

Abstracts of the 10th International Academic Medical Congress of Maranhão (X COIMAMA) 2025

Oral Presentations

RESEARCH ABSTRACTS

01. SURGICAL TECHNIQUES FOR THE TREATMENT OF CERVICAL INSUFFICIENCY: AN INTEGRATIVE REVIEW FROM 2015 TO 2024

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INTRODUCTION: Cervical insufficiency or incompetence (CIN) is defined as dilation and shortening of the cervix before the 37th week of gestation, which can result in miscarriage or premature birth. Given the high risk of these pregnancies, uterine cerclage is the most effective option, reducing the incidence of adverse outcomes by up to 20%. **OBJECTIVE:** Analyze the different surgical techniques for IIC. **METHODS:** This is an integrative review of articles published between 2015 and 2024 in the SCIELO, PubMed, and BVS databases. The following descriptors were used, extracted from DeCS/MeSH (Health Sciences Descriptors): ("Cerclagem Cervical") AND ("Incompetência do Colo do Útero") in Portuguese; and ("Cerclage, Cervical") AND ("Uterine Cervical Incompetence") in English. **RESULTS:** After the search, 11 articles were selected. Various cervix access routes can be used, such as vaginal and abdominal (laparotomic and laparoscopic). The most commonly used transvaginal cerclage technique (TVC) is divided into two forms. The McDonald technique involves suturing at the cervicovaginal junction, avoiding bladder or rectal injuries. Another option is the Shirodkar technique, which involves dissection of the vesicocervical mucosa and suturing at the internal os of the cervix. The McDonald technique is the most commonly used due to its simplicity and speed. On the other hand, the abdominal technique (TAC) can be applied in very short cervix cases and when the previous technique has failed. Although used as a second-line approach, this approach allows for better suture placement at the cervicoisthmic junction and a lower risk of vaginal infection/inflammation. Laparotomy, on the other hand, has higher surgical morbidity and a risk of complications such as bladder or bowel injury. Robotic surgery or laparoscopy allows for greater precision and safety. **CONCLUSION:** The choice of surgical technique, in addition to the surgeon's discretion, should consider the clinical condition and risks of each patient. There are no studies confirming the superiority of the McDonald technique compared to Shirodkar, and both should be used at the highest possible level. The laparoscopic approach, although more complex than CVT, has proven to be the most effective procedure for reducing preterm birth and maximizing neonatal survival. However, it still requires more training and is costly to healthcare systems.

02. EVOLUTION OF HERNIA SURGERIES IN THE SUS: TRENDS AND ECONOMIC IMPACT IN THE LAST DECADE

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INTRODUCTION: Hernia surgeries are one of the main elective procedures in the Unified Health System (SUS), notable for their high frequency and impact on patients' quality of life. However, over the last decade, changes aimed at optimizing health services have influenced the profile and volume of these interventions. **OBJECTIVE:** In this context, the study seeks to analyze the evolution of hernia surgeries in the SUS over the last decade, with an emphasis on healthcare trends and economic repercussions. **METHODS:** This is a retrospective, cross-sectional, quantitative study based on secondary data from the Hospital Information System (SIH) of the Unified Health System (SUS). The categories selected were region, state, number of procedures, and total cost. The data were then collected and tabulated in an Excel spreadsheet for descriptive statistical analysis. **RESULTS:** During the period from 2014 to 2024, 2,735,678 hospitalizations for hernia surgeries were registered in the SUS, with an annual average of 273,567 procedures. The total accumulated cost in the period was R\$1.8 billion, with an annual average of R\$183.4 million, demonstrating an increase of 139.47% in the amount spent from 2014 to 2024. The average cost per surgery rose from R\$604.76 in 2014 to R\$974.33 in 2024, which corresponds to an increase of 61.11%. Regionally, the Southeast concentrated the highest number of hospitalizations (1,063,594), followed by the Northeast (843,615), South (433,925), North (213,635) and Central-West (180,909) regions. The largest percentage increase in the number of hospitalizations was recorded in the North Region (66.62%), while the smallest occurred in the Northeast (41.11%). As for the total cost, the Southeast also led with R\$725 million, followed by the Northeast (R\$544 million), South (R\$317 million), North (R\$13 million) and Central-West (R\$11 million), with the Northeast region having the second largest percentage increase in spending (159.49%). **CONCLUSION:** The study showed an increase in hernia surgeries performed by the SUS (Unified Health System) over the last decade, accompanied by an increase in the average cost per procedure. However, the Northeast region stands out, having the smallest percentage increase in the number of hospitalizations (41.11%) and one of the largest percentage increases in spending (159.49%). This discrepancy highlights the need for further analysis and public policies that promote regional equity and efficient use of SUS resources.

03. EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH DIABETIC RETINOPATHY IN PRIMARY CARE IN SÃO LUÍS, MARANHÃO.

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INTRODUCTION: Diabetic retinopathy (DR) is a chronic microvascular complication of diabetes mellitus (DM) and the leading cause of preventable blindness in the working-age population. The main risk factors include disease duration, poor glycemic control, systemic arterial hypertension (SAH), and dyslipidemia. Given its high prevalence and significant impact on quality of life, early diagnosis and regular follow-up are essential to prevent severe visual impairment. **OBJECTIVE:** To analyze the epidemiological profile of patients with DR in primary care in São Luís, Maranhão, Brazil. **METHODS:** This was a descriptive, cross-sectional, and quantitative study conducted in a primary healthcare center in São Luís. Consecutive patients with a prior diagnosis of DM, scheduled for ophthalmology consultations between July 2024 and May 2025, were included. Data were collected using a standardized clinical form comprising demographic information, history of DM and SAH, indirect ophthalmoscopy findings, and recommended management. Ethics approval: CEP 6.955.973. **RESULTS:** Among 310 patients evaluated, 65.8% were female, of whom 20% presented DR. The predominant age group was 51–60 years (32.3%). Regarding DM duration, 35.2% had less than 5 years of disease, while 27.4% had between 16 and 20 years. Most patients (52.9%) either did not have SAH or reported less than 5 years since diagnosis. Only 38.4% had attended an ophthalmology consultation within the previous year. No significant media opacities were observed in 69.7% of cases. Indirect ophthalmoscopy revealed no signs of DR in 52.6% of patients, non-proliferative DR in 19.4%, proliferative DR in 8.7%, macular edema in 6.1%, tractional retinal detachment in 1.9%, and previous laser photocoagulation scars in 3.9%. In 75.5% of cases, no immediate intervention was required, and only periodic follow-up was recommended; the remaining patients were referred for panretinal photocoagulation, anti-VEGF/corticosteroid therapy, or surgery. **CONCLUSION:** DR was more prevalent among women and in the 51–60-year age group, which corresponds to an economically active population. The presence of advanced DR in a significant proportion of patients suggests delayed diagnosis, likely due to limited access to regular ophthalmologic care (only 38.4% had a consultation within the last year). These findings highlight the need for health education strategies, active screening, and expanded access to specialized ophthalmologic services in primary care to prevent DR progression and reduce the risk of blindness.

04. EPIDEMIOLOGICAL ASPECTS OF BARIATRIC SURGERY IN BRAZIL AND MARANHÃO: DISTRIBUTION AND INEQUALITIES

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INTRODUCTION: Severe obesity is an increasing public health concern in Brazil, and bariatric surgery has emerged as a relevant strategy for its management. However, persistent inequalities in access and regional disparities limit its clinical and social impact. **OBJECTIVE:** To characterize the epidemiological panorama of bariatric surgery within the Brazilian Unified Health System (SUS), with emphasis on temporal, regional, and sociodemographic distribution, and a specific focus on the state of Maranhão. **METHODS:** Observational study based on secondary data extracted from DATASUS/SIH-SUS from 2020 to 2024. Hospital Admission Authorizations (AIH) for bariatric procedures (intestinal bypass, vertical banded gastroplasty, and laparoscopic approach) were analyzed according to state, sex, and age group. **RESULTS:** More than 30,000 bariatric procedures were recorded nationwide, with

progressive annual growth except for a drop in 2021, likely related to the COVID-19 pandemic. Laparoscopic surgery predominated due to clinical advantages. Women represented 87.3% of hospitalizations, concentrated between 30 and 49 years old. Marked regional inequalities were observed: Paraná, São Paulo, and Minas Gerais accounted for over 50% of surgeries, while North and Northeast states showed minimal participation. In Maranhão, 288 surgeries were performed in the period (<1% of the national total), showing modest growth and a predominance of the laparoscopic approach. **CONCLUSION:** Bariatric surgery has expanded in SUS but remains concentrated in few regions, reflecting structural inequalities. The predominance of women in productive age highlights social and cultural factors influencing access. In Maranhão, despite recent growth, the low availability of specialized services still restricts access. Public policies aimed at regionalization, multidisciplinary teams, and continuous care are essential to achieve sustainable outcomes in the management of severe obesity.

