001

ASSESSING THE PREVALENCE OF DIABETES DISTRESS AND ASSOCIATED FACTORS IN PATIENTS WITH TYPE 2 DIABETES AT COMMUNITY CLINICS IN NEW PROVIDENCE, BAHAMAS.

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Background: The psychological implications associated with diabetes are knownas diabetes distress and are often neglected in medical practice. This can affect the treatment, management, and overall quality of life for individuals with diabetes.

Objectives: To assess the prevalence of diabetes distress, determine associated factors,and identify the most prevalent source of distress in patients with type 2 diabetes attending community clinics in New Providence, Bahamas.

Methodology: This cross-sectional study assessed the prevalence of diabetes distress and associated factors in 295 adults (19-80 years) with Type 2 Diabetes (diagnosed ≥1 year) at four New Providence, Bahamas community clinics. Participants completed a 55-item questionnaire (sociodemographic, clinical, and Type 2 Diabetes Assessment System, which has a Cronbach's α=0.94, Sources α=0.73). De-identified REDCap data was cleaned and analyzed via StataSE 16 (descriptive, bivariate, multivariable regression with a 95% CI; $P < 0.05$). Ethical approval and informed consent were obtained; all participants received a distress handout.

Results: A 89% response rate yielded a sample predominantly female (69.49%), with a mean age of 60.71, single (36.95%), high school educated (54.11%), full-time employed (37.29%), and an annual income of $10,000 (49.15%). Core distress prevalence was 31.86%. Bivariate analysis showed significant associations between high distress and being unmarried (p=0.041), insulin use (p=0.041), depression/anxiety (p< 0.001), frequent UTIs (p=0.029), and lack of HbA1c knowledge (p=0.019). The final multivariate logistic regression reported that anxiety strongly predicted distress [OR 9.920, 95% CI: 1.102 – 89.336], while random blood glucose level was a weaker predictor of diabetes distress [OR 1.003, 95% CI: 1.000 – 1.006]. Management demands were the most prevalent distress source (40.68%).

Conclusion: Almost one-third of participants experienced diabetes distress, and management demand was the most prevalent source of distress. These findings highlight the need for psychological assessment in diabetes care and further research.

002

IMPACT OF MULTIMORBIDITY ON HEALTH-RELATED QUALITY OF LIFE IN ADULT PATIENTS ATTENDING PUBLIC CLINICS IN NEW PROVIDENCE, THE BAHAMAS

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Objective: To investigate the impact of multimorbidity on health-related quality of life (HRQoL) of patients attending community clinics in New Providence, The Bahamas.

Methodology: A cross-sectional study of 267 individuals diagnosed with multiple chronic conditions was conducted. Sociodemographic information was collected and HRQoL was measured using the Short Form-36v2 Health Survey which comprises of Physical Component (PCS) and Mental Component Summary (MCS) scores. Trained research assistants collected data using REDCap after the instrument was piloted. Statistical analyses were done using Stata. Descriptive measures were summarized as means and standard deviation or percentages and frequencies. Logistic regression models were performed to examine associations between multimorbidity, specific chronic conditions and HRQoL scores, controlling relevant sociodemographic factors. Models were reported with p-values and odds ratios. Public Hospital Authority/University of the West Indies Ethics Review Committee provided approval.

Results: Participants were primarily female (71%, n=190), middled aged (53%, n=141) with hypertension (87%, n=232) and diabetes (50%, n=134). One Hundred & Forty-Four (54%) participants had at least three (3) chronic diseases. PCS had a mean of 48.9 ± 8.1, while MCS showed a higher mean of 55.3± 8.0. Results revealed that multimorbidity significantly impacts HRQoL (*p=0.004)*, with individuals reporting 57% (OR 0.43, 95% CI 0.24-0.76) lower odds of being in the same or better physical component summary score when affected by three chronic conditions and 71% (OR 0.29, 95% CI 0.15-0.55) lower odds when more than three conditions were present. Hypertension *(p=0.024)* and arthritis *(p=0.008)* were identified as having the most significant impact on PCS. While depression *(p=<0.001)* was associated with a lower MCS. Sociodemographic factors further influenced HRQoL outcomes – older age *(p=0.010),* non-black ethnicity *(p=0.004)* and higher income *(p=0.001),* were associated with better HRQoL.

Conclusion: Multimorbidity significantly impacts HRQoL of Bahamians attending select clinics. Strategies should be developed to help reduce the disease burden and guide long-term improvements in health-related quality of life.

Keywords: multimorbidity; health-related quality of life; SF36v2; the Bahamas; Caribbean; public health.

003

VISUAL CLINICAL IMPRESSION SIGNIFICANTLY CORRELATE WITH STANDARDIZED UPTAKE VALUE OF ^{99M}Tc-MDP BONE SCANS OF THE 3D SLICER IMAGE ANALYSIS SOFTWARE

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Objective: The purpose of this study was to determine the correlation between the clinical impression and the level of uptake of Technetium-99m Methylene Diphosphonate (^{99m}Tc-MDP) in bone scans of prostate and breast cancer patients obtained through the Siemens Symbia T6 SPECT/CT system at the University Hospital of the West Indies (UHWI), Jamaica.

Methodology: This was a retrospective, observational study that was conducted at the UHWI among thirty-four prostate and breast cancer patients from February 2025 to May 2025. Clinical impressions confirmed by the nuclear medicine physician were grouped as metastatic or non-metastatic and for each focus, an area of normal visual impression was identified. Standardized Uptake Value (SUV) calculations were obtained using the 3D Slicer Software. Statistical analysis was performed with the IBM SPSS (version 29.0) software and involved the use of Wilcoxon rank test and Spearman's rho correlation analysis.

Results: Of the 34 patients that were included in the study, 25 (73.5%) presented with prostate cancer and 9 (26.5%) presented with breast cancer, having a mean age of 68.43 ± 7.63 years. Sixty-seven foci were identified; the majority being non-metastatic (n=53, 79.1%) with a SUV range from 5.28-41.42 g/ml, and metastatic hot foci (n=14, 20.9%) with a SUV range from 6.58-70.37 g/ml. Analysis showed significant correlation between clinical impression of foci and SUV ($p<0.001$). Wilcoxon rank test showed median SUV for foci for both non-metastatic and metastatic for prostate cancer patients were significantly higher than the normal foci ($p<0.01$); similar outcome was seen for breast cancer patients ($p<0.05$).

Conclusion: The 3D Slicer image analysis software deemed useful in providing SUV for quantification to aid with differentiating metastatic from non-metastatic lesions showing strong correlation with clinical impression results. These finding support SUV as a valuable adjunct to qualitative assessment in bone SPECT/CT scans improving overall diagnostic confidence and clinical treatment guidance.

004

DEMOGRAPHIC TRENDS IN NUCLEAR MEDICINE UTILIZATION: A STUDY FROM A TERTIARY HOSPITAL IN JAMAICA

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Objectives: This study sought to evaluate trends in the demands for nuclear medicine services offered at the first nuclear pharmacy established at a public hospital in the developing country, Jamaica.

Methodology: This was a non-experimental, retrospective study of Nuclear Medicine (NM) scans completed at the University Hospital of the West Indies from 1 June 2022 to 31 May 2024. Data was extracted from daily records that were kept in the radiopharmacy of the NM Division. Details of age, sex, radiopharmaceutical used and NM scan administered, were documented. Inferential statistics involved the use of chi-square goodness of fit and multinomial logistic regression.

Results: Of the 1098 patients that were included in the study, 596 (54.3%) were female and 502 (45.7%) were male; ages ranged from 3–94 years old. Among the female patients, the ≥60 years age group had a greater demand for cardiac amyloid scans ($\chi2=6.40$, $p<0.05$), while the 18–59 years had a greater demand for thyroid ($\chi2=7.714$, $p<0.05$) and bone scans ($\chi2=3.904$, $p<0.05$). In contrast, more males in the ≥60 age group presented for cardiac amyloid ($\chi2=4.167$; $p<0.05$) and bone scans ($\chi2=145.79$, $p<0.01$). Logistic regression analysis revealed that males were less likely to undergo a thyroid scan ($p<0.01$, OR=0.072, 95% CI: 0.021, 0.243) and more likely to do a cardiac amyloid scan ($p<0.05$, OR=2.237, 95% CI: 1.023, 4.891) than females.

Conclusion: The study highlights the demand for NM services in a developing country. Cancer related indications are a top priority, especially among the aging population. Differences by sex and age were related mainly to thyroid, bone and cardiac amyloid scans. The findings may serve to guide future involvements with the IAEA in building capacity.

005

POSSIBLE DRUG-RADIOPHARMACEUTICAL INTERACTION IN A PATIENT FOR ^{99M}TC-SESTAMIBI PARATHYROID SCAN: A CASE REPORT

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Uniqueness of Case: The prevalence of drug-radiopharmaceutical interactions is unknown, therefore considerable work needs to be done to ascertain the rate of altered biodistribution due to these interactions as well as the mechanisms by which they occur. This report seeks to assess the factors that may have contributed to the occurrence of a possible drug-radiopharmaceutical interaction in a patient for ^{99m}Tc-methoxyisobutyl isonitrile (^{99m}Tc-MIBI) parathyroid scan.

Clinical Findings: A 64-year-old male who underwent a ^{99m}Tc-MIBI parathyroid scan for suspected primary hyperparathyroidism presented with multiple chronic diseases including hypertension and stage 5 chronic kidney disease. His medication profile included 13 prescribed medications. The scan images revealed significantly reduced counts/tracer uptake in the thyroid, parathyroid and cardiac tissues in both the early and delayed phases of the scan. An investigation was warranted to determine the cause of the reduced uptake and to ensure accurate diagnosis.

Outcomes: Two weeks later, he was advised to cease all medications for 72 hours prior to a repeat scan. Results revealed a small focus of marked tracer retention in the left inferior parathyroid bed suggestive of a small parathyroid adenoma. Post-surgery the focus was removed and histologically confirmed to be a parathyroid adenoma. On review of his medication profile, it was postulated that there were potential interactions between multiple P-glycoprotein (P-gp) substrates and inhibitors with specific emphasis on amlodipine, atorvastatin and telmisartan and the radiopharmaceutical, ^{99m}Tc-MIBI. Of the 13 drugs that the patient in this report were prescribed, 5 have been classified as a P-gp substate, inhibitor or inducer.

Conclusion: This is the first report of its kind among nuclear medicine patients in Jamaica. It highlights the importance of recognizing possible drug-radiopharmaceutical interactions, especially involving P-gp. This is crucial for mitigating against false-negative results in nuclear medicine imaging, ensuring accurate diagnosis and appropriate clinical management.

006

THE PREVALENCE OF POTENTIAL DRUG–DRUG INTERACTIONS AMONG NUCLEAR MEDICINE PATIENTS AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES

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Objective: This study sought to identify potential drug-drug interactions (DDIs) on the prescriptions of nuclear medicine patients at the University Hospital of the West Indies (UHWI).

Methodology: This was a non-experimental, cross-sectional analysis of the medication profiles of patients for nuclear medicine (NM) scans at the UHWI from 1 February 2024 to 31 May 2024. Potential DDIs were identified using the Food and Drug Administration Drugs Interactions Checker online database(www.Drugs.com). Prescriptions with more than one item were included in the study.

