

**ANNUAL GENERAL MEETING & SCIENTIFIC CONFERENCE OF
THE NIGERIAN THORACIC SOCIETY, LAGOS 2021
BOOK OF ABSTRACTS**

SESSION 1:

A01.

**Covid-19, Tuberculosis, Pulmonary Embolism & Cystic Fibrosis
Lessons Learnt from The Management of a Case of Severe Covid-19
Disease in A 93-Year-Old Admitted at The Isolation Facility of a Tertiary
Hospital in Enugu State Nigeria: A Retrospective Study**

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Conflicts of interest:

The authors declare no conflict of interest.

Introduction: Severe Covid-19 infection is associated with significant mortality in elderly patients and in the presence of co-morbidities.

Aims/Objectives: To elaborate lessons learnt from the management of a case of severe Covid-19 disease in a 93-year-old with co-morbidities.

Methods: Clinical management of the index case and laboratory parameters are detailed.

Results: A 93-year-old man was referred to a tertiary hospital in Enugu during the second wave of the covid-19 pandemic, with a 5-day-history of high-grade fever, severe fatigue, and altered sensorium. He had been living with diabetes for 48 years; recently had worsening glycaemic control, with random blood glucose of 227g/dl and he was yet to pass urine in the previous 12 hours. He was also being managed conservatively for bladder outlet obstruction. Examination revealed signs of severe pneumonia: respiratory rate – 32 breaths/min, pulse – 114 beats/min, oxygen saturation – 93 %, blood pressure: 90/40 mm/Hg. He was drowsy, dehydrated, and had asterixis. A diagnosis of acute kidney injury from septicaemia, following community-acquired pneumonia and, possibly, urinary tract infection (UTI) was made, with covid-19 infection as a differential. Samples were collected for laboratory investigations while he was recommended for admission into the intensive care unit. Parenteral broad-spectrum antibiotics, intravenous fluid therapy, intranasal oxygen therapy, basal-bolus insulin-regimen, and anti-coagulation prophylaxis were instituted. Laboratory investigations revealed a positive covid-19 test, severe systemic inflammation, UTI, intravascular thrombosis and severe renal impairment; thus, the nephrology, infectious disease, urology and, later, plastic surgery (for pre-sacral pressure ulcers) teams were invited to co-manage the patient alongside the endocrinologists. After 27 days of collaborative care, he was discharged with resolution of symptoms and signs.

Conclusion: Multi-specialty collaborative care may improve outcome in severe covid-19 with associated co-morbidities in elderly patients. Also, severity stratification may ensure life-saving timely care for severe covid-19 disease.

Keywords: Lessons, covid-19, severity, Enugu, Nigeria.

Acknowledgement: The authors wish to thank the staff of the University of Nigeria Isolation Centre for their kind assistance in retrieving relevant materials used in the preparation of this work.

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A02.

Latent Tuberculosis Infection (Ltbi): Knowledge and Practice of Physicians in Lagos: A Descriptive Cross-Sectional Study

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CONFLICT: The authors
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Background: Nigeria has the highest incidence of both drug-susceptible and multi-drug resistance tuberculosis (MDR-TB) in Africa. It is important to focus on utilizing one of the core components of the WHO End-TB Strategy, which is prevention of active TB by treatment of LTBI. The programmatic approach for TB treatment is focused more on active infection while those with LTBI largely seen by doctors remain in the community without a regular program to cater for them. It is therefore important to assess the knowledge and practices of doctors regarding the care and management of their patients with LTBI.

Aims/Objectives: To evaluate current knowledge, attitude and practices of practising physicians in Lagos on the management of LTBI.

Methods: a descriptive cross-sectional study of physicians practising in Lagos State was done over five months (March-July 2021) via an online survey. The link to the survey was delivered to each doctor's individual

account via social media platforms (Whatsapp®, Telegram®) and anonymous responses were automatically recorded.