05. RESPIRATORY DISTRESS SYNDROME OF NEWBORN: NUMBER OF DEATHS BETWEEN 2014 AND 2024 IN THE STATE OF MARANHÃO

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INTRODUCTION: Respiratory Distress Syndrome of Newborn (ARDSN), or hyaline membrane disease, is characterized by low levels of pulmonary surfactant in the lungs of newborns (NBs). This causes respiratory distress in babies, especially those born before 28 weeks. This surfactant deficiency, combined with the minimal removal of lung fluid and the limited surface area of the lungs for efficient gas exchange, leads to serious respiratory complications in this population. **OBJECTIVE:** Analyze the number of deaths from ARDSN in Maranhão between 2014 and 2024. **METHODS:** This is an epidemiological, descriptive, and quantitative study. Data were collected from the Mortality Monitoring Panel, through the Department of Epidemiological Analysis and Surveillance of Noncommunicable Diseases (DAENT). The P22.0 indicator (ARDSN) was used. The variables were: newborn age, sex, ethnicity/skin color, reference years between 2014 and 2024, and deaths per occurrence in the state of Maranhão. Data were analyzed and tabulated in the Google Docs® platform. **RESULTS:** During the years 2014 and 2014, 917 deaths from ARDSN were reported in the state of Maranhão. Of this total, the year with the highest number of newborn deaths was 2014, 110 deaths (12.00%), while the year with the lowest number of notifications was 2020, 58 deaths (6.32%). In addition, there was a decrease in the number of deaths reported in the interval from 2014 (110 deaths) to 2024 (63 deaths), corresponding to a decline of 42.73%. Regarding sex, the number of deaths of male newborns was slightly higher than that of females. Respectively, 500 deaths (54.53%) against 415 notifications (45.26%). Regarding ethnicity/color, brown RN account for the highest number, 643 deaths (70.12%), followed by white/unknown 133 (14.50%), white 121 (13.20%), black 11 (1.20%), indigenous 9 (0.98%) and yellow 0 (0.00%). **CONCLUSION:** It is concluded that ARDSN is a public health problem in the state of Maranhão. However, the number of deaths among newborns with this condition has decreased significantly. This reveals improvements in both hospital preparedness to reverse more critical postpartum cases and increased access to prenatal care. These measures aid in

the early identification of problems and risks related to prematurity, promoting better care for newborns.

06. INFLUENCE OF PARENTING ON THE DEVELOPMENT OF EXECUTIVE FUNCTIONS IN SCHOOL-AGED CHILDREN: AN INTEGRATIVE REVIEW

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INTRODUCTION: Executive functions (EFs) are defined as the biological process involving a set of skills and abilities responsible for the conscious control of actions and thoughts. **OBJECTIVE:** This integrative review aims to synthesize the main evidence regarding the relationship between executive functioning in early childhood and parenting. **METHODS:** It is an integrative literature review conducted using the databases of the Scientific Repository of the University of Coimbra and CAPES Journals, employing the descriptors "Executive functions," "Children," and "Parenting," and selecting articles published between 2015 and 2025 in Portuguese. Out of 31 studies found, 7 were included and 25 excluded for not meeting the study's objective. **RESULTS:** Organized, predictable, and safe family environments with cooperative and affectionate relationships significantly promote the development of Executive Functions (EFs). Inhibitory control is the primary skill modulated by consistent parenting practices, correlating with moral reasoning and emotional self-regulation. An integrative review of 13 articles revealed that indulgent parenting style (70% of studies) and authoritative style (30% of studies) were associated with better socio-emotional development, emotional intelligence, and self-esteem, due to high levels of "parental warmth." In contrast, authoritarian and neglectful styles were linked to lower emotional intelligence and increased violence. Specifically, a study involving 30 children indicated that a more appropriate parenting style results in better interference control in the Semantic Stroop Test. However, "inconsistent punishment" increased interference reaction time in the Stroop test, and "physical abuse" also correlated with longer reaction times in the Stroop Test. Socioeconomic variables, such as maternal education and family income, showed a correlation with EF performance. Parental investment in stimulating activities, such as reading, directly impacts cognitive development. **CONCLUSION:** Parental consistency and affectionate family interactions—characteristics of indulgent and authoritative styles—promote inhibitory control, moral reasoning, and emotional self-regulation. Furthermore, socioeconomic variables like maternal education and family income demonstrate a correlation with EF performance, highlighting the importance of environment and parental investment for healthy child development.

07. DISTRIBUTION OF SICKLE CELL DISEASES ACCORDING TO SOCIOECONOMIC INDICATORS IN MUNICIPALITIES IN NORTHEAST BRAZIL

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INTRODUCTION: Sickle cell diseases constitute a group of hereditary hemoglobinopathies with a high prevalence in Brazil, particularly in the North and Northeast regions. These conditions are often

associated with social vulnerability, highlighting the importance of understanding the distribution of cases in light of socioeconomic and public health indicators. In this context, the Human Development Index (HDI) and the infant mortality rate emerge as relevant markers for assessing the social impact of these diseases at the municipal level. **OBJECTIVE:** To analyze the distribution of sickle cell disease cases in relation to the Human Development Index (HDI) and infant mortality rate in a state in northeastern Brazil. **METHODS:** This cross-sectional study was conducted using data from the only blood center in the state of Maranhão, Brazil. Information on diagnosis, sex, age, and municipality of residence was obtained from electronic medical records in 2024. Municipal HDI and infant mortality data were retrieved from the most recent national census conducted in 2022 by the Brazilian Institute of Geography and Statistics (IBGE), and categorized as low/medium HDI when < 0.7 and high infant mortality when > 10 deaths per 1,000 live births. Descriptive and bivariate analyses were performed using the Chi-square and Fisher's exact tests. **RESULTS:** Of the 1,736 patients attended at the blood center, 74 had missing data in key variables and were excluded from the analysis, resulting in a final sample of 1,662 individuals. Among them, 50.78% were male and 67.49% were from the northern macro-region of the state. The median age was 16 years (IQR 25%: 9; IQR 75%: 25). Regarding diagnosis, 92.24% of the sample had sickle cell anemia or β -thalassemia, and 7.76% presented the heterozygous form of the disease. Bivariate analysis revealed a statistically significant difference in the distribution of sickle cell disease cases according to municipal HDI, with 70.76% of patients residing in municipalities with low or medium HDI ($p = 0.036$). However, no significant differences were found regarding the distribution of sickle cell anemia cases in relation to municipal infant mortality rates ($p = 0.24$). **CONCLUSION:** Sickle cell diseases disproportionately affect individuals living in more socially disadvantaged contexts in the state of Maranhão, particularly those residing in municipalities with low or medium HDI.

08. ASSESSMENT OF THE MENTAL STATE OF PATIENTS WITH HEART FAILURE FOLLOWED UP IN A TERTIARY HEALTH CENTER

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INTRODUCTION: Heart failure (HF) is the heart's inability to meet tissue blood demands. Emotionally, patients with HF experience greater distress, anxiety, and fear, as the diagnosis of a serious and progressive disease generates a new lifestyle, with adaptations due to functional restrictions. Therefore, research is needed to investigate the relationship between HF and mental health. **OBJECTIVE:** Analyze how the diagnosis of HF can impact the mental state of affected patients. **METHODS:** This was an observational, cross-sectional, quantitative study conducted between 2021 and 2024 with 195 patients with HF treated at a tertiary hospital in Maranhão. The GAD-2 and PHQ-2 questionnaires were used to assess the risk of anxiety and depression, respectively. Data were processed and analyzed using R Studio software (version 4.4.1). Fisher's exact test and Student's t-test were used for inferential analyses, with a significance level of 5%. The research was approved by the Ethics Committee (CAAE: 25756919.9.2004.5086). **RESULTS:** Regarding the epidemiological profile, the majority of patients were male (67.69%); self-identified as brown (60.51%); married (48.2%); had incomplete elementary education (25.38%); retired (46.15%); and lived in their

own home (84.61%). The median age of patients was 59 years. The median monthly family income was R\$1,420.00, while the median expenditure on medication was R\$500.00. Regarding the risk of mental illness, 30.77% of patients had a GAD-2 score ≥ 3 , indicating a risk for generalized anxiety disorder (GAD). Furthermore, 26.67% had a PHQ-2 score ≥ 3 , indicating a risk for depression. Statistical analyses revealed a significant association between the risk of GAD and the variables sex ($p = 0.01339$), education ($p = 0.04736$), and medication expenditure ($p = 0.01841$). For the risk of depression, only the sex variable showed a statistically significant association ($p = 0.001897$). **CONCLUSION:** The study results demonstrate that a diagnosis of HF impacts patients' mental health, particularly the development of anxiety and depression. The need for a multidisciplinary approach to HF patient care is evident, including psychological assessment and monitoring as an integral part of treatment, especially among the most susceptible and vulnerable populations identified by the study.