Results: A total of 160 drug profiles were assessed during the study period yielding 386 pairs of active agents with potential DDIs. Of the interactions identified, 324 (84%) were moderate, 37 (10%) were minor and 25 (6%) were major interactions. The most frequently occurring major potential interaction was amlodipine and simvastatin, while amlodipine and aspirin was the most frequently occurring moderate potential interaction, and aspirin and carvedilol was the most frequently occurring minor potential DDI.

Conclusion: While the majority of the identified potential DDIs were classified as moderate, these patients may require careful monitoring, dose adjustments or caution during co-administration. Interdisciplinary cooperation, such as pharmacist-driven drug therapy management, may mitigate the risk of clinically relevant interactions and enhance patient safety. These findings support the continued role of the nuclear pharmacists in identifying potential DDIs in an effort to enhance patient safety and maximize diagnostic imaging results.

007

VIRULENCE-RESISTANCE PATTERNS IN CLINICAL ESBL-PRODUCING AND NON-ESBL-PRODUCING UROPATHOGENIC *ESCHERICHIA COLI* AND *KLEBSIELLA PNEUMONIAE* IN JAMAICA

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Urinary tract infections (UTIs) impact hundreds of millions of people annually, primarily due to well-documented bacteria such as *E. coli* and *K. pneumoniae.* Over time, these pathogens have evolved, acquiring increasingly resistant and virulent traits that pose a significant challenge to contemporary healthcare systems, particularly in the context of antimicrobial resistance (AMR) globally. This study assessed the antibiotic resistance and virulence profiles of ESBL-producing and non-producing multidrug-resistant uropathogenic *E. coli* (UPEC) and *K. pneumoniae* (KP) sourced locally.

The study utilised UPEC (n=28) and *K. pneumoniae* (n=22) isolates obtained from urinary specimens at the University Hospital of the West Indies (UHWI). These were conventionally identified, and their susceptibility to antibiotics (including ESBL) determined using the Kirby-Bauer disc diffusion method, in accordance with CLSI guidelines. The distribution of various virulence factors, such as biofilm and capsule formation, efflux pumps, siderophores, toxins, and antimicrobial resistance genes, was also conducted through PCR.

In UPEC, the most prevalent virulence genes were *kps*MTII (67.9%) and *iuc*D (60.7%), whereas *acrAB* (100%) and *ent*B (40.9%) were dominant in *K. pneumoniae*. Interestingly, although ESBL-non-producing isolates exhibited the same pattern, *iucD* (85.71%) was notably the most frequent among ESBL-producing *E. coli* isolates, followed by *kpsMTII* (57.14%). *fim*H was not detected in any *E. coli* isolates. Collectively, seventeen unique virulence patterns were observed across *E. coli* (E1-10) and *K. pneumoniae* (K1-7), respectively. Among *K. pneumoniae,* K1 (*acrAB*) was found only in ESBL-producing isolates, while K6 (*fimH*, *iroN, entB, acrAB*) emerged among ESBL-non-producing isolates. In contrast, pattern E4 (*iucD* and *kpsMTII*) was prevalent in *E. coli*. These patterns were also consistent among isolates resistant to quinolones, tetracycline, and trimethoprim/sulfamethoxazole. Consequently, thirty-one distinct AMR patterns were established with ESBL-producing *E. coli* isolates presenting prevalence (42.86%) linked to *parC/gyrA* AMR profiles.

While *K. pneumoniae* exhibited a higher prevalence of virulent genes compared to UPEC, the latter displayed marginally greater heterogeneity. The observed diversity in AMR patterns was pronounced across all groups, with the exception of the ESBL-producing UPEC isolates. This diversity underscores the urgent need for comprehensive epidemiological surveillance and analysis to preemptively tackle outbreaks, particularly those unique to the Jamaican context.

008

AN ANALYSIS OF FORENSICALLY IMPORTANT BLOWFLIES ASSOCIATED WITH HUMAN REMAINS IN WESTERN JAMAICA

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Objective: To identify forensically important blowflies associated with human remains at scenes of death investigations in western Jamaica.

Methods: Blowfly larval samples associated with human remains in an advanced state of decomposition from three crime scenes in Hanover and Westmoreland were collected by a forensic pathologist according to the forensic entomology guidelines. The blowfly larvae were collected both at the crime scene and during the autopsy proceedings. Larval samples were stored in 95% ethanol and stored at -20 C until further analysis. Morphological identification was conducted using established morphological keys for blowflies. Information on the environmental conditions (humidity, temperature, precipitation) were obtained from the Metereological Centre for each scene of death location.

Results: Approximately 1000 blowfly larvae in various stages of development were analysed from human remains associated with crime scene #1 in Hanover. The stages of development included 1st, 2nd and 3rd instars. The human remains were found indoors and blowflies identified were *Cochliomyia macellaria*, *Chrysomya megacephala*, *Lucillia* species and *Chrysomya ruffifaces*. Less blowfly larvae (100) were obtained from the human remains found indoors in the parish of Westmoreland. Most of the larvae were not intact, however for those that were, they were identified as belonging to *Calliphora* genus, with both 1st and 2nd instars being present. In the case of the human remains found outdoors at crime scene #2 in Hanover, only *Chrysomya ruffifacies* was identified among the 580 larval samples analysed, with most of them being in the 3rd instar stage of development.

Conclusion: Blowflies from four genera were identified as being associated human remains at crime scenes in western Jamaica. The correct identification of blowfly species is important in the field of forensic sciences as it assists in the determination of the postmortem interval and as such can be used to determine the approximate time of death, especially when the remains are at an advanced state of decomposition. Further studies using molecular methods will serve to complement the morphological analysis as some of the blowfly larvae were too fragmented to be fully identified morphologically.

009

ASSOCIATIONS BETWEEN NEIGHBOURHOOD SOCIOECONOMIC STATUS AND CARDIOVASCULAR DISEASE IN ADULTS 40 YEARS AND OLDER IN URBAN JAMAICA

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Objectives: Studies in developed countries have shown associations between neighbourhood socioeconomic status (SES) and cardiovascular disease (CVD), but few studies have explored this in developing countries. This study investigated associations between neighbourhood SES and CVD among adults 40 years and older in urban Jamaica.

Methods: We conducted a secondary analysis of data from the Cardiovascular Health in Urban Communities Study. Participants resided in urban communities in four south-eastern parishes. Neighbourhood SES was assessed using two variables: (i) community-level property values and (ii) community-level poverty, both obtained from government data and categorized into tertiles. CVD was defined as self-reported doctor-diagnosed heart disease, stroke or heart attack. Covariates assessed included diabetes, hypertension, hypercholesterolemia, and obesity. Pearson's chi-squared tests were used to assess bivariate associations and logistic regression used for multivariable models. Analyses were weighted for survey sampling design.

Results: Analyses included 480 participants (336 females; 144 males) with mean (SD) age 59.2 (12.0) years. Prevalence of CVD was 8.3% with no sex difference, but varied with age (p=0.013), with highest prevalence among persons 65-74 years (23.9%). In bivariate models, odds of CVD were lowest in those with mid-range community property values (OR 0.30, p=0.009) and highest in those in the worst poverty tertile (OR 2.57, p=0.011). In multivariable models, men in the worst poverty tertile had significantly higher odds of CVD (OR 6.95, 95% CI 1.48-32.68) after adjusting for age, sex interaction, hypertension, education and occupation. Associations with property value and CVD were not statistically significant in adjusted models. Hypertension was also associated with higher odds of CVD, while higher education was associated with lower odds of CVD.

Conclusions: Men living in poorer communities had higher odds of CVD, while hypertension and education were significant covariates. Further research should explore the drivers of community mediated NCD risks.

010

ARTERIAL STIFFNESS OUTCOME ACCORDING TO TRANSCRANIAL DOPPLER VELOCITY STROKE RISK CLASSIFICATION AND OTHER CEREBROVASCULAR HAEMODYNAMIC PROPERTIES IN JAMAICAN CHILDREN WITH SICKLE CELL ANAEMIA

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Objective: To determine arterial stiffness (aortic stiffness) differences between high and low transcranial Doppler (TCD)-defined stroke risk groups and to use arterial stiffness to predict TCD indices.

Method: This cross-sectional study included children 4-16.9years, selected by random stratified sampling and placed in two groups (high stroke risk/ TCD velocity > 200cm/second cm/sec, n=19 and low stroke risk<170 cm/second, n=15)). Aortic stiffness(pulse wave velocity (aoPWV,metres/sec), pulse pressure(aoPPmmHg) and augmentation index(aoAI,%)) were measured using the Tensiomed arteriograph24 along with TCD mean, peak, and end-diastolic velocity; resistivity(RI) and pulsatility(PI) indices, clinical, demographic, biochemical variables and hydroxyurea use.

Results: High and low stroke risk groups differed by red cell count,1012 /L(p=0.04), mean corpuscular volume f/L(p=0.003), gamma-glutamyl transferase IU/L(p=0.03) and hydroxyurea use (55.9%(high), 44%(low) (p=0.007). Unadjusted, there were significant differences in aortic stiffness between high and low risk groups - mean(SD): aoPWV =5.8 (0.8), and 5.2(0.8)metres /second(P=0.03) respectively. Aortic pulse pressure was significantly higher in the high-risk group; 42.3(6.7) vs 37.4 (4.3) mmHg(p=0.02). There was no significant difference between groups in aoAI. After adjusting for hydroxyurea use, aoPWV remained significantly different between groups(p=0.014). RI of the bifurcation of the right distal internal artery was the cerebral artery TCD index best predicted by aortic stiffness measurements. For every 1 mmHg increase in aortic pulse pressure, the TCD resistivity index at the bifurcation of the right distal internal carotid artery increased by 0.005 (95% CI: 0.002 to 0.008, p=0.002).

Conclusion: Arterial stiffness was different between groups. Using arterial stiffness to predict stroke risk could aid risk stratification.

011

COMPARISON OF SELF-REPORTED VERSUS ACCELEROMETER-MEASURED PHYSICAL ACTIVITY IN OLDER JAMAICAN ADULTS

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Objective: The main objective was to test the hypothesis that the International Physical Activity Questionnaire (IPAQ) overestimates physical activity and underestimates sedentary times compared to accelerometer in older adults.

Method: The study design is cross-sectional using a convenient sample. One hundred seven persons, aged 60 – 90 years, were consecutively recruited from the National Council for Senior Citizens. Self-report of time engaged in physical activity over 7 days was obtained using the short form IPAQ. ActivPal accelerometers were worn for 7 days to acquire time engaged in physical activity. Paired t-test and Pearson's correlation were used to evaluate the difference and correlation respectively between the 2 methods. Ethical approval was obtained from the Mona Campus Research Ethics Committee (January 5, 2016, ECP 21, 15/16).

Results: The findings showed that sitting and walking times obtained from IPAQ were significantly lower than those from accelerometer ($p<0.001$). Moderate and high activities times obtained from IPAQ were significantly higher than those from accelerometer ($p=0.016$, $p=0.004$). The correlation between the times obtained from IPAQ and accelerometer for sitting, walking and moderate activity was weak ($r=0.3807$, $r=0.2842$, $r=0.0254$). Strong correlation was observed between times obtained from IPAQ and accelerometer for high activity ($r=0.7024$).

Conclusions: Though physical activity questionnaires are less expensive and easier to use than accelerometers as a tool for assessing physical activity, the findings showed that they may overestimate moderate and high activity and underestimate low activity or sedentary time in older adults. This can have negative implications on health assessment and obesity prevention.

