade the Obio health center to a Cottage hospital and initiated the Community Health Insurance Scheme(CHIS). Indigenes in the scheme's target communities subscribe to it with the sum of N3,600 while others pay N7,200 per person annually and can access several services especially for Maternal, Neonatal and Child Health (MNCH).

**Objectives:** To share experiences from Obio CHIS and its impact on MNCH services.

**Method:** Data were retrieved from the records of Obio Cottage Hospital for the period 2009 to 2012 and analyzed.

**Results:** Facility utilization for MNCH and staff skills in record keeping, patient care, administration, laboratory and pharmaceutical services increased. The number of pregnant women screened for HIV increased from 141 in 2010 to 3,228 in 2012 while HIV seroprevalence reduced from 4.25% to 3.5% and all 57 HIV-exposed babies tested negative at 6 weeks. Similarly, the number of children on GMP increased from 7,227 to 10,206 and percentage of underweight children reduced by over 150%.

**Conclusion:** The CHIS has thus contributed significantly not only to increased access to health services but also to improved child health indices in target communities.

A102

#### Do As Many Babies Die As the Estimates Show? Evidence from a Community Based Assessment

Ewah RO,<sup>1</sup> Ibadin MO,<sup>2</sup> Omoigberale AI,<sup>2</sup> Sadoh WE,<sup>2</sup> Agbede GO.<sup>1</sup>

<sup>1</sup>Irrua Specialist Hospital, Irrua, Edo State, <sup>2</sup>University of Benin Teaching, Benin

**Background:** The fourth Millennium Development Goal was endorsed to reduce under-five mortality rate by two-thirds between 1990 and 2015. To achieve this goal, the accurate knowledge of the PMR, SBR and ENDR and knowledge of factors that promote perinatal mortality in a given community is important. The projected National estimates of PMR, ENDR and SBR may not be accurate. This community based study was therefore carried out to determine the PMR, SBR and ENDR in Igueben Local Government Area (LGA) of Edo State.

**Methods:** All women of child-bearing age, who resided in three randomly selected political wards in Igueben LGA were identified. The mothers, who had deliveries and perinatal deaths between June 2009 and May 2010, were recruited for the study. Interviewer administered questionnaires were used to obtain relevant data from the mothers.

**Results:** Of the 921 women of child-bearing age recruited, 258 deliveries with 3 perinatal deaths were recorded. This resulted in PMR, SBR and ENDR of 11.6/1000TB, 11.6/1000TB and 0/1000LB respectively. The values were lower than the projected Nigerian averages; 76/1000TB, 43/1000TB and 35/1000LB for PMR, SBR and ENDR. Almost all the mothers studied (99.6%) received skilled obstetric care in delivery.

**Conclusion:** In the community studied, the PMR and SBR were lower than the National estimates, perhaps because of receipt of good obstetric care by the mothers. This therefore underscores the importance of community-based studies in the determination of vital statistics which are important in health planning including resource allocation.

A103

#### Perinatal Mortality in Some Public Hospitals in Abuja

Mairami AB, Audu LI, Aikhionbare HA.  
National Hospital Abuja

**Background:** Perinatal mortality rates remain high in Nigeria and other developing countries. In designing intervention and strategies to reduce perinatal deaths, it

is important to know the magnitude, causes and determinants of perinatal mortality in a given locality.

*Objective:* To determine the perinatal mortality and associated risk factors in Abuja Municipal Area Council of the Federal Capital Territory.

*Method:* All deliveries including live and stillbirths in the selected hospitals over a period of 4 months were recruited. Live born babies were followed up until the age of 7 days and any death occurring during this period was documented.

*Results:* There were 1065 deliveries during the period of study, out of which 1027 were analyzed. Of these, 62 suffered perinatal death, giving a perinatal mortality rate of 60.4 per 1000 births. There were 35 stillbirths (17 fresh stillbirths and 18 macerated stillbirths) giving a stillbirth rate of 34.1 per 1000 births and fresh: macerated stillbirth ratio of 1:1.06. Of those born alive, 27 did not survive beyond the 1<sup>st</sup> week of life, giving an early neonatal death rate of 27.2 per 1000 live births. The majority (88.7%) of perinatal deaths were due to severe perinatal asphyxia (53.2%), macerated stillbirths (29.0%) and prematurity (6.5%). Lack of antenatal care, antepartum hemorrhage, pregnancy-induced hypertension, intrapartum pyrexia and prematurity were risk factors for perinatal death.

*Conclusion:* Risk factors associated with poor antenatal and intrapartum care accounted for the high perinatal mortality rate in Abuja.

A104

**Pattern of Morbidity And Mortality of Admissions into The Special Care Baby Unit (SCBU) of Enugu State University Teaching Hospital (ESUTH), Park lane, Enugu, South-East Nigeria**

Ekwochi U, Ezenwosu OU, Nwokoye IC, Ndu IK.  
*Enugu State University Teaching Hospital, Park Lane, Enugu*

Neonatal morbidity and mortality rates have great impacts on the millennium development goals 4 (MDG 4). This indicator strongly poses a major challenge in developing country like Nigeria.

*Objectives:* To determine the morbidity and mortality pattern of admissions within 5 months of re-opening the SCBU of ESUTH, Parklane, Enugu.

*Methods:* Information on the bio-data, place of birth, APGAR scores, age on admission, diagnosis on admission, duration of hospital stay and outcome was collected retrospectively from the case notes of admissions into the SCBU from June – October 2012.

*Results:* A total of 126 patients were admitted during the period under review. The leading causes of admissions were perinatal asphyxia 50 (39.7%), Low birth weight 43 (34.1%), Neonatal sepsis 13 (10.3%) and neonatal jaundice 4 (3.2%). A total of 25 (19.8%) deaths were recorded during the period under review. Fifty-five percent of the deaths occurred within 24hrs of admission. The leading cause of deaths were perinatal asphyxia 14 (56%), neonatal sepsis 7 (28%) and very low birth weight 2(8%).

*Conclusion:* The neonatal mortality in this study is high.

The major causes are similar to those documented by other studies in Nigeria and are largely preventable. Strengthening perinatal care, emergency obstetric services, and enhancement of neonatal resuscitation skill are necessary to reduce the neonatal mortality.

A105

**Morbidity Pattern of as Seen in the Pediatric Out-Patient Department of Irrua Specialist Teaching Hospital, Irrua**

Ikhayere E, Ewah RO, Alikah SO, Obasoyo SE.  
*Department of Paediatrics Irrua Specialist Teaching Hospital, Irrua, Edo State*

*Background:* Hospital data can be a valuable tool for assessing the epidemiology of diseases within populations. This data can give an insight into the types of diseases in a community and their burden on health services.

*Objective:* To determine the common morbidity pattern in children who were seen in the Paediatrics Out-patient Department of Irrua Specialist Teaching Hospital, Irrua.

*Methods:* A retrospective analysis of the records of the Paediatric Out-patient Department of Irrua Specialist Teaching Hospital, Irrua from 1<sup>st</sup> September, 2011 to 31<sup>st</sup> August, 2012.

*Results:* Of a total of 9,122 visits were made during the period under review, 4,579 (50.2%) were males and 4,543 (49.8%) were females giving a male: female ratio of 1:1. Malaria remains the commonest diagnosis made (13.3 %), followed by acute respiratory tract infection (12.2%).

*Conclusion:* Infections still remains the commonest diagnosis for visits to the Paediatrics Out-patient Department of Irrua Specialist Teaching Hospital, Irrua.

A106

**Morbidity and Mortality Pattern among in-Patients in the Pediatric Department of Olabisi Onabanjo University Teaching Hospital (OOUTH) Over A Twelve Month Period**

Ayeni VA, Oladipo AO, Ogunlesi TA, Olowu AO, Ogunfowora OB, Fetuga MB, Adekanmbi AF, Runsewe-Abiodun IT, Olanrewaju DM.  
*Olabisi Onabanjo Teaching Hospital, Sagamu, Ogun State*

*Background:* It is essential to know the current pattern of childhood morbidities and mortality if the Fourth MDG is to be achieved.

*Objective:* To determine the trend of morbidity and mortality peculiar to different age groups in a Nigerian teaching hospital over a 12-month period.

*Methods:* The hospital records of all the children between birth and age of 16 years admitted into the paediatric wards of OOUTH, Sagamu between November 2010 and May 2012 were reviewed. Data extracted include age, major clinical diagnosis and outcome of admission.

*Results:* There were 862 admissions in all. Neonates

constituted 43.1% while the remaining 21.9%, 20.9%, 14.7% were infants, pre-school age children and school age and adolescents respectively. The overall mortality rate was 10.1%. Age-specific mortality rates were 15.4% for newborn period, 9.4% for infancy, 5.4% for pre-school age and 4.9% for school age and adolescence. The commonest causes of death among neonates and infants were prematurity and bronchopneumonia respectively. Severe malaria was the leading cause of death in the pre-school age. Among school-age and adolescent, no specific cause was significantly more common.

*Conclusion:* Most of the morbidities and mortalities are due to preventable causes. Improved health education and early presentation in the hospital should be encouraged.

A107

### **Childhood Mortality in Mile 4 Mission Hospital Abakaliki, South-Eastern Nigeria**

Muoneke VU,<sup>1</sup> Ibekwe MU,<sup>2</sup> Eke CB,<sup>1</sup> Onwe O,<sup>2</sup> Ibekwe RC.<sup>1</sup>

<sup>1</sup>*Department of Pediatrics, University of Nigeria Teaching Hospital, Enugu*

<sup>2</sup>*Department of Pediatrics, Federal Teaching Hospital Abakaliki*

*Background:* Most previous mortality reports in Nigeria are from Government owned tertiary health facilities that may select for the more severe cases and may not reflect the societal pattern. There are few studies that highlight the experience in primary/secondary health facilities, in spite of the fact that they attend to more than 60% of medical conditions,

*Objective:* The study aims to evaluate the pattern and causes of childhood mortality at a Mission hospital in Abakaliki, South Eastern Nigeria.

*Methods:* The medical records of admissions and deaths of children admitted in Mile 4 hospital Abakaliki from the 1<sup>st</sup> January 2009 to the 31<sup>st</sup> December 2009 were retrospectively reviewed.

*Results:* Of the 1102 patients admitted within this period, 72 died giving a mortality of 6.5%. There were 43 males and 29 females, the male: female ratio was 1.5:1. Most of the deaths 58 (80.6%) occurred among children younger than 2 years. Severe malaria (37.5%), gastroenteritis (23.6%) and broncho-pneumonia (15.3%) were the most common causes of death. The modal months for childhood mortality in this hospital were between May and August (55.6%) and were mainly due to severe malaria and pneumonias, while a smaller peak in February and March (16.7%) was due to gastroenteritis.

*Conclusion:* Mortality was more common among children younger than 2 years of age. Severe Malaria, gastroenteritis and pneumonia were the most common causes of death. A proactive planning taking into account the seasonal variation of these diseases could reduce the childhood mortality recorded.

A108

### **Expansion of the incubator capacity of Special Care Baby Units in Nigeria: a contribution to MDG4 target**

Amadi HO,<sup>1</sup> Azubuike JC,<sup>2</sup> Osibogun AO.<sup>3</sup>

<sup>1</sup>*Bioengineering Department, Imperial College, London, SW7 2AZ, United Kingdom;*

<sup>2</sup>*Department of Pediatrics, Enugu State University Teaching Hospital, Park Lane, Enugu, Nigeria*

<sup>3</sup>*Lagos University Teaching Hospital, Idi-Araba, Lagos, Nigeria*

*Background:* Millennium Development Goal 4 targets a two-thirds reduction in mortality in children under 5 years of age (U5MR) between 1990 and 2015. Since 40% of deaths in children under 5 years of age occurs in the first month of life (neonatal mortality), any measures undertaken to improve on newborn care would help contribute to the improvement in the under five mortality rate. As the deadline approaches, concerned players in the field are reviewing and questioning the effectiveness of the strategies being applied. In August 2012, the Lancet-Imperial Commission on Technologies for Global Health published a review<sup>1</sup> which appeared to suggest that the time and funds spent on huge high-tech investments might not have been as cost-effective to global health as was expected. The review did recognize the impact of Nigeria's recycled incubator technology (RIT) as a positive contribution to the newborn health target of MDG4. In spite of the success of the RIT, it is necessary that Special Care Baby Units (SCBU's) in Nigeria re-examine prevailing strategies, in order to ascertain that these provide progressive growth in incubator capacity and other facilities that ensure continuous and sustainable good quality of care.

*Objective:* To examine the strategic expansion of incubator capacities in Special Care Baby Units of 5 tertiary health institutions in Nigeria over a ten-year period (2003 – 2012).

*Methods:* The SCBUs of 16 tertiary health institutions in Nigeria including the University of Benin Teaching Hospital (UBTH), Benin, Federal Medical Centre (FMC), Owerri, Federal Medical Centre (FMC), Nguru, Lagos University Teaching Hospital (LUTH), Lagos, University of Nigeria Teaching Hospital (UNTH), Enugu etc were recruited into the study at various times and closely monitored. Each Unit was assessed every six months and reports submitted with appropriate recommendations to the Hospital Management. Each Hospital was assisted with the institution of failure-preventive maintenance of existing systems, whilst the RIT was used to expand the incubator capacity of the various Units.

*Results:* The UBTH incubator capacity increased from one (1) functional incubator in June 2006 to 24 by the end of 2012; FMC Owerri increased its capacity from 1 (one) in March 2005 to 22 by the end of 2012. LUTH, Lagos, increased its capacity from zero (0) in January 2007 to 37 by the end of 2012. The FMC, Nguru, which had no functional incubator in March 2008, had increased its capacity to 15 by the end of 2012, whilst the

UNTH, Enugu, had progressed from zero functional incubator capacity in April 2009 to 15 by the end of 2012.

Progress was often markedly delayed or needlessly terminated by succeeding Hospital Administrations, e.g. at UPTH, JUTH, EBSUTH, UITH etc. which were slow or reluctant in catching up with the vision of their predecessors.

*Conclusion:* This model has attempted to demonstrate systems availability, sustainability and the growth requirement in these Units that could contribute positively to the newborn care target of MDG4.

B101

**Knowledge of Childhood Diseases by Caregivers whose Children were Hospitalized in University of Benin Teaching Hospital, Benin City, Nigeria**

Nwaneri DU, Oviawe OO,<sup>1</sup> Oviawe O.

*Department of Child Health and <sup>1</sup>Department of Radiotherapy and Clinical Oncology, University of Benin Teaching Hospital, Benin City, Nigeria.*

*Background:* Health education and knowledge of patients and caregivers (in pediatric cases) about common childhood diseases is an important component of health care services and should form integral part of patients' care in hospitals.

*Objectives:* To assess the caregivers' knowledge of their child's illness following admission in hospital as well as assess whether health care providers render health education services during their daily routine works.

*Methods:* Subjects were caregiver and child (ages 0 – 5 years) pair admitted in pediatric wards for common childhood illnesses from July to October 2012. A semi-structured research administered questionnaires was used to obtain data from the caregivers. Each child's case note was then used to cross-check data obtained on child's disease diagnosis and to check whether the attending physicians documented the content of health information provided to the caregivers.