09. EFFECT OF A MONOTERPENE ON HEMODYNAMIC PARAMETERS IN RATS SUBJECTED TO AN ACUTE MYOCARDIAL INFARCTION MODEL

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INTRODUCTION: Cardiovascular disease (CVD) is the leading cause of death worldwide, with acute myocardial infarction (AMI) being the most prevalent. Arterial hypertension is a key risk factor for AMI. Experimentally, the isoproterenol (ISO)-induced AMI model in animals is well-established in the literature. Regarding CVD, polyphenol-based formulations possess antioxidant and anti-inflammatory properties. In this context, there is a monoterpene (5-isopropyl-2-methyl-phenol), abundant in the essential oils of oregano and thyme, to which cardioprotective properties are attributed. **OBJECTIVE:** To evaluate the effect of the monoterpene (M20) on the hemodynamic parameters of rats subjected to AMI. **METHODS:** This study was approved by the Animal Ethics Committee under protocol number 23115.002016/2023-60. Ten adult, male, previously healthy Wistar rats (*Rattus norvegicus*), approximately 45 days old and weighing around 250 grams, were used. Initially, the animals were randomized into 3 groups of 3 animals each: Control (not induced to AMI); ISO (induced to AMI); CARV (treated with M20 at 20mg/kg/day and induced to AMI). They underwent a 15-day adaptation period with free access to water and chow, and weight monitoring. Subsequently, the CARV group received oral gavage of M20 for 4 weeks; the other groups were gavaged with water. After the treatment, the CARV and ISO groups were subjected to an AMI induction model with two injections of ISO at a dose of 85 mg/kg, 24 hours apart. They were then anesthetized with ketamine (80 mg/kg) and diazepam (5 mg/kg) for the measurement of hemodynamic parameters: systolic blood pressure (SBP), diastolic blood pressure (DBP), and mean arterial pressure (MAP), followed by euthanasia. Data are presented as mean \pm standard error, with a $p < 0.05$ considered statistically significant. Statistical analysis was performed using GraphPad Prism 9.0 software. **RESULTS:** The CARV group showed a relevant improvement in hemodynamic parameters compared to the Control and ISO groups. A significant reduction ($p < 0.05$) was observed in SBP [111 ± 26.29 mmHg vs. 164 ± 2.64 mmHg (Control) and 152 ± 6.94 mmHg (ISO)], DBP [95.24 ± 24.91 mmHg vs. 136 ± 10.79 mmHg and 134.8 ± 9.23 mmHg, respectively], and MAP [101.3 ± 24.87 mmHg vs. 137 ± 9.77 mmHg and 154 ± 3.51

mmHg, respectively]. **CONCLUSIONS:** The monoterpene M20 improved all hemodynamic parameters in the treated animals through a hypotensive effect, supporting the hypothesis that it possesses cardioprotective properties.

10. EVALUATION OF THE EFFECT OF FRIDERICIA PLATYPHYLLA EXTRACT ON THE ELECTROCARDIOGRAPHIC PARAMETERS OF RATS

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INTRODUCTION: *Fridericia platyphylla*, from the Bignoniaceae family, is a plant native to the Brazilian Cerrado, commonly known as "cipó-una" or "cervinha do campo." Recent studies highlight that flavonoids, triterpenes, saponins, tannins, and other polyphenols are important components of this species. The hydroethanolic extract of the plant has demonstrated antispasmodic activity in isolated rat jejunum, acting through the inhibition of Ca^{2+} influx via voltage-dependent calcium channels. **OBJECTIVE:** This study aimed to evaluate the biological potential of the effects of the hydroethanolic extract of *Fridericia platyphylla* (EFP) on cardiovascular parameters in rats. **METHODS:** Specifically, the following steps were carried out: obtaining the hydroethanolic extract of *Fridericia platyphylla* (EFP); evaluating feed intake and weight progression in animals treated with the extract; measuring electrocardiographic tracing variables; and determining body temperature and oximetry. For this purpose, the animals were previously randomized into groups distributed as follows: EFP100 group (treated with 100 mg/kg of EFP), EFP250 group (treated with 250 mg/kg of EFP), Healthy Control group (treated with 0.1 mL/100 g of water), and ISO group (treated with 0.1 mL/100 g of water). All animals received oral treatment for 15 days, administered once daily. At the end of this period, cardiac injury was induced with isoproterenol (85 mg/kg) in the treated groups and the ISO group on days 14 and 15, via subcutaneous administration. The study was approved by the Ethics Committee on Animal Use (CEUA), in accordance with the Guidelines for the Care and Use of Laboratory Animals (protocol no. 23115.019856/2023-61). **RESULTS:** The results showed that the EFP did not cause significant changes in the animals' body temperature or oximetry, suggesting an adequate safety profile. Furthermore, the electrocardiographic analysis indicated that the EFP group exhibited a better tracing pattern compared to the ISO 85 mg/kg group, with the absence of extrasystoles and the presence of a regular sinus rhythm. However, the animals presented an inverted T wave, which is suggestive of myocardial injury. **CONCLUSION:** In summary, this research adds value to the bioprospecting of this plant, resulting in the development of a promising oral therapeutic alternative due to its safety profile and improvement in electrocardiographic patterns. Therefore, based on future preclinical and clinical studies, this formulation may be further established as a valuable resource for enhancing human health.

11. ASSOCIATION BETWEEN ROBSON CLASSIFICATION AND APGAR: AN APPROACH BASED ON OBSTETRIC GROUPS

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INTRODUCTION: Performing cesarean sections without appropriate clinical indication remains a major public health issue in countries such as Brazil. To address this, the Robson classification was developed to standardize the analysis of cesarean section rates and to better characterize obstetric populations. Meanwhile, the Apgar score is widely used to assess neonatal vitality in the first minutes of life. Despite the extensive use of both systems individually, significant gaps remain in understanding the relationship between Robson classification groups and neonatal outcomes as measured by the Apgar score. **OBJECTIVE:** To verify the existence of an association between the Robson classification and the Apgar score. **METHODS:** This was a cross-sectional, analytical, observational study including newborns residing in the Northeast region of Brazil in 2023, as recorded in the Live Births Information System (SINASC). The variables analyzed were maternal age, birth weight, type of delivery, race/ethnicity, type of pregnancy, Robson classification group, and 5-minute Apgar score. Statistical analyses were performed using R software. To investigate the association between Robson groups and Apgar scores, odds ratios (ORs) and their respective 95% confidence intervals (CIs) were estimated. **RESULTS:** In 2023, SINASC registered 703,448 births in the Northeast region, of which 648,427 were included in the analysis. Most mothers self-identified as brown (78.87%), had singleton pregnancies (97.87%), and underwent cesarean delivery (57.7%), with a mean age of 27 years. Robson groups 3, 5, and 1 accounted for 69.28% of the cases. Among newborns, 78.87% were classified as brown, with a mean birth weight of 3,181 g. A total of 98.85% had a 5-minute Apgar score ≥ 7 , while 1.15% had a score < 7 . Mothers classified in Robson groups ≥ 6 had higher odds of giving birth to infants with severe alterations in heart rate, respiratory effort, muscle tone, reflex irritability, and/or skin coloration, with group 9 presenting the highest risk (OR = 2.78, 95% CI: 1.97–3.84). In contrast, Robson groups ≤ 5 showed a reduced or nonsignificant risk for Apgar < 7 . **CONCLUSION:** These findings indicate that the maternal obstetric profile assessed by the Robson classification is a relevant predictor of neonatal health. The potential use of the Robson classification as a regulatory tool for obstetric practices, based on group-specific risk, should be further explored.

12. ADAPTIVE RADIOTHERAPY GUIDED BY ARTIFICIAL INTELLIGENCE IN CERVICAL CANCER: A SYSTEMATIC REVIEW

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INTRODUCTION: Adaptive radiotherapy (ART) is a technique that allows for treatment adjustment, enabling more precise dose distribution, ensuring better tumor coverage, and avoiding damage to organs at risk (OAR). In the last 5 years, it has been associated with Artificial Intelligence (AI) with the goal of streamlining this process. **OBJECTIVE:** The aim of this study is to analyze the current perspectives on the use of AI-guided ART in the treatment of cervical cancer (CC), considering applicability, dose adjustment, and toxicity reduction. **METHODS:** This is a systematic literature review that used the PubMed, Scopus, BVS, and Embase databases. The following descriptors were used: ("uterine cervical neoplasms") AND ("adaptive radiotherapy") AND ("artificial intelligence" OR "deep learning" OR "machine learning") AND ("treatment outcome" OR "tumor control" OR "dose precision"). Thirty-four articles were found, of which 6 were

selected and independently evaluated by the authors, according to the inclusion criteria: controlled clinical trials, randomized studies, and meta-analyses. Duplicate articles in the databases, reviews, and those outside the scope of the study were excluded. **RESULTS:** AI-guided ART reduced gastrointestinal (GI) and genitourinary (GU) toxicities in 21 patients when compared to conventional plans. GI and GU toxicity rates were 19.0% and 0%, respectively, versus 43.3% in the control group. Another study with 10 patients showed a reduction in damage to organs at risk (OARs). An automated decision model was developed to determine the need for replanning. With a significant reduction in decision time, the model optimized the workflow, reducing evaluation time from 5–8 minutes to less than 2, without compromising the quality of the plans. A machine learning (ML) model was created to predict the ideal applicator for brachytherapy; the result was equivalent to that of specialists, reducing the accumulated dose in the OARs. Another study expanded the use of knowledge-based planning (KBP) in brachytherapy applicators. The model predicted the doses and reduced their distribution in the OARs by up to 10.7%, proving useful in optimization. **CONCLUSION:** AI-guided radiotherapy has proven to be a promising strategy in the treatment of cervical cancer, indicating a reduction in toxicities, protection of organs at risk, and precision in dose delivery, with the potential to optimize planning and improve applicator selection, without compromising treatment quality when compared to conventional techniques.