Results: A total of 206 registered medical doctors working in both the public and private sector participated: male/female (89/117). Of this, 162 (78.9%) had *good overall knowledge* of LTBI and TB epidemiology, however only 58 (28.1%) of participants had knowledge on the availability of treatment for LTBI, among which only 19 (33%) had knowledge of correct treatment options for LTBI. Only 26 (12.6%) of all the participants routinely screen at risk patient groups for LTBI in routine practice, the majority (84.6%) of whom erroneously employ sputum geneXpert® test as the screening tool for LTBI.

Conclusion: The knowledge of physicians concerning LTBI is modest but practice is poor. Implementation of the WHO end TB strategy, involving detection and treatment of LTBI, is low among physicians in Lagos State.

Keywords: latent tuberculosis infection (LTBI), tuberculosis (TB), world health organization (WHO), end TB strategy

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A03.

Pulmonary Embolism following Chronic Oral Glucocorticoid Use: A Case Report.

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Introduction: Pulmonary embolism (PE) is a life-threatening complication of venous thrombosis, with significantly high mortality.^{1,2} Both endogenous and exogenous glucocorticoid excesses are associated with increased risk of venous thromboembolism (VTE).³ There is very limited data on the prevalence of PE and VTE following the use of glucocorticoids both for therapeutic or recreational reasons in Nigeria and Africa.

Case history: A 40-year-old male statistician presented with progressive right leg swelling and pain and weight loss of eight weeks, difficulty in breathing and left-sided stabbing, non-radiating chest pain of three days with no known relieving or aggravating factors. He had exertional

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dyspnoea, dizziness; however, no cough, haemoptysis, nor symptoms of heart failure. Further history revealed he had been on oral dexamethasone 4 - 8mg daily for the past 10 years to gain weight. There was no antecedent history of trauma, prolonged immobilisation, surgeries or recent travels.

Examination findings: Significant findings were tachypnoea, hypoxia (oxygen saturation at room air was 86%), tachycardia, blood pressure (BP)- 150/100 mmHg, tender right leg oedema with excoriations and broad abdominal striae.

Investigations: Right lower limb doppler ultrasound revealed deep vein thrombosis, CT pulmonary angiogram showed features of left-sided pulmonary thromboembolism, serum D-dimer levels were elevated (2.78 mg/L), while blood glucose, electrolyte, urea and creatinine were normal. A diagnosis of left pulmonary embolism was made. The patient was commenced on SC enoxaparin 80 mg 12 hourly and intranasal oxygen. He subsequently was placed on oral hydrocortisone due to Addisonian crisis. He improved remarkably and was discharged on rivaroxabani and later weaned off hydrocortisone.

Conclusion: Use of glucocorticoids should be sought in the young presenting with PE without obvious cause. Also, research on the prevalence of thromboembolic events associated with glucocorticoid use needs to be done.

Keywords: Glucocorticoids, steroids, pulmonary embolism, venous thromboembolism

A04.

Seizures as a Presentation of Pulmonary Embolism: A Case Report.

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Background: Pulmonary embolism (PE), despite being common, poses diagnostic problem mainly because of its wide array of presentation. Interestingly, a seizure, with its numerous likely causes, is an atypical presenting symptom. We describe a 31-yr old female who presented with seizures and was subsequently diagnosed with PE, emphasising need for high index-of-suspicion for early diagnosis and prompt intervention.

Case Report: A 31-year-old female presented to the emergency with sudden-onset sternal chest pain, dull, increasing in severity, with no aggravating or relieving factor; it was associated with breathlessness but no orthopnoea or paroxysmal nocturnal dyspnoea. She had two episodes of generalized tonic-clonic seizures, each lasting about 30 seconds with transient loss of consciousness, vomiting and upward eye-rolling. She was not a known epileptic and there was no history of substance abuse. She had experienced painful swelling of the left leg three months after removal of open-reduction-and-internal-fixation implant she had had for four

years. She was morbidly obese (BMI of 41.9 kg/m²), afebrile, tachycardic (PR 140 b/m), tachypnoeic (RR 38c/m), in respiratory distress with room-air SpO₂ 88% and right basal coarse crepitations; S3 with loud P2, BP 80/40mmHg. Other were systems unremarkable. EUCr, PT-INR, glucose and CBC were normal. Chest X-ray showed blunting of right costophrenic angle, right middle lung opacities; ECG showed sinus tachycardia, normal axis, T-wave inversion; Chest CT-angiogram showed filling defect in right and left pulmonary arteries; Doppler ultrasonography showed intraluminal echoes in the left common femoral vein (venous thrombosis). She was commenced on LMW heparin, oxygen, compression-stockings and discharged few weeks after remarkable clinical improvement and has been on follow-up with no recurrence.