*Results:* Of the 108 children (male 58, female 50; mean age [SD] 18.5±14.6 months; range 1 – 60 months) and caregivers (mean age [SD] 32.1[7.0] years; range 15 – 60 years) pair; two-third of the caregivers correctly identified names of diseases their children had on admission. Mean duration of admission was 4.6 [1.7] days. Only 25/108(23.1%) caregivers were taught about the disease their children presented with. Educational status of the caregivers significantly predicted whether he/she would be taught by the attending physician ( $\beta = -0.13$ , SE = 0.055,  $p = 0.023$ ). In all cases, there was no documentation in the patients' case note about the health information taught by the physicians.

*Conclusions:* Caregivers' knowledge of their child's illness while on admission was poor. Pediatricians should incorporate health education of common childhood illnesses in their daily routine health care services.

B102

**Sexual Abuse in Childhood, Who Is At Fault? The Child the Abuser or the Law?**

Yahaya-Kongoila S , Olaosebikan RR, Ernest SK. Fakayode EO.

*Department of Pediatrics, University of Ilorin Teaching Hospital, Ilorin*

*Background:* Child abuse is very rampant in our environment. However, most cases go unreported due to the stigma associated with it. Even when reported, it is often very difficult to establish proofs that will enable punitive measures against the perpetrator. It is time to really put the searchlight on where the fault lies. We present a classical case of child sexual abuse, which most probably may be the tip of the iceberg in our society.

*Case presentation:* AA, a 7 year old girl, primary school pupil who was sexually assaulted by a 21 year old man. During the holidays, she went to her aunt's shop with no toilet in the facility and she and her cousin were taken to nearby perpetrator's house when she was abused while cousin was in the toilet. The victim had prior to this, had a series of sexual encounters with different people of different age groups, both heterosexual and homosexual. Even though the perpetrator confessed to the abuse, yet after several months, no case has been established against him in the law court.

*Conclusion:* There is a need to protect children, especially the girl child, from circumstances that can lead to their abuse. Parents should also have more time for their children. The need for the individual family and society to stand up to their responsibility was emphasized and the need for law reforms was discussed.

B103

**Prevalence and Pattern of Sexual Abuse among Children attending Ebonyi State University Teaching Hospital, Abakiliki, Ebonyi State**

Chinawa JM,<sup>1</sup> Ibekwe RC,<sup>1</sup> Ibekwe MU,<sup>2</sup> Obu DC,<sup>2</sup> Eke BC.<sup>2</sup>

*<sup>1</sup>Department of Pediatrics, University of Nigeria Teaching Hospital, Enugu, Nigeria*

*<sup>2</sup>Department of Pediatrics, Ebonyi State University Teaching Hospital, Abakiliki, Nigeria*

*Background:* Child sexual abuse is broadly defined as both direct genital contact and indirect interactions such as 'exposure' or internet-based activity (for example, the sending of electronic sexual pictures to minors). Though sexual abuse is common, yet many adults are not prepared or unwilling to deal with the problem when faced with it, this could lead to underreporting of the crime and stigmatizing of the victim.

*Objectives:* To determine the prevalence and pattern of sexual abuse among children attending Ebonyi State University Teaching Hospital, Abakiliki.

*Methods:* A retrospective study of cases of sexual abuse that presented in the children outpatient clinics of EB-SUTH between the 1<sup>st</sup> of January and 31<sup>st</sup> of December 2010.

*Results:* A total of 3750 children attended clinic of which 33 were diagnosed as being sexually abused, giving a prevalence rate of 0.9%. They were 31 (93.9%) females and 2 (6.1) males, most of the reports were made by the victims 23 (69.7%) and or their parents 9 (27.3%). Most of the reports made happened within one week 15 (45.5%). It is noted that HIV test was done which was negative among 15 (42.4%) children and positive in one (3%) after twelve weeks.

*Conclusions:* The prevalence of sexual abuse in EBSUTH is 0.9%. This low prevalence could be due to the fact that child sexual abuse is scantily reported because of the stigma attached to it.

#### B104

##### **Stray Dog Trade Fuelled By Dog Meat Consumption as a Risk Factor For Human Rabies Infection In South-Eastern Nigeria**

Ekanem EE,<sup>1</sup> Eyong KI,<sup>1</sup> Philip-Ephraim EE,<sup>2</sup> Eyong ME,<sup>1</sup> Adams EB,<sup>1</sup>, Asindi AA.<sup>1</sup>

<sup>1</sup>Department of Pediatrics, <sup>2</sup>Department of Internal Medicine, University of Calabar, Calabar.

*Background:* Rabies is a preventable zoonosis with the highest case fatality rate of any disease in the world. In the developing world, it is transmitted mainly by dog bites. In parts of South-eastern Nigeria, dog meat is a delicacy. This case series aims at highlighting trade in stray dogs as a major risk factor of human rabies in South-eastern Nigeria.

*Method:* Patients admitted into the University of Calabar Teaching Hospital (UCTH) with the diagnosis of rabies between July and October 2012 were analysed for risk factors, post exposure prophylaxis (PEP), health seeking behaviour and outcome. Focused group interview was conducted among traders/ handlers of stray dogs.

*Result:* Nine rabid patients, aged 5 to 52 years, were recorded during the four 4-month period. Eight of these were males who got infected directly or indirectly through trading in stray dogs for human consumption. None of the cases had received PEP and all patients died.

*Conclusion:* Trading in stray dogs, fuelled by dog meat consumption, is a risk factor for human rabies in South-eastern Nigeria.

*Recommendation:* Culling of stray dogs, monitoring of the stray dogs trade and public enlightenment on PEP are recommended.

#### B105

##### **Sleep Hygiene of Children in Abakaliki, South Eastern Nigeria**

Orji I,<sup>1</sup> Anyanwu OU,<sup>1</sup> Ibekwe RC,<sup>2</sup>

<sup>1</sup>Federal Teaching Hospital, Abakaliki, <sup>2</sup>University of Nigeria Teaching Hospital, Enugu

*Background:* Sleep hygiene is the control of all behavioural and environmental factors that precede sleep and may interfere with sleep. Poor sleep hygiene could interfere with a child's proper functioning.

*Objective:* The study is aimed at determining the pattern of sleep hygiene and factors contributing to poor sleep among children attending children outpatient in Federal Teaching Hospital Abakaliki.

*Methods:* A cross sectional descriptive study conducted at the children outpatient clinic of FETHA. The study instrument was the BEARS screening tool and subjects were children aged 3-16 years.

*Results:* Of the 354 children surveyed. 9% had difficulty falling asleep, 15% wake up frequently at night. Only 33.3% have regular bedtime and wake time and 15.3% have regular day time naps. 41.8% frequently watch television or play rough play an hour to bedtime. 66.9% eat heavy meal before bedtime, most (38.7%) eating 30minutes to 1 hour before going to bed. 19.8% have television in their bedroom. Problems with going to bed (8.5%), falling asleep (12.6%), night waking (13.3%) and day time sleepiness (17.2%) were most prevalent in children aged 6- 10 years . Watching television or playing rough play are significantly associated with daytime sleepiness (p=0.002), waking up at night (p=0.00) and problems with falling asleep (p=0.001).

*Conclusion:* Poor sleep hygiene is common in this environment. Health education to parents on the importance of good sleep hygiene is therefore necessary.

#### B106

##### **Hyperglycemia in the Children Emergency Room**

Oyenusi EE,<sup>1</sup> Oduwole AO,<sup>1</sup> Aronson AS.<sup>2</sup>

<sup>1</sup>Lagos University Teaching Hospital, Idi-Araba, Lagos, <sup>2</sup>Hospital of Halland, Sweden

*Background:* Hyperglycemia occurs frequently among critically ill non-diabetic children. Hyperglycemia may be advantageous providing the glucose-dependent organs such as the brain and blood cells adequate supply for their needs or be a risk factor for adverse outcomes and increased morbidity and mortality in children during acute illnesses.

*Objectives:* To determine the prevalence of hyperglycemia and the incidence in different disease entities among children admitted to the Children's Emergency Rooms.

*Methods:* A prospective study involving two tertiary hospitals in Lagos. Study subjects included all children aged beyond one month who were admitted into the emergency room. An *Accu-Chek Active* glucometer was used for the bedside blood glucose. Hyperglycemia was defined as blood glucose  $\geq 7.8$ mmol/L.

*Results:* 1040 patients were recruited. Hyperglycemia was recorded in 132 patients (prevalence rate of 12.7%). Leading diagnoses associated with hyperglycemia included acute respiratory infections (18.8% hyperglycemic versus 80.5% normoglycemic patients, p=0.047), gastroenteritis (16.3% versus 75.5%, p=0.20), septicemia (12.9% versus 78.6%, p=0.83), malaria (10.7% versus 82.7%, p=0.27), sickle cell anemia (10.2% versus 85.2%, p=0.44) and meningitis (8.1% versus 90.3%, p=0.21). The mortality of patients with hyperglycemia (15.2%) was twice that of the normoglycemic patients (7.4%) and the difference was statistically significant ( $\chi^2 = 8.82$ , p = 0.003).

**Conclusion:** Hyperglycemia is common in ill children admitted to the emergency rooms and a risk factor for increased mortality. Blood glucose determination is important in all acutely ill children at presentation. The practice of empirical administration of intravenous bolus of glucose without blood glucose determination in ill children should be discouraged.

B107

**Indications for Oxygen Therapy and its Outcome in Children Admitted Into the Children Emergency Ward of University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu**

Asinobi I, Edelu B, Onyeyile I, Aronu AE, Eze J, Ihekwe RC

*University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu*

**Background:** Oxygen is one of the most commonly used interventions in emergency pediatric units worldwide, when appropriately used it could be lifesaving. However, its use has its complications. There is need to audit emergency units to determine its appropriate use so as to ensure quality care. This study is aimed at auditing oxygen use in UNTH.

**Objectives:** To review the indications of oxygen therapy and its outcome in children admitted in the children emergency ward of UNTH, Enugu

**Methods:** This is a retrospective review of the records of admissions in CHER, UNTH from January 2007 to May 2012.

**Results:** Of the 3689 children admitted 458(12.42%) received oxygen. Of these 55.6% were males while 32.2% were females. The major indications for oxygen therapy were severe sepsis (56%), bronchopneumonia (25%), and severe malaria (28%). Pulse oximetry was done in only 65% of patients before the commencement of oxygen. In 76% of cases oxygen was commenced at values  $\leq$  92%. The average duration of oxygen therapy was 54 hours. The predominant route of administration was intranasal in 95% of cases.

Of the cases that received oxygen, 26.4% died, 35.7% were transferred to the ward, 36% were discharged and 1.9% was discharged against medical advice.

**Discussion:** Oxygen therapy remains an essential component of the management of acutely ill children. Indications for oxygen therapy was not limited to hypoxia as documented by pulse oximetry of 92% and less, but included other reasons like severe anemia and respiratory distress.

C101

**Prevalence of Urinary Tract Infection in Febrile Under Five Children in Enugu, South Eastern Nigeria**

Ibeneme CA,<sup>1</sup> Okafor HU,<sup>2</sup> Ikefuna AN,<sup>2</sup> Ozumba UC,<sup>3</sup> Oguonu T.<sup>2</sup>

<sup>1</sup>*Department of Pediatrics, Federal Medical Centre, Umuahia.*

<sup>2</sup>*Department of Pediatrics,* <sup>3</sup>*Department of Medical Microbiology, University of Nigeria Teaching Hospital, Enugu.*

**Introduction:** Fever is common to urinary tract infection as with other febrile illnesses in under-fives. Little attention is paid to UTI as a cause of fever in this age group giving an erroneous impression that it is uncommon.

**Objectives:** To determine the prevalence of urinary tract infection in febrile under-fives in Enugu and relate its occurrence to age, gender and clinical features.

**Methods:** Two hundred febrile children aged 1 month to 60 months who presented at the Children's Out-patient Clinic of the University of Nigeria Teaching Hospital Enugu between February and April 2010 and met the study criteria were studied. Urine specimens were obtained by suprapubic aspiration and midstream collection where appropriate. Standard laboratory procedures were used to culture the urine specimens and identify the bacterial pathogens.

**Results:** Of the 200 children studied, 112 were males while 88 were females. The prevalence of UTI was 11% and was significantly higher in females than in males ( $p = 0.049$ ). Prevalence was also higher in children below 12 months of age than in those 12 months and above ( $p=0.028$ ). Some subjects presented with features such as vomiting, abdominal pain, diarrhea, urinary frequency and urgency but no clinical feature had significant association with UTI.

**Conclusion:** Urinary tract infection is common in febrile under-fives especially among females and infants. No single clinical feature is indicative of UTI in these children.

C102

**Bacterial causes of urinary tract infection and their antimicrobial sensitivity patterns in febrile under-fives in Enugu, South Eastern Nigeria**

Ibeneme CA, 1 Okafor HU,<sup>2</sup> Ikefuna AN,<sup>2</sup> Ozumba UC,<sup>3</sup> Oguonu T.<sup>2</sup>

<sup>1</sup>*Department of Pediatrics, Federal Medical Centre, Umuahia.*

<sup>2</sup>*Department of Paediatrics,* <sup>3</sup>*Department of Medical Microbiology, University of Nigeria Teaching Hospital, Enugu.*

**Introduction:** Urinary tract infection is an important cause of morbidity and mortality in children. Antimicrobial resistance rate among uropathogens is an increasing problem limiting therapeutic options, and underscores the need to develop local guideline for empiric antibiotic choice.

**Objectives:** To identify the bacterial pathogens responsible for UTI in febrile under-fives in Enugu as well as their antibiotic sensitivity patterns.

**Methods:** Urine specimens were obtained from 200 febrile children aged 1 month to 60 months seen at the Children's Out-patient Clinic of the University of Nigeria Teaching Hospital Enugu from February to April 2010, having met the inclusion criteria. Standard laboratory procedures were used to culture the urine specimens, identify the bacterial pathogens and their antibiotic sensitivity patterns.

**Results:** Significant bacteriuria occurred in 22 (11%) of the samples. *Escherichia coli* was the commonest organism (31.8%) isolated, followed by *Staphylococcus aureus* (22.7%), *Klebsiella* spp (13.6%) and *Streptococcus faecalis* (13.6%). *Proteus* spp., *Pseudomonas* spp., *Enterobacter* spp., and *Serratia* spp accounted for 4.5% each. Most of the isolates were sensitive to ofloxacin, ciprofloxacin, nitrofurantoin and ceftriaxone, while high levels of resistance to ampicillin, cotrimoxazole, amoxicillin, nalidixic acid were observed.

**Conclusion:** *Escherichia coli* is the most common cause of UTI in febrile under-fives in Enugu. Ciprofloxacin and ceftriaxone are advocated for the empiric treatment of febrile UTI in Enugu but their use should be guided by sensitivity studies.

C103

#### **Antimicrobial Sensitivity Pattern of Urine Isolates from Adolescents with Asymptomatic Bacteruria in Enugu**

Nwokocha ARC,<sup>1</sup> Okafor HU,<sup>1</sup> Onukwuli V,<sup>1</sup> Ujunwa FA,<sup>1</sup> Onyemelukwe N.<sup>2</sup>

<sup>1</sup>Department of Pediatrics, University of Nigeria Teaching Hospital, Enugu.

<sup>2</sup>Department of Medical Laboratory Sciences, University of Nigeria Enugu Campus.

**Background:** Asymptomatic bacteriuria (ABU) is common among adolescents who may have some predisposing factors. The topic of whether ABU should or not be treated is still an issue of debate. However in certain situations where its treatment is beneficial, knowledge of the common isolates as well as their antibiotic sensitivity pattern becomes necessary.