13. IMPACT OF ALCOHOLIC BEVERAGE CONSUMPTION AND SMOKING ON HOSPITALIZATION OF PATIENTS WITH HEART FAILURE

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INTRODUCTION: Heart failure (HF) is a clinical manifestation resulting from dysfunction in ventricular filling or blood ejection. Evidence indicates that excessive alcohol consumption is associated with higher rates of HF, especially in individuals with structural or functional cardiac alterations. Prolonged smoking is also considered a significant aggravating factor of this cardiovascular condition. **OBJECTIVE:** To analyze the implications of alcohol consumption and smoking on the hospitalization of patients with HF in a tertiary hospital in Maranhão. **METHODS:** This was a cross-sectional, retrospective, quantitative study conducted with patients diagnosed with Heart Failure with Reduced Ejection Fraction (HFrEF) treated at the cardiology outpatient clinic of a tertiary public hospital in Maranhão between 2021 and 2024. The final sample included patients with complete data on cardiovascular mortality and number of hospitalizations. The independent variables were related to alcohol consumption (status, monthly quantity, duration of use, and abstinence) and smoking (status, smoking history, and abstinence duration). The outcomes assessed were cardiovascular mortality (binary variable) and total number of hospitalizations (continuous). RStudio® software (version 4.5.0) was used. Fisher's exact test was applied for categorical variables. For continuous or ordinal variables, the Wilcoxon test (two groups), Kruskal-Wallis test (three or more groups), and Spearman correlation test were used. The significance level adopted was 5% ($p < 0.05$). Study approved by the CEP under protocol number 25756919.9.2004.5086. **RESULTS:** A total of 156 patients with HFrEF were analyzed. There was no statistically significant association between alcohol consumption and the

outcomes of cardiovascular death or hospitalizations. The same was observed for smoking, although a trend toward an association between longer smoking abstinence and fewer hospitalizations was noted ($p = 0.085$). **CONCLUSION:** No significant associations were found between alcohol consumption or smoking and the outcomes assessed. The study's limitations include its cross-sectional design, the use of retrospective data, and the relatively small sample size, which may have reduced the statistical power to detect associations. Multicenter studies with larger sample sizes and prospective designs are recommended to better elucidate the impact of these exposures on the progression of HF.

14. ORAL MONOTERPENE ATTENUATES INFARCTION AREA AND CARDIAC HYPERTROPHY IN AN EXPERIMENTAL MODEL OF MYOCARDIAL INFARCTION IN RATS

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INTRODUCTION: Cardiovascular diseases (CVDs) are the leading cause of death worldwide, with acute myocardial infarction (AMI) being one of the main contributors to high morbidity and mortality rates. In this context, natural compounds with antioxidant and anti-inflammatory properties have attracted scientific interest as potential cardioprotective agents. Among these, monoterpenes stand out for having demonstrated cardiovascular benefits in studies using animal models. **OBJECTIVE:** To analyze the effect of oral treatment with monoterpene on the infarct area and the estimated cardiac hypertrophy in rats induced with AMI. **METHODS:** This study was approved by the Animal Research Ethics Committee under No. 23115.002016/2023-60. Male, normotensive Wistar rats (*Rattus norvegicus*) were randomly assigned to three groups: control (healthy), ISO (AMI induced with isoproterenol 85 mg/kg without treatment), and MON (AMI induced with isoproterenol 85 mg/kg after oral gavage with monoterpene 20 mg/kg/day for 30 days). At the end of the experiment, animals were anesthetized and euthanized for heart removal. Cardiac hypertrophy was estimated by the relative heart weight (g/100g of body weight). Infarct area was analyzed using triphenyltetrazolium chloride (TTC) staining for 30 minutes, followed by sample photography and quantification using ImageJ software. Statistical analysis was performed using GraphPad Prism version 9.0. Data are presented as mean \pm standard error of the mean. **RESULTS:** Regarding the percentage of infarcted area, the control group had a mean of $5.37 \pm 0.71\%$, the ISO group showed $25.95 \pm 4.87\%$, and the MON group had $7.27 \pm 2.07\%$. The differences were statistically significant between the control and ISO groups ($p = 0.0027$) and between the MON and ISO groups ($p = 0.0085$) for this parameter. Regarding heart weight, the control group had a mean of 0.3122 ± 0.009 g/100 g, the ISO group 0.4761 ± 0.015 g/100 g, and the MON group 0.4200 ± 0.013 g/100 g. Statistically significant differences were observed between the control and ISO groups ($p < 0.0001$), the MON and ISO groups ($p = 0.03$), and also between the MON and control groups ($p = 0.0003$). **CONCLUSION:** Oral treatment with monoterpene demonstrated a protective effect against the impacts of AMI in rats, being able to reduce both the infarct area and the estimated cardiac hypertrophy. Therefore, further studies are needed to evaluate the potential use of monoterpenes as a natural therapeutic alternative for cardiovascular diseases.

15. ASSOCIATION OF ANTHROPOMETRY AND FIBROSIS-4 INDEX IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND METABOLIC HEPATIC STEATOSIS

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INTRODUCTION: Visceral fat plays a key role in the pathophysiology of hepatic fibrosis—characterized by excessive accumulation of extracellular matrix in the liver—since its excess is associated with the release of inflammatory mediators and metabolic stress, which stimulate fibrous tissue production and increase the risk of metabolic diseases. Anthropometric measures such as Body Mass Index (BMI), Waist Circumference (WC), and Neck Circumference (NC) are simple and useful tools for assessing this risk. **OBJECTIVE:** To evaluate the association of BMI, NC, and WC with the Fibrosis-4 Index (FIB-4) score—a marker used to estimate the risk of hepatic fibrosis—in patients with type 2 diabetes mellitus (T2DM) and metabolic-associated fatty liver disease (MAFLD) treated at a referral center for endocrinology. **METHODS:** This is a retrospective study based on the analysis of medical records of patients with T2DM and MAFLD followed between 2022 and 2024 at a referral center in Maranhão, Brazil. Anthropometric variables (BMI, WC, and NC), age, sex, and FIB-4 score were collected. FIB-4 was categorized as follows: <1.3 = low risk; $1.3\text{--}2.67$ = intermediate risk; >2.67 = high risk. Data were analyzed using IBM SPSS Statistics 23 software, applying Spearman's correlation test and the Kruskal–Wallis test to assess associations. This study is part of a research project approved by the Research Ethics Committee (approval no. 5.216.774). **RESULTS:** A total of 206 patients were included in the study, of whom 70 (34%) were male and 136 (66%) were female. The mean age was 55.5 years. Regarding anthropometric measures, the mean BMI was 32.26 kg/m^2 , the mean WC was 103.5 cm, and the mean NC was 37.5 cm. Spearman's test showed a significant correlation between BMI and FIB-4 ($p = 0.033$). However, no significant associations were observed with NC ($p = 0.15$) or WC ($p = 0.464$). FIB-4 categorization indicated that 159 patients had low risk, 43 had intermediate risk, and 4 had high risk. Finally, a significant correlation was found between BMI and FIB-4 categories ($p = 0.045$) in the Kruskal–Wallis test, while NC ($p = 0.995$) and WC ($p = 0.375$) showed no such association. **CONCLUSION:** The results show that BMI is associated with the risk of hepatic fibrosis, whereas WC and NC did not demonstrate a significant association. Therefore, BMI may be considered a more reliable marker than WC and NC for identifying the risk of hepatic fibrosis in the studied population.

16. EFFICACY AND SAFETY OF METFORMIN IN THE TREATMENT OF GESTATIONAL DIABETES MELLITUS: A SYSTEMATIC LITERATURE REVIEW

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INTRODUCTION: Gestational diabetes mellitus (GDM) is associated with obstetric and neonatal complications when not treated appropriately. In cases of GDM uncontrolled by diet, the gold standard treatment is insulin therapy. However, the literature suggests metformin as an alternative with similar results to insulin, although it has not yet been established as a first-line therapy.

Therefore, it is essential to understand and summarize the efficacy, safety, and impact of metformin in the treatment of GDM, compared to other therapeutic approaches. **OBJECTIVE:** To evaluate glycemic control and maternal and neonatal outcomes during pregnancy, at term, and up to 12 weeks postpartum in women treated for GDM with metformin, compared with placebo, diet, insulin, or combination therapy. **METHODS:** This is a systematic literature review conducted using the PubMed and Virtual Health Library (VHL) databases. The descriptors "Pregnancy," "Diabetes, Gestational," and "Metformin" were used, combined with the Boolean operator "AND," and limited to original articles published between 2020 and 2025, in English or Portuguese. Of a total of 55 selected articles, 10 were included and 45 were excluded for not meeting the study objective or for being duplicates across databases. **RESULTS:** Most studies concluded that metformin provided adequate glycemic control similar to insulin, delaying the need for insulin therapy, but lacked benefits as a preventative treatment for diet-controlled GDM. Regarding maternal and neonatal outcomes, studies associated metformin with lower rates of maternal and neonatal hypoglycemia and lower maternal weight gain and birth weight, but there was no consensus regarding the rates of small or large for gestational age infants. Furthermore, studies reported good therapeutic adherence to metformin treatment. Finally, there were no significant differences in the rates of hypertensive disorders of pregnancy, neonatal intensive care unit admission, fetal macrosomia, or mode of delivery. **CONCLUSION:** The literature suggests that metformin may be a safe and effective alternative to first-line insulin therapy in GDM not controlled by diet, and may be associated with lower maternal weight gain, lower birth weight, and lower rates of maternal and neonatal hypoglycemia. However, further studies are needed to better elucidate the outcomes associated with metformin, especially in the long-term postpartum period.

17. EVALUATION OF THE PSYCHOSOCIAL IMPACTS OF AESTHETIC AND REPARATIVE SURGERIES: QUALITY OF LIFE, SELF-IMAGE AND MENTAL HEALTH

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INTRODUCTION: The growing appreciation for body aesthetics, intensified by social media, has transformed plastic surgery into instruments of personal reinvention. Brazil ranks among the countries with the highest number of cosmetic procedures, many motivated by unrealistic beauty standards disseminated digitally. This pursuit has profound psychosocial implications, such as low self-esteem and anxiety, and can be exacerbated by pathologies such as Body Dysmorphic Disorder (BDD). Therefore, this study aimed to evaluate the psychosocial impacts of cosmetic and reconstructive surgeries, focusing on quality of life, self-image, and mental health, analyzing the influence of social media, psychiatric disorders, and factors that motivate the decision to undergo procedures. **METHODOLOGY:** An integrative literature review was conducted based on the PICO model. The search was conducted in the PubMed and LILACS databases between 2015 and 2025, using descriptors related to cosmetic surgery, mental health, and social media. Twelve original, qualitative, descriptive, and cross-sectional studies were included. The themes found were divided into: the influence of social media, the presence of mental disorders (especially BDD), self-esteem, and medical ethics.