012

ACUTE GLOMERULONEPHRITIS: PREVALENCE, AETIOLOGY, CLINICAL PRESENTATION AND COMPLICATIONS OF CHILDREN ADMITTED AT BHC FROM JANUARY 1, 2014 TO DECEMBER 31, 2023

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Introduction/Objective
Acute glomerulonephritis necessitates timely diagnosis and treatment to prevent significant sequelae. There is a dearth of published studies regionally. This study aimed to document the prevalence, etiology and complications of AGN in children admitted to Bustamante Hospital for Children over 10-year period.

Methodology
This was a retrospective descriptive study on patients aged 29 days to 11 years admitted from January 1st, 2014- December 31st 2023. Ethical approval was obtained. Data collected via data extraction sheet and analyzed using the Statistical Package for the Social Sciences software, version 18. P value < 0.05 was statistically significant.

Results
Eighty-two children were eligible. There was a male preponderance (76%). The estimated prevalence of AGN was 0.08%. Ninety percent of AGN were due to PIGN (post infectious glomerulonephritis). 97% of PIGN were due to PSGN (post- streptococcal glomerulonephritis). The most common antecedent infection was respiratory tract infections (50%) and impetigo (43%). Seventy percent (70%) presented with AKI while 83% of patients had complications; with the most common being hypertensive urgency/emergency (69%) p=0.041.

Conclusion
PSGN remains a significant cause of morbidity, highlighting the need for generalized rapid strep antigen testing. Future studies are needed to examine the long-term renal outcomes of patients with AGN.

Keywords
Acute glomerulonephritis, Post streptococcal glomerulonephritis, Acute kidney injury

013

EXPLORING MEALTIME BEHAVIORS AND SENSORY PATTERNS IN CHILDREN WITH AUTISM SPECTRUM DISORDER AT A SPECIALIST DEVELOPMENT CLINIC IN JAMAICA

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Background: Children with Autism Spectrum Disorder (ASD) often face feeding challenges. They experience sensory sensitivities, restricted diets, and gastrointestinal symptoms, which may lead to nutritional deficiencies and obesity risks. Limited data exists on these behaviors in the Caribbean. This study focuses on mealtime behaviors, food selectivity, and sensory processing in ASD children at UHWI, Jamaica.

Methods: Over four months (June–October 2024), 85 parents of children (aged 3–11 years) with ASD at Specialist Development Clinic were interviewed. Data was collected using the Brief Autism Mealtime Behaviour Inventory (BAMBI) and the Short Sensory Profile-2 (SSP-2). Confirmation of diagnosis and anthropometric measurements, including BMI were collected from docket review on day parents interviewed. Descriptive analysis and logistic regression assessed associations between behaviors, sensory patterns, and demographics.

Results: Over half of the study participants (55%) exhibited problematic feeding behaviors, including food refusal, selectivity, and mealtime rigidity. Sensory processing challenges were evident, with heightened sensitivity reported in 56.5% of participants, sensory seeking in 55.3%, and sensory avoidance in 54.2%. Twenty eight percent of Children with ASD were classified as obese using the CDC BMI charts.

Conclusion: Children with ASD at UHWI exhibit high rates of problematic feeding behaviors, sensory sensitivities, and increased obesity risk. These findings emphasize the need for early screening, sensory-based interventions, and a multidisciplinary approach incorporating occupational therapy, nutritional counseling, and behavioral strategies. Routine standardized mealtime assessments should be integrated into ASD management to enhance dietary habits and overall health outcomes.

Keywords: Autism Spectrum Disorder, Mealtime Behaviors, Sensory Processing, Food Selectivity, Obesity in ASD, Child Health.

014

STERILE CEREBROSPINAL FLUID PLEOCYTOSIS IN INFANTS WITH URINARY TRACT INFECTION AT A JAMAICAN PAEDIATRIC HOSPITAL: A SINGLE CENTRE STUDY

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Background - Studies have identified a relationship between UTI and CSF Pleocytosis in infants. No published studies have assessed this association in infants in the Caribbean, and few international studies have assessed this association in infants over 6 months.

Aim and Objectives -We aimed to describe the clinical characteristics of infants 29 days to 12 months admitted to the Bustamante Hospital for Children from January 1, 2018, to December 31, 2023, with urinary tract infections and determine the prevalence of concomitant sterile CSF pleocytosis.

Methodology: This is a single-centre retrospective study. Ethical approval was obtained. Those fulfilling the inclusion criteria were reviewed, and data extracted electronically using Google Forms. Data was analysed using the Statistical Package for the Social Sciences version 29 (SPSS 29.0.0.0). A P-value < 0.05 was considered statistically significant.

Results: 127 patients were identified with UTI. 85.8% were male. The most common presenting symptom was fever (40.9%). Other common symptoms included irritability (35.4%) and decreased appetite/activity (23.6%). Escherichia coli (37.8%) was the most common pathogen, followed by Klebsiella species (28.3%), Proteus species (16.5%) and Enterococcus sp. (12.6%). Of 83 infants who had a lumbar puncture, 26.5%(n=22) had concomitant sterile CSF pleocytosis. Patients in the CSF pleocytosis group had a higher CSF protein count (p=0.024) compared to the non-CSF pleocytosis group. With multivariate logistic regression analysis, no independent factors were identified.

Conclusion: Those with CSF pleocytosis had higher levels of nonspecific markers, suggesting systemic inflammation. Further studies are needed to determine the relationship between UTI and CSF pleocytosis in our population, enabling informed decisions and protocols for patient care.

015

BEHAVIOURAL SLEEP DISTURBANCES IN CHILDREN WITH AUTISM SPECTRUM DISORDER AND PARENTAL SLEEP KNOWLEDGE: A CARIBBEAN PERSPECTIVE

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Background: Autism Spectrum Disorder (ASD) is characterized by persistent deficits in social interaction, communication, and restricted or repetitive behaviors. Sleep plays a crucial role in children's cognitive, emotional, and physical development. Notably, behavioural sleep disturbances, such as bedtime resistance, delayed sleep onset, and night waking, are common in children with ASD, affecting 50-80% of this population and significantly impacting quality of life.

Objective: This study aimed to evaluate behavioural sleep disturbances in Jamaican children with ASD and assess parental knowledge regarding pediatric sleep.

Methods: This cross-sectional study enrolled eighty-three participants aged 4-10 years diagnosed with ASD. Sleep patterns, frequency of behavioural sleep disturbances, daytime sleepiness, and parental sleep knowledge were assessed. Data collection included parental questionnaires and the Children's Sleep Habits Questionnaire (CSHQ), with a threshold score of 41 indicating the likelihood of sleep disorders.

Results: Findings revealed significant sleep-related issues among the participants. Consistent bedtimes were maintained by only 45.8% of children 5 to 7 days weekly. Major disturbances identified included delayed sleep onset (51.8%), bedtime resistance (30.9%), frequent night wakings (35.9%), and daytime sleepiness (25.3%). Using the CSHQ, 76.0% of participants scored above 41, indicating a high prevalence of potential sleep disorders necessitating further evaluation. Parental knowledge assessments revealed that 67.4% of parents answered at least half of the sleep-related questions correctly, with knowledge levels significantly higher in parents with tertiary education (71.6%) compared to those without (59%).

Conclusion: This pioneering Caribbean study underscores the high prevalence of behavioural sleep disturbances in children with ASD, mirroring international findings. The gaps in parental knowledge highlight the critical need for educational interventions and resources for caregivers to improve child sleep outcomes.

016

UNVEILING CRITICAL INSIGHTS: ASSESSING ROP SCREENING IN A RESOURCE-LIMITED SETTING

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Background: Retinopathy of Prematurity (ROP) is a leading cause of childhood blindness, particularly affecting premature infants with incomplete retinal vascularization. While high-income countries (HICs) primarily report severe ROP in extremely preterm infants (< 30 weeks, < 1000 g), low- to middle-income countries (LMICs) experience higher rates of severe ROP in more mature infants (>32 weeks, >1500 g). Limited data exist on ROP in Jamaica and the Caribbean. This study evaluates the incidence, severity, risk factors, and completeness of screening for ROP at the Spanish Town Hospital (STH) in Jamaica.

Methods: A retrospective descriptive medical record review was conducted at the Level II NICU of Spanish Town Hospital for the period January 1, 2021, to December 31, 2022. Infants meeting the hospital's ROP screening criteria (< 32 weeks gestational age, < 1500 g birthweight, prolonged oxygen therapy >7 days, or 32–36 weeks with a stormy clinical course) were included. Descriptive statistics summarized patient demographics and clinical characteristics. Differences between neonates with and without ROP were analyzed using t-tests for continuous variables and chi-squared tests for categorical variables. Logistic regression identified independent risk factors for ROP development. Statistical analysis was performed using SPSS software, with significance set at $p < 0.05$. Ethical approval was obtained from the Mona Campus Research Ethics Committee and the South East Regional Health Authority ethics committee.

Results: ROP was diagnosed in 66 infants, with an incidence rate of 45.7% among very low birth weight (VLBW) infants who survived to at least 6 weeks. Most (72.8%) cases had mild ROP, 18 (27.2%) had severe ROP. Five (7.6%) had stage 5. Among larger infants ≥1.5 kg, 26% developed ROP (12 of 46 cases), with 9 cases being mild and 3 cases severe. No cases of stage 5 ROP were identified. Identified risk factors included lower gestational age, low birthweight, number of blood transfusions, chronic lung disease, and duration of oxygen therapy. Logistic regression confirmed duration of oxygen therapy as the only independent predictor of ROP. Screening compliance was observed in 87.3% of at-risk infants, but 45.8% of those screened, were screened after 6 weeks of age. No significant difference was observed in ROP occurrence between infants screened at 6 weeks versus those screened later ($p = 0.219$). Overall there was significant loss to follow-up with only 68.4% returning for follow-up.

Conclusion: The incidence of ROP at Spanish Town Hospital aligns with trends in LMICs, with a high prevalence in VLBW infants and occurrence in bigger, more mature infants (>32 weeks, >1500 g). Duration of oxygen therapy was the strongest predictor of ROP, emphasizing the need for stringent oxygen monitoring. Screening captured most at-risk infants, but significant follow-up loss suggests a need for enhanced tracking and parental education.

017

PAEDIATRIC AKI AT A TERTIARY INSTITUTION IN JAMAICA

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Introduction:
Acute Kidney Injury (AKI) is underrecognized in the paediatric population. Severe AKI can present as a part of multiorgan dysfunction and in the absence of renal replacement therapy options in the intensive care setting, it is associated with poor outcomes.

Objectives:
We aim to describe the epidemiology of AKI in the paediatric population at a tertiary care pediatric institution over a five year period.

Methodology:
This is a review of four retrospective studies done at the BHC on paediatric AKI between 2020-2024 spanning neonatal AKI, dengue and covid-19 disease. Ethical approval was obtained.

Results:
The studies were all single centered except one. All the single centered studies involved patients up to 12 years of age. There was a male preponderance ((58-88%) except for AKI due to dengue. The prevalence of neonatal AKI was 4.9% and more severe AKI in neonates was with concurrent sepsis. Severe AKI was seen in 17% of patients with severe dengue and associated with a mortality rate of 28%. The prevalence of AKI was 3.8-7.3% in patients with covid-19 infection. AKI was more prevalent in patients with severe disease/MIS-C and older children ($p<0.001$). Patients with comorbidities were more likely to be diagnosed with AKI and MIS-C. A diagnosis of AKI is more likely to warrant PICU admission. ($p<0.001$).