**Objective:** This study was conducted to determine the antibiotic susceptibility pattern of the common organisms isolated from secondary school adolescents with asymptomatic bacteriuria.

**Methodology:** Midstream urine specimen was collected and cultured. A significant growth of 10<sup>5</sup> organisms/ml was identified with Analytical Profile Index 20 tests for identification of Enterobacteraceae (API-20-E) and for Gram positive cocci by other standard methods.

Antibiotic sensitivity test was analyzed by disc diffusion method using different antibiotics and their zone of inhibition was measured.

**Results:** The bacterial isolates were identified as *Staph saprophyticus* (29.51%), *Enterococcus* (26.23%), *Staph aureus* (24.59%), *Escherichia coli* (14.75%), others (6.55%). *Staph saprophyticus* showed highest sensitivity

to levofloxacin (61.11%), and 50% resistance to both ceftriaxone and ciprofloxacin. *Enterococcus* showed 68.75% sensitivity to ciprofloxacin and 93.75% resistance to erythromycin. *Staph aureus* showed 53.33% to levofloxacin and an equal amount of resistance to ciprofloxacin and ceftriaxone. All isolates showed 100% resistance to ampicillin and 98.36% resistance to Gentamycin.

**Conclusion:** The quinolone antibiotics are useful in the empirical treatment of asymptomatic bacteriuria when indicated.

C104

#### **Bacterial Isolates from the Stools of Children Aged Less Than 5 Years with Acute Diarrhea in Kaduna, Northwestern Nigeria**

Eseigbe EE,<sup>1</sup> Adama SJ,<sup>3</sup> Ayuba GI,<sup>4</sup> Eseigbe P,<sup>2</sup> Ibok S,<sup>3</sup> Iriah S,<sup>4</sup> Anyanwu F.<sup>4</sup>

Departments of <sup>1</sup>Paediatrics and <sup>2</sup>Family Medicine Ahmadu Bello University Teaching Hospital (ABUTH), Shika-Zaria, Nigeria And Departments of <sup>3</sup>Paediatrics, and <sup>4</sup>Microbiology 44 Nigeria Army Reference Hospital Kaduna, Nigeria

**Background:** Diarrhea is a significant cause of morbidity and mortality among children aged less than 5 years in sub-Saharan Africa. Bacterial organisms are important etiological agents and their identification is vital to effective management.

**Objective:** To identify characteristics of bacterial isolates in the stools of children aged less than 5 years with acute diarrhea.

**Method:** The stools of children aged less than 5 years presenting with acute diarrhea were cultured using Deoxycholate Citrate Agar (DCA) and Salmonella-Shigella (SS) agar. Data was analyzed using Epi Info version 3.5.3 and p values < 0.05 were regarded as significant.

**Results:** Stool samples were obtained from 270 children aged 0.2 years to 4.9 years (mean 1.6 ± 1.4 years). Majority of the children were males (156, 57.8%) and aged < 2 years (64.1%). Diarrhea was bloody in 28(11.8%) children. Antibiotic therapy was instituted in 185 (68.7%) children before presentation and mostly prescribed by caregiver (87, 47%). Metronidazole (154, 83.2%) was the commonest antibiotic prescribed. Bacteria were isolated in 175 (64.8%) samples. The commonest isolate was *Escherichia coli* (105, 60%). Bacteria were isolated from 7(25%) of bloody diarrhea stools and the isolates were *Escherichia coli* (2, 28.6%) and *Shigella* spp (5, 71.4%). Isolates were most sensitive to Ciprofloxacin (167, 95.4%). Bacterial isolation was significantly (p<0.05) associated with age < 2 years, non-use of antibiotics and bloody diarrhea.

**Conclusion:** Enterobacteriae are still important etiological agents of acute diarrhea among children. The study highlights the need for appropriate treatment of children with diarrhea and promotion of prevention.

C105

### Neonatal Septicemia as Seen at University Of Nigeria Teaching Hospital: Current Trend

Adimora GN, Ibeziako SN, Obu HA, Ukoha OM  
 Department of Pediatrics, University of Nigeria  
 Teaching Hospital, Enugu

**Background:** Infectious conditions such as septicemia account for the greatest proportion of deaths within the first month of life in Nigeria. Thus, periodic bacteriologic surveillance in neonatal units is a necessity.

**Objective:** To determine the current prevalent pathogens of neonatal sepsis in the Special Care Baby Unit of UNTH Enugu, and their antibiotic susceptibility pattern.

**Methodology:** One hundred and twelve neonates with clinical suspicion of sepsis underwent bacteriologic screening over an 18month period.

**Results:** A total of 28 (25%) bacteria were isolated, 50% were gram-positive and 50% gram-negative. There were no mixed isolates. The commonest causes of neonatal sepsis were *Staphylococcus aureus* (42.9%), coliform bacilli (32.1%) and *Escherichia coli* (14%). Other isolates were *Streptococcus pyogenes* (7.1%) and *Klebsiella* spp. (3.6%). The susceptibilities of all isolates to at least a penicillin was 39.3% but only 14.3% isolates were susceptible to a combination of a penicillin with gentamicin. However, antibiotic susceptibility of all isolates to at least one third generation cephalosporin or quinolones were 78.6% and 100% respectively. Ceftriaxone and ciprofloxacin were the most useful antibiotics, though effective against, 64.3% and 82% for all isolates respectively.

**Conclusion:** Our data showed a change in the predominant gram negative bacterial pathogen compared with an earlier report from our unit, and an alarming overall decline in the susceptibilities of pathogens to the commonly used antibiotics.

C106

### Effective Nursery Building that Resolves Tropical Evening Fever Syndrome (EFS) in Neonates

Lawan MI,<sup>1</sup> Kawuwa MB,<sup>2</sup> Oyedokun A,<sup>1</sup> Mohammed H,<sup>1</sup> Amadi HO<sup>3</sup>

<sup>1</sup>Department of Paediatrics, <sup>2</sup>Department Obstetrics & Gynecology, Federal Medical Centre, Nguru, Nigeria.

<sup>3</sup>Bioengineering Department, Imperial College London, SW7 2AZ, United Kingdom.

**Background:** Recent publications have commented on neonatal morbidity due to climate-induced Evening Fever Syndrome (EFS) in neonates. EFS on neonates, especially those on incubator care, does not presently have any known clinical remedy as temperature of babies soars up to 42°C in some regions of Nigeria like Nguru during extreme-sunny days. FMC Nguru desperately resorts to ineffective sponging of babies (>37.9°C) with water. We hypothesise that any method of achieving naturally cooled nursery-rooms will eliminate EFS.

**Objective:** To develop and validate a neonatal nursery building-technique that eliminates EFS.

**Methods:** Ethical approval and carer-informed consent were obtained at FMC Nguru. Main nursery was the Control. Two laboratories constructed, a fresh building (Lab-1) and a renovated (Lab-2); surrounding walls doubled with 6cm of air space in-between. In Lab-1, floor was 120cm below ground-level; tap-water-operated heat-exchanger of 15mm copper-piping was lined round the inside wall. Meteorological-data within and outside Laboratories/Control was collected via installed W-8681 weather-station. Neonates were nursed and vital-signs-data collected in all 3 apartments.

**Results:** For extremely hot days (36°C-43°C outside-wind pick-temp), control-room was cooler by 2.3°C, Lab-2 (4.4°C), Lab-1(8.8°C). Average lowest relative-humidity: Control (17%), Lab-2 (25%), Lab-1 (46%). From captured data for hot days between February and October 2012, incubator over-heat was frequent in Control-room but never occurred in Lab-1 or Lab-2; 71% of babies nursed in Control-room required water-sponging 63 times, Lab-2(once), Lab-1(none).

**Conclusions:** Correcting an existing SCBU building using the specifications of Lab-2 or constructing new ones with the specifications of Lab-1 will eliminate EFS and improve outcome.

C107

### Immunization Coverage of Children with Chronic Neurological Disorders Seen in University of Nigeria Teaching Hospital Enugu, Nigeria

Okoro JC,<sup>1</sup> Ojinnaka NC,<sup>2</sup> Ikefuna AN.<sup>2</sup>

<sup>1</sup>Imo State University Teaching Hospital Orlu.

<sup>2</sup>University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu.

**Background:** Children with Chronic Neurological Diseases(CND) may be at risk of inadequate vaccination. Both health workers and caregivers may inappropriately categorize their clinical features as contraindication to vaccination and thus, may not want to immunize them. A dearth of information exists on the immunization status of children with such disorders.

**Objective:** To assess the vaccination coverage rates of children with CND seen at the University of Nigeria teaching hospital (UNTH) Enugu compared to controls. To also determine the relationship between vaccine coverage and type of neurological disorders.

**Method:** Cross-sectional study carried out over a period of 8months from May to December 2008 at the Pediatric Neurology Clinic and Children Outpatient Clinic of the hospital among mothers of children aged 6months to five years. Interviewer-administered pre-tested questionnaire and immunization cards of the children were used. Yates' corrected Chi-Squared test for proportion and student T-test for means were used for analysis. Values of p <0.05 were considered significant.

**Result:** The overall immunization coverage rate of children with CNDs (68.5%) was significantly lower than that of the controls (85.4%) (p= 0.001).Except for HBV, the coverage rates of all the NPI vaccines both in the subjects and controls were higher than the UCI target

of 80%. The type of CNDs significantly affected the immunization coverage of these children ( $p=0.01$ ).

*Conclusion:* There is low immunization coverage of children with CND with significant missed opportunity. The type of the disorder significantly influenced the coverage rate. It is recommended that health care workers should assess the immunization status of children with CND at every opportunity for necessary.

A201

### **Socio-Economic and Cultural Factors Influencing Malnutrition among Under-5 Children in Two Selected Markets in Ibadan North Local Government Area of Oyo State**

Olaniyi AO, Windokun N

*School of Nursing, University College Hospital, Ibadan.*

*Background:* Malnutrition among under-five children is a chronic problem in developing countries. Factors contributing to the development of malnutrition include insufficient dietary intake resulting from social, economic and cultural practices.

*Objective:* This study examined the influence of socio-economic status and cultural practices of the family on malnutrition among under five children in two selected markets in Ibadan.

*Method:* This was a descriptive, non- experimental study involving one hundred (100) mothers of under-five children randomly selected for the study. A semi-structured questionnaire was used to collect data and hypothesis testing done using SPSS 15.

*Results:* The study revealed that underweight children are commonly found in low-income mothers 35(77.8%) than in mothers with higher monthly income 2 (22.2%). It also showed that prevalence of underweight reduces as the level of education increases; viz: primary level of education 17 (51.5%), secondary level 13 (29.5%) and tertiary 6 (28.6%). Again, malnutrition is found to be more common in polygamous families [40 (64.5%)] than in a monogamous families [15 (44.1%)]. Finally, children of mothers who believe in cultural practices that prevent the provision of protein rich food [19 (52.8%)] were more malnourished than children of mothers who do not have such cultural beliefs 22 (35.5%).

*Conclusion:* Poor mothers' income, low educational status, polygamous type of family and bad cultural practices negatively influenced malnutrition among children of the selected markets women. It is therefore recommended that mothers should be empowered economically, educated on the importance of exclusive breastfeeding and using locally available food resources as weaning diet and be enlightened on the effects of adopting harmful cultural practices that prevents the provision of protein-rich foods.

A202

### **Zinc Status and Sexual Maturation of Sickle Cell Anemia (SCA) Children at the University of Nigeria Teaching Hospital (UNTH), Enugu**

Onukwuli VO, Nwokocha ARC, Emodi IJ, Ikefuna AN  
*University of Nigeria Teaching Hospital (UNTH)  
Ituku-Ozalla, Enugu.*

*Background:* Adolescence is an important developmental period of childhood. Adequate nutrition consisting major food constituents and trace elements like zinc is fundamental for optimal sexual maturation.

*Objective:* To determine the pattern of sexual development, age at menarche and serum zinc levels of female SCA children aged 6-18 years and their socioeconomic and age matched HbAA controls.

*Methodology:* In this cross sectional study, information on biodata, age at menarche, medical and drug history as well as 24 hour dietary recall was documented using interviewer administered questionnaire. Sexual maturation was assessed using Tanner staging while serum zinc levels were determined using Atomic absorption spectrophotometer.

*Results:* Eighty-one subjects were compared with 81 controls. There was significant delay in the mean age of attainment of various Tanner stages of breast and pubic hair in the subjects. Mean age of  $14.81 \pm 1.07$  years at menarche in the subjects was significantly higher than  $12.62 \pm 1.18$  years in the controls ( $p = 0.001$ ). Serum zinc level of  $58.01 \pm 10.58$   $\mu\text{g/dl}$  in the subjects was also significantly lower than  $68.37 \pm 8.67$   $\mu\text{g/dl}$  in the controls ( $p = 0.001$ ). Although no consistent association was noted between zinc levels and the stages of sexual maturation using multivariate analysis, serum zinc was found to be a good predictor of breast and pubic hair development.

*Conclusion and Recommendation:* Reduced serum zinc in subjects was associated with delayed sexual maturation. A randomized trial of zinc supplementation in SCA children with delayed sexual maturation is recommended.

A203

### **Influence of Zinc on The Body Mass Index of Children with Sickle Cell Anemia (SCA) at the University Of Nigeria Teaching Hospital, Enugu**

Onukwuli VO, Nwokocha ARC, Emodi IJ, Ikefuna AN  
*Department of Paediatrics, University of Nigeria  
Teaching Hospital, Enugu.*

*Background:* Sickle cell anemia is the most common inherited disorder of the black race and associated with retardation of physical growth. Clinical similarities exist between children with SCA and those with zinc deficiency.

*Objective:* To assess the physical growth and serum zinc levels of SCA children and their socioeconomic and age matched controls.

*Methodology:* A cross sectional study on children aged 6

-18 years at the UNTH, Enugu. Information on biodata, medical history, drug history and 24 hour dietary recall was collected using interviewer administered questionnaires. Weights and heights were measured and their BMI calculated. Serum zinc was determined using Atomic absorption spectrophotometer.

**Results:** One hundred and sixty two children consisting of 81 HbSS and 81 HbAA were studied. Mean weights and BMI of the subjects ( $34.58 \pm 12.76\text{kg}$  and  $16.27 \pm 2.76\text{kg/m}^2$ ) respectively was significantly lower than  $40.19 \pm 13.37\text{kg}$  and  $18.40 \pm 2.96\text{kg/m}^2$  respectively in controls. ( $p = 0.01$ ) while differences in mean heights were not significant. Mean serum zinc level of  $58.01 \pm 10.58\mu\text{g/dl}$  was also significantly lower than  $68.37 \pm 8.6\mu\text{g/dl}$  in controls ( $p=0.01$ ). Using multivariate analysis, there was a positive correlation between serum zinc and BMI of the children. Serum zinc level was a significant predictor of weight, height and BMI.

**Conclusion:** Reduced serum zinc in SCA patients was associated with delayed physical growth.

**Recommendation:** A randomized trial of zinc supplementation in SCA patients with growth retardation is recommended.

A204

#### **Serum Zinc Levels in Hospitalized Children with Acute Lower Respiratory Infections in Ilorin, Kwara State**

Ibraheem RM,<sup>1</sup> Bilamin SA,<sup>2</sup> Gobir AA,<sup>1</sup> Johnson WBR.<sup>1</sup>

<sup>1</sup>Department of Pediatrics, <sup>2</sup> Department of Chemical Pathology, University of Ilorin Teaching Hospital, Ilorin, Kwara State

**Background:** Malnutrition deficiency has continued to attract a lot of research interest, whereas the import of micronutrient deficiency like zinc has only recently become the focus of research attention. Against the background of the present dearth of data on the status of zinc levels in Nigerian children with ALRI, this study was carried out in Ilorin Nigeria to determine the serum zinc levels in hospitalized children with ALRI.