RESULTS: Social media directly influences the decision to undergo plastic surgery, and patients with BDD have high rates of dissatisfaction even after surgery. Aesthetic motivation predominated among women, those aged 18 to 30, and those with higher socioeconomic status. It was noted that medical practice with rigorous screening, attention to expectations, and ethical behavior are essential given the psychosocial risks involved. **CONCLUSION:** Cosmetic surgeries, although potentially beneficial to self-esteem and quality of life, should be understood as complex psychosocial phenomena. Patient and physician decision-making must consider multidimensional aspects. This study revealed the importance of psychological counseling, ethical protocols, and the mitigating role of medical responsibility for better outcomes in plastic or reconstructive surgery.

18. ANALYSIS OF HOSPITALIZATIONS DUE TO STROKE: AN ECOLOGICAL STUDY IN THE STATE OF MARANHÃO (2015-2024)

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INTRODUCTION: The Cerebrovascular Accident (CVA), commonly known as stroke, is a pathology resulting from an obstructive or hemorrhagic event in the cerebral circulation. It is characterized by an acute neurological dysfunction lasting more than 24 hours and presenting compatible findings on imaging tests. This condition represents a complex and multifactorial neurological emergency, and its incidence ranks among the leading causes of disability and mortality worldwide. **OBJECTIVE:** To assess the temporal trend and compare hospitalizations due to stroke in the state of Maranhão (MA), outlining the epidemiological profile. **METHODS:** This is an ecological and descriptive epidemiological study conducted using data from the Hospital Information System (SIH/SUS). Records of hospitalizations due to stroke in Maranhão (MA) from 2015 to 2024 were included, considering variables such as year of admission, number of hospitalizations, hospitalization rate per 100,000 inhabitants, age group, sex, mortality rate, and type of care. Statistical analysis was performed using Simple Linear Regression and Pearson's test, employing GraphPad Prism software. **RESULTS:** During the evaluated period, a total of 49,604 hospitalizations due to stroke were recorded in Maranhão (MA). Simple linear regression analysis indicated an increasing trend in hospitalization rates, with an average annual rise of 5.42 hospitalizations per 100,000 inhabitants ($p < 0.01$, $R = 0.78$, $\beta_1 = 5.42 \pm 1.46$), reaching a peak in 2023 with a maximum rate of 88.62 per 100,000 inhabitants. Correlation between age group and hospitalizations revealed a strong positive association ($r = 0.95$, $p < 0.01$), indicating that hospitalizations increase significantly with advancing age. Regarding sex, there was a slight predominance of male hospitalizations ($n = 26,325$; 53.06%) compared to female hospitalizations ($n = 23,279$; 46.94%). **CONCLUSION:** Data analysis demonstrates an increasing trend in stroke hospitalizations in Maranhão, particularly among the elderly population. These findings suggest potential factors such as shortcomings in preventive measures, increased population longevity, or greater exposure to risk factors. This scenario underscores the need for the implementation of effective health strategies focused on the prevention and control of stroke, aiming to minimize the associated social and economic burdens.

19. NUTRITIONAL IMPACTS OF BARIATRIC SURGERY: CLINICAL REFLECTIONS FROM AN INTEGRATIVE REVIEW

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INTRODUCTION: Severe obesity has grown alarmingly on the world stage and today represents one of the greatest public health challenges. In this context, bariatric surgery emerges as a consolidated therapeutic alternative, offering significant weight reduction and improvement of comorbidities such as type 2 diabetes, hypertension and sleep apnea. However, despite the benefits, the procedure leads to structural changes in the gastrointestinal tract that directly affect the absorption of essential nutrients, requiring continuous and multidisciplinary nutritional attention. **OBJECTIVE:** This study aimed to analyze the main effects of bariatric surgery on the nutritional status of adult patients through an integrative literature review covering publications from 2020 to 2024. **METHODS:** The search was conducted in the PubMed, SciELO, and LILACS databases, using the descriptors "bariatric surgery", "nutritional deficiency", "supplementation", and "intestinal absorption". Studies that reported clinical outcomes and nutritional follow-up strategies after procedures such as Roux-en-Y gastric bypass and vertical sleeve gastrectomy were selected. **RESULTS:** The findings reveal that iron, vitamin B12, vitamin D, folate, calcium, and thiamine deficiencies are recurrent in the postoperative period. These deficiencies are associated with factors such as reduced gastric acidity, exclusion of segments of the small intestine, low dietary intake, and poor adherence to supplementation routines. The consequences may include anemia, overall weakness, impaired bone health, neurological disorders, and an increased risk of fractures. Furthermore, evidence indicates that vulnerable populations — such as pregnant women, older adults, and low-income individuals — face greater challenges in maintaining adequate nutritional management. **CONCLUSION:** This study concludes that the success of bariatric surgery depends not only on the procedure itself, but also on the maintenance of a structured and humanized clinical follow-up. The involvement of a multidisciplinary team, access to specific supplementation, periodic examinations, and continuous patient education are fundamental strategies for preventing nutritional complications and ensuring the sustainability of long-term metabolic benefits.

20. EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH PENILE CANCER IN THE STATE OF MARANHÃO FROM 2019 TO 2023

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INTRODUCTION: Penile malignant neoplasm is a rare type of cancer, with higher incidence among men aged 50 years or older, although it can also affect younger individuals. The disease is associated with poor genital hygiene, human papillomavirus (HPV) infection, and lack of circumcision. In Brazil, penile cancer is more common in the North and Northeast regions, accounting for 2% of all cancer types affecting men. This disease is considered a public health challenge in Maranhão, with the state standing out negatively

at both national and international levels. **OBJECTIVE:** To determine the epidemiological profile of penile cancer in Maranhão between the years 2019 and 2023. **METHODS:** This is an epidemiological, retrospective, descriptive study with a quantitative approach, based on data collected from the Department of Informatics of the Unified Health System (DATASUS) regarding the epidemiological profile of patients with penile cancer in Maranhão from 2019 to 2023. The variables analyzed were "incidence," "age group," and "treatment initiation". **RESULTS:** In Maranhão, 187 cases of penile cancer were recorded, corresponding to 11.8% of notifications in the Northeast, with concentration in São Luís (76.5%) and Imperatriz (20.9%), while Caxias (2.1%) and Pinheiro (0.5%) showed lower incidence. Approximately 70% of cases occurred in men over 50 years of age, with the age groups 60–64 years (12.8%), 65–69 years (12.5%), 55–59 years (12.3%), 70–74 years (10.7%), and ≥80 years (10.7%) standing out. Regarding treatment initiation, 63.1% started within 30 days, 10.7% waited more than 60 days, and 21.4% had no record. **CONCLUSION:** Most cases are reported in the capital, São Luís, a municipality markedly unequal in income distribution and technical-scientific-informational resources. A total of 10.7% of diagnosed patients assuredly began treatment after the 60 days established by the "60-Day Law" for initiation of treatment in oncology patients. The lack of record in 21.4% of cases may indicate difficulties in follow-up and statistical control of patients with this condition, which may have affected the findings observed in the analysis.

21. ANALYSIS OF FACTORS ASSOCIATED WITH TYPE 2 CARDIORENAL SYNDROME IN HOSPITALIZED PATIENTS WITH HEART FAILURE

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INTRODUCTION: Cardiorenal syndrome (CRS) is characterized by dysfunctional interaction between the cardiac and renal systems, in which dysfunction in one system exacerbates impairment in the other. Type 2 CRS occurs when chronic heart failure (HF) causes chronic renal dysfunction. Factors such as Chronic Kidney Disease (CKD) and reduced glomerular filtration rate (GFR) are related to its development. **OBJECTIVE:** Analyze the risk factors for the development of type 2 SCR in patients hospitalized with HF. **METHODS:** This is an observational, longitudinal, quantitative study. Data from patients with HF followed up at a tertiary hospital in Maranhão between 2021 and 2025 were used. The variables analyzed were: estimated GFR (clearance), CKD stage, New York Heart Association (NYHA) functional class, and occurrence of clinical decompensation in 12 months. Statistical analysis was performed using RStudio software. For inferential analysis, Fisher's, Chi-square, and Mann-Whitney tests were applied, considering statistical significance of $p < 0.05$. The study was approved by the Research Ethics Committee (protocol: 25756919.9.2004.5086). **RESULTS:** The sample consisted of 185 patients. Regarding the stage of CKD, 27.57% were in stage 1, 31.35% in stage 2, 36.22% in stage 3, 3.24% in stage 4, and 1.62% in stage 5. Regarding the functional class of HF, 15.14% were NYHA I, 58.39% NYHA II, 21.62% NYHA III, and 4.85% NYHA IV. During the 12-month follow-up, 27.03% ($n = 50$) presented decompensation. There was no statistically significant association between decompensation and CKD stage ($p = 0.333$), functional class ($p = 0.242$), or clearance ($p = 0.927$). There was also no association between CKD stage and HF functional class ($p = 0.143$). Although patients in NYHA classes III/IV had numerically lower GFR than those in classes I/II, this difference was not statistically significant. In addition, the combination of NYHA III/IV with GFR <60 mL/min/1.73m² showed no association with increased risk of decompensation in the period analyzed. **CONCLUSION:** Despite the high prevalence of renal changes demonstrated in the study, no significant associations were found between the

parameters evaluated and worsening HF. Therefore, although there is no direct association between the risk factors analyzed and the development of type 2 CKD, the findings reinforce the importance of further research on the predictive elements of CKD in the context of HF.