Conclusions:
The prevalence of paediatric AKI was <10%. Severe AKI was associated with severe presentations and PICU admissions. Early recognition and prevention are important to prevent adverse sequalae**.** Studies are needed to differentiate hospital and community acquired AKI**.**

018

A REVIEW OF THE PATTERN OF DISEASE MANIFESTATIONS, DISEASE ACTIVITY AND OUTCOMES IN PAEDIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS AT A PAEDIATRIC REFERRAL CENTRE IN JAMAICA

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Background: Systemic Lupus Erythematosus (SLE) is an autoimmune condition characterized by multisystem inflammation, which may follow a relapsing and remitting course and progress to irreversible organ damage. Studies have shown that the disease follows a more severe and aggressive course in the paediatric population with higher rates of damage accrual. There is no published data exploring this condition in Jamaican children.

Objective: The study aimed to review the manifestations, activity and outcomes of paediatric SLE in a Jamaican cohort.

Method: This was a retrospective study of children diagnosed with paediatric Systemic Lupus Erythematosus (pSLE) over the 10-year period, January 2013 to December 2022, at the Bustamante Hospital for Children. Ethical approval was received from the South East Regional Health Authority and the Mona Research Ethics Committee. Records were reviewed and data collected using a digital data extraction sheet. Descriptive analyses were performed using IBM SPSS Statistics software v 29.0.2.0. Continuous variables were presented as means and categorical variables as frequencies and percentages.

Results: The study included 11 children with a mean age of 10.0 years. The most common clinical features at presentation were constitutional symptoms (fever, lymphadenopathy, anorexia and weight loss). Renal manifestations were common with 45.5% of the cohort having Lupus Nephritis. At diagnosis, 63.7% of the cohort had severe disease with high or very high SLEDAI-2k scores. Higher scores were noted in patients with lupus nephritis and neuropsychiatric lupus when compared to those without. Three patients showed end organ damage at 1-year of follow up. The systems affected by end organ damage were ocular, renal and cerebrovascular.

Conclusion: In an early and middle childhood Afro-Caribbean population, constitutional symptoms were a dominant presenting feature in pSLE. Patients with major organ involvement had greater disease severity indicated by higher SLEDAI-2k scores.

019

OUTCOMES OF ADOLESCENTS TRANSFERRED TO ADULT CARE AT AGE 12 YEARS. A RETROSPECTIVE COHORT STUDY AT A TERTIARY CARE CENTRE IN WESTERN JAMAICA

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Objective: To assess outcomes among adolescents with congenital and acquired heart disease transferred to an adult-based cardiology clinic

Method: This is a single-centre, retrospective, descriptive cohort survey of adolescents aged 12-19 years with congenital and acquired cardiac disease, in the adult cardiology unit at Cornwall Regional Hospital. The cohort was identified from the cardiology clinic register. Routine data was manually abstracted from health records using a structured abstraction tool, with security measures in place to protect confidential data. Data extracted include demographics, echocardiogram findings, and ejection fraction outcomes before and after transfer, as well as mortality. SPSS Version 17 was used for data analysis.

Results: Twenty adolescents were identified; three were excluded due to normal cardiac evaluations. The remaining 17 had a mean age of 16 years (±2.2), with 41% (7) being male. Of these, 29% (5) had congenital anomalies, and 82% (14) had congenital heart disease, of which 53% (9) had multiple or complex lesions, including 41% (7) with cyanotic heart disease, 71% of whom had Tetralogy of Fallot. Among the 59% (10) with acyanotic conditions, there were 2 cases of cardiomyopathy, 2 of rheumatic heart disease, and 4 of mitral valve prolapse, along with single cases of ventricular septal defect and complete heart block. Most (88%, 15) were reviewed within 7 months before data collection, with a repeat echocardiogram. Among 10 echocardiograms before transfer, 40% showed abnormal ejection fractions, compared to 54% after transfer among 11 results (P=0.5). No deaths were reported post-transfer.

Conclusions: Adolescents transferred to adult cardiology services had a high proportion of complex congenital heart disease, with favourable clinical outcomes post-transfer, and a mild increase in disease progression that is not statistically significant. This aging population presents new challenges during the adolescent period, necessitating a comprehensive team approach that includes transition protocols to ensure compliance with follow-up and social and mental health support services.

020

RENAL MANIFESTATIONS OF COVID-19 IN PAEDIATRIC PATIENTS ADMITTED TO THE BUSTAMANTE HOSPITAL FOR CHILDREN: A SINGLE CENTRE RETROSPECTIVE STUDY

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Objective:
To describe the epidemiology and clinical features of patients admitted with COVID-19 infection and renal involvement at the Bustamante Hospital for Children from April 1, 2020 to April 1, 2023 and to determine the prevalence of Acute Kidney Injury in patients admitted with COVID-19 infection to the BHC during the study period.

Method:
This was a retrospective descriptive study which documented the renal manifestations of COVID-19 infection in children <12 years. The relevant ethical approvals were granted. COVID 19 infection was confirmed by PCR or serology and renal involvement defined as the presence of acute kidney injury, haematuria, proteinuria or leukocyturia. A p value of ≤ 0.05 was considered statistically significant.

Results:
151 patients fulfilled the inclusion criteria. The prevalence of renal manifestations and AKI in hospitalized patients with COVID-19 are 15% and 7.3%, respectively. Patients with renal manifestations tend to be older, median age being 3 years while those <1 year were more likely to not have any renal manifestations. Acute Covid-19 infection was more common in children <1year old while MIS-C tend to occur in older children. Patients with MIS-C are noted to have a significantly higher occurrence of renal manifestations and AKI compared to the acute COVID-19 patients ($p<0.001$). Also, patients known to have comorbidities were found to be more likely to be diagnosed with AKI and MIS-C ($p=0.006$). In addition, having a diagnosis of AKI is more likely to warrant PICU admission. ($p<0.001$)

Conclusions:
COVID-19 infection in the paediatric population is associated with renal manifestations such as AKI. Screening for renal manifestations is recommended in patients presenting with COVID-19 infection ultimately improving management and allows for early intervention.

021

NEONATAL ACUTE KIDNEY INJURY: A SINGLE CENTER STUDY IN A TERTIARY CARE FACILITY IN JAMAICA

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Objectives: To document the prevalence and epidemiology of AKI in neonates admitted to the Special Care Nursery (SCN) at the Bustamante Hospital for Children (BHC) during the period, September 1, 2023 – February 29, 2024.

Methods: This was a retrospective cross-sectional study conducted on the Special Care Nursery (SCN) at the Bustamante Hospital for Children (BHC). The ward admissions log was used to identify the cases who fulfill the inclusion criteria. Data was collected using a data extraction sheet and analyzed using the Stata/SE version 18. Categorical variables were analyzed by proportional differences using Fisher's exact test and a p value of <0.05 was taken as statistically significant.

Results: The prevalence of AKI among neonates was 4.9%**.** Stage 1 AKI (44%) was the most prevalent, followed by stage 3 (31%) and stage 2 (25%). The maximum baseline and peak creatinine values for all neonates with AKI were 219 μmol/L and 179 μmol/L, respectively. Neonates with AKI were ≤7 days old (69%), male sex (88%), had a birthweight above 2500 grams and delivered at full term. Neonates with a concurrent diagnosis of sepsis and maternal age 25 – 30 years had more severe AKI. Neonates with meningitis exclusively had severe (stage 3) AKI, an observation which was statistically significant ($p = 0.025$). There were no significant differences in the prevalence of AKI severity among neonates with prematurity ($p = 1.00$), lower birth weight ($p = 0.736$), and neonatal sepsis ($p = 0.412$).

Conclusion: Five percent of neonates admitted to BHC had AKI, predominantly with AKI Stage 1. Neonates diagnoses with meningitis and sepsis as well as those born to older mothers had more severe AKI. Given the unique challenges in diagnosing acute kidney injury (AKI) in neonates due to their dynamic renal function, serial creatinine monitoring is essential. A standardized protocol requiring at least one repeat creatinine measurement for all admitted neonates can improve early detection and prompt treatment, potentially leading to improved patient outcomes and reduced morbidity.

023

CHRONIC KIDNEY DISEASE - EPIDEMIOLOGY AND OUTCOMES IN JAMAICAN CHILDREN PRESENTING TO THE BUSTAMANTE HOSPITAL FOR CHILDREN

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Introduction: Chronic Kidney Disease (CKD) is a major global public health challenge. While extensively studied in adults, limited epidemiological data exist for children, particularly within the English-speaking Caribbean, underscoring the urgent need for updated local data.

Objective: To describe the epidemiology and outcomes of CKD in Jamaican children under twelve years presenting to the Bustamante Hospital for Children between January 1, 2010, and December 31, 2020.

Method: A retrospective, descriptive design was used. Medical records fulfilling inclusion criteria were reviewed following ethical approval. Data were analyzed using SPSS version 29.0.2.0.

Results: Fifty-five cases met the inclusion criteria. The prevalence was 46.96 per 100,000. There was a male predominance (43 cases, 78%). The most common presenting symptoms were vomiting (36, 65.5%) and fever (29, 52.7%). CAKUT accounted for 28 cases (50.9%) with obstructive uropathy due to posterior urethral valves (18, 32.7%) the main etiology. Renal scarring secondary to recurrent urinary tract infection (17, 30.9%) was prominent. The mean eGFR at diagnosis was 74 ml/min/m² (Stage 2 CKD), improving to 124.87 ml/min/1.73m² (Stage 1 CKD) after three months. Anemia(47.3%) and hypertension (36.4%) were the main complications at diagnosis. Improvements were noted at one and two years follow up 38.2%, and 18.2% for anemia, and 23.6%, and 9.1% for hypertension respectively. Twenty-one children (38.2%) defaulted follow-up.

Conclusion: Compared to locally conducted studies, the incidence of CKD is rising, with CAKUT strongly associated with pediatric CKD. Local protocols are essential for early detection, targeted interventions, and effectively reducing progression to ESRD.

024

STRADDLING CHANGE: NEONATAL OUTCOMES AND PREDICTORS OF MORTALITY IN JAMAICAN VERY LOW BIRTH WEIGHT INFANTS. A COMPARATIVE ANALYSIS OF PROMAC AND JAKIDS

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Background: Neonatal mortality remains high among Very Low Birth Weight (VLBW) infants in Jamaica, with rates particularly concerning in low and middle-income countries (LMICs). Recent Jamaican data from the JAKids study reported a mortality rate of approximately 54% among VLBW infants. The Programme for the Reduction of Maternal and Child Mortality (PROMAC), funded by the European Union, aims to decrease maternal and neonatal mortality in Jamaica through targeted interventions. This study compares VLBW outcomes between JAKids (2011) and PROMAC-supported Spanish Town Hospital (STH; 2020-2022) to assess the effectiveness of recent healthcare initiatives.

Objective: To compare neonatal outcomes and identify predictors of mortality among VLBW infants managed at the PROMAC-supported neonatal unit of Spanish Town Hospital against historical national data from the JAKids study.

Methods: A retrospective chart review was conducted of infants born weighing between 500g and 1500g admitted to the STH neonatal unit from January 2021 to December 2023. Demographic data, clinical characteristics including birthweight, gestational age, Apgar scores, maternal health factors, mode of delivery, and neonatal complications were collected. Outcomes assessed were neonatal mortality and discharge status. Relative risk (RR) and relative risk reduction (RRR) analyses were performed, and logistic regression was used to determine predictors of mortality, with statistical significance set at $p<0.05$.