Conclusion: Pulmonary embolism presenting with seizures could pose some diagnostic difficulties. Thus, a high index of suspicion is needed by physicians in order to make accurate diagnosis for prompt intervention.

Consent: Informed consent was obtained from the patient for the publication of this case report.

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A05.

Case Report: A Nigerian Child with a Diagnosis of Cystic Fibrosis – Challenges with Management in a Resource-Limited Setting

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Conflicts of interest: None

Abstract: Cystic fibrosis, an autosomal recessive disease that arises from a defective cystic fibrosis transmembrane conductance regulator (CFTR) protein, is not a common condition recognized among people of non-Caucasian or African descent and is sparsely reported in the literature from sub-Saharan Africa.

Case report: A 4-year-old Nigerian male child presented with progressive abdominal swelling, passage of fatty bulky stools, poor weight gain of 2 years duration, recurrent cough of 5 months duration, catarrh and difficult breathing of 3 weeks duration and fever of 2 days. He was born to Nigerian parents with no history of parental consanguinity or foreign ancestry. On examination, he was malnourished, had digital clubbing, and was hypoxic.

Investigation: Genetic testing confirmed cystic fibrosis with 2 heterozygous, pathogenic gene variants of the CFTR gene. Sputum culture yielded *Staphylococcus aureus*, Chest Xray showed interstitial pneumonitis and spirometry showed an obstructive lung pathology with air trapping.

Treatment and follow up: Despite challenges faced with management in a resource-limited setting like Nigeria, he has made remarkable and steady improvement within 2years of follow-up after being placed on pancreatic enzymes, a course of antibiotics for lung infections, chest physiotherapy and regular nebulization with saline and salbutamol.

Conclusion: Cystic fibrosis is still very rare in Nigeria but a high index of suspicion should be entertained especially in patients presenting with a chronic history of malnutrition with or without malabsorption and chronic lung disease.

Key words: Cystic fibrosis, malabsorption, Paediatrics, genetic study, Nigeria, case report.

Acknowledgment: A special thanks goes to our patient and his family for their cooperation and consenting to this publication.

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SESSION 2: ASTHMA

A06.

Predictors of Health – Related Quality of Life Affecting Asthmatic Children and Their Caregivers in Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria.

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Introduction: Asthma is the most common chronic respiratory disease among children which impairs various bio-psychosocial domains of

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health.¹ Hence, holistic management should be key, consisting of the conventional clinical indices assessment as well as improvement in the quality of life (QOL) through assessment of predictors that influence health related quality of life (HRQOL) among asthmatic children and their caregivers.¹⁻⁵

Objective: To determine the predictors (socio-clinical factors) of HRQOL that affects asthmatic children and their caregivers.

Method: It was a cross-sectional, hospital-based study conducted among 80 asthmatic children (aged 7-15 years) and their caregivers during a period of 4 months. Diagnosis was made based on Global Initiative for Asthma (GINA) criteria. Biodata, socio-demographic and anthropometric information were collected using a predesigned questionnaire; QOL was assessed with a standardized paediatric asthma and caregiver QOL questionnaire (PAQOLQ, PACQOLQ). Spirometry was done using a portable spirometer. Data was analysed using SPSS version 22.

Results: The mean age of the subjects was 11.4±2.6 years, mothers comprised 95% of the caregivers. Older Age, higher educational level and good caregiver's QOL grade were the positive predictors of HRQOL among asthmatic children. Presence of a caregiver with smoking habit, obesity, and overweight were the negative predictors of HRQOL among asthmatic children. Good lung function test (higher FEV₁/FVC) and good QOL grade among the asthmatic children were the positive predictors of HRQOL among the caregivers.