22. TREND OF HOSPITALIZATIONS DUE TO ARTERIAL EMBOLISM AND THROMBOSIS IN MARANHÃO: A REGIONAL OVERVIEW

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INTRODUCTION: In Brazil, more than 300,000 hospital admissions per year are related to peripheral vascular diseases, many of them resulting from arterial thrombotic events. Arterial thrombosis and embolism represent significant causes of amputations and deaths, especially among populations with risk factors such as hypertension, diabetes, and smoking. These events are strongly associated with atherosclerosis and population aging. In Maranhão, there are still gaps regarding the regional distribution of these hospitalizations. **OBJECTIVE:** To analyze the trend and regional profile of hospital admissions due to arterial embolism and thrombosis in the state of Maranhão. **METHODS:** This is a cross-sectional, descriptive, and analytical epidemiological study with a quantitative approach, using data from the Hospital Information System of the Brazilian Unified Health System (SIH/SUS), available through the Department of Informatics of the SUS (DATASUS), for the period from 2020 to 2024. All hospitalizations recorded in the state of Maranhão with ICD-10 code I74 — arterial embolism and thrombosis — were included. The variables analyzed were health region, year of hospitalization, gender, and age group, in order to describe the trend of these events. **RESULTS:** From 2020 to 2024, a total of 884 hospitalizations for arterial embolism and thrombosis were recorded in the state of Maranhão. A moderate upward trend was observed, increasing from 137 hospitalizations in 2020 to a peak of 204 in 2023, followed by a slight decrease in 2024 (192 hospitalizations). Regionally, hospitalizations were highly concentrated in the São Luís (423; 47.8%) and Imperatriz (351; 39.7%) regions, accounting for nearly 88% of all cases. The remaining regions had significantly lower numbers, with Codó (35 cases), Timon (12), and Pinheiro (12) standing out. Most cases occurred among males (505; 57.1%) and in individuals over 50 years of age (64.6%). **CONCLUSION:** The data reveal an epidemiological pattern concentrated in regions with greater hospital infrastructure, highlighting the need for decentralization and strengthening of vascular care in other regions, especially considering the risk of complications such as amputations and deaths. Furthermore, the predominance of cases among males and older adults reinforces the influence of population aging and the presence of risk factors on the increase in arterial events.

23. PENILE CANCER IN MARANHÃO: HIGH HPV PREVALENCE HIGHLIGHTS VACCINATION CHALLENGES AND THE URGENT NEED FOR PUBLIC HEALTH POLICIES

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INTRODUCTION: In Brazil, the state of Maranhão stands out for having the highest incidence rate of penile cancer (PC) in the country and in the world. This has been linked to social vulnerabilities and the high prevalence of human papillomavirus (HPV) infection in the region. **OBJECTIVE:** Given this context, the present study aimed to synthesize available data on HPV infection in penile cancer (PC) cases in Maranhão. **METHODS:** An integrative review was conducted following the PRISMA (Preferred Reporting Items for Systematic

Reviews and Meta-Analyses) protocol. Searches were performed in the PubMed, Scopus, and Web of Science databases using the descriptors "HPV OR Human Papillomavirus" AND "Maranhão" AND "Penile Squamous Cell Carcinoma OR Penile Cancer." Articles that used PCR (Polymerase Chain Reaction) as the HPV detection method were included, while those referring to other locations were excluded. A total of 46 studies were initially identified, and after full-text reading and application of the inclusion criteria, 13 studies remained for data analysis. **RESULTS:** A total of 933 patients were evaluated. The weighted mean age was 61.1 years, with the most common histological subtype being the usual type (53.8%). Cases staged as pT3 (61.5%), with perineural invasion (32.7%), and histological grade G2 (66.6%) were predominant. Approximately 657 patients (70.3%) had HPV data available by PCR, showing a positivity rate of 80.8%, higher than the global average of 58.8%. Genotyping data were available for 289 cases, revealing 83.7% of high-risk oncogenic genotypes, mainly types 16 (70.2%) and 18 (4.2%). The identified high-risk genotypes included 16, 18, 34, 35, 39, 45, 53, 58, 59, 66, 69, and 73, while the low-risk types were 6, 11, 30, 40, 41, 42, 43, 44, and 74. The quadrivalent vaccine provided by the Brazilian public health system (SUS) protects against types 6, 11, 16, and 18, which account for 83.7% of the genotypes identified in penile cancer cases in Maranhão. Nevertheless, data from the state show that only 26% of Maranhão's Health Regions have achieved adequate vaccination coverage ($\geq 80\%$) among boys. Despite the publication of Technical Note No. 5/2024 by the Ministry of Health, which guides Primary Health Care actions in the control of penile cancer, no effective impact on vaccination coverage expansion has been observed in the state. **CONCLUSION:** Penile cancer remains a serious public health challenge in Maranhão, with a high prevalence of HPV-positive tumors. These findings highlight the urgent need to expand vaccination coverage and to develop specific public health policies as preventive measures.

24. DYSLIPIDEMIA PROFILE IN PATIENTS WITH FAMILIAL PARTIAL LIPODYSTROPHY

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INTRODUCTION: Lipodystrophies are metabolic syndromes characterized by changes in body fat deposits. They are classified according to the extent of fat loss and the mode of inheritance. Familial partial lipodystrophies (FPL) are rare forms, presenting early-onset dyslipidemia, often diagnosed as metabolic syndrome. Understanding the presentation of dyslipidemias in patients with FPL is essential for proper diagnosis and the implementation of more effective therapeutic approaches. **OBJECTIVE:** To analyze the profile of dyslipidemias manifested in patients with familial partial lipodystrophy. **METHODS:** This is a retrospective study based on the analysis of medical records of patients with familial partial lipodystrophies followed between 2020 and 2025 at a reference center in Maranhão. Variables related to demographic characteristics (age and sex) and dyslipidemias were collected: total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides. The data were analyzed using IBM SPSS Statistics 23 software, employing the Kruskal-Wallis test to assess associations. This work is part of a study submitted to and approved by the Research Ethics Committee under opinion No. 4,415,776. **RESULTS:** Seventeen patients were included in the study, of whom 16 (94.1%) were female. The mean age of the participants

was 44.12 years. Regarding lipid parameters, the mean values were: total cholesterol 205.94 mg/dL (± 68.3), triglycerides 277.29 mg/dL (± 98.4), LDL-cholesterol 129.18 mg/dL (± 58.2), and HDL-cholesterol 39.29 mg/dL (± 14.9). In the age group stratification, a significant increase in triglycerides (median ~ 270 mg/dL) and LDL (median ~ 130 mg/dL) was observed in the 25-50 years age group. Conversely, the median HDL-cholesterol was lower in the 51-75 years group (about 30 mg/dL) compared to the younger groups. However, no significant differences were found among the three age groups in the mean values of TC ($H=5.017$; $p=0.081$), TG ($H=4.482$; $p=0.106$), LDL ($H=3.929$; $p=0.140$), or HDL ($H=3.664$; $p=0.160$) in the Kruskal-Wallis test. **CONCLUSION:** Analyzing the lipid profile of the patients, it was observed that the averages of total cholesterol, triglycerides, and HDL cholesterol were outside the targets established for the general population, corroborating the characteristic findings of LPF. The limitation of the study is due to the small sample size, explained by the rarity of the disease and the difficult access of patients to genetic diagnosis.

25. PROGNOSTIC VALUE OF B-TYPE NATRIURETIC PEPTIDE IN HEART FAILURE WITH REDUCED EJECTION FRACTION

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INTRODUCTION: Heart failure with reduced ejection fraction (HFrEF) is a complex and progressive clinical condition associated with high rates of hospitalization and morbidity and mortality. The evaluation of biochemical markers is essential for the appropriate management of the syndrome. In this context, the measurement of B-type natriuretic peptide (BNP), a biomarker associated with left ventricular dysfunction, becomes relevant due to its correlation with the severity and prognosis of the disease. **OBJECTIVE:** To analyze the correlation between serum BNP levels and left ventricular ejection fraction (LVEF), in addition to evaluating its usefulness in predicting clinical decompensation in patients with HFrEF. **METHODS:** This is an observational, longitudinal, and quantitative study conducted with 63 patients diagnosed with HFrEF at a tertiary hospital in Maranhão, between 2021 and 2025. Clinical, laboratory, and functional data were collected, including age, sex, LVEF, NYHA functional class, BNP levels, and clinical decompensation within 12 months. Statistical analysis was performed in RStudio. The correlation between BNP and LVEF was analyzed using Spearman's coefficient (ρ), considering $p < 0.05$ as significant. To evaluate the performance of BNP as a predictor of decompensation, a ROC curve was used, with the area under the curve (AUC) calculated. Research Ethics Committee: 25756919.9.2004.5086. **RESULTS:** The sample consisted of 63 patients: 80.65% male ($n = 50$) and 19.35% female ($n = 13$). The median age was 67 years (range, 32–93 years). The mean LVEF was 34.5%. The median BNP level was 1,497 pg/mL (range, 60–9,000 pg/mL). Regarding functional class, 64.52% of patients were in NYHA II. During follow-up, 32.26% of participants presented decompensation. There was a moderate negative correlation between BNP levels and LVEF ($\rho = -0.31$; $p = 0.01405$), indicating that higher BNP levels were associated with lower ejection fraction. However, the ROC curve demonstrated that BNP alone performed poorly in predicting decompensation, with an AUC of 0.56, close to chance (AUC = 0.5). **CONCLUSION:** The data demonstrate a

moderate negative correlation between BNP levels and LVEF, suggesting an association between elevated BNP and greater ventricular dysfunction. However, BNP alone showed low accuracy in predicting decompensation in this clinical context, indicating the need for integrated assessment with other parameters for better risk stratification in patients with HFrEF.