**Methods:** This comparative cross-sectional study included 120 children aged 2 months to 5 years with ALRI recruited as subjects and 120 age-and-gender matched peers without ALRI as controls. Socio-demographic, clinical and laboratory data were obtained. The serum zinc levels was analyzed with a Jenway™ spectrophotometer after initial preparation with the QuantiChrom™ zinc assay kit.

**Results:** Overall the male: female ratio was 1.6:1. The mean (SD) serum zinc level in subjects with ALRI of  $18.7 (11.8) \mu\text{g/dl}$  was significantly lower than the corresponding value of  $53.1 (18.5) \mu\text{g/dl}$  recorded in the controls ( $p=0.001$ ). Furthermore, the 98.3% prevalence of zinc deficiency in children with ALRI was significantly higher than the 64.2% recorded in controls ( $p=0.001$ ).

**Conclusion:** lower serum zinc levels are significantly associated with ALRI compared with those without. Adequate enlightenment of mothers and health workers on appropriate zinc-rich food sources would likely re-

duce ALRI-related morbidity and mortality.

A205

#### **High Rate of Micronutrient Deficiency among Intestinal Failure Patients during and After Transition to Enteral Nutrition**

Ubesie AC,<sup>1</sup> Henderson CJ,<sup>2</sup> Mezzoff GA,<sup>2</sup> Kocoshis SA,<sup>2</sup> Cole CR.<sup>2</sup>

<sup>1</sup>University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.

<sup>2</sup>Cincinnati Children's Hospital, Ohio

**Background:** Micronutrient malabsorption occurs in intestinal failure (IF) due to anatomic defects, physiologic derangement or a combination of both. Micronutrient deficiencies are associated with an increased risk of morbidity and mortality.

**Objective:** To determine the prevalence of specific micronutrient (iron, zinc, magnesium, phosphorus, selenium, copper, folate, vitamins A, D E and B12) deficiencies in children with IF, and identify risk factors associated with developing these deficiencies.

**Method:** A retrospective review of prospectively collected data from children with IF managed by the intestinal care team at Cincinnati Children's Hospital Medical Center, Ohio, between July 31<sup>st</sup> 2007 and August 1<sup>st</sup> 2012. Transition to full enteral nutrition was defined as the period during which the patient received between 20%-100% of estimated required nutrition enterally. Full enteral nutrition (FEN) was defined as patient tolerating all of the estimated required nutrition (100%) enterally for > 2 weeks.

**Results:** Two hundred and four IF patients were included in the study. Necrotizing enterocolitis (NEC) was the most common cause of IF (27%). Common micronutrient deficiencies during transition to FEN were iron (79.3%), vitamin E (54.5%) and vitamin A (36.8%). Majority (89%) of the subjects had anemia. In patients who were successfully transitioned to FEN, Iron deficiency was the most common micronutrient deficiency (43%) reported. However the prevalence of iron deficiency was significantly lower on FEN compared to during the transition period ( $p=0.0007$ ). Anemia was documented in 40% of the subjects on FEN.

**Conclusion:** IF patients have high prevalence of micronutrient during and after transition to enteral nutrition.

A206

#### **Vitamin D Levels and Abnormal Bone Health in Children with Intestinal Failure**

Ubesie AC,<sup>1</sup>Kocoshis SA,<sup>2</sup>Henderson CJ,<sup>2</sup>Mezzoff GA,<sup>2</sup> Cole CR.<sup>2</sup>

<sup>1</sup>University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.

<sup>2</sup>Cincinnati Children's Hospital, Ohio.

**Background:** Intestinal failure (IF) is associated with macro and micronutrient malabsorption and deficiencies. Vitamin D deficiency is one of the commonly associated micronutrient deficiencies reported in IF patients due to a complex interaction between absorption and physiology. This interplay may lead to abnormal bone

health in these patients.

**Objective:** To determine the prevalence and the predisposing factors for vitamin D deficiency and abnormal bone health in children with IF.

**Method:** A retrospective review of intestinal failure patients managed by the Intestinal care center at the Cincinnati Children's Hospital Medical Center between July 31<sup>st</sup> 2007 and August 1<sup>st</sup> 2012. Vitamin D deficiency was defined as serum vitamin D < 20ng/dL. Abnormal bone mineral density (BMD) was defined as z-score < -2 as measured by Dual energy X-ray Absorptiometry (DXA) scan.

**Results:** One hundred and twenty three patients were enrolled; 71 boys (57.7%) and 52 girls (42.3%). The mean age at entry into the study was 5.8 years. Fifty-two patients (42.3%) had vitamin D deficiency documented and 17.7% had abnormal BMD z-score. Older age (>10 years) was significantly associated with vitamin D deficiency ( $p = 0.02$ ) and abnormal BMD z-score ( $p = 0.015$ ). There was no relationship between Vitamin D levels and BMD z-score ( $p = 0.147$ ).

**Conclusion:** Older IF patients had higher risk of vitamin D deficiency and abnormal BMD z-scores.

A207

### **Rickets as seen in Federal Teaching Hospital Abakaliki**

Ibekwe MU, Ogugua CF, Ogeh CO.

*Department of Pediatrics, Federal Teaching Hospital, Abakaliki*

**Background:** Rickets is a process resulting in defective mineralization of the growth plate. It constitutes 15% of disorders seen in the pediatric endocrine clinic of Federal Teaching Hospital Abakaliki (FETHA). Its management is fraught with diagnostic challenges.

**Objective:** To review cases of rickets seen in endocrine clinic of FETHA and how they present.

**Method:** This is a retrospective study of children presenting with rickets attending the endocrine clinic of FETHA between October 2010 and September 2012. Case files of these children were retrieved and analyzed. Information obtained included age, sex, clinical presentation, laboratory investigation treatment and outcome.

**Result:** A total of 64 children with endocrine disorders were seen during the study period under review. Eight (15%) children presented with rickets. The male to female ratio was 1.6:1. The average age at presentation was 24.1 months (with a range of 13-60 months). Most common presentations were genu varum (62.5%), genu valgum, bone pain, joint swellings (12.5% respectively). Average calcium value was 1.38 (2.2-2.8) with a range of 0.35-1.9. Average phosphate was 1.15mg/dl (1.1-1.6) with a range of 0.63-2.1mg/dl. That of alkaline phosphate was 453.3 (25 – 92) mg/dl. All cases had positive radiologic findings and belonged to a modal social class of 3. Seventy five percent were lost to follow up while 2 responded to Vitamin D treatment.

**Conclusion:** Rickets in Abakaliki is an important endocrine problem that cuts across the different social classes and most of them are lost to follow up during treatment.

B201

### **Clinical and Laboratory Profile of ARV Naïve HIV Infected Children in Enugu, South-East Nigeria**

Iloh KK, Ubesie AC, Iloh O, Okoli C, Eze C, Ibeziako NS, Emodi IJ.

*Department of Pediatrics, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.*

**Background:** HIV/AIDS is one the most dynamic epidemic infectious disease. An estimated 1000 children are newly infected with HIV every day, most of them in sub-Saharan Africa. They often present with various clinical and laboratory manifestations that complicates their management.

**Objectives:** To document the baseline clinical and laboratory features of HIV-infected children presenting at the University of Nigeria Teaching Hospital.

**Methods:** Data was collected prospectively from HIV infected children seen at the APIN Clinic of UNTH between July 1<sup>st</sup> 2010 and June 30<sup>th</sup> 2012. Clinical and immunological staging were done using the WHO criteria and data analysis was with SPSS version19.

**Results:** Two hundred and fifty-two children were enrolled into the study. The most common route of infection was vertical (90.8%). Common presenting clinical features were: anemia (91.5%), cough (74.6%), papular rash (62.7%), fever (61.5%) and poor weight gain (61.1%). Tuberculosis, hepatitis B and C co-infections were seen in 34.8%, 2.6% and 3.4% of the children respectively. Most of the patients had either a WHO clinical stage III (42.6%) or II (38.2%) disease. Severe immunosuppression based on CD4% or count was seen in more than half of the patients (55.5%). Univariate analysis showed that cough ( $p=0.02$ ), skin warts ( $p=0.01$ ), weight ( $p=0.00$ ) and height ( $p=0.02$ ) < 3<sup>rd</sup> percentiles significantly predicted severe immunosuppression but only cough ( $p=0.013$ ) remained significant on multivariate analysis. Fifty-seven (23.8%) children had leukocytosis while 8.8% had thrombocytopenia.

**Conclusions:** Majority of our patients presented late (advanced disease). Cough, rash, fever and anemia were most common features seen.

B202

### **HIV Orphan Status and Severity of Pediatric HIV Disease Seen In Enugu, South-East Nigeria**

Iloh KK, Ubesie AC, Iloh O, Okoli C, Eze C, Ibeziako NS, Emodi IJ.

*Department of Pediatrics, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.*

**Background:** Since the beginning of the HIV epidemic, about 15 million children have lost one or both parents to HIV/AIDS, 90% of them live in sub-Saharan Africa. The death of one or both parents has both psycho-social and medical implications for an HIV-infected child.

**Objectives:** To determine if HIV-infected AIDS orphans present with more severe HIV disease than their non-orphaned counterparts.

**Methods:** Data on orphan status was collected prospectively from HIV infected children presenting at the pediatric HIV clinic of University of Nigeria Teaching Hospital between July 1<sup>st</sup> 2010 and June 30<sup>th</sup> 2012. Single orphan was defined as having lost either of the parents and double if both parents were dead. Data analysis was with SPSS version 19.

**Results:** Children aged 6 months to 15 years were enrolled into this study. One hundred and three (41.1%) were AIDS orphans. Among the orphans, 71.8% and 28.2% were single and double orphans respectively. The route of HIV transmission was evenly distributed between the two groups of patients ( $p=0.91$ ). Mother was the primary care of 98% of the non-orphans and 43.7% of the orphans ( $p=0.000$ ). More children from the orphaned group (65.2%) compared to the non-orphans (34.8%) presented at aged 11-15 years ( $p=0.001$ ). Double orphans had more severe anemia (80%) than those who lost either their mother (0%) or father (20%) alone ( $p=0.013$ ). HBsAg co-infection was significantly higher in the orphaned group ( $p=0.042$ ). A relatively higher proportion of HIV-infected non orphans compared to the orphaned group presented with early WHO clinical stages ( $p = 0.26$ ).

**Conclusions:** HIV-infected AIDS orphans present at later age with more advanced disease and HBsAg co-infection than the infected non-orphans. Severe anemia was significantly higher among double orphans.

B203

### **The impact of PMTCT on the Vertical transmission of HIV in Abuja Municipal Area Council (AMAC) of the Federal Capital Territory (FCT)**

Oyesakin AB, Audu LI, Oniyangi OO  
National Hospital, Abuja

**Background:** HIV/AIDS is a major cause of under 5 mortality and 90% of Pediatric HIV/AIDS is acquired through mother to child transmission (MTCT). With the implementation of Prevention of Mother to Child Transmission (PMTCT) program, it is expected that the rate of MTCT of HIV should have reduced drastically. It is on this premise that a study to determine the current rate of MTCT of HIV in Abuja Municipal area council was undertaken.

**Objective:** To determine the current rate of mother to child transmission of HIV in AMAC, Abuja

**Method:** Using the deoxyribonucleic polymerase chain reaction (PCR) test, the HIV status of all the exposed babies delivered in AMAC, over a 9-month period was determined by taking their peripheral blood at 6 weeks of age. This was repeated 6 weeks post cessation of breast feeding for breastfed babies. The extent to which mothers participated in the PMTCT program was noted. The number of babies who tested positive was obtained and computed over the total number of exposed babies to determine the rate of mother to child transmission (MTCT)

**Result:** An overall HIV transmission from mother to child of 6.5% (23/355) was found. A lower rate of 1.6% was obtained as transmission rate for those whose moth-

ers' had complete PMTCT program and 66.6% for those whose mothers' had no PMTCT in pregnancy.

**Conclusion:** This study has shown that the PMTCT program has a significant impact on the mother to child transmission of HIV.

B204

### **Elimination of Mother –To- Child Transmission of HIV Infection: Effectiveness of Integrated HIV Services in a Cottage Hospital with a Highly Subscribed Community Health Insurance Scheme**

Nte AR<sup>1</sup>, Fajola AO<sup>2</sup>, Fakunle BA<sup>2</sup>, Adibe N<sup>3</sup>, Umeji-aego C<sup>3</sup>, Ehigiegba A<sup>4</sup>

<sup>1</sup> Department of Pediatrics, College of Health Sciences, University of Port Harcourt

<sup>2</sup> Community Health, Shell Petroleum Development Company, Port Harcourt

<sup>3</sup> Obio Cottage Hospital, Port Harcourt

<sup>4</sup> Department of Obstetrics and Gynecology, College of Medicine, University of Benin, Benin

**Introduction:** Nigeria is one of the 22 priority countries for the monitoring of the attainment of the goal of eliminating all forms of mother to transmission of HIV infection (EMTCT) by 2015. The *Global Plan* aims to reduce new child HIV infections by 90% and reduce HIV-associated deaths of women during pregnancy, childbirth, and puerperium by 50% from the 2009 baseline; and to reduce mother-to-child-transmission to less than 5%, a level low enough that mother-to-child transmission of HIV would no longer be considered a major public health problem. As part of the four prong approaches for the attainment of these goals an integrated HIV services including the prevention of mother-to-child transmission was initiated at the Obio Cottage Hospital (OCH). The OCH introduced the Community Health Insurance Scheme to increase access of target communities to affordable health care services while reducing out of pocket spending on health care. As part of the scheme, the scope of Maternal, Newborn and child health services and their monitoring indicators at the centre increased.

**Objectives:** The paper presents data generated at the Integrated HIV service programme at the OCH to evaluate its efforts towards the attainment of the goals of the Global Strategy and their monitoring indicators at the centre increased.

**Methods:** The records of HIV services maintained at the OCH from 2009-2012 were reviewed and data extracted for presentation

**Results:** The integrated services offered include antenatal care, HIV counseling and testing, maternal ARV prophylaxis/ART, infant feeding counseling and ARV prophylaxis, IPT and family planning services, DBS for early infant diagnosis. The subscription to these services was high in the two year period of program implementation with increments ranging from 116% to 667 of the 2011 level for various services. Overall, 83() and 113() women respectively were positive in 2011 and 2012. Overall, 58 babies were delivered to HIV positive mothers, 110 mothers started SRV prophylaxis, 220 refilled

their ARV prophylaxis, 144 were compliant with the prophylaxis, 39 were initiated on ART, 69 came for ARV refill and 194 were counseled on Infant feeding. Furthermore, 194 HIV positive women had family planning counselling while 4436, 1693 and 44 respectively received IPT1-3. Among the 58 babies delivered by HIV infected women, who 57 received antenatal care and PMTCT services at the centre, while one absconded to a church, delivered there and presented at 6 weeks with a baby that tested positive. Of the remaining babies, one died at the age of two days and could not be tested for HIV. Among the 57 who survived till 6 weeks, all were initiated on ARV and DBS sent, none tested positive. Additionally the babies receive cotrimoxazole from 6 weeks to 18 months. None of the babies has reached 18 months for a final testing. All the babies were exclusively breastfed for 6 months while their mothers took ARV prophylaxis or HAART and continued the drugs till one week after cessation breastfeeding

*Conclusions:* Integrated HIV services are effective in eliminating Mother-to Child transmission and promote child survival. Ensuring access to these services through a community health insurance scheme is recommended.