Conclusion: Assessment of predictors of HRQOL may help in strategizing management plan among asthmatic children for a better asthma care outcome. This is because it is the quality of care that produces wellness, which is assessed by QOL.

Keywords: Predictors, asthma, health, quality of life, children

Conflict of interest: None declared

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A07.

Levels of Asthma Control and Relationship with Peak Inspiratory Flow Rates in Patients with Asthma in South-Western Nigeria

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Introduction: Good asthma control has been associated with improvement in lung function, improved quality of life, reduced utilization of healthcare resources and resultant gradual step-down of asthma medications. Peak inspiratory flow rate (PIFR) against the resistance in dry powder inhalers, if suboptimal, may impair asthma management and level of control. The link between the levels of asthma control and PIFR has not been adequately explored.

Objectives: This study assessed the relationship between levels of asthma control (using the Asthma Control Test - ACT) and PIFR among asthma patients.

Methods: A descriptive cross-sectional study was done among 60 stable asthma patients. PIFR was measured using In-Check Dial Meter to simulate resistance of DPIs and categorized (suboptimal < 60L/min; optimal ≥ 60L/min). Spirometry was done. Level of asthma control was assessed using the Asthma Control Test (ACT). Total scores - 5 to 25 (≥ 20 - 'Well-controlled' asthma; < 20 - 'Not well controlled').

Results: Mean age was 39.4 ± 17.3 years, mean FEV1% was 82.75 ± 24.19%; and 33.3% of respondents were males. Suboptimal PIFR was found in the simulated resistances against Clickhaler and Turbuhaler (28.3% and 23.3%; p<0.001) compared to Accuhaler, Autohaler and Easyhaler (3.3%, 8.3%, and 3.3% respectively, p<0.001) among asthma patients. Using the ACT Score, 15 (25%) patients were controlled while 45 (75%) were not controlled. Most patients with controlled asthma had optimal PIFR (86.7%) while 25.7 % and 22.2 % of those with Clickhaler and Turbuhaler simulated-resistances had suboptimal PIFR compared to 2.2% in Accuhaler, 6.7% in Autohaler, 4.4% in Easyhaler and 2.2% in Low resistance pMDI.

Conclusion: Though the majority of patients with asthma had optimal PIFR, a certain cohort of uncontrolled asthmatics might not be able to effectively benefit from inhalers with higher resistances. This category must be adequately assessed for suitable DPIs to ensure better control.

Key Words: Asthma control, inspiratory flow rate, optimal, suboptimal

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A08.

Prevalence and Pattern of Skin-Prick Allergen Sensitisation among Children with Asthma in Lagos, Nigeria

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Conflict of interest: None

Background: Allergen sensitisation (AS) is abnormal immunologic, often IgE-mediated, reactions to environmental allergens like foods or aero-allergens.¹ Globally and in Nigeria, allergic disorders are increasing.² Although 78% of asthmatic children in our clinic have comorbid allergies especially allergic rhinitis (AR),³ the spectrum of AS among them is largely unknown.

Objective: To describe the prevalence and types of aeroallergens to which asthmatic children at the Paediatric Asthma Clinic, LASUTH, are sensitised.