26. EFFECT OF A PHENOLIC MONOTERPENE ON MYOCARDIAL INJURY MARKERS IN RATS SUBJECTED TO ACUTE MYOCARDIAL INFARCTION

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INTRODUCTION: Acute myocardial infarction (AMI) is characterized as a clinical or pathological event resulting from myocardial ischemia, with evidence of cardiac injury. Globally, AMI is the leading cause of death worldwide. Considering the public health impact of this condition, new therapeutic alternatives have been explored to prevent and treat cardiovascular diseases. Monoterpenes exhibit cardioprotective properties due to their anti-inflammatory, antioxidant, vasodilatory, and antihypertensive actions. Furthermore, they may reduce biochemical markers of myocardial injury in animal models. **OBJECTIVE:** To investigate the effect of oral treatment with a phenolic monoterpene on myocardial injury markers in rats subjected to an experimental model of AMI, aiming to scientifically validate its cardioprotective action. **METHODS:** This experimental study (Ethics Committee on Animal Use/UFMA no. 23115.002016/2023-60) used normotensive, healthy, adult male Wistar rats randomly assigned into three groups: Control (untreated; non-induced), ISO (untreated; induced), and M20 (monoterpene 20 mg/kg/day; induced). Animals received a single daily oral dose by gavage for 30 days. AMI was induced via subcutaneous administration of isoproterenol (85 mg/kg). At the end of the protocol, animals were euthanized under anesthesia with ketamine and diazepam. Blood samples were collected for laboratory analyses of lactate dehydrogenase (LDH), creatine kinase-MB (CK-MB), and C-reactive protein (CRP). Results were expressed as mean \pm standard error. Normality was verified by the Shapiro-Wilk test, and intergroup differences were determined using ANOVA followed by Tukey's post hoc test ($p < 0.05$). **RESULTS:** Administration of isoproterenol (ISO) led to a significant increase in biochemical markers of myocardial injury compared with the control group. Serum levels of LDH, CK-MB, and CRP were significantly elevated in the ISO group ($p < 0.05$), confirming the effectiveness of the experimental AMI model. Conversely, animals treated with the monoterpene showed significant reductions in these markers compared with the ISO group ($p < 0.05$). **CONCLUSION:** The monoterpene demonstrated a cardioprotective effect by significantly reducing myocardial injury markers in rats with induced AMI. These findings support its therapeutic potential in preventing cardiac damage.

27. USE OF LSD IN THE TREATMENT OF DEPRESSIVE DISORDERS: AN INTEGRATIVE REVIEW

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INTRODUCTION: Depressive disorders, which are highly prevalent and impact public spending, manifest as persistently low mood, anhedonia, cognitive impairment, and other symptoms that can lead

to disability. Thus, lysergic acid diethylamide (LSD), a serotonin 5-hydroxytryptamine 2A (5-HT_{2A}) receptor agonist, is being progressively studied as a potential antidepressant, as it induces biochemical cascades related to neuroplasticity, a central mechanism of conventional antidepressant therapies. **OBJECTIVE:** The study aims to synthesize, through an integrative review, scientific evidence published between January 2020 and June 2025 on the efficacy and mechanisms of action of LSD in the treatment of depressive disorders. **METHODS:** An integrative review of articles from the last five years was conducted in the PubMed and SciELO databases, using structured searches with Boolean operators (AND, OR) combining terms such as "Lysergic Acid Diethylamide" [MeSH], "Depressive Disorder" [MeSH], and similar terms. The initial screening of 42 records resulted in the final inclusion of 15 articles, after excluding duplicates, unrelated articles, isolated case reports, and publications outside the defined period. **RESULTS:** In patients with depression, clinical trials of LSD-assisted psychotherapy have demonstrated substantial reductions in symptoms. In a double-blind study with 12 participants, a single dose of 200µg of LSD significantly reduced scores on the Hospital Anxiety and Depression Scale (HADS-D), an effect maintained for up to 12 months. In parallel, in healthy volunteers, both microdoses of 5 and 20µg and the full dose of 200µg caused acute elevations in plasma levels of Brain-Derived Neurotrophic Factor (BDNF), a neurotrophin crucial for neuronal development and maintenance, while intermediate doses (10–100µg) did not always produce such an increase, suggesting the existence of an optimal dose window. Furthermore, 5-HT_{2A} activation in the prefrontal cortex and anterior cingulate induced synaptogenesis, while repeated doses of LSD promoted intermittent desensitization of the 5-HT_{2A} receptor in the hippocampus, improving learning, cognitive flexibility and reordering ruminative thought patterns. **CONCLUSION:** Evidence suggests that LSD exerts significant antidepressant effects through modulation of the 5-HT_{2A} receptor and stimulation of neuroplasticity. However, larger studies and more robust protocols are needed to demonstrate its clinical applicability.

28. AROMATASE INHIBITORS VS. TAMOXIFEN IN ADJUVANT THERAPY IN POST-MENOPAUSAL WOMEN WITH BREAST CANCER

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INTRODUCTION: Hormone receptor-positive breast cancer is the most common subtype in postmenopausal women. Since the 1980s, tamoxifen has established itself as the standard adjuvant hormone therapy. However, since 2015, aromatase inhibitors (AIs) have been increasingly compared to tamoxifen in clinical studies, demonstrating distinct efficacy and safety profiles. Evaluating these strategies comparatively is essential to guide evidence-based practices. **OBJECTIVE:** To analyze whether the use of aromatase inhibitors, compared to tamoxifen, improves disease-free survival (DFS) in postmenopausal women with hormone receptor-positive breast cancer. **METHODS:** A systematic review was conducted according to PRISMA 2020, including studies published between 2019 and 2024 in the PubMed, BVS, SciELO, Scopus, and Web of Science databases. DeCS and MeSH descriptors were used in combination with the Boolean operator AND: "Breast Neoplasms" AND "Postmenopause" AND "Tamoxifen" AND "Aromatase Inhibitors" AND "Survival

Analysis." Comparative studies between tamoxifen and aromatase inhibitors with the primary outcome of disease-free survival (DFS) were included, covering meta-analyses, randomized clinical trials, and cohort studies. **RESULTS:** After screening 28 articles, 5 were selected. Four studies showed a significant reduction in the risk of recurrence with AI versus tamoxifen, favoring longer DFS: HR 0.51 ($p < 0.05$) in HER2-negative patients; HR 0.68 ($p < 0.0001$) with upfront use of AI; HR 0.70 ($p < 0.01$) in HER2-positive patients; and HR 0.82 ($p < 0.05$) with prolonged therapy in lymph node-positive patients. An Asian cohort study was not significant (HR 0.84; $p = 0.108$), but showed a favorable trend for AI in patients with low adherence and advanced disease. No study demonstrated a significant gain in overall survival. Articles resulting from the search that presented results for only one type of therapy, or that did not specifically include the target population in the results, were excluded. **CONCLUSION:** It is suggested that aromatase inhibitors may be potentially superior to tamoxifen in disease-free survival in postmenopausal women with hormone receptor-positive breast cancer, especially in higher-risk settings. Different immunohistochemical subgroups may respond differently to the use of different medications, so new studies may be designed.

29. CLINICAL-LABORATORY TARGETS IN NON-DIALYSIS CHRONIC KIDNEY DISEASE: ANALYSIS OF A MULTIDISCIPLINARY OUTPATIENT CLINIC

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INTRODUCTION: Chronic kidney disease (CKD) is common, frequently asymptomatic, and without adequate clinical, nutritional, or pharmacological interventions, can lead to progression to advanced stages. Although guidelines exist for clinical and laboratory monitoring and for therapeutic targets, few studies describe the outcomes achieved in CKD outpatient settings. **OBJECTIVE:** This study aimed to determine the proportion of non-dialysis CKD patients who meet recommended clinical and laboratory targets. **METHODS:** The study was conducted in a model multidisciplinary nephrology outpatient clinic and included clinical and laboratory data from 37 patients. Statistical analyses were performed in GraphPad Prism 8, data normality was assessed with the Shapiro-Wilk test and correlations were evaluated using Spearman's and Pearson's tests. This work is part of the research "Analysis of Biopsychosocial Aspects in Interdisciplinary Care at a Model Nephrology Outpatient Clinic," approved by the Ethics Committee (No. 7.195.964). **RESULTS:** The sample had a mean follow-up duration of 7.52 ± 7.1 years and a mean estimated glomerular filtration rate (eGFR) of 34 ± 15 mL/min, with most patients in stages 3B (51.3%) and 4 (32.4%). Clinic systolic blood pressure exceeded 130 mmHg in 36.8% of patients, and 31.5% had a body mass index >30 kg/m². Regarding lipids, 26.3% had LDL cholesterol >100 mg/dL despite statin therapy, and 44.7% had triglycerides >150 mg/dL. Hyperkalemia ($K^+ >5.3$ mEq/L) occurred in 10.5% and hemoglobin <10 g/dL in 13.6%, and neither of those parameters correlated with eGFR, highlighting the need for monitoring across all disease stages. In terms of mineral and bone metabolism, 43.7% of patients had parathyroid hormone (PTH) levels two to three times the reference value, 60.5% had serum phosphorus >3.5 mg/dL, and 12% had serum calcium <8.5 mg/dL. These findings reflect reduced phosphaturia as CKD progresses and a consequent rise in PTH, which correlated negatively with eGFR ($r = -0.67$; $p <$

0.001). Control of serum phosphorus with phosphate binders is important, yet these agents are often unavailable in the Brazilian public health system. Metabolic acidosis, defined as bicarbonate <22 mEq/L, was present in 42.1% of patients, oral bicarbonate was prescribed, but the medication adherence is limited by poor palatability. **CONCLUSION:** In conclusion, despite long-term multidisciplinary follow-up, achieving therapeutic targets in non-dialysis CKD remains challenging, particularly due to issues regarding medication adherence.