B205

#### **White Blood Cell Count in Febrile Children without an Obvious Focus of Infection: a Private Hospital Experience**

Adesanmi TA,<sup>1,2</sup> Mobolaji-Lawal O,<sup>1</sup> Odudu L,<sup>1</sup> Adibuah FN,<sup>1</sup> Akinboni T.<sup>1</sup>

*EMEL Hospital 21 Road Z Close, FESTAC, Lagos State.*

*Background:* EMEL Hospital is a multispecialty hospital and Pediatric center situated in FESTAC Lagos state, Nigeria. Fever without an obvious focus of infection is a common cause of presentation in children aged > 1 month to 60 months at this hospital. Repeated hospital visits and parental anxiety are common. In this era of managed healthcare, polypharmacy and indiscriminate laboratory investigations are wasteful. How can we be more cost effective?

*Objectives:* To determine

1. The white blood cell [WBC] count (total and differential) pattern in these children.
2. What percentage of these children have white cell counts suggestive of an infection (viral or bacterial).  
What percentage of such children have positive malaria parasitemia.

*Methods:* Hospital records of children aged >1 to 60 months over a six month period were retrieved and necessary information was extracted. Data was analyzed using Excel and Epi info softwares.

*Results:* Thirty seven per cent (277/744) had total WBC count greater than 10,000/mm<sup>3</sup>, whilst 0.9% had total WBC count less than 3,500/mm<sup>3</sup>. Relative neutrophilia was found in 79% of cases. Leucocytosis did not vary significantly with age. Positive malaria parasitaemia was found in 50% of cases. Neutrophilia and positive malaria parasitaemia coexisted in 41% of cases.

*Conclusion:* Relative neutrophilia, suggestive of bacterial infection; and positive malaria parasitemia were

very common in these children. Both neutrophilia and malaria parasitemia coexisted in 41% of cases. A differential WBC count and malaria parasitemia evaluation done on such children at first presentation is proposed.

B206

#### **Probable Non- HIV Immune Reconstitution Syndrome: A Case Report**

Orogade AA, Eseigbe E, Abubakar Y, Usman N  
*Department of Pediatrics, Ahmadu Bello University Teaching Hospital, Shika Zaria.*

*Background:* Immune reconstitution inflammatory syndrome (IRIS) results from heightened immunologic and or inflammatory response against pathogens after commencing therapy. Although it gained more recognition after the introduction of anti-retroviral therapy for HIV, non HIV IRIS had been described earlier.

*Case Presentation:* A 12 year old boy presented with history of progressive weight loss, fever, cough breathlessness, severe anemia and generalized lymphadenopathy. He had failed to respond to antibiotics. Chest X-ray revealed widespread lung infiltrates with paratracheal and hilar lymphadenopathy, Complete Blood Count showed severe anemia, leucopenia with relative neutrophilia, no blast cells, normal platelet count and Reticulocyte count of 5%. Tuberculin Skin Test was negative despite a BCG scar. Serial Blood cultures and HIV test were negative. An assessment of disseminated Tuberculosis was made and he was transfused and commenced on 4 drug antituberculous therapy.

After initial good clinical response with tapering fever, on fourteenth day, he developed a sudden onset of severe respiratory distress with SpO<sub>2</sub> of 75% on room air. Chest X-ray then showed pneumatocele which resolved spontaneously within a few hours and trans-thoracic echocardiogram did not show any abnormal features. Thereafter he apparently improved but six days later, he became confused and developed sudden signs of raised intracranial pressure. He succumbed before he could have any neuro-imaging could be done. A probable diagnosis of immune reconstitution syndrome (IRIS) was made.

*Conclusion:* Non HIV IRIS has neither universal clinical criteria nor diagnostic tests to confirm it unlike HIV IRIS. It is usually subtle and can be overlooked.

B207

#### **The Factors Associated with Attention Deficit Hyperactivity Disorder (ADHD) in Nigerian Children with Epilepsy**

Ibekwe R.C<sup>1</sup>, Ndukuba A.C<sup>2</sup>, Aronu A.E<sup>1</sup>, Ojinnaka N.C<sup>1</sup>

*<sup>1</sup>Department of Paediatrics, <sup>2</sup>Department of Psychological Medicine, University of Nigeria Teaching Hospital Enugu*

*Background:* The presence of co-morbidity of attention deficit/hyperactivity disorder and epilepsy worsen the prognosis of epilepsy, make the treatment of epilepsy

more difficult, and affect their quality of life.

**Objective:** To determine the seizure and non seizure related variables associated with ADHD in Nigerian children with epilepsy.

**Method:** A cross-sectional study of 113 children with epilepsy was assessed for ADHD using the home version of the ADHD Rating Scale IV. The influence of certain variables on the presence of ADHD was determined.

**Results:** Sixteen (14.2%) children had ADHD with the inattentive subtype being the most common (68.8%). The variables that were significantly associated with ADHD were poor academic performance ( $p=0.01$ ), living in rural areas ( $p=0.00$ ), history of status epilepticus ( $p=0.00$ ) and the presence of other associated anomalies ( $p=0.00$ ).

**Conclusion:** Children with epilepsy that are under-achieving academically, not living with both parents, with history of status epilepticus, family history of epilepsy, with other neurological anomalies and abnormal EEG finding are at increased risk of having ADHD and should be screened for ADHD.

C201

#### **Management of Uncomplicated Malaria in Under-Fives in Private and Public Health Facilities in South-Eastern Nigeria: A Clinical Audit of Current Practices**

Udoh EE, Oyo-ita AE, Odey FA, Effa EE, Esu EB, Oduwole OO, Chibuzor MA, Meremikwu MM.  
*Calabar Institute of Tropical Disease Research and Prevention, University of Calabar Teaching Hospital, Calabar.*

**Background:** Malaria remains a leading cause of under-five morbidity and mortality in sub-Saharan Africa.

Effective case management is one of WHO's strategies for controlling the disease.

**Objective:** Clinical audit of case management of uncomplicated malaria in under-fives.

**Methods:** Clinical audit was conducted in 24 public and 12 private health facilities in Cross River State, Nigeria from January to March 2012. Trained medical personnel extracted information on selected audit criteria from patients' case records using pre-tested data extraction forms. The audit criteria were checked on the data extraction forms as "Yes", "No" or "Unclear" depending on the findings.

**Results:** Of the 463 case records reviewed, age, gender and weight were reported in 98.1%, 97.3% and 49.7%. A history of fever was obtained in 89.6% and a record of temperature in 74.1%. General examination was performed in 203 (43.8%) children. Malaria parasite test was requested in 132 (28.5%) but performed in 127 (96.2%) children with light microscopy constituting 86.4%. Packed Cell Volume or Haemoglobin was requested in 107 (23.1%) but performed in 95 (88.8%) children. Appropriate dose of Artemisinin Combination Therapy (ACT) was instituted in 300 (64.8%), wrong dose of ACT in 109 (23.5%), inappropriate treatment in 41 (8.9%) and undetermined treatment in 13 (2.8%) chil-

dren. Chloroquine was the most common inappropriate treatment.

**Conclusion:** The utilization of ACTs for treating uncomplicated malaria has improved in health facilities in the State but patient evaluation is sub-optimum. There is need for proper patient evaluation and confirmation of diagnosis before instituting treatment in these facilities.

C202

#### **The Pattern of Thrombocytopenia in Plasmodium Falciparum Malaria in Children Attending a Tertiary Hospital in Uyo, South Eastern Nigeria**

Utuk EE,<sup>1</sup> Ikpeme EE,<sup>1</sup> Emodi IJ,<sup>2</sup> Essien EM.<sup>3</sup>  
<sup>1</sup>*Department of Pediatrics and* <sup>3</sup>*Department of Hematology, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria.* <sup>2</sup>*Department of Pediatrics, University of Nigeria Teaching Hospital, Enugu, Enugu State, Nigeria.*

**Introduction** Malaria due to *Plasmodium falciparum* (Pf) is a major cause of illness and deaths in children. The occurrence of complications such as thrombocytopenia varies in its prevalence and pattern among different population groups. There is paucity of data on this in Nigerian children.

**Objective:** To determine the prevalence and pattern of thrombocytopenia in malaria due to Pf in children attending a tertiary Hospital in Uyo, Akwa Ibom State located in the south eastern region of Nigeria.

**Methods:** A prospective cross-sectional study of one hundred and eighty children aged six months to fifteen years with microscopically confirmed infection with *P. falciparum* was conducted. They were compared with 180 healthy controls without malaria parasitemia matched for age and gender. Their platelet counts were evaluated using the automated analyzer (Sysmex KX-21N).

**Results:** The overall prevalence of thrombocytopenia (platelet count  $< 100 \times 10^9/L$ ) in the subjects was 5.0%. The mean platelet count ( $\times 10^9/L$ ) in subjects was lower than in the controls with a range of 44 – 565 and 113 – 598 respectively. The mean platelet count in subjects with severe manifestations of malaria was lower than that in those with uncomplicated malaria. There was an inverse relationship between the malaria parasite density and platelet count in subjects ( $r = -0.21$ ;  $p < 0.001$ ).

**Conclusion:** The study showed a higher prevalence of thrombocytopenia in children presenting with severe malaria from Pf in this setting. It is therefore important to monitor the platelet counts of such children.

C203

#### **Comparative Efficacy and Acceptability of Artemether-Lumefantrine versus Dihydroartemisinin-Piperaquine in Kenyan Children with Uncomplicated Falciparum Malaria**

Ogutu B,<sup>1</sup> Onyango KO,<sup>2</sup> Ongecha JM,<sup>3</sup> Juma E,<sup>3</sup> Otieno GA,<sup>1</sup> Obonyo C,<sup>3</sup> Otieno L,<sup>1</sup> Eyase F,<sup>4</sup> Johnson JD,<sup>4</sup> Perkins DJ,<sup>5</sup> Akhwale W.<sup>6</sup>  
<sup>1</sup>*Walter Reed Project-Centre for Clinical Research,*

Kenya Medical Research Institute, Nairobi, Kenya, <sup>2</sup>Centre for Clinical Research, Kenya Medical Research Institute, Kisumu, Kenya, <sup>3</sup>Centre for Global Health Research, Kenya Medical Research Institute, Kisumu, Kenya, <sup>4</sup>Walter Reed Project, Kenya Medical Research Institute, Kisumu, Kenya, <sup>5</sup>University of New Mexico, Albuquerque, NM, United States, <sup>6</sup>Department of Disease Prevention and Control, Ministry of Public Health and Sanitation Nairobi, Kenya

**Background:** Artemether-lumefantrine (AL) and dihydroartemisinin-piperazine (DP) have been introduced as first and second-line treatment, respectively, for uncomplicated falciparum malaria in Kenya.

**Objectives:** Primary objective was to compare corrected Acceptable Clinical and Parasitological Responses (ACPR) on Day 28 in children treated with AL dispersible (AL<sub>d</sub>) and DP pediatric (DP<sub>p</sub>) with uncomplicated falciparum malaria.

**Methods:** This open-label, comparative study in Western Kenya randomized 454 children with uncomplicated falciparum malaria of age 6-59 months to receive either AL<sub>d</sub> (n=227) or DP<sub>p</sub> (n=227). Children were hospitalized for 3-days for observed treatment and followed up on Days 7, 14, 28 and 42. Adherence to treatment and acceptability were assessed by caregiver questionnaire.

**Results:** No significant differences were observed for corrected ACPR rates on Day 14, 28 and 42 for AL<sub>d</sub> (100%, 97.8%, and 96.8%) and DP<sub>p</sub> (100%, 99.1%, and 98.7%;  $p > 0.05$  for all comparisons). For uncorrected ACPR rates no significant differences were observed on Day 3, 14, 28 and 42 for AL<sub>d</sub> (99.1%, 98.7%, 81.1%, and 67.8%) vs DP<sub>p</sub> group (100%, 100%, 87.7%, and 70.5%;  $p > 0.05$  for all comparisons). Overall incidence of AEs was 65.5% (156/238) and 67.5% (156/231) in AL<sub>d</sub> and DP<sub>p</sub> arms. Adherence to treatment regimen was higher for AL<sub>d</sub> arm (93.6%) compared to DP<sub>p</sub> (85.6%) arm. 82% considered AL<sub>d</sub> 'simple' or 'very simple' to use compared with 67% in DP<sub>p</sub> arm ( $p = 0.007$ ). Taste of AL<sub>d</sub> was 'liked' or 'liked very much' by 72% of respondents, compared with 56% for DP<sub>p</sub> ( $p = 0.001$ ).

**Conclusions:** Both AL<sub>d</sub> and DP<sub>p</sub> are efficacious treatments for uncomplicated falciparum malaria in Kenyan children.

C204

### **Impact of Community Screening and Treatment of Asymptomatic Carriers of *Plasmodium Falciparum* with Artemether-Lumefantrine on Asymptomatic and Gametocyte Carriage: A 12-Month, Cluster-Randomized Study In Sub-Saharan Africa**

Tiono AB,<sup>1</sup> Ouédraogo A,<sup>1</sup> Ogutu B,<sup>2</sup> Diarra A,<sup>1</sup> Coulibaly S,<sup>1</sup> Cousin M,<sup>3</sup> Remy C,<sup>3</sup> Mukhopadhyay A,<sup>4</sup> Soullama I,<sup>1</sup> Sirima SB,<sup>1</sup> Hamed K.<sup>5</sup>

<sup>1</sup>Centre National de Recherche et de Formation sur le Paludisme, Ouagadougou, Burkina Faso, <sup>2</sup>Walter Reed Project-Centre for Clinical Research, Kenya Medical Research Institute, Nairobi, Kenya, <sup>3</sup>Novartis Pharma AG, Basel, Switzerland, <sup>4</sup>Novartis Healthcare Private Limited, Hyderabad, India, <sup>5</sup>Novartis Pharmaceuticals Corporation, East Hanover, NJ, United States

**Background:** Asymptomatic carriers of *P. falciparum* constitute a reservoir for infection of newly hatched mosquitoes.

**Objectives:** Controlled, parallel, cluster-randomized (intervention=9, control=9) 12-month study was conducted in Burkina Faso to evaluate impact at community level of systematic screening and artemether-lumefantrine (AL)/AL dispersible treatment of RDT-detected ACs during 3 community screening campaigns (CSCs1-3).

**Methods:** CSCs1-3 were successively placed 1 month apart before rainy season and CSC4 1 year later. Symptomatic malaria episodes were treated with AL or an alternative in both arms. Proportion of gametocyte carriers (GCs) was evaluated by microscopy in all subjects at CSCs1-4 in intervention arm and in randomly selected 40% subset of control arm, and by qRT-PCR at CSC4 in 1,999 randomly selected subjects across both arms.