Results: A total of 214 infants met inclusion criteria, with 183 records (85%) reviewed. The mortality rate at STH (PROMAC group) was 37.16%, significantly lower than the 53.90% observed in the JAKids cohort (RR=1.45; 95% CI: 1.14-1.84). Relative risk reduction analysis demonstrated a 31% reduction in mortality risk in the PROMAC group compared to the JAKids group, with a statistically significant confidence interval (14.28% to 84.09%). Independent predictors of VLBW mortality in the PROMAC group included extremely low birth weight (<1000g, $p<0.001$), gestational age less than 28 weeks ($p<0.001$), male gender ($p=0.026$), absence of antenatal steroids ($p=0.002$), vaginal delivery ($p<0.001$), and pulmonary hemorrhage ($p<0.001$).

Conclusion: The implementation of PROMAC interventions at Spanish Town Hospital has significantly reduced neonatal mortality among VLBW infants compared to historical JAKids data. Identified mortality reduction in this underscore the need for further evaluation of the effect in the other PROMAC sites.

025

ASSESSMENT OF DELAYS TO DIAGNOSIS AND TREATMENT OF BREAST CANCER AMONG PATIENTS ACCESSING CARE AT THE CORNWALL REGIONAL HOSPITAL IN WESTERN JAMAICA: A MIXED METHODS STUDY

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Objective: Breast cancer diagnosis in Jamaican women often occurs at an advanced stage due to patient and health system delays. We aimed to assess delays in diagnosis and treatment of breast cancer patients while exploring perspectives of patients and healthcare providers.

Method: A mixed-methods study was conducted. Medical records of 87 breast cancer patients attending Cornwall Regional Hospital's Oncology Clinic (2012-2016) were reviewed. Timelines from symptom onset to definitive treatment were extracted. In-depth interviews were conducted (6 patients and 6 healthcare providers). Total interval (TI = problem identification to definitive cancer treatment), patient interval (PI= problem identification to first medical consultation), and health system interval (HSI=first medical consultation to cancer treatment initiation) were calculated.

Results: Mean TI was 44.4 weeks, with 57.5% of patients experiencing delays exceeding the six-month international benchmark. For PI, 24.4% exceeded the three-month (13-week) threshold, with a mean PI of 17.9 weeks. For HSI, 73.6% exceeded the 13-week threshold, with a mean HSI of 26.8 weeks. Significant HSI contributors were pre-hospital interval (mean 13.9 weeks) and the time from biopsy to histology results for treatment planning (mean 6.58 weeks). Lack of awareness, symptom misinterpretation and competing priorities were reasons for delayed medical help.

Conclusion: Patient and health system delays impede timely breast cancer diagnosis and treatment in Western Jamaica. Increasing awareness and improving available services may reduce PI. Accelerated referral pathways to medical specialists and enhanced public sector diagnostic services (mammography, biopsy, pathology and laboratory) are needed to reduce the HSI.

Keywords: breast cancer; delays; intervals; western Jamaica

026

ASSOCIATIONS BETWEEN NEIGHBOURHOOD SOCIOECONOMIC STATUS AND CARDIOVASCULAR DISEASE IN ADULTS 40 YEARS AND OLDER IN URBAN JAMAICA

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Objectives: Studies in developed countries have shown associations between neighbourhood socioeconomic status (SES) and cardiovascular disease (CVD), but few studies have explored this in developing countries. This study investigated associations between neighbourhood SES and CVD among adults 40 years and older in urban Jamaica.

Methods: We conducted a secondary analysis of data from the Cardiovascular Health in Urban Communities Study. Participants resided in urban communities in four south-eastern parishes. Neighbourhood SES was assessed using two variables: (i) community-level property values and (ii) community-level poverty, both obtained from government data and categorized into tertiles. CVD was defined as self-reported doctor-diagnosed heart disease, stroke or heart attack. Covariates assessed included diabetes, hypertension, hypercholesterolemia, and obesity. Pearson's chi-squared tests were used to assess bivariate associations and logistic regression used for multivariable models. Analyses were weighted for survey sampling design.

Results: Analyses included 480 participants (336 females; 144 males) with mean (SD) age 59.2 (12.0) years. Prevalence of CVD was 8.3% with no sex difference, but varied with age (p=0.013), with highest prevalence among persons 65-74 years (23.9%). In bivariate models, odds of CVD were lowest in those with mid-range community property values (OR 0.30, p=0.009) and highest in those in the worst poverty tertile (OR 2.57, p=0.011). In multivariable models, men in the worst poverty tertile had significantly higher odds of CVD (OR 6.95, 95% CI 1.48-32.68) after adjusting for age, sex interaction, hypertension, education and occupation. Associations with property value and CVD were not statistically significant in adjusted models. Hypertension was also associated with higher odds of CVD, while higher education was associated with lower odds of CVD.

Conclusions: Men living in poorer communities had higher odds of CVD, while hypertension and education were significant covariates. Further research should explore the drivers of community mediated NCD risks.

027

STATIN-INDUCED RHABDOMYOLYSIS: A SYSTEMATIC REVIEW OF POTENTIAL DRUG INTERACTIONS OF INCREASED RISK

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Background: Statin-induced rhabdomyolysis is a known adverse reaction related to their mechanism of action. The risk may be increased through the pharmacokinetic or pharmacodynamics interactions of co-administered drugs. The aim of this study was to explore published case reports for possible interactions that could increase the risk of statin-induced rhabdomyolysis.

Methods: A systematic search was done on May 20, 2025 using the electronic database of PubMed (Medline) using the terms "Statin AND (Rhabdomyolysis OR Myopathy) AND Case Report". The filters applied were "English", "Human", and from "2004/1/1" to "2024/12/31". The clinical significance of drug interactions between statin and co-administered drugs was determined using the online "Drug Interaction Checker" application.

Results: Thirty-six case reports were identified containing 38 patients, ranging from ages 34-85 years; having equal distribution of males (n=21) and females (n=17). Most of the case reports were from the United States of America (n= 15, 39.5%); most involved Simvastatin (n=14, 36.8%) followed by Atorvastatin (n=12, 31.6%) and Rosuvastatin (n=7, 18.4%). In total, there were 20 statin-drug interactions which could possibly increase the risk of rhabdomyolysis; 11 were of moderate clinical significance and 9 were of major clinical significance. Major clinical significant interactions included statin co-administered with fenofibrate, colchicine and diltiazem. These drugs act to increase plasma concentration of statins (pharmacokinetic interaction) and may directly induce rhabdomyolysis (pharmacodynamics interaction).

Conclusion: Rhabdomyolysis is a possible adverse drug reaction resulting from treatment with statins and there may be increased risk with some co-administer drugs. Patients should be monitored to reduce the risk.

Key Words: Statin-Induced Rhabdomyolysis; Adverse Drug Reaction; Drug Interactions

028

PEMBROLIZUMAB-INDUCED NON-CUTANEOUS IMMUNE-RELATED ADVERSE EFFECTS: A SYSTEMATIC REVIEW

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Background: Pembrolizumab, a humanized programmed cell death protein 1 checkpoint inhibitor, is used in the treatment of various types of cancers and is associated with non-cutaneous immune-related adverse effects (irAE). This systematic review aimed to describe published case reports of Pembrolizumab-induced non-cutaneous irAE.

Methods: Following the Preferred Reporting Items for Systematic Reviews and Meta-analyses guidelines, a systematic literature search of PubMed was performed on May 21, 2025. The search was conducted using the terms "Checkpoint Inhibitor" AND "Case Report", filtered using "English", "Free Full Text", "Humans", "Non-Cutaneous", "NOT review" and "January 1, 2004 to December 31, 2024." Associations between categorical variables were assessed with Fisher's Exact test; a $p<0.05$ was considered significant.

R**esults:** Fifty-three articles met the inclusion criteria, yielding 54 case reports. The majority of case reports were from countries in Asia(31, 57.4%), followed by North America (12, 22.2%), then Europe (11, 20.4%). Japan(18,33.3%) was the most represented country. The sex distribution was 30 males and 24 females; ages ranged from 27-88 years. In total, 68 irAE were reported, with the top five being endocrine(16,23.5%), neurological(9,13.2%), pulmonary(8,11.8%), cardiac(7, 10.3%) and urogenital(7, 10.3%). Time of onset for irAE ranged from less than 24 hours to 4.5 months. Of the non-cutaneous irAE, neurological irAE appeared to be less represented in case reports from the Asian continent ($p<0.05$), while pulmonary was more significantly represented($p<0.05$). Comparison by sex showed greater representation of cardiac irAE among females($p<0.05$).

Conclusions: These trends among case reports of Pembrolizumab-induced non-cutaneous irAEs may provide insights into possible factors to explore to promote risk minimization.

029

EVALUATING THE PREVALENCE AND RISK FACTORS OF DIABETES DISTRESS IN A JAMAICAN TERTIARY CARE DIABETES CLINIC

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Objective:
Diabetes-related distress (DD) refers to the psychological impact of having to live with, and cope with the self-management of diabetes. Despite its impact on diabetes outcomes, there is a paucity of data in the Caribbean. Our objective was to estimate its prevalence in patients attending the diabetes clinic at the University Hospital of the West Indies.

Methods:
This was a cross-sectional study in 257 participants, attending the clinic from February 2025 to August 2025. A single interviewer (SMLM) administered the standardized Diabetes Distress Scale-17 (DDS17) Questionnaire, and a screening 2-item questionnaire (DDS2). Biographical data and medical history were obtained from the electronic medical records. Descriptive statistics (means and proportions) and univariate Pearson correlations were calculated.

Results:
The sample consisted of 257 adults, age (mean ± SD) 55.3 ± 17.0 years, 67% women, 17% had type 1 diabetes, age at diagnosis 40.5 ± 16.6 years, duration of diabetes 14.9 ± 12.1 years, waist 96.5 ± 14.9 cm, and weight 78.8 ± 20.2 kg. Their A1c measured closest to the interview was 9.0 ± 3.2%.
The mean score for DD was 2.6 (95% CI: 2.5 - 2.7). About 75 (29%) had no DD (i.e. score <2), 106 (41%) had moderate DD (≥ 2.0 and < 3.0), and 74 (29%) had severe DD (≥ 3.0). There were no significant correlations of DD with age, waist, weight, and duration of diabetes, but DD was correlated with age at diagnosis (r = -0.20; P <0.05) and A1c (r= 0.22, P< 0.05).

Using the DDS2; the mean score for Question 1 (i.e. “feeling overwhelmed”) was 3.2 **(**95% CI: 2.9 - 3.5), and **f**or Question 2 (i.e. “feeling like they are failing”) the score was 3.7 **(**95% CI: 3.5 – 4.0). Both indicated severe DD. The correlation of the DDS17 score with Questions 1 and 2 was 0.57 and 0.55, respectively.

Conclusions:
Most diabetic Jamaicans in this sample had moderate to severe diabetes distress, and the prevalence is higher than many countries. These data suggest that clinicians need to consider their patients’ mental well-being and screen for DD.

030

THE ADENOMA DETECTION RATE AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES (UHWI), MONA, FOR THE PERIOD JANUARY 1, 2017 TO DECEMBER 31, 2023

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Objective:
This retrospective study aimed to determine the Adenoma Detection Rate (ADR) at the University Hospital of the West Indies (UHWI) between January 1, 2017, and December 31, 2023. ADR, the percentage of patients with at least one histologically confirmed adenoma during colonoscopy, is regarded as the most reliable metric for colonoscopy quality.