Method: We extracted prospectively-collected data of children who had SPT from January 2019 to May 2021. Standardised SPT¹ was conducted with a 9-allergen extracts kit (ALK-Abello, Spain): HDM [HDM subtypes: *Dermatophagoides pteronyssinus* (Dp), *Dermatophagoides farina* (Df), *Blomia tropicalis* (Bt)]; cockroach, *Aspergillus fumigatus* (Af), cat, dog, *Alternaria alternate* (Aa) and grass mix (Gm)] and two controls (histamine and saline) pricked on marked areas of the volar surface of the forearm. SPT positivity was defined as wheal diameter ≥ 3 mm more than the saline control (0 mm), with histamine wheal ≥ 3 mm (after 15-minute observation). **Results:** Overall, 58 children (35 boys, 60.3%) aged 2-17 years (mean $\pm$ SD = 7.6 $\pm$ 3.6 years) had SPT, two-thirds (n = 38, 65.5%) of whom were residing in middle-income neighborhoods and 93.8% attending private schools. Associated comorbid allergies were AR (n = 46), conjunctivitis (n = 2) and dermatitis (n = 2). **Positive SPT** occurred in 86.2% (n = 50/58), consisting of: **HDM:** 82.1% (n = 46/56) [Df: 67.9%; Bt: 64.3%; Dp: 51.8%]; **cockroach** (39.3%, 22/56), Af (3.6%, 2/56), cat 1.8% (1/56), dog (1.8%, 1/56), Aa (1.8%, 1/55) and GM (0%). Almost two-thirds (65.5%, 38/58) had more than one AS.

Conclusion: AS was common among these predominantly middle-income urban-dwelling asthmatic children, the commonest being HDM and cockroach; a high prevalence of *Blomia tropicalis* allergy was a unique (scarcely-reported)⁴ but expected finding (due to the coastal nature of Lagos). HDM and cockroach control measures may be important in our patients.

Key words: Allergen sensitisation, sub-Saharan Africa, Skin prick test, allergy

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A09.

Epidemiology of Asthma among School Children in Enugu State, South-East, Nigeria.

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Background: Asthma is a common chronic respiratory illness affecting children and constitutes a major global health problem. Higher prevalence has been noted in high-income countries with reports of increasing prevalence among the population in low-income countries of Asia and Africa.

Objective: To determine the epidemiology of asthma among school children in rural and urban areas of Enugu State.

Methodology: A cross-sectional descriptive study of children aged 5 to 12 years selected by multisampling method from primary schools from urban and rural communities in Enugu State of Nigeria was performed. Information was obtained from consenting parent/caregiver's on probable asthma symptoms/signs using modified International Study of Asthma and Allergies in Childhood (ISAAC) questionnaire.

Result: An overall prevalence was 11.34%, with urban and rural areas prevalence of 13.1% and 11.2%, respectively. More males than females were affected in both communities (urban: 13.4% vs 12.8%; rural: 11.2% vs. 10.2%). Daytime wheezes (≤ 3 episodes per week) with school absence were the dominant cause of morbidity. History of atopic diseases was noted in 25.7% urban and 23.4% rural children.

Conclusion: There is high prevalence of asthma among children in our community, particularly among the urban population. The need for more health education and intervention to reduce the disease burden is paramount.

Keywords: Epidemiology, Asthma, Children, Southeast Nigeria.

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A10.

Serum Vitamin D Levels amongst Asthmatic and Non- Asthmatic Children, a Comparative Cross-Sectional Study in Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria

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Conflict of interest: The
Authors declare that there is
no conflict of interest.

Introduction: Asthma is a common chronic inflammatory disease of the airways. Recent studies have found an additional important role of Vitamin D in extra-skeletal health, particularly in the aetio -pathogenesis of childhood asthma due its roles in immune modulation and inflammation.

Aim/objective: This study aimed to determine and compare the serum vitamin D (VD) amongst asthmatic and non-asthmatic children, also to determine the relationship between serum VD level and lung function test (LFT) in asthmatic children in Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto.

Method/materials: This was a comparative cross-sectional study. A total of 120 children aged 5-15 years were enrolled (60 asthmatic and 60 non-asthmatic) over a period of 4 months. Serum VD was assayed with ELISA kit, portable spirometer was used to assess the LFT of the participants.

Results: The median serum VD levels among asthmatic children was 16.25ng/mL (IQR = 13.38) and that of non-asthmatic children was 16.80ng/mL(IQR=8.89) with no significant difference in their median serum VD ($p = 0.550$). However, there was significant difference in the LFT (median FEV1/FVC) between the asthmatic and non- asthmatic children ($z = -0.633$, $p = 0.001$). No relationship was found between serum VD and LFT (FEV1: $r = 0.034$, $p = 0.080$, FEV1/FVC: $r = 0.067$, $p = 0.623$, PEFr: $r = 0.045$, $p = 0.152$).