**Results:** Prevalence of microscopy-confirmed ACs in intervention and control arms was 42.8% vs 47.5%, 4.1% vs 35.7%, 2.8% vs 32.2% and 34.4% vs 37.8% at CSC1, 2, 3 and 4, respectively. Overall proportion of GCs in intervention and control arms was 9.5% vs 10.2%, 0.6% vs 5.5%, 0.4% vs 5.8% and 4.8% vs 5.1% at CSC1, 2, 3 and 4, respectively. Prevalence (least square mean [SE]) of microscopy-confirmed GCs at CSC4 in intervention arm was 4.9 (0.41) vs 5.1 (0.41) in control arm ( $p = 0.7208$ ). Prevalence of GCs at CSC4 as assessed by qRT-PCR was around 8-fold greater in both arms compared to microscopy (intervention=49.7% vs 6.0%; control=47.3% vs 5.4%).

**Conclusions:** In this community-setting study, intervention arm showed greater reductions in prevalence of ACs and GCs than control arm at CSCs2 and 3, relative to CSC1 ( $p < 0.0001$ ). However, AC and GC prevalence rose thereafter in intervention arm to reach a level similar to control arm at CSC4.

C205

### **Community Acquired Pneumonia: A One Year Review of Pediatric Admissions in Ahmadu Bello University Teaching Hospital Zaria**

Orogade AA, Esegbe EE, Oloorukoba AA, Ezeukwu IE, Adewumni OA.

Department of Paediatrics, Ahmadu Bello University Teaching Hospital Shika-Zaria.

**Background:** Pneumonia is responsible for 17% of all under-five deaths in Nigeria. In March 2009, Nigerian government revised the National Immunization Policy to include "new and underutilized vaccines" among which are the Pneumococcal Conjugate and Haemophilus Influenza B vaccines that prevent 2 of the most prevalent causes of pneumonia in childhood. These antigens became part of routine vaccines in Kaduna State, one of states in the first phase of implementation of this immunization policy.

**Objectives:** To study the current contribution of pneumonia to morbidity and mortality in children admitted into ABUTH Shika Zaria.

*Methods:* Consecutive children admitted to the Emergency Pediatric Unit of Ahmadu Bello University Teaching Hospital over a one year period with clinical and radiological evidence of pneumonia were recruited.

*Results:* A total of 148 children were seen from November 2011 to October 2012. These formed 18.4% (148/805) of the total admissions during this period. The male: female ratio was 1.8:1 and 42.6% (63/148) of them were infants and 90.5% (134/148) were under fives. There was incidence of pneumonia all year round with highest peak in Dec 2011 and two smaller peaks in of incidence in April and August 2012. There were 16 deaths, 10.8% of cases.

*Conclusion:* One in five children admitted to EPU, ABUTH Shika Zaria has pneumonia, with a case fatality rate of 10%. These morbidity and mortality figures are unacceptably high where vaccines are available. There is need for careful monitoring of implementation and utilization of vaccine programs to prevent childhood pneumonia.

## C206

### **Purpura Fulminans Complicating Klebsiella Sepsis: A Case Report**

Adefehinti O,<sup>1</sup> Oke OJ,<sup>2</sup> Olowu WA,<sup>2</sup> Adeodu OO.<sup>1</sup>

<sup>1</sup>Haemato-Oncology Unit, <sup>2</sup>Nephrology and Hypertension Unit, Department of Pediatrics, Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria

*Background:* Purpura fulminans (PF) is a very rare haematological emergency that may complicate severe sepsis in infants and young children. Rapid thrombotic end organ damage with profound morbidity and mortality is common if diagnosis and treatments are delayed.

*Objective:* To highlight the need for early recognition, diagnosis and management of PF.

*Case Report:* A 15 months old female who presented to our Children Emergency Ward with clinical features of sepsis and anaemic heart failure is reported. she was transfused with whole blood and commenced on parenteral Zinacef and Gentamicin. She developed generalised purpuric skin lesions with epistaxis on day four and acute kidney injury on day seven of admission. On day 8, there was bilateral dark colouration of both feet and hands with gangrene of all toes. Blood and urine cultures yielded Klebsiella species sensitive only to imipenem. Haematological tests showed deranged clotting profiles, leucocytosis with toxic granulations, thrombocytopenia and microangiopathic haemolytic anaemia. A definitive diagnosis of PF complicating Klebsiella sepsis was made. Despite FFP and platelet transfusion, haparinsation, EBT and management with Imipenem, patient died on day 25 of admission.

*Conclusion:* Purpura fulminans is a life-threatening consumptive thrombo-haemorrhagic disorder for which a high index of suspicion is needed to make a diagnosis.

## C207

### **The Effect of PEM on the CD4<sup>+</sup> T-Lymphocyte Counts in under-5 Children as seen in Sokoto, Nigeria**

Yusuf T, Jiya NM, Ahmed H.

Department of Pediatrics, Usmanu Danfodiyo University Teaching Hospital, Sokoto

*Background:* Protein-energy malnutrition, a major public health problem in the developing countries, has been associated with impaired cell-mediated immunity.

*Objectives:* To determine the effect of PEM on CD4<sup>+</sup> T-lymphocyte counts among under -5 children.

*Methods:* This was a prospective cross-sectional study conducted among HIV-negative children aged 6 - 59 months with PEM and the HIV-negative well-nourished children between 1<sup>st</sup> November, 2009 and 30<sup>th</sup> April, 2010. The socio-demographic characteristics, weight and some haematological indices of the both groups were documented. The CD4<sup>+</sup>T-lymphocyte count was determined using Partec cytoflow machine.

*Result:* One-hundred children were recruited for each group over a 6 month period. The two study groups were comparable in age ( $p= 0.53$ ) and sex ( $p= 0.65$ ). The mean CD4<sup>+</sup>T-lymphocyte count in children with PEM was  $1705.5\pm 605.6$  cells/ $\mu$ L as compared to  $2314.3\pm 491.1$  cells/ $\mu$ L among the controls ( $p= 0.0001$ ). The mean CD4<sup>+</sup>T-lymphocyte count decreases as the age increases ( $r= - 0.2$ ,  $p= 0.04$ ). The inverse relationship between the age and the CD4<sup>+</sup>T-lymphocyte count was also seen in the control group ( $r= - 0.52$ ,  $p= 0.0001$ ). There was significant difference in the mean CD4<sup>+</sup>T-lymphocyte count of the different types of PEM with the highest value observed among children with kwashiorkor ( $2097.7\pm 712.9$  cells/ $\mu$ L) and lowest value observed among those with marasmus ( $1449.3\pm 368.2$  cells/ $\mu$ L).

*Conclusion:* The PEM has deleterious effects on the CD4<sup>+</sup> T-lymphocyte counts among under-5 children with PEM with the lowest count observed among those presenting with marasmus.

## C208

### **Disseminated Herpes Zoster Ophthalmicus in an immunocompetent eight year old boy: A Case Report**

Olomukoro CN,<sup>1</sup> Oladokun RE,<sup>2</sup> Owa AE.<sup>2</sup>

<sup>1</sup>Department Paediatric, National Hospital, Abuja,

<sup>2</sup>University College Hospital, Ibadan

*Background:* Varicella (chicken pox) results from a primary infection with the varicella virus while herpes zoster is caused by a reactivation of a latent infection. Incidence of herpes zoster and frequency of one of its complications involving the trigeminal nerve; ophthalmic zoster, increases with age probably due to the decline in cell-mediated immunity. Dissemination of herpes zoster is seen more frequently in immunocompromised hosts but is uncommon in immunocompetent individuals. Reports of disseminated herpes zoster in

children are even less common than in adults.

*Case presentation:* An unusual case of disseminated Herpes Zoster Ophthalmicus in an eight year old immunocompetent black boy is presented. His past medical history revealed that he had a previous primary Varicella Zoster Virus infection at three years of age. In the current report, he presented during an on-going chicken pox outbreak. He was admitted and nursed in isolation in the children's ward. He survived with a residual ptosis of the affected side but with no significant intraocular complication

*Conclusion:* A break through varicella virus re-infection or a reactivation are possible, both of which could present as zoster. This case emphasizes the need for prevention of varicella virus infection through universal childhood immunization and infection control strategies to be put in place in health care settings.

A301

### **Blood Pressure Profile of Adolescents in Enugu**

Ujunwa FA, Ikefuna AN, Nwokocha ARC, Anisuba B. University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu

*Background:* Elevation of blood pressure during the first two decades of life is likely an early warning sign of overall future cardiovascular risk. Identifying children and adolescents at risk of hypertension is the first step in modifying or preventing the disease and its risk factors.

*Objective:* To determine the blood pressure profile of secondary school adolescents in Enugu.

*Method:* Cross sectional survey of 2698 secondary school adolescents aged 10-18yrs was carried out in Enugu. A pretested questionnaire was used to obtain information on socio-demographic and risk profile. Anthropometric measurements, blood pressure readings were recorded. Data was analyzed using SPSS version 17.0. Significant probability was  $p < 0.05$ .

*Result:* The mean age of study population was found to be  $15.03 \pm 1.89$ . The mean systolic blood pressure and diastolic blood pressure for males were  $106.66 \pm 11.80$ mmHg and  $70.25 \pm 7.34$ mmHg respectively, while the mean systolic and diastolic blood pressure for females were  $109.83 \pm 11.66$ mmHg and  $72.23 \pm 8.26$ mmHg respectively. Mean weight of males and females were  $52.96 \pm 12.96$ kg and  $54.44 \pm 9.18$ kg respectively ( $p < 0.01$ ). The BMI of male and females were  $19.81 \pm 3.61$ kg/m<sup>2</sup> and  $21.16 \pm 3.29$ kg/m<sup>2</sup> respectively ( $p < 0.01$ ). These anthropometric variables correlated positively with both SBP and DBP. The prevalence of hypertension and prehypertension was found to be 5.4 % (male 3.8% and females 6.9%) 17.3% (males 14.3% and females 20.1%) respectively.

*Conclusion:* Blood pressure profile of adolescents shows that female adolescents have a higher blood pressure values than their male counterparts in Enugu.

A302

### **Childhood Acquired Heart Disease in Nigeria: An Echocardiographic Experience from Three Centers**

Sadoh WE,<sup>1</sup> Uzodimma CC,<sup>2</sup> Daniels Q.<sup>3</sup>

<sup>1</sup>Department of Child Health University of Benin Teaching Hospital, Benin Nigeria, <sup>2</sup> Department of Paediatric, Lagoon Hospital, Lagos Nigeria.

<sup>3</sup>Department of Paediatric, Zankli Hospital Abuja Nigeria.

*Introduction:* Acquired heart diseases (AHDx) are not uncommon in children. Earlier studies provided the spectrum of AHDx from single centers. The current multi-center study aims to provide a more representative data of AHD in Nigeria.

*Objective:* To determine the spectrum of AHDx from three centers in Nigeria

*Methods:* Over 42 months, children referred for echocardiographic evaluation who had confirmed AHD in three centers in Nigeria were recruited. The data was collected on biodata and types of AHDx.

*Results:* There were 121 children with 139 cases of AHD, with a mean age of  $6.6 \pm 5.7$  years. The males were 65(53.7%). Pericarditis was the commonest AHD in 36 (25.9%), followed by RHD 23 (16.5%), hypertrophic cardiomyopathy 23(16.5%), myocarditis 20(14.4%) and dilated cardiomyopathy 18(12.9%). Endomyocardial fibrosis 3(2.2%) and Kawasaki disease were uncommon. 21.7% of hypertrophic cardiomyopathy were among infants of diabetic mothers.

*Conclusion:* Nigerian children face a quadrupled of AHD namely, pericarditis, RHD, myocarditis and dilated cardiomyopathy. There is need to improve intervention facilities in the country to meet with the demands of the growing afflictions.

A303

### **Prevalence of Rheumatic Heart Disease among Primary School Pupils in Mid-Western Nigeria**

Sadoh WE, Omuemu VO, Israel-Aina YT.

Department of Child Health University of Benin Teaching Hospital, Benin Nigeria.

*Background:* Rheumatic heart disease (RHD) is the commonest acquired heart disease in Nigeria. In the last community based study on RHD conducted over 30 years ago in Lagos, a prevalence of 0.07/ 1000 pupils was obtained.

*Objective:* To determine the prevalence of RHD among primary school pupils in Egor Local Government Area (LGA) of Edo State of Nigeria.

*Methods:* Using a multistage sampling technique, pupils were selected from public and private primary schools in Egor LGA. They were clinically screened for evidence of RHD by auscultating for significant murmurs. The pupils with significant murmurs then had echocardiographic evaluation to confirm the presence of RHD using the 2006 WHO echocardiographic criteria for case definition of RHD.

*Results:* Of the 1764 pupils recruited, 900 (51.02%)

were females while 864 (48.98%) were males. The mean age of the pupils was  $8.86 \pm 2.14$  years. 1065(60.37%) and 699(39.63%) respectively were recruited from public and private schools. Of the 1764 pupils 6 (0.34 %) had significant murmur. Only 1 of the 6 had RHD, giving a prevalence of 0.57/1000 pupils. The pupil with RHD was a male, from public school and in the low socioeconomic class.

*Conclusion:* The prevalence of RHD in this study is low compared to similar studies conducted outside the country. The true prevalence may be underestimated since higher prevalence is obtained from echocardiographic based screening compared to clinical screening.

A304

#### **The ECG changes in children with anemia seen in Irrua Specialist Teaching Hospital, Irrua**

Odike AI,<sup>1</sup> Omokhodion SI,<sup>2</sup> Akpede GO.<sup>1</sup>

<sup>1</sup>Department of Pediatrics, Irrua Teaching Hospital, <sup>2</sup>Department of Pediatrics, University College Hospital, Ibadan.

*Background:* Anemia is a major cause of morbidity and mortality in Nigerian children. It affects all the systems of the body including the heart.

*Objectives:* This study is aimed at determining the prevalence and pattern of ECG abnormalities in anemia.

*Method:* A cross sectional study was done using 94 anemic cases (PCV < 33%) aged 6 months to 16 years and 94 age and sex matched non-anemic controls (PCV  $\geq$  33%) recruited from the pediatric department of (Irrua Specialist Teaching Hospital) ISTH between September and December 2009. ECG was recorded at rest for each child and PCV determined. The anemic cases comprised children with sickle cell anemia (SCA), children without SCA and children in anemic heart failure (AHF).

*Results:* The prevalence of ECG abnormalities was significantly higher in the anemic cases (76.6%) than in the controls (40.4%). The prevalence of ECG abnormalities in SCA cases (82.9%) and non-SCA cases (66.7%) was significantly higher than in the controls (40.4%). The abnormalities noted were sinus tachycardia, ventricular hypertrophy and long QTc interval. The prevalence of ECG abnormality was also noted to increase with increased severity of anemia.

*Conclusions:* It was concluded that anemia, irrespective of cause, is associated with an increased prevalence of ECG abnormalities and that the prevalence of ECG abnormalities increased with the severity of anemia.

A305

#### **Kawasaki Disease: An Unusual Presentation in a 14-Year Old Boy In Sokoto, North Western Nigeria**

Sani UM, Ahmed H.

Department of Pediatrics, Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto.

*Introduction:* Kawasaki disease (KD) is an acute systemic vasculitis that mostly affects children less than 5 years. Occasionally, it may present with renal involvement of varying severity. In Nigeria and most of Africa, only a few cases of KD have been reported and these were among children within the typical age group.