Methods:
A retrospective review was conducted of all colonoscopies performed by the Gastroenterology Division at UHWI during the study period. Data included patient age, gender, and colonoscopy indications. Records were obtained from the Hospital Information Management System (HIMS) and Document Management System (DMS), while histological confirmation of adenomas was retrieved from the clinical laboratory system. Logistic regression was used to assess associations between ADR and factors such as age, gender, cecal intubation rate, and bowel preparation score. ADR was calculated annually as the number of colonoscopies with adenomas divided by the total procedures performed, multiplied by 100.

Results:
A total of 1,672 colonoscopies were performed. The mean patient age was 59.9 years (median 61, SD 16.88). The cumulative ADR was 21%, while the colorectal cancer detection rate was 4.9%. The mean Boston Bowel Preparation Scale score was 7.14 (SD 1.70), and the cecal intubation rate was 93.7%. The most common indications included lower gastrointestinal bleeding, anemia, constipation, and diarrhea.

Conclusion:
The ADR at UHWI was 21% over the six-year period, closely associated with higher bowel preparation scores (>7) and a cecal intubation rate of 93.7%. These findings underscore the importance of optimal preparation and complete colonoscopy in improving adenoma detection and colorectal cancer prevention.

031

THE CLINICAL PROFILE OF PATIENTS DIAGNOSED WITH MIGRAINE IN THE NEUROLOGY CLINIC AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES, MONA: A SINGLE CENTRE DESCRIPTIVE STUDY.

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Objective: This single-centre descriptive pilot study sought to characterize the clinical profile of patients with migraine attending the Neurology Clinic at the University Hospital of the West Indies (UHWI), Mona, over a 12-month period (July 1, 2022–June 30, 2023). Specific objectives were to describe clinical characteristics, treatment outcomes, and complication rates.

Methods: All clinic cases with "migraine" recorded in the diagnosis during the study period were screened. Twenty-eight patients met inclusion criteria. Data was extracted through retrospective chart review.

Results: The majority of patients were women of reproductive age, most with migraine with aura. Almost all cases (96%) had inadequately controlled symptoms for an average of 13 years before formal neurological evaluation. One patient developed migrainous infarction. Prophylactic therapy was prescribed in most cases, with valproate and topiramate the most frequently used agents. Treatment adherence was high (76.2%). Statistically significant improvement was observed: 71.4% reported reductions in headache frequency or severity ($p = 0.001$), and 25% achieved migraine freedom as defined by International Headache Society criteria ($p = 0.001$).

Conclusion: Migraine represents a clinically significant neurovascular disorder rather than a benign headache. Prolonged inadequate control prior to specialist evaluation highlights the need for earlier diagnosis and management. Effective prophylaxis was associated with meaningful clinical benefit, underscoring the importance of adherence and timely intervention in reducing disease burden.

Keywords: migraine; headache; neurology clinic.

032

TRANSVAGINAL CERVICAL LENGTH AS A PREDICTOR OF PRETERM BIRTH IN THREATENED PRETERM LABOR: A CARIBBEAN CENTER'S EXPERIENCE

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Objective: Preterm birth is the leading cause of perinatal morbidity and mortality worldwide, with the African ethnicity being a risk factor of this occurring spontaneously. This study aimed to predict a transvaginal cervical length (CL) cut-off of women presenting with threatened preterm labour (TPTL) in an Afro-Caribbean population.

Method: A Jamaican prospective cohort study (2018 – 2023) studied singleton non-anomalous fetuses presenting with TPTL between 24^{+0} to 36^{+6} weeks. CL was measured at admission with outcomes including spontaneous delivery in 14 days and preterm birth (PTB) <37 weeks, according to CL cut-off of 25 mm. Receiver-operating characteristics (ROC) curves were done to establish CL cut-off for prediction of PTB within 14 days.

Results: Among 63 cases analyzed, 61 (96.8%) were of African descent, 16 (25.4%) had CL <25 mm and 47 (74.6%) was ≥25mm. Five were loss to follow up. Delivery within 14 days occurred in 11/58 (19%) of women. There were no statistically significant associations between CL and delivery within 14 days, PTB < 37 weeks and birthweight (BWT). ROC curve showed 36.15 mm was the most relevant cut off to predict PTL within 14 days (sensitivity = 90.9%, false positive rate (FPR) = 61.7%, AUC = 0.622, 95% CI: 0.458 – 0.785). Use of 25mm CL produced a sensitivity and FPR of 36.4% and 23.4% respectively.

Conclusion: Although CL has been validated for TPTL assessment, CL cut-offs have varied among studies with the Afro-Caribbean population not being majorly considered. This represents the first study to do so.

033

ISUOG VS SMFM: COMPARING RECOMMENDED TIMING OF DELIVERY IN FETAL GROWTH RESTRICTION SECONDARY TO PRE-ECLAMPSIA

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Introduction:
Fetal growth restriction (FGR) secondary to pre-eclampsia (PET) necessitates close antenatal monitoring with Doppler interrogation. Both the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG) and the Society for Maternal-Fetal Medicine (SMFM) outline specific Doppler patterns, including the umbilical artery (UA), ductus venosus (DV) and middle cerebral artery (MCA), to guide delivery timing.

Objectives:
We compared perinatal outcomes according to recommended delivery timing using SMFM and ISUOG guidelines.

Methods:
A retrospective analysis was conducted on singleton non-anomalous fetuses with FGR due to PET < 37 weeks, between 2009 and 2022. The SMFM approach relied solely on UA Doppler, whereas ISUOG included assessments of the DV and MCA.

Results:
Of 123 cases analyzed, SMFM or ISUOG guidelines was associated with reduced vaginal delivery rates and a later GA at delivery ($p < 0.05$), compared to cases where these were not applied. Furthermore, SMFM indications for delivery was linked to lower BWT centiles ($p = 0.02$), but shorter NICU stays (14.7 vs 25.7 days, $p = 0.01$), whereas ISUOG guidance did not significantly impact NICU admission days (18.1 vs. 24.9 days, $p = 0.22$). Regression analysis showed SMFM was a stronger predictor of BWT <3rd centile (OR = 4.5, $p = 0.013$ vs ISUOG OR = 3.1, $p = 0.037$), while ISUOG more strongly predicted cesarean delivery (OR = 10.2 vs 8.5).

Conclusion:
The SMFM guideline, which primarily relies on the more accessible UA Doppler, may be more practical for resource limited settings, offering comparable patient outcomes without significant negative impact.

034

FACTORS INFLUENCING SUCCESSFUL PREGNANCY OUTCOMES IN IVF CYCLE AMONGST COUPLES ATTENDING A FERTILITY CLINIC IN KINGSTON, JAMAICA.

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Objective:
This study sought to determine the factors associated with in vitro fertilization (IVF) success among Jamaican women undergoing Assisted Reproductive Technology (ART) at the Hugh Wynter Institute for Reproductive Healthcare and Endoscopic Surgery (HWI-RHES) at the University Hospital of the West Indies (UWI).

Method:
A retrospective cohort study was carried out. The study involved 170 couples accessing fertility care at the HWI-RHES at the University Hospital of the West Indies who met the inclusion criteria. Demographic data, clinical data and outcomes were sought from hospital records.

Results:
The average age of the couples included in the study was advanced maternal age, with a mean age of 38 years for females and 41 years for males. The mean BMI of couples was elevated at 27.1 kg/m^2 however, this was not found to be of statistical significance when looking at outcomes. There was a statistically significant correlation (p value <0.001) with female age, specifically the 35- to 40-year-old category, and positive outcomes, live births and implantation. Other statistically significant factors included a normal AMH (p value 0.013) and AFC ranging between 11 and 22 follicles (p value 0.014). A majority of the couples had a duration of infertility between 3 to 5 years but this was not statistically significant when associated with positive outcomes. Tubal factor infertility (27.6%) and decreased ovarian reserve (21.8 %) accounted for the highest causes of female infertility; however, this impact on outcome was not found to be statistically significant.

Conclusion:
The factors predictive of IVF success in the Jamaican population included female age, AMH and AFC. The age group 35 to 40 years was associated with the highest positive outcomes of implantation and live births.

035

RARE PREGNANCY RELATED BREAST MASS: TUBULAR ADENOMA. A CASE REPORT.

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Background: Tubular breast adenomas arise from the acinar epithelium of breast lobules. They are also call pure breast adenomas and they are rare, accounting for about 1% of all benign breast lesions (in contrast to ***fibro***adenomas, which account for about 50% of all breast biopsies and 75% for biopsies in women under the age of 20 years). Less than 50 of these cases have been described in the literature.

Objective: To highlight diagnostic challenges and management considerations for breast masses detected in pregnancy and underline the role of opportune excision with histological confirmation.

Method: Descriptive narrative of a single pregnant patient managed at the University Hospital of the West Indies. Management comprised excisional biopsy under local anaesthesia and histopathological analysis. A focused literature review was performed to contextualise management.

Case Report: A 32-year-old primigravida presented at 26 weeks' gestation with a newly detected mass in the upper outer aspect of her right breast. This was not present at booking, nor had the patient ever felt it before. Ultrasound revealed the presence of a complex cystic mass with suspicious features. Differential diagnoses included a complicated fibroadenoma or malignancy. Excision under local anaesthesia was performed and urgent histopathological correlation requested. The specimen confirmed a tubular adenoma with no mitotic activity or malignant features. The wound healed well, several weeks prior to delivery, and she had an uncomplicated vaginal delivery at term with no subsequent issues with lactation. The patient was advised of her diagnosis and reassured about the benign nature of the entity and discharged after her six week post-natal visit.

Conclusion: Tubular adenoma is rare but should be considered among newly diagnosed breast masses in pregnancy as it is a benign entity and complete surgical excision is both diagnostic and therapeutic.

Key Words: Tubular adenoma; Breast mass; Pregnancy; Case report.

036

TITLE: THE RARE "PREGNANCY TUMOUR" OF THE VULVA. PYOGENIC GRANULOMA IN THE THIRD TRIMESTER: A CASE REPORT

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Background:
Lobular capillary haemangioma, commonly known as pyogenic granuloma (PG), is a non-neoplastic, inflammatory, reactive hyperplasia commonly found on keratinized tissues such as the skin or oral mucosa. PG is often associated with local trauma, chronic irritation, or hormonal changes, particularly during pregnancy. Vulvar involvement however is exceptionally rare, with only a few documented cases in the literature, and may mimic malignant conditions like vulvar cancer.

Objective: To highlight diagnostic challenges and management considerations for vulvar pyogenic granuloma in pregnancy and underline the role of opportune excision with histological confirmation.

Method: Descriptive narrative of a single pregnant patient managed at the University Hospital of the West Indies. Management comprised excisional biopsy under local anaesthesia with base ligation and histopathological analysis. A focused literature review was performed to contextualise management.

Case Report: A 26-year-old primigravida presented at 35 weeks' gestation with a rapidly enlarging, pedunculated vulvar mass located superior to the clitoral hood and causing significant discomfort. Differential diagnoses included condyloma acuminatum and vulvar carcinoma given the background of an abnormal booking pap smear indicating LSIL. Excision under local anaesthesia was performed with suture ligation for haemostasis. Histopathology confirmed lobular capillary haemangioma with no HPV-related changes. The pregnancy progressed uneventfully; she delivered vaginally at 37+2 weeks. At six weeks postpartum, the wound had healed and there was no recurrence; she was referred for postpartum colposcopy due to prior LSIL cytology.