Conclusion: Vitamin D deficiency was highly prevalent in both asthmatic and non- asthmatic children, with no difference in their median serum VD. No relationship was found between serum VD and LFT. Emphasis should be made to improve serum VD status among study population, more so that emerging evidences have shown a possible association between VD deficiency and asthma.

Key words: Asthma, Vitamin D, Lung function test, Vitamin D deficiency, children

SESSION 3: LUNG FUNCTION

A11.

Lung Function Values of Children Exposed to Gas Flaring Smoke in Bayelsa State: A Cross Sectional Study**Urire Idholo,¹ Emmanuel E. Ekanem,² Felix O. Akinbami³,
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Conflict of interest:

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Background: Gas flaring constitutes a health hazard particularly for growing children who are at risk of lung function compromise. Despite a long history of gas flaring in Nigeria, the body of evidence is sparse regarding the possible impact of gas flaring on the lung function in the affected regions.

Aim: To determine the lung function indices of children, exposed to gas flaring in Gbarian Clan and those not exposed to gas flaring in Sagbama community, both in Bayelsa State of Nigeria.

Methods: It was a cross sectional study, among children 6- 18 years. Multi-staged sampling technique was used. Spirometry was done using Spirolab II. Inclusion criteria included children living in the community for at least one year, children older than 7 years who gave assent, children whose parents gave consent while excluding those with anatomical and chronic lung disease. Ambient air quality assessment was done.

Results: A total of 762 participants were recruited in the study, 381 from the subject community and 388 from the control community. The mean lung function indices in the gas flaring community compared to the control community were: FEV1: 1.54L vs 1.65L (p=0.002), FEV1/FVC: 86.96% vs 92.77% (p=0.001), PEF: 4.32 L/sec vs 3.38L./sec (p=0.001), FVC: 1.84L vs 1.78L (p=0.461) Air quality and suspended particulate measurement in gas flaring versus control in ug/m³ were: CO: 22.90 vs <11.45, H₂S 2.79 vs < 1.39, NO₂: 73.29 vs <2.62.

Conclusion: The study shows that the lung function indices in the gas flaring area compared to the non- gas flaring area were lower and air quality was lower in the subject community than the control. There is a need to stop flaring gases or convert flare to other uses. Routine lung function test, as well as ambient air quality monitoring, is important for children living in gas flaring area.

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A12.

Indication For Spirometry and Pattern of Lung Function among Patients in a Tertiary Health Institution in Northwest Nigeria: A 3 Years Review

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Conflict of interest: None.

Introduction: Respiratory diseases are leading cause of mortality and morbidity worldwide. Spirometry is crucial in diagnosis, differentiation, management of respiratory illnesses such as COPD, asthma and restrictive lung diseases.

Objectives: Use of spirometry to assess ventilatory function continues to gain recognition but study on spirometry in Northwestern Nigeria is scarce. This study assessed indication for spirometry and lung function pattern in patients attending a tertiary health centre in Northwestern Nigeria.

Methods: Study involved 238 patients who had spirometry between 2018 and 2020 at Federal Medical Centre Katsina. Patients' records including age, gender, height, weight, BMI, indication, and spirometric parameters were extracted from the unit register. Spirometry were conducted using a standard field spirometer. Data was analyzed using SPSS version 21, p-value < 0.05 indicate significance.

Results: Patient's age ranged between 11 and 86 years with a mean age of 40.4 ± 17.0 years. Many were male (53.8%) and 43.2% were female. Restrictive lung pattern was seen in 29.8%, obstructive pattern in 15.1%, and mixed pattern in 4.6%. Lung function pattern was associated with age and BMI of patients, p-value < 0.05. The commonest indication for spirometry was asthma (37%) and COPD (17.6%) in the reviewed year, and most of the patients were referred from medical unit of the hospital.

Conclusion: Asthma and COPD were the commonest indication for spirometry, and restrictive lung function was the predominant pattern. There is need for more awareness in use of spirometry among other physician especially surgery.