*Case presentation:* We report an unusual case of Kawasaki disease with renal manifestation in a 14 year old adolescent. Apart from the principal features of KD comprising of high grade fever, non-purulent conjunctivitis, polymorphous rash, right sided cervical lymphadenitis and symmetrical desquamative lesions of the digits of the hands and feet; our patient also had renal involvement. The renal manifestations included mild periorbital edema, oliguria, hypertension (140/90mmHg), hematuria (++) , proteinuria (++) and elevated serum urea and creatinine (8.3mmol/L and 1.9mg/dl respectively). He was managed with high dose aspirin at 80mg/kg/day. The dose was reduced (5mg/Kg/day) and subsequently stopped after serial echocardiography showed normal coronary arteries. Intravenous immune globuline (IVIG) could not be started due to non-availability. Nevertheless, clinical signs resolved, renal function normalized after 6 weeks and echocardiographic picture did not deteriorate. Patient is currently on follow up at our pediatric cardiology clinic.

*Conclusion:* Kawasaki disease can occur even in older children and renal manifestation may be self-limiting. This report highlights the need for high index of suspicion in all cases.

A306

#### **Musculoskeletal Complications among Children with Sickle Cell Anemia attending University of Nigeria Teaching Hospital Ituku- Ozalla Enugu: A 4 Year Review**

Chinawa JM, Chukwu B, Ikefuna A, Emodi I.

University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu.

*Background:* Sickle cell anemia (SCA) is a genetic hematological disorder characterized by red blood cells that assume abnormal, rigid, sickle shape. The musculoskeletal manifestations of SCA result from vessel occlusion, leading to tissue ischaemia and infarction and progressive end organ damage.

*Objectives:* To determine the frequency and pattern of presentation of musculoskeletal changes among children with sickle cell anemia attending UNTH Ituku Ozalla.

*Methods:* This is retrospective study of cases of musculoskeletal complications among children attending UNTH from 1<sup>st</sup> of January 2007 and 31<sup>st</sup> of October 2012.

*Results:* There were 78 musculoskeletal complications in 55 patients with sickle cell anemia from Jan 2007 to Oct 2012.

Patients consisted of 34 (61.8%) males and 21 (38.2%) females. Mean age of patients was  $9.3 \pm 4.7$  years (9 months to 17 years).

Common musculoskeletal symptoms include lower limb pain seen in 39 (50%) of cases, upper limb pain in 36 (46.2%) and chest pain in 16 (29.5%) of cases. Fever was the commonest non musculoskeletal symptom and was seen in 41 (52.6%) of cases.

The commonest musculoskeletal complication was acute bone pain crisis diagnosed in 34 (43.6%) with acute osteomyelitis, either proven or suspected as the second commonest, diagnosed in 11 (14.1%) of cases. Gender did not have any significant effect on the occurrence of these complications but there is a significant association with age.

*Conclusion:* Bone pain crisis and acute osteomyelitis are the commonest musculoskeletal manifestation in children with sickle cell anemia attending UNTH Ituku Ozalla

A307

### **Hemoclaria (Bloody tears): Challenges of Management in a Resource Constrained Setting: A Case Report and Review of Literature**

Oyenusi EE<sup>1</sup> Ananti CN.<sup>2</sup>

<sup>1</sup>Motayo hospital Ikeja, Lagos, <sup>2</sup>Lagos University Teaching Hospital, Idi Araba, Lagos

*Introduction:* The phenomenon of bloody tears (haemolacria) is a rare occurrence that can panic the patient and perplex the doctor. It can be caused by a wide spectrum of eye abnormalities or systemic disorders. Extensive workup is required to determine the etiology. The challenges of management encountered in our patient are highlighted.

*Case Presentation:* A four-year-old boy presented with cough, catarrh and three episodes of epistaxis. He was not on any medications and had no family history of bleeding disorders. He was placed on Otrivin™ nasal drops, Actifed™, Cefuroxime™, and a stat dose of Dicyanone. Full blood count, coagulation profile, bleeding time, blood film picture and Xray of the postnasal space were normal. He started shedding blood stained tears initially on crying, two weeks later without associated epistaxis. Subsequently the bloody tearing became spontaneous which was unnerving for his mother and school teacher. The eyes were grossly normal. Other relevant investigations planned were assays for factors VIII, IX and Von Willebrand factor. He would have also benefited from a nasolacrimal irrigation and biopsy, CTScan and/or MRI of the head and orbit but the HMO could not cover the expenses and the parents had financial constraints. His parents resorted to alternative medicine therapy out of frustration and he was lost to follow up.

*Conclusion:* Management of haemolacria involves a multidisciplinary approach. Financial constraints can be a challenge in our environment. The National Health

Insurance Services should be strengthened to enable insured persons the full benefits of prescribed good quality health services.

B301

### **Pattern of Renal Diseases in Pediatric Ward of Federal Medical Center, Asaba**

Ezeonwu B, Okike C, Nwankwo O

*Department of Pediatrics, Federal Medical Center (FMC) Asaba.*

*Background:* Childhood renal diseases are becoming important in the morbidity and mortality pattern in pediatric population. Renal diseases in children have recognizable features.

*Objectives:* To determine the proportion of children admitted in FMC Asaba, with renal diseases, their age and gender distribution, common presenting features, and to ascertain the outcome of their management.

*Method:* A descriptive case series review of case files of these children admitted in pediatric unit from January 2007 to December 2011 was done. Information obtained were age, gender, presenting features, diagnosis and outcome of management.

*Results:* A total of 5159 children comprising 3148 males and 2011 females were admitted in pediatric unit within the period under review. Children who had renal diseases were 69 giving a hospital prevalence of 1.3%. Of the 62 cases analyzed, 29 were males and 33 were females; M: F, 1:1.3, ( $\chi^2=5.53$ ,  $p=0.02$ ). Children aged 5 years and above were commonly affected,  $\chi^2=95.25$ ,  $p<0.0001$ . The most common renal diseases were urinary tract infection (UTI), nephrotic syndrome and acute glomerulonephritis (AGN). While dysuria was significantly associated with UTI,  $p<0.001$ , nephrotic syndrome and AGN commonly presented with body swelling,  $p < 0.01$  and  $0.02$  respectively. Proteinuria was documented in all the subjects. About 77% of the subjects improved and were discharged while mortality due to renal diseases was 6.5%.

*Conclusion:* Nephrotic syndrome, UTI, AGN were the most common renal diseases and more prevalent in children aged 5 years and above. Mortality rate due to the prevailing renal diseases was low.

B302

### **Renal biopsy in childhood Nephrotic Syndrome: a new histopathological trend.**

Odetunde OI.<sup>1</sup> Nourse P,<sup>1</sup> Gajjar P,<sup>1</sup> Komala Pillay.<sup>2</sup>

<sup>1</sup>Paediatric Nephrology Unit, Department of Pediatric Medicine, Anatomical Pathology Department,

<sup>2</sup>University of Cape Town and Red Cross War Memorial Children's Hospital, Cape Town, South Africa.

*Background:* In children, about 80% of primary nephritic syndrome has minimal change disease (MCNS). The term minimal change nephritic syndrome has become synonymous with steroid sensitive nephritic syndrome because of the sensitivity to steroid therapy,

such that renal biopsy is not usually indicated in MCNS. However, renal biopsy is required in patients whose clinical features are not in keeping with that of MCNS. In this study we document the histopathological pattern of children who were diagnosed nephrotic syndrome and required renal biopsy who presented at Red Cross Children's Hospital between year 2003 and 2011 (Eight years).

**Objectives:** To determine the histological patterns of renal biopsied of patients with primary childhood nephrotic syndrome at Red Cross Hospital.

**Method:** This is a retrospective descriptive study. The charts and medical records of biopsied patients with nephrotic syndrome and their histopathological reports of renal biopsies were reviewed.

**Result:** One hundred and thirty (130) primary nephrotic syndrome patients were biopsied in the period of eight years (2003 -2011). Age range of 1 month to 14 years and mean age of  $4.9 \pm 2$  years with mode age of 2 years. Male: Female 1:1.7, 60(46.2%) were mixed race, 44 (33.8%) Afro-Africans, 23(17.7%) Euro-Africans and 3 (2.3%) Asian- Africans race. Steroid resistance 45 (34.6%), atypical presentation 36(27.7%), frequent relapses 23(17.7%), steroid dependence 19(14.6%), and congenital nephrotic syndrome 7(5.4%) were the indication for renal biopsy in this patients. The biopsies report showed mesangial proliferative nephropathy (mesangioproliferative) 62(47.7%), focal segmental glomerulosclerosis (FSGS) 25(19.2%), minimal change nephrotic syndrome (MCNS) 16(12.3%), membranoproliferative (mesangiocapillary) 13(10.0%), and others 14 (10.8).

**Conclusion and Recommendation:** We conclude that mesangioproliferative histopathological sub-type represents a remarkable percentage of our biopsied primary nephrotic syndrome and clinical presentation is that of atypical. It is therefore pertinent for more studies on this histological subtype in the region

B303

### **Histopathological Pattern of Childhood Nephrotic Syndrome in Enugu**

Odetunde OI, Okafor HU, Ukoha OM, Adiele KD, Olusina BD, Aderibigbe ASO

<sup>1</sup>Pediatric Nephrology Unit, Departments of Pediatrics, <sup>2</sup>Histopathology and Morbid Anatomy, <sup>3</sup>Department of Radiation Medicine, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu, Nigeria.

**Background:** Histopathological evaluation of renal tissues of children with atypical presentation of nephrotic syndrome, in which renal biopsy is an integral part of the clinicopathological correlation required for accurate diagnosis, prognostic and to guide the treatment of the disease in the sub-region. In this study we document the histopathological pattern of children who were diagnosed nephrotic syndrome (NS) and required renal biopsy.

**Objective:** To determine the histological patterns of renal biopsied patients with childhood nephrotic syndrome in Enugu

**Methods:** This is an on-going prospective study which started in March 2012. Fourteen out of 30 children with nephrotic syndrome who attend the paediatric nephrology clinic underwent a renal biopsy which was investigated by light microscopy. All patients fulfilled the clinical and laboratory criteria of a NS.

**Results:** fourteen out of 31 children were biopsied. The age range was 3-17 years, 13 males, 1 female. Frequent relapses 5(35.7%), steroid resistance 3(21.4%), atypical presentation 3(21.4%) and secondary nephrotic syndrome 2(14.3%) were the indication for renal biopsy in this patients. The biopsies revealed minimal change disease (MCNs) in 3(21.4%); Mesangial proliferation (Mesangioproliferative) in 3(21.4%); Focal segmental glomerulosclerosis (FSGS) in 2(14.3%); Membranoproliferative in 2(14.3%); Lupus Nephritis in 2(14.3%); Membranous Nephropathy 1(7.1%), and no conclusive result in one patient.

**Conclusions:** Mesangioproliferative, MCNs, FSGS and Membranoproliferative are most frequent findings on histology. We conclude that the histopathological pattern of NS may vary between geographical locations.

B304

### **Factors Associated with Enuresis among Primary School Children in Port Harcourt**

Paul NI, Alikor EAD, Anochie IC.

University of Port Harcourt Teaching Hospital, Port Harcourt.

**Background:** Enuresis is a common childhood problem and can lead to important psychosocial disturbances.

**Objectives:** To determine the risk factors to enuresis, its methods of management and relationship with academic performance among school children in Port Harcourt City (PHC)

**Methods:** A cross sectional study of enuresis among school children in PHC was performed. Pretested questionnaires completed by parents/guardians was used to collect data. Validation of their academic performances was made using their results in the past one year from the schools head teachers' records. Descriptive statistics and chi-square test were used for analysis.

**Results:** A total of 922 children, consisting of 463 (50.2%) males and 459 (49.8%) females were studied. The response rate was 82.2%. The prevalence of enuresis was 23.2%. Arousal difficulty and positive family history of enuresis were significantly more frequent in the enuretic group ( $p < 0.05$ ). Enuresis was associated with family stressors in 45 (21.0%) of the children. The enuretic children had higher rates of poor school performance compared with non-enuretic children ( $p < 0.001$ ) however; there was no statistical significant relationship between enuresis and social class. None of the enuretic children visited a physician for the management of enuresis. Prayers, punishment and herbal medication were the methods of treatment in 89(41.6%), 42(19.6%) and 6(2.8%) children respectively. **Conclusion:** Arousal difficulty, positive family history of enuresis and family stress were common risk factors for enuresis. Also, enuretic children had higher rates of

poor school performance compared with non-enuretic children. The inappropriate enuresis management methods require health education intervention.

B305

### **Enuresis in Children with Sickle Cell Disease (SCD) seen at Isolo General Hospital, Lagos**

Oluwabiyi OO, Olatunji T, Adekoya FT, Raji S.  
*Department of Paediatrics, Isolo General Hospital, Lagos.*

*Background:* Enuresis is an important morbidity that appears to be under-diagnosed and often overlooked in the management of Nigerian children with sickle cell disease (SCD).

*Objectives:* To determine the prevalence of enuresis in children with SCD, perceived causes adduced by the caregivers, interventions that have been used and to deduce possible contributory factors.

*Method:* A structured questionnaire was administered to caregivers of children with SCD attending the Sickle Cell Clinic of Isolo General Hospital after an informed consent was obtained.

*Results:* Enuresis was a complaint expressed by 62.8% of respondents with SCD and 40.8% of non-SCD matched siblings. Primary enuresis accounted for 85% of cases while the remaining had secondary enuresis. There was a positive family history in 52% of enuretic subjects. Ingestion of fluids, excessive play, deep sleep or a combination of these were the major reasons adduced by the caregivers with only 15% convinced that the child's genotype may play a role. Respondents have used a wide array of interventions including prayers, beatings and punishments, herbs while only 7.4% have sought medical care. Although not statistically significant, socio economic status and child's position in the family were predictive factors. The average age of dryness in subjects with SCD was  $5 \pm 2.8$  yrs while that of non SCD matched sibling was  $3.2 \pm 1.5$  yrs.

*Conclusions:* Enuresis is a major morbidity in subjects with SCD. Low levels of parental knowledge on enuresis and its management are possible contributors to the high prevalence. The presence of enuresis and possible interventions must therefore be sought for by health care practitioners and implemented in the follow up and care of children with SCD.

B306

### **Recurrent Respiratory Papillomatosis (RRP)**

Ahmed PA,<sup>1</sup> Ulonnam CC,<sup>1</sup> Undie NB.<sup>2</sup>  
<sup>1</sup>*Department of Pediatrics,* <sup>2</sup>*Department of Surgery (ENT), National Hospital Abuja*

*Introduction:* Respiratory Papillomatosis is a non-cancerous tumor of the upper airway caused by the human papilloma virus. RRP is a small "wart-like" growth, which could be anywhere from the nose to the lungs. RRP in the larynx is the most common.

*Case Presentations:* Two patients diagnosed with RRP were seen at the paediatric respiratory clinic of the NHA

between 2009 and 2012, following referral from Ear-Nose-Throat (ENT) department.

*Case 1:* A 4year female who presented with persistent hoarseness of voice, difficulty in breathing and noisy breathing of one year duration.

She was born at term, by spontaneous vaginal delivery. Mother had vaginal warty lesion which was excised during pregnancy. Immunization was routine NPI vaccines. A neck X-ray showed opacities around the laryngeal region with total obliteration of air column. Tissue histology confirmed squamous papilloma. Retroviral screening was nonreactive. She has had about eight excision surgeries from recurrence, with only temporal relief. Treatment included use of interferon and oral acyclovir for over one year, and lately methotrexate. Patient has a tracheotomy tube in place for over 2 years.