Conclusion: Vulvar pyogenic granuloma in pregnancy is rare but should be considered among rapidly growing vascular vulvar lesions. Complete surgical excision is both diagnostic and therapeutic, prevents unnecessary radical treatment, and provides excellent outcomes.

Key Words: Pyogenic granuloma; Vulva; Pregnancy; Lobular capillary haemangioma; Case report

037

TO INVESTIGATE THE OCCURRENCE OF IRON DEFICIENCY AND ANAEMIA AMONG COLLEGE ATHLETES IN JAMAICA

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Objective: Iron deficiency and anaemia are common among collegiate athletes and can affect health and performance. This study assessed the prevalence of iron deficiency and anaemia in Jamaican college athletes.

Methods: 75 Athletes (42 males, 33 females) were evaluated in pre-season, and 64 athletes (38 males, 26 females) during competition. Blood samples were analyzed for markers of anaemia and iron deficiency. Anaemia was defined by low haemoglobin (Hb), which is Hb below the normal ranges of [<11.5 g/dL]. The study also looked at other measures of anemia such as haematocrit (HCT) mean corpuscular volume (MCV) and red cell distribution width (RDW). Iron Deficiency was defined by low ferritin Fer (Female) below normal ranges of [<7-282 ng/mL], and males (male) below normal reference range of [<18-323 ng/mL] or serum iron Fe below [<6-25 umol/L] or low iron saturation (Fe %) [Sat <13-45 %] and total iron- binding capacity (TIBC) [<44-72 umol/L] descriptive statistics were performed using SPSS 25.

Results: 5.3% pre-season and 6.3% during competition of low HGB [11.5-16.5 g/dL] was observed. low HCT [37.0-47.0 %] decreased from 22.7% pre-season to 9.4% during competition, low MCV [81.1-96.0] declined from 18.7% to 15.6%, Elevated RDW [11.5-14.5 %] decreased slightly persisted (16% pre-season, 14.1% competition). Low iron increased from 6.7% to 14.1%, low iron saturation increased from 8% to 12.5% and low TIBC increases from 5.3% to 42.2%. Male athletes with low ferritin rose from 10.7% to 21.9%; female athletes had 3.1% low ferritin only during competition and 0% during pre-season.

Conclusion: This first report on Jamaican collegiate athletes shows anemia prevalence near 6% and iron deficiency increasing from 16% pre-season to 32.8% during competition. These findings provide critical Caribbean-specific data that enrich the global understanding of athlete health and may inform targeted interventions.

038

CARDIAC TROPONIN T TESTING PATTERNS AND CLINICALUTILIZATION: A LABORATORY AUDIT

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Objective: To evaluate cardiac troponin T test requesting patterns, analyze single versus serial testing practices, and assess transport times from sample collection to laboratory receipt.

Method: A retrospective audit was conducted of all high-sensitivity troponin T tests requested from the Chemical Pathology Laboratory, The University of the West Indies (UWI) during March 2025.Data collected included patient demographics, test ordering patterns, and sample collection to receipt transport times. Results were analyzed avoiding double-counting of individual patients with multiple tests.

Results: A total of 648 troponin tests were performed on 176 unique patients (average 3.7 tests per patient). Serial testing was appropriately utilized in 84.1% of cases compared to 15.9% single tests. Mean transport time from sample collection to laboratory receipt was 129.1 minutes (2.2 hours)with a median of 104.0 minutes (1.7 hours), ranging from 1.0 to 478.0 minutes. Transport time analysis showed 30.1% of samples arrived within 60 minutes, 26.8% between 61-120 minutes,28.4% between 121-240 minutes, and 14.7% exceeded 240 minutes.

Conclusions: The UWI Laboratory demonstrates excellent serial testing compliance (84.1%) indicating appropriate protocol adherence for troponin testing. However, transport times averaging 2.2 hours with only 30.1% of samples arriving within the optimal 60-minute timeframe highlight significant opportunity for pre-analytical process improvement to optimize troponin result turnaround times.

039

INVESTIGATION OF THE EFFECTS OF SEMICARBAZONE LIGAND AND ITS COMPLEX ON THE HEMATOLOGY AND BIOCHEMISTRY OF TYPE II DIABETIC RATS

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Objectives: Diabetes mellitus, a chronic metabolic disorder, is the fourth leading cause of death globally. Medications for managing diabetes, particularly type II diabetes (T2DIA), are often expensive and can have unpleasant side effects. Therefore, there is growing interest in alternative treatments. Semi-carbazones and their metal complexes have emerged as promising candidates. This study aims to investigate the biochemical and haematological effects of metallic semi-carbazone complexes on the management of T2DIA, using Sprague-Dawley rats as a model.

Method: Type II diabetes was induced in Sprague-Dawley rats using a combination of 10% fructose in drinking water and a single intraperitoneal injection of streptozotocin at 40 mg/kg. The rats were then assigned to seven groups based on their metabolic status and treatment conditions. Treatments were administered over a period of 10 weeks. At the end of the treatment period, the rats were sacrificed, and various assays were conducted on blood samples and harvested organs to evaluate biochemical and hematological parameters.

Results: Significant increases in hemoglobin A1c (HbA1c) and serum urea concentrations were observed in diabetic groups compared to non-diabetic controls. No significant differences were noted in hematocrit, neutrophils, lymphocytes, serum creatinine, and serum globulin levels between diabetic and non-diabetic groups. Decrease in serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels were observed in non-diabetic rats treated with the ligand and chromium complex. Additionally, reductions in platelet counts were evident in the diabetic groups.

Conclusions: The findings indicate that treatment with semi-carbazone complexes can modulate biochemical and haematological parameters in both diabetic and non-diabetic rats. However, further studies are necessary to fully elucidate the extent to which semi-carbazone and its chromium complex influence various biochemical and hematological processes in diabetes management.

041

AN INVESTIGATION OF THE ASSOCIATION BETWEEN 30-DAY MORTALITY AND PREOPERATIVE NEUTROPHILS TO LYMPHOCYTES RATIO (NLR) IN ELECTIVE OPEN-HEART SURGERY AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES (UHWI)

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Background: The neutrophil-to-lymphocyte ratio (NLR) has been noted to increase with immune dysregulation and systemic inflammation. Some data suggest this is associated with an increased risk of morbidity and mortality in patients who undergo cardiac surgery with cardiopulmonary bypass. Since the NLR can be calculated from the patient's complete blood count (CBC), which is a cheap and routinely done investigation, it is potentially an additional marker to evaluate the risk of patients doing these proceuders.

Objectives: The primary aim was to assess the association between preoperative NLR and outcomes following cardiac surgery. The secondary objectives were to determine the association between preoperative NLR and the incidence of acute kidney injury (AKI) post-cardiac surgery, the length of stay (LOS) in the Intensive Care Unit (ICU) following cardiac surgery, and the length of hospital stay following cardiac surgery.

Methods: Data was collected retrospectively from the perfusionist chart, the University West Indies (UWI) laboratory information service (LIS), UHWI Health Information Service (HIMS), and the Registry of Birth and Death. Data analysis was done using R version 4.2.3 (shortstop Beagle).

Results: In the univariate analysis, preoperative NLR has a mean of 2.32 in alive patients (n = 334); has a mean of 4.21 in dead patients (n = 61), p = 0.001. Using multivariate logistic regression analysis, the preoperative NLR is associated with 30-day mortality, p = 0.003. There was no association identified between the preoperative NLR and AKI. There were statistically significant association between LOS in ICU and LOS in hospital with the preoperative NLR, with LOS in hospital have a slightly positive relationship with the preoperative NLR.

Conclusions: There is a significant association between the preoperative NLR and the 30-day mortality for open-heart surgery at the UHWI. Preoperative NLR was also associated with LOS in ICU and the hospital. It was not related to the risk of AKI. Further study in this field is warranted.

Keywords: 30-day mortality, preoperative NLR, open-heart surgery

042

MICROBIAL CONTAMINATION OF THE OPERATING THEATRES AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES, MONA, JAMAICA

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Objective: Surgical site infections are of grave concern as they can increase the risk of patient morbidity and mortality, and costs both for the patient and for the hospital. The quality of the operating theatre environment contributes greatly to the development of these surgical site infections. To date, there has been no formal study in the Main Operating Theatres (MOTs) of the University Hospital of the West Indies (UHWI) to identify these organisms and determine the frequency of contamination.

This study assessed the prevalence of positive microbial cultures and organisms isolated from surfaces and air within the seven Main Operating Theatres at the UHWI. An audit of the theatre cleaning practices was also conducted.

Method: This was a laboratory-based study in which the various surfaces and air in the seven operating rooms were sampled then inoculated and incubated. Any organisms present were sub-cultured, and the identity and frequency were determined using conventional methods. Cleaning practices within the operating theatres were also reviewed using standard checklists administered during the cleaning process.

Results: The surface samples had an overall positivity rate of 41.1%. Two-thirds (63.2%) of the bacterial organisms isolated were gram-positive, of which Coagulase *Negative Staphylococcus* (32.3%) and Enterobacter (13.2%) were most common. Important gram-negative organisms isolated included extended-spectrum beta-lactamase (ESBL) positive *Klebsiella* and *Escherichia*. The bioburden in the air was higher than the acceptable limit of 35 cfu/m^3. The cleaning audit showed poor cleaning practices for some surfaces, particularly anaesthetic equipment.

Conclusion: The microbial contamination of the main operating theatre suites at the UHWI exceeded acceptable limits on surfaces with a positivity rate of 41.1%. The air quality in the operating theatres was generally poor and significantly above the threshold of 35 colony-forming units per $metre^3$. Cleaning practices observed highlighted the need for revision of cleaning policies and supplemental training of staff.

043

THE PREVALENCE OF THE RISK FOR OSA AND THE ASSOCIATION OF FRAILTY AMONG ELDERLY PATIENTS OF THE UNIVERSITY HOSPITAL OF THE WEST INDIES MEDICAL OUTPATIENT DEPARTMENT.

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Background: Obstructive Sleep Apnoea (OSA) and frailty are major, yet often underrecognized, contributors to morbidity and mortality in older adults. Despite their potential impact, there are no published data exploring their interaction in the Caribbean.

Objective: To determine the prevalence of OSA risk, frailty, and their interrelationship among elderly medical outpatients in Jamaica.

Methods: A prospective, cross-sectional study of 204 patients aged 60 years and older attending medical outpatient clinics at the University Hospital of the West Indies (February–April 2025) was conducted. OSA risk was assessed using the STOP-BANG questionnaire, while frailty was determined by the Clinical Frailty Scale (CFS). Associations with demographic and clinical factors and the presence of frailty and OSA risk were analyzed using univariate and multivariate models.

Results: The population had a mean age of 70 (SD 9), with 69% of the patients being female, and almost two-thirds (65%) being overweight or obese. Hypertension and diabetes mellitus were the most common chronic illnesses and were present in 83% and 42% of patients, respectively. Forty-four patients (22%) had a high risk for OSA, and 75% were moderate risk. Almost half of the patients were frail. Male gender, being overweight or obese, frailty and hypertension were independently associated with having a high risk for OSA. Of the factors evaluated, only increased age was independently associated with an increased risk for frailty. Patients who were classified as high risk for OSA had almost twice the odds of being frail (OR 1.9), but this did not reach statistical significance ($p = 0.059$).