Keywords: Spirometry, pattern, review, Northwest Nigeria.

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A13.

Cardiopulmonary Functions and Respiratory Health Symptoms of adults residing/working near a Landfill Site and Those in a Non-Landfill Community in Lagos State

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Background/Objective: Emissions of poisonous gases and air pollution from landfill sites negatively impact the body systems especially the cardiopulmonary system of individuals living close to them resulting in various medical conditions. This study evaluated and compared the cardiopulmonary functions and respiratory health symptoms of adults residing/working near a landfill site with those in a non-landfill community in Lagos State.

Method: Two hundred and fifty-nine adults were recruited for this study. One hundred and fifty-two of them were adults residing or working near Olusosun-Ojota-Oregun landfill site and 107 were the age and gender matched adults residing in Ikorodu far from a landfill site. Their cardiopulmonary function parameters were assessed using a blood pressure monitor and a spirometer. Their respiratory health symptoms were evaluated using the Medical Research Council Questionnaire. Their demographic and physical characteristics were also collected. Data was analyzed using SPSS version 22.

Results: Participants who were residing or working near the landfill site had significantly lower FEV₁ (p= 0.025), PEFR (p= 0.011) and FEV₁/FVC (P= 0.013) than those far from the landfill site; they also had a significantly higher SBP (p= 0.01) than the participants far from the landfill site. The presence of increased chest tightness (p=0.003) was significant among the participants who were residing or working near landfill site. Participants who had resided near landfill site for more than 10 years had significantly lower FVC (p= 0.044) than those who have resided for less than 10 years. The presence of increased chest tightness was significantly associated (p= 0.038) with the duration of exposure to landfill site.

Conclusion: This study established that individuals who reside/work near landfill sites are at higher risks of having compromised cardiopulmonary functions which may worsen with increased duration of stay and may have more respiratory symptoms such as chest tightness than those residing far from a landfill site. It is therefore recommended that there should be public awareness campaign on the hazards of residing/working near a landfill site and the Government should enact policies that will prevent people from erecting buildings for residential or commercial purposes near a landfill site.

Keywords: Keywords: Cardiopulmonary functions, Respiratory Health symptoms, Landfill site

A14.

Spirometry results from a Respiratory Laboratory in Enugu State, Nigeria: Implications

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Conflict of Interest: the authors declare that there is no conflict of interest.

Introduction: Spirometry is the most commonly performed pulmonary function test used to evaluate patients with suspected respiratory disease.^{1, 3} It is recommended by guidelines for the diagnosis and monitoring of asthma and COPD.²

Aims and Objectives: The study was done to profile the spirometry results of physician-diagnosed asthma and physician-diagnosed COPD. It also aimed to ascertain the pattern of respiratory symptoms, co-morbidities and spirometry results among those referred to do the test.

Methods: It was a cross-sectional study which involved attending patient for spirometry at a private respiratory laboratory in Enugu, Enugu State, from November 2020 to September 2021. A structured proforma was used to obtain data regarding patients' respiratory symptoms, co-morbidities, socio economic demography, and spirometry results. Spirometry was conducted with Spirolab III.

Results: One hundred and ninety-eight participants (18 to 66 years) undertook spirometry. Only 164 of them met spirometry acceptability criteria and were included in the analysis. Ninety of them (54.88%) had normal spirometry while 30 (18.2%) had PRISM, 8 (4.88%) ACO, 5 (3.05%) COPD, 5 (3.05%) asthma, and 26 (15.85%) other abnormalities. The most frequent symptom occurring within 2 days of spirometry was central chest pain in 71 (43.29%) while the least common was noisy breathing/wheezing in 54 (32.93%). The most common co-morbidity among the participants was hypertension in 79 (48.2%). Cough with sputum production and noisy breathing occurred significantly among those with obstructive spirometry result. Four (25%) out of 20 physician-diagnosed asthma and none of the 5 physician-diagnosed COPD were confirmed to have COPD on spirometry, although 57.9% of patients were referred without a provisional diagnosis.