*Case 2:* A 6year old female seen on account of persistent hoarseness of voice that progressed to loss of voice of 1½ years. She had associated noisy breathing, snoring, difficult breathing and frequent arousal from sleep. Pregnancy and delivery were normal. Histology was diagnostic of laryngeal Papillomatosis. She has had 2 excisions surgeries for laryngeal polyps and had been placed on oral acyclovir, alongside a tracheotomy tube in place.

*Conclusion:* RRP though a slow growing tumor, presently has no definitive cure. Excision surgeries provide a temporal relief, alongside adjuvant therapies with antiviral agents. Prevention with vaccination is desirable.

B307

### **Trilateral Retinoblastoma**

Oduvbun M, Abiodun M, Iguodala O  
*Department of Child Health, University of Benin Teaching Hospital, Benin City, Edo state, Nigeria*

*Background:* Trilateral retinoblastoma (TRB) is a rare syndrome consisting of intraocular retinoblastoma and an intracranial tumour in the pineal or other midline regions.

*Case presentation:* This is a case of a 4 year old boy who presented with a two-year history of leucocoria, subsequent bilateral proptosis and progressive visual loss in both eyes. Ocular ultrasonography showed a non-homogenous, intra-orbital solid mass with complete distortion of orbital anatomy diagnostic of retinoblastoma (RB). Contrast-enhanced cranial computerized tomography (CT) scan revealed plaques of calcification filling most of the left eye, partly the right eye, and a cerebellar mass consistent with an ectopic intracranial neuroblastic tumour in TRB. He received 2 courses of systemic chemotherapy but defaulted before enucleation. Ophthalmoscopic examination under anaesthesia (EUA) confirmed unilateral RB in his sibling.

*Conclusion:* Neuro-imaging, genetic counseling and routine ophthalmologic screening of first degree relatives are pertinent in the management of TRB.

C301

### Academic Performance and Intelligence scores of Children aged 5-11 years with Sickle Cell Anemia

Ezenwosu O,<sup>1</sup> Emodi IJ,<sup>2</sup> Ikefuna AN,<sup>2</sup> Chukwu BF.<sup>2</sup>  
<sup>1</sup>Department of Paediatrics, Enugu State University Teaching Hospital, Parklane, Enugu. <sup>2</sup>Department of Paediatrics, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.

**Background:** Children with Sickle Cell anemia (SCA) are faced with complications which may interfere with their educational activities including academic performance. Reports on their academic performance are mainly from developed countries and the results have been inconsistent.

**Objective:** To determine the academic performance of primary school-aged children with SCA in Nigeria and compare findings with a group of controls.

**Methods:** Ninety children with SCA aged 5-11 years were consecutively recruited at the SCA clinic of UNTH Enugu and their age- and sex-matched normal classmates were enrolled as controls. Academic performance of the children with SCA were studied using the overall scores achieved in the three term examinations in the preceding academic year (2009/2010) while their intelligence quotient (IQ) was determined using the Draw-A-Person Test (DAPT). The findings were compared with that of ninety controls.

**Results:** The mean overall academic score of the children with SCA of  $62.71 \pm 19.43\%$  was similar to  $67.47 \pm 16.42\%$  in the controls ( $p = 0.077$ ). However, a significantly higher number of children with SCA (32.2% vs 16.7% of the controls;  $p = 0.015$ ) scored below 50%, thus, had poor performance. The mean IQ of the subjects ( $91.41 \pm 16.61\%$ ) was similar to that of the controls ( $95.56 \pm 17.31\%$ ) ( $p = 0.103$ ). However, more SCA patients had lower IQ scores than controls though not statistically significant ( $p = 0.083$ ).

**Conclusion:** Overall academic performance of children with SCA compares favorably with that of controls although there is a higher prevalence of poor performance among children with SCA.

C302

### Determinants of Academic Performance in Children with Sickle Cell Anaemia in Enugu, South-East Nigeria

Ezenwosu O,<sup>1</sup> Emodi IJ,<sup>2</sup> Ikefuna AN,<sup>2</sup> Chukwu BF.<sup>2</sup>  
<sup>1</sup>Department of Paediatrics, Enugu State University Teaching Hospital, Parklane, Enugu.  
<sup>2</sup>Department of Paediatrics, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu.

**Background:** Some factors may influence the academic performance of children with Sickle Cell Anaemia (SCA). Limited information is available on the effects of these factors in Nigerian children with SCA.

**Objective:** To determine the factors that influence the academic performance of children with SCA in Enugu, Nigeria.

**Methods:** Consecutive children with SCA aged 5-11 years were recruited at the weekly sickle cell clinic of the University of Nigeria Teaching Hospital (UNTH) Enugu, Nigeria. Their age- and sex- matched normal classmates were recruited as controls. The total number of days of school absence for 2009/2010 academic session was obtained for each pair of pupils from the class attendance register. Academic performance was assessed using the average of the overall scores in the three term examinations of 2009/2010 academic year. Intelligence Quotient (IQ) was assessed using the Draw-A-Person Test and socio-economic status determined with the occupational status and educational attainment of each parent.

**Results:** There was no significant relationship between academic performance and school absence in children with SCA ( $r = -0.080$ ,  $p = 0.453$ ). However, academic performance of children with SCA showed statistically significant association with their socio-economic status ( $\chi^2 = 9.626$ ,  $p = 0.047$ , and significant correlation with IQ ( $r = 0.394$ ,  $p = 0.000$ ) and age ( $r = -0.412$ ,  $p = 0.000$ ).

**Conclusion:** Academic performance of children with SCA is not negatively affected by their increased school absenteeism but is influenced by their IQ, age and socio-economic status.

C303

### Childhood Diabetes Mellitus in Sokoto, Northwestern Nigeria-A Ten Year Review

Ugege MO, Ibitoye PK, Jiya NM, Ahmed HA.  
 Department of Pediatrics, Usmanu Danfodiyo University Teaching Hospital, Sokoto.

**Background:** There is paucity of literature on childhood diabetes mellitus (DM) from developing countries and especially Northwestern, Nigeria.

**Objectives:** To describe the clinical presentation and outcome of childhood DM as seen in Usmanu Danfodiyo University Teaching hospital (UDUTH) Sokoto.

**Methods:** This was a 10-year retrospective review of case files of children aged 15 years and below, with childhood DM, between September 1<sup>st</sup> 2001- August 31<sup>st</sup> 2011. The age, gender, presenting features, complications, laboratory features and outcome of the patients were extracted and analyzed.

**Results:** Eight out of the 23, 931 children admitted during the study period, were diagnosed with type 1 DM, giving a case prevalence rate of 0.33/1000 (or 3/10,000). Male to female ratio was 1:1. Mean age at presentation was  $11.8 \pm 3.1$  years. Mean duration of illness before presentation was  $6 \pm 4.9$  weeks (range 1.2-12 weeks). Most prevalent symptoms were polyuria and weight loss- 7 each (87.5%), polydipsia-6 (75%), polyphagia-5 (62.5%), and weakness-4(50%). Five patients (62.5%) presented with diabetes ketoacidosis (DKA). Mean RBS was  $22.6 \pm 12.01$  (range 13- 49.5) mmol/L. Five patients (62.5%) were discharged while three (37.2%) left against medical advice. Four (80%) of the discharges were lost to follow up.

**Conclusion:** Childhood DM is relatively uncommon in

UDUTH, Sokoto. There is a high frequency of DKA, late presentation and default to follow up. It is recommended that there should be a collaboration of efforts for the early recognition of symptoms by parents and physicians through awareness campaigns, health education and specialized training of health personnel.

C304

**Neonatal Jaundice among In-Born Neonates at Ebonyi State University Teaching Hospital Abakaliki, South Eastern Nigeria**

Onwe O,<sup>1</sup> Muoneke V,<sup>2</sup> Ibekwe RC<sup>2</sup>, Ibe BC.<sup>2</sup>

<sup>1</sup>Federal Teaching Hospital, Abakaliki, <sup>2</sup>University of Nigeria Teaching Hospital Enugu

*Background:* Though neonatal jaundice is a significant contributor to neonatal morbidity and mortality in Nigeria and sub-Saharan Africa, its role among neonates in Abakaliki has not been elucidated.

*Objectives:* This study aims at evaluating the incidence, aetiological causes and outcome of neonatal jaundice among in-born neonates in Ebonyi State University Teaching Hospital (EBSUTH) Abakaliki, South-Eastern Nigeria.

*Methods:* This was a prospective study among neonates delivered at EBSUTH Abakaliki between July 2007 and June 2008.

*Results:* Of the 1180 neonates delivered within this period, 235 (19.9%) had jaundice. There were more males (60.9%) than females (39.1%). Most of the children (91.0%) developed jaundice between the 2<sup>nd</sup> and 5<sup>th</sup> day of life. One hundred and twenty neonates (51.1%) developed jaundice while still on admission and the rest, 48.9% were re-admitted having been discharged before jaundice developed. Majority of the patients presented > 48 hours after noticing jaundice.

The common aetiologic factors were Neonatal sepsis (32.8%), low birth weight (30.6%), glucose -6-phosphate dehydrogenase deficiency (26.8%) and ABO blood group incompatibility (22.6%). Twenty five point one percent of the neonates had multiple aetiologies.

Bilirubin encephalopathy was noted in 33.2% of the children while 12.3% died.

*Conclusion:* Neonatal Jaundice is a common problem in Abakaliki, is associated with high morbidity and mortality. It can be curtailed if the post natal/nursery wards are expanded so that mothers and their babies can stay more than 48hrs before discharge.

C305

**A Study on Neonatal Jaundice in Amuwo Odofin LGA, of Lagos State**

Dosekun E

Anu Dosekun Healthcare Foundation, C/O Outreach Children's Hospital, FESTAC Town, Lagos

*Background:* Anu Dosekun Healthcare Foundation, a nonprofit organization based in Lagos initiated a Jaundice in Babies Awareness Project (JIBA). The project commenced February 2012. The project involved

screening babies at Day 1- 21 of life for Jaundice and created a platform for educating health workers in PHC and TBA on neonatal Jaundice. Ongoing parent education initiatives were developed.

*Objectives*

- To increase the awareness of the community to the dangers of Jaundice
- Supporting the Primary Care System in upgrading services to newborn

*Method:* A survey of 402 women of child bearing age on their knowledge, attitude and practices on Jaundice was carried out. Learning materials for parent education were developed. Workshop on Neonatal Jaundice was developed for Primary Health care workers and an appropriate lecture in Yoruba was delivered to the local TBAs. A screening Transcutaneous Bilirubinometer was used at the BCG immunization clinic to screen babies between Days 1- 21 of life to measure bilirubin. Positive cases were sent for diagnostic test at Outreach Children's Hospital. All positive cases were treated free at OCH.

*Results: (Feb 15<sup>th</sup> – Nov. 30<sup>th</sup> 2012)* 82% of the 402 women surveyed did not know that Neonatal Jaundice was dangerous. 1513 babies were screened. 11% of the babies screened tested positive. 37% of the positively screened babies required (1: 3) treatment. 1 out of the 1,513 babies died of NNJ

*Conclusion:* The initiative has had a positive impact on the community. Neonatal screening should be instituted in all PHC's in Nigeria

C306

**Can Barr body Determination and Radiological Evaluation Predict the Type of DSD?**

Idris HW, Mado SM, Abdullahi FL, Abegunde BO, Yauba MS, Musa A.

*Background:* Disorders of sexual development is associated with a lot of diagnostic and management challenges because evaluation and long-term management requires sophisticated diagnostic and management interventions.

*Objective:* To assess the usefulness or otherwise of Barr body determination and radiological evaluation in determining the type of DSD

*Method:* Retrospective study of all children attending the Pediatric Endocrinology Unit of ABUTH, Zaria from Sept, 2007 to August 2012.

*Results:* 18 of the 108 cases seen had DSD. Their ages ranged from 2 weeks to eight years. Ten presented with genital ambiguity. Five had non-palpable gonads, while two had inguinal masses.

The assigned genders were ten males, seven females while 1 was assigned no gender. Eight patients had Barr body determination with four of them suggesting XY karyotype, three of whom were raised as females. One had Barr bodies of between 10-20% and was raised as a male. The remaining three with suggestive XX

karyotype were raised as females. 16 patients had abdominopelvic USS, while 7 had flush genitogram. In 44% of them, a uterus was visualized. Among the 9 whose USS did not reveal a uterus, flush genitogram

revealed uterus and fallopian tubes in 2. In one of the patients who had an absent uterus, the chromosomal analysis revealed an XX karyotype.

*Conclusion:* Barr body determination with radiological evaluation are important in the assessment of disorders of sexual development however confirmatory chromosomal analysis is necessary.

C307

#### **Proximal focal femoral deficiency: A Case Report**

Ewah RO, Olukotun AP, Obasoyo SE, Alikah SO.

*Background:* Proximal focal femoral deficiency (PFFD) is a rare congenital osseous anomaly characterised by failure of normal development of a variable portion of the proximal femur resulting in a shortened lower limb. The main biomechanical abnormalities include limb length discrepancies, malrotation, proximal joint instability and inadequacy of the proximal musculature. The incidence is one per 50,000-200,000 population with no sexual predilection.

*Case presentation:* A three month old boy (I.I) who presented with shortened right thigh from birth. Examination revealed a bulbous thigh with disparity in the lengths of the lower limbs and thigh and the girth of the thighs. The right patella was not palpable but the right leg and foot and the left lower limbs were normal. Radiological examination revealed grossly shortened right femur with no proximal shaft and ossification of the femoral head.

C308

#### **Sleep Hygiene of Children in Abakaliki, South Eastern Nigeria**

Orji M<sup>1</sup>, Anyanwu O.U<sup>1</sup>, Ibekwe R.C.<sup>2</sup>

Maria-Lauretta O<sup>3</sup>,

<sup>1</sup>Federal Teaching Hospital Abakaliki

<sup>2</sup>University of Nigeria Teaching Hospital Ituku-Ozalla, Enugu. <sup>3</sup>Department of Paediatrics Federal Teaching Hospital, Abakaliki

*Background:* Sleep hygiene is the control of all behavioral and environmental factors that precede sleep and may interfere with sleep. Poor sleep hygiene could interfere with a child's proper functioning.

*Aim and Objective:* The study is aimed at determining the pattern of sleep hygiene and factors contributing to poor sleep among children attending children outpatient in Federal Teaching Hospital Abakaliki.

*Methods:* A cross sectional descriptive study conducted at the children outpatient clinic of FETHA. The study instrument was the BEARS screening tool and subjects were children aged 3-16 years.

*Results:* Of the 354 children surveyed. 9% had difficulty falling asleep, 15% wake up frequently at night. Only 33.3% have regular bedtime and wake time and 15.3% have regular day time naps. 41.8% frequently watch television or play rough play an hour to bedtime. 66.9% eat heavy meal before bedtime, most (38.7%) eating 30minutes to 1 hour before going to bed. 19.8% have television in their bedroom. Problems with going to bed (8.5%), falling asleep (12.6%), night waking (13.3%) and day time sleepiness (17.2%) were most prevalent in children aged 6- 10 years . Watching television or playing rough play are significantly associated with daytime sleepiness (p=0.002), waking up at night (p=0.00) and problems with falling asleep (p=0.001).

*Conclusion:* Poor sleep hygiene is common in this environment. Health education to parents on the importance of good sleep hygiene is therefore necessary.