Conclusion: This population of elderly medical outpatients has a high burden of frailty and likely OSA. The high prevalence of frailty in this population suggests a high risk of future morbidity. OSA is also associated with several complications, including hypertension and cardiac disease. The data indicate interaction between OSA risk and frailty. A more thorough evaluation of the prevalence of OSA and its effects in this population is likely warranted. This should include the use of formal sleep studies in this population. Management of OSA may be one way to improve functional and long-term outcomes in this population.

044

THE PREVALENCE, MORPHOLOGY AND DISTRIBUTION OF ABDOMINAL AORTIC ANEURYSMS IN A JAMAICA POPULATION OF PATIENTS IMAGED AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES

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Introduction:
Abdominal aortic aneurysms (AAA) affect 1–12.7% of adults in published studies (mean 5.7%).Rupture is a life-threatening emergency associated with high mortality especially when >5.5cm in maximum diameter. No data exist on the prevalence, morphology, or anatomical distribution of AAA in the Jamaican population. This study aimed to determine the prevalence, morphology (saccular vs. fusiform), anatomical distribution (supra-renal vs. infra-renal), and demographic associations of AAA among adults imaged at UHWI.

Methods:
We conducted a retrospective cross-sectional study. All adults (≥18 years) who underwent abdominal CT (non-contrast or contrast-enhanced) between 01/07/2022 and 01/07/2023 were eligible. Systematic probability sampling was used to select the study sample. Abdominal aortas were assessed for aneurysm presence, morphology, and location. Descriptive statistics were generated, and associations between AAA and age or sex were tested using Pearson's Chisquare.

Results:
Of 2768 eligible patients, 341 were included through systematic sampling (95% CI, margin of error □}0.05). AAA were identified in 11% (37/341). All were fusiform (100%, 37/37). A few (1.8%, 6/37) were large >5.5cm. Most were infra-renal (73%, 27/37), occurred in males (54%, 20/37), and in patients ≥65 years (76%, 28/37). There was no significant association (p >0.05) between the presence of AAA with gender, AAA maximum diameter with gender, Gender with morphology of the AAA or gender with anatomic distribution of the AAA.

Conclusion:
The relatively high prevalence observed suggests screening strategies may be warranted. Larger, population-based studies are recommended to confirm prevalence and inform policy in the Jamaican population.

045

PULMONARY EMBOLISM IN CHRONIC KIDNEY DISEASE (CKD) AND END-STAGE RENAL DISEASE (ESRD): A RETROSPECTIVE ANALYSIS OF PREVALENCE, MORTALITY, AND HOSPITAL OUTCOMES AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES (UHWI).

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Objective:
Pulmonary embolism (PE) occurs more frequently in patients with CKD and ESRD than in those with normal kidney function (NKF). This study aimed to determine the prevalence of PE in CKD/ESRD patients and assess its impact on length of hospital stay and 30-day in-hospital mortality in the local population.

Method:
We conducted a retrospective study of patients aged 20–90 years who underwent CT pulmonary angiography at UHWI between 01/06/ 2023 and 31/05/ 2024. Data collected included demographics, PE diagnosis (from radiology reports), renal function deYined by eGFR (from the laboratory system), and hospital outcomes (length of stay and 30-day in-hospital mortality from the hospital information system).

Results:
A total of 1247 patients met inclusion criteria (434 males [34.8%], 813 females [65.2%]). Of these, 1106 (88.7%) had normal kidney function, 101 (8.1%) had CKD, and 40 (3.2%) had ESRD. Among CKD/ESRD patients, the prevalence of PE was 31.2% [44/141] (cf. 21% in the NKF patients [233/1106]). Mean ages were 70 years (CKD) and 65 years (ESRD). Females accounted for 62% of CKD/ESRD PE cases, though no significant sex differences in prevalence were observed. The 30-day in-hospital mortality was 27% for CKD/ESRD patients with PE compared with 16% in NKF patients. Median hospital stay was longer in CKD/ESRD patients with PE (7.5 days) compared with NKF patients (5.5 days).

Conclusion:
PE in CKD/ESRD patients was associated with higher prevalence, greater mortality, and longer hospitalization than in NKF patients, underscoring the need for heightened clinical vigilance and further study in this high-risk group.

046

THE PREVALENCE OF MULTIPLE SCLEROSIS (MS) IN AN AFRO-CARIBBEAN POPULATION (ACP) OF PATIENTS

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Introduction:
MS is the most common of the central nervous system inflammatory demyelinating diseases affecting approximately 2.5 million people globally. The exact causes of MS are still not known however correlations include genetics, age, sex, the environment, and autoimmune proclivities. This study aimed to review the local prevalence of MS and the demographic features of the affected local patient population.

Method:
A retrospective cross-sectional study involving review of diagnostic quality MRI Brain scans done at UHWI over a 5 year period (01/01/2019 to 31/12/2023) in patients >/= 18 years old. Scans were reviewed to identify positive cases of MS. Calculation of the annual and 5 year prevalence of MS was done. Review of the independent variable (age , sex, residence) and Pearson Chi-Square test of the relationship of these variables with a positive MS diagnosis was analyzed.

Results:
A sample population of 1076 patients met the inclusion/exclusion criteria. The annual prevalence ranged from 1.0% [Year 2022, 3/304] - 2.5% [Year 2019, 2/79]. The five-year prevalence was 1.5% (16/1076). 66% (467/708) of positive cases were female and 34% (241/708) were male. The highest age prevalence of MS was 2% in the age groups 18-39 years and 40-59 years. 2.7% of the positive cases were from Clarendon and 1.9% from Kingston and St. Andrew. No significant ($p>0.05$) statistically significant relationship is noted between age , sex and residence location and positive MS cases.

Conclusion:
There is no significant relationship between the presence of multiple sclerosis and age, sex, and residence, respectively. Given the small sample size, it is suggested that this study be replicated across the island to garner more substantial and scientifically sound findings for the ACP in Jamaica.

047

A RETROSPECTIVE ANALYSIS OF THE INCIDENCE OF PNEUMOTHORAX SECONDARY TO CT-GUIDED LUNG BIOPSY AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES (UHWI) FROM JULY 2022 TO JUNE 2024

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Objective:
The incidence of pneumothorax after CT-guided lung biopsy is less than 30% according to multiple studies done in Asia, Europe, and North America. About 89% of these events occur within an hour of the procedure and up to 11% of patients may require chest tube placement. We are unaware of any publications on this complication from Jamaica. This study aimed to identify the incidence of pneumothorax after CT-guided lung biopsy at the UHWI from July 2022 to June 2024.

Method:
A retrospective observational cohort study involving patients who underwent CT-guided lung biopsy at the UHWI within the aforementioned period. Utilizing patient records and review of images (CT and X-ray) descriptive statistics, including frequencies and percentages for categorical variables, and means and standard deviations for continuous variables were analyzed.

Results:
71 patients underwent CT-guided chest biopsy; however, after applying inclusion and exclusion criteria, 68 patients remained. The overall incidence of pneumothorax following CT-guided lung biopsy was 19% (95% CI: 10.1%, 28.5%) with 13% (95% CI: 5.2%, 21.3%) within the first hour and 16% prevalence (95% CI: 7.4%, 24.9%) in 6 hours. 50% of patients required chest tube placement. Most lesions (29%) were biopsied within the right upper lobe with an associated 30% (95% CI: 9.9%, 50.1) incidence of pneumothorax. 42.9% (95% CI: 6.2% - 79.5%) of pneumothoraces was associated with lesion depth between 4-6 cm. Adenocarcinoma was identified in 23.5% of patients. The mortality rate was 0%.

Conclusion:
The incidence of pneumothorax following CT-guided lung biopsies at the University Hospital of the West Indies was comparable to the incidence reported in the literature (< 30%).

048

AN EVALUATION OF THE UTILITY OF ULTRASOUND-MEASURED FOREARM MUSCLE THICKNESS TO SCREEN FOR SARCOPENIA AND FRAILTY IN ELDERLY SURGICAL PATIENTS AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES

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Objectives: To evaluate the relationship between forearm muscle thickness, frailty and grip strength in elderly surgical patients.

Method: This was a prospective, observational study. The population was elective surgical patients over the age of 59. Data collected included ultrasound-measured forearm muscle thickness, frailty status (as assessed by the Clinical Frailty Scale), handgrip strength, and demographic information.

Results: One hundred and twenty-five patients were recruited. The mean age was 70 years, and the population was almost evenly split between male (52%) and female patients. There was a high burden of chronic illnesses (83%), and 60% were classified as frail. Almost half of the study population (48%) had only a primary school education, and 18% had some tertiary education. Level of education, age and retirement status were significantly associated with frailty; gender and BMI were not. Forearm muscle thickness and hand grip strength were reduced considerably in frail patients ($p = 0.011$ and $p < 0.001$, respectively). However, the relationship between muscle thickness and frailty differed between male and female patients. Frail female patients did not exhibit reduced muscle thickness, despite having decreased grip strength. In contrast, frail male patients showed a significant decrease in muscle thickness and grip strength compared to non-frail males.

Conclusions: Decreased forearm muscle thickness was associated with frailty. However, elderly male and female patients had differences in the association of forearm muscle thickness and frailty. Evaluation of the relationship between sarcopenia, frailty and sex in elderly patients may help understand this relationship and plan possible interventions.

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THE EARLY EXPERIENCES OF A NEW STROKE SERVICE AT A TERTIARY HOSPITAL IN A DEVELOPING COUNTRY – AN OPPORTUNITY FOR INNOVATION.

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Introduction and Method: Stroke is a leading cause of death and disability worldwide and in developing countries with high burdens of cardiometabolic risk factors, organising and delivering stroke care is a national priority. Here we describe six months of stroke referring experience pre implementation of a stroke service at a tertiary hospital in a developing country and the first two weeks post implementation of the service.

Results: Between March and August 2025 there were thirteen consults; two were Stroke Mimics, two Transient Ischaemic Attacks and nine Ischaemic Strokes. There were five hyperacute Ischaemic Strokes, all of which had reperfusion; two intravenous thrombolysis (IVT), two endovascular thrombectomy (EVT) and one IVT and EVT. All had good outcomes with discharge modified Rankine scores ranging from 0 to 2. There was no post IVT/EVT intracranial bleeding. We have now implemented a formal stroke service staffed by a senior resident in Internal Medicine and a Stroke Consultant. These staff take consults from the primary managing teams for hyperacute and non-acute strokes from the emergency department and inpatients anywhere in the hospital. A stroke clinic has been established to effect early pathophysiological work-up of stroke to optimise secondary prevention. Rehabilitation using state of the art facilities at the UWI SODECO is planned to be available in January 2026 with a primary focus to recover patient mobility and enhance aerobic fitness and paretic muscle metabolic and physiologic function to reduce cardiometabolic risk and cognitive decline post stroke. In the first two weeks post implementation we have seen thirteen patients re ten Ischaemic Stroke, two Intra-Cranial Haemorrhage and one Stroke Mimic. One patient had IVT with no post-IVT Intracranial Haemorrhage. Stroke Mimics included Seizures, Syncope, Tumours and Transient Global Aphasia.

Conclusion: The early stages of this new stroke service is an opportunity for collaborative innovation to provide comprehensive stroke care nested and integrated within a tertiary hospital in a rapidly developing country where stroke is the leading cause of death and disability. Importantly, the service is being developed as a clinical quality assurance programme that will serve as a framework for future research.