Conclusion: Spirometry was important in arriving at a diagnosis in the respiratory laboratory. However, more than 50% of participants had normal spirometry result, suggesting the need to complement spirometry with other diagnostic tools in the respiratory laboratory.

Keywords: asthma, COPD, ACO spirometry

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A15.

Anthropometric Correlates of Lung Function Indices in Healthy Nigerian School Children

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Conflict of interest: None

Introduction: Pulmonary function tests done by spirometry is useful for confirming normalcy and detecting abnormalities of lung function.¹ Some factors which affect lung function values include anthropometric indices, age and gender.² This current paper describes the relationship between anthropometric parameters and lung function indices among healthy Nigerian school children in Lagos.

Methodology: A cross sectional descriptive study was conducted between May 2018 and May 2019. A total of 480 healthy school children aged six to 17 years selected by multistage sampling were enrolled. Spirometric³ values measured were FEV1, FVC, PEFR and FEV1/FVC with participants in standing position using Spirobank II ®. Multiple linear regression analysis was performed between spirometric parameters and age, gender, sitting height, standing height, weight, chest circumference and waist circumference.

Results: Mean FEV1, FVC, PEFR and FEV1/FVC for the study population were 1.99 ± 0.97 , 2.40 ± 0.8 , 4.06 ± 1.4 and 82.92 ± 6.5 respectively. Males had significantly higher overall mean FEV1, FVC and PEFR ($p < 0.001$) than females. Mean lung function indices increased linearly with age in both males and females. For males, standing height and age were consistently independent predictors of FEV1, FVC and PEFR ($p < 0.05$ in all cases). For females, standing height was the independent predictor of FEV1, FVC, PEFR and FEV1/FVC ratio ($p < 0.05$ in all cases).

Conclusion: Height is the most consistent predictor of pulmonary function in Nigerian children.^{4,5}

Key words: Spirometry, anthropometry, healthy school children

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A16.

Covid-19: A Single-Centre Observational Study of South Asian (Indian) Expatriates and their Dependants in Nigeria

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Introduction: COVID-19 emerged in Wuhan, China December 2019 and the first case in Nigeria was announced late in February 2020. Globally, vaccination began in the United Kingdom on December 8, 2020, and in Nigeria in March 2021. The South Asian (Indian) expatriate population in Nigeria numbers about 50,000. There are few studies on the pattern of COVID-19 infection in expatriates in Nigeria, as compared with the local population. We report on our observations among Indian expatriate community in Nigeria, seen in a single-centre facility, before and after the vaccination drive.

Aims/Objectives: This study aims to analyse observations on the pattern of COVID-19 infection in Indians seen in a single-centre facility.

Methods: An analytical review of observational, retrospective data collected from Indian expatriates in Nigeria and their dependants over 18 months (between April 2020 - September 2021); covering the periods before and after the COVID-19 vaccination exercise began. The patients were either hospitalised or monitored at home. Confirmation of diagnosis was by RT-PCR.

Results: 256 Indians (0.0051% of the total Indian Population in Nigeria) had a positive SARS CoV2 PCR test during the review period. The total number of confirmed cases of COVID-19 in Nigeria during the same period was 205,484 (0.0010% of the total population), giving a ratio of 5:1. By the end of that period, there were 33,739,980 total cases in India. 18 persons (7.03%) were hospitalised of whom 15 (5.86%) were before vaccination but only 3 (1.17%), after double vaccination. While 161 (62.89%) persons had positive tests before the vaccination drive began in Nigeria, 95 (37.11%) had positive tests post-vaccination, a ratio of 1.7:1.

Conclusion: This study suggests that the Indian expatriates were possibly disproportionately affected by COVID-19 compared to the local population, with more positive cases recorded before the vaccination campaign began in Nigeria. The rate of hospitalisation decreased after the start of the vaccination drive

Keywords: COVID-19, Reverse Transcription - Polymerase Chain Reaction (RT-PCR), Indians, Homebased care.

Conflicts Of Interest: The authors declare no conflict of interest.

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