30. CORRELATION BETWEEN FERRITIN AND FIBROSIS-4 SCORE: FERRITIN AS A POTENTIAL COMPLEMENTARY MARKER FOR HEPATIC FIBROSIS

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INTRODUCTION: Metabolic Hepatic Steatosis (MHS) is one of the main causes of liver fibrosis and hepatocellular carcinoma (HCC). Moreover, its prevalence among individuals with type 2 diabetes mellitus (T2DM) is high, reaching 63.7% in this group. The Fibrosis-4 (FIB-4) Score is a well-established, low-cost tool for estimating the risk of liver fibrosis. In the search for other possible complementary markers for fibrosis risk, the measurement of serum ferritin—a marker of iron overload and inflammation—has been considered as a low-cost method independent of age range. **OBJECTIVE:** To evaluate ferritin as a marker of liver fibrosis by correlating it with FIB-4 in patients with T2DM and MHS. **METHODS:** This is a retrospective study approved by the ethics and research committee under number 5,216,774, based on the analysis of medical records of patients with T2DM and MHS followed between 2022 and 2024 at a reference center in Maranhão. Data related to patient age, sex, ferritin levels, and FIB-4 scores were collected. Patients with high alcohol consumption (>30 g/day for men and >20 g/day for women) and those with other causes of liver disease (viral hepatitis, drug-induced hepatotoxicity, among others) were excluded. To categorize patients by their risk of liver fibrosis using FIB-4, the following cutoff values were used: <1.30 = low risk; 1.30 - 2.67 = indeterminate risk; >2.67 = high risk. Data were analyzed using IBM SPSS Statistics 23 software, employing Spearman's correlation test and the Kruskal-Wallis test to assess associations. **RESULTS:** A total of 209 patients were included, 71 male and 138 female (66%), with a mean age of 55.5 years and an age range of 35 to 65 years. The mean ferritin level was 174.87 ng/mL, and the mean FIB-4 score was 1.04. Using Spearman's test, no significant relationship was found between FIB-4 values and ferritin levels ($p = 0.170$). Of these patients, 161 were classified as low risk, 43 as intermediate risk, and 5 as high risk for liver fibrosis. When comparing these risk groups with ferritin values, the relationship approached, but did not reach, statistical significance ($p = 0.062$) in the Kruskal-Wallis test. **CONCLUSION:** No significant correlation was found between ferritin levels and FIB-4 scores. However, the relationship was close to the confidence interval, justifying further studies with more representative samples, especially including patients with higher FIB-4 scores.

31. MORTALITY TREND OF DIABETES MELLITUS IN MARANHÃO, 2015-2023

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INTRODUCTION: Diabetes Mellitus (DM) is a chronic disease characterized by a deficiency in pancreatic insulin production or resistance to the action of this hormone, resulting in hyperglycemia. In 2023, more than 1.5 million patients with DM were registered in the Primary Care Information System in the state of Maranhão. Furthermore, in the same year, there were more than 3,000 hospitalizations for DM in the state. This fact highlights that the condition results in multiple acute and chronic complications, increasing the individual's risk of mortality, such as coronary artery disease, chronic kidney disease, diabetic neuropathy, diabetic retinopathy, stroke and peripheral arterial disease. **OBJECTIVE:** To analyze DM mortality trends in Maranhão and Brazil from 2015 to 2023. **METHODS:** A retrospective, analytical, time-series study was conducted using data from the Mortality Information System (SIM) regarding DM as a cause of death from 2015 to 2023. Mortality rates were calculated and the annual percentage change (APC) was calculated using Joinpoint regression analysis software to determine trends. **RESULTS:** The DM mortality rate in Brazil was 29.17/100,000 inhabitants in 2015 to 34.65/100,000 inhabitants in 2023. In Maranhão, the rate was 34.20/100,000 inhabitants in 2015 to 37.01/100,000 inhabitants in 2023. Between 2015 and 2021, in Brazil, an APC of +4.29% was observed, indicating an increase in the mortality rate compared to the previous year. From 2021 onwards, an inflection point was analyzed, the trend reversed, reaching an APC of -1.47%. A similar pattern was observed in Maranhão. From 2015 to 2020, the APC was +5.43%, with a significant increase in mortality. Meanwhile, from 2020 to 2023, there was a decrease, represented by an APC of -2.95%. **CONCLUSION:** Data analysis demonstrates an increase in DM death rates in both Brazil and Maranhão in the initial years of the study period. After 2020 and 2021, the pattern changed, with rates declining. Thus, although Maranhão started with higher rates, the intensity of the decline was greater than that observed nationally, indicating relative progress in controlling diabetes mortality. Therefore, monitoring and assessing DM mortality are important to improve healthcare for the diabetic population.

32. NEONATAL MANAGEMENT IN DELIVERIES OF WOMEN LIVING WITH HIV: AN INTEGRATIVE REVIEW OF THE LITERATURE

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INTRODUCTION: In Brazil, between 2000 and 2022, more than 54,000 children were reported as exposed to HIV, with vertical transmission of the human immunodeficiency virus (HIV) remaining the primary route of neonatal and childhood infection, particularly among middle- and low-income populations. Despite significant advances in antiretroviral therapy (ART), challenges persist in implementing effective neonatal management and ensuring adherence to clinical protocols. **OBJECTIVE:** To synthesize and critically analyze the main scientific evidence on neonatal management in deliveries of women living with HIV, with a focus on antiretroviral prophylaxis, breastfeeding practices, and emerging therapeutic strategies. **METHODS:** An integrative literature review

was conducted using the PubMed and Virtual Health Library (BVS) databases. The descriptors "HIV infections," "Infectious Disease Transmission, Vertical," and "Perinatal Care" were combined with the Boolean operator "AND." The inclusion criteria comprised articles published between 2020 and 2025 in English or Portuguese. From a total of 137 retrieved studies, 10 met the eligibility criteria, while 127 were excluded due to duplication or lack of relevance to the study objectives. **RESULTS:** The reviewed studies demonstrated notable progress in neonatal HIV care, including the incorporation of newer antiretrovirals such as Dolutegravir and Raltegravir, the application of innovative tools like the Pratt Pouch, and the conditional recommendation of breastfeeding when maternal viral load is undetectable. However, persistent gaps were identified in maternal adherence to ART and in the standardization of neonatal clinical management across healthcare settings. Delayed initiation of antiretroviral regimens during pregnancy was strongly associated with higher risks of vertical transmission. Additionally, socioeconomic disparities influenced prophylactic decisions, as the cost of infant formula limited access in low-income populations, and HIV-exposed neonates—regardless of infection status—showed an increased risk of nutritional deficits affecting child development. **CONCLUSION:** Neonatal management in deliveries of women living with HIV requires integrated strategies encompassing timely initiation of ART, effective prophylaxis, informed decision-making on breastfeeding, and a humanized approach to ensure continuous follow-up of HIV-exposed infants. Strengthening adherence and harmonizing clinical practices are essential to further reduce vertical transmission rates and promote equitable neonatal health outcomes.

33. PROFILE OF PNEUMONIA MORTALITY AMONG CHILDREN UNDER FIVE YEARS OF AGE IN BRAZIL (2015–2023).

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INTRODUCTION: Pneumonia remains one of the leading causes of mortality among children under five years of age, particularly in developing countries, accounting for approximately 20% of deaths in this group worldwide. Although Brazil has made significant progress in reducing child mortality over recent decades, deaths due to pneumonia still represent a major public health challenge. Understanding the epidemiological profile of these deaths over time is crucial to guide more effective prevention and care policies. **OBJECTIVE:** To analyze the epidemiological profile of mortality due to pneumonia among children under five years of age in Brazil from 2015 to 2023. **METHODS:** This was an epidemiological, retrospective, descriptive, and quantitative study. Mortality data were obtained from the Department of Informatics of the Brazilian Unified Health System (DATASUS) regarding deaths caused by pneumonia in children under five years old between 2015 and 2023. The analyzed variables included year, age group, sex, race/skin color, geographic region of occurrence, and ICD-10 category. **RESULTS:** During the study period, 15,272 deaths from pneumonia were recorded among children under five in Brazil. A 45.5% reduction was observed in the mean number of deaths during 2020–2021 ($\bar{x} = 1,028.5$) compared to other years ($\bar{x} = 1,887$). According to ICD-10 classification, unspecified pneumonia (J18) was predominant ($n = 10,087$; 66.0%), followed by congenital pneumonia (P23; 15.5%) and bacterial pneumonia not elsewhere classified (J15; 15.0%). Most deaths occurred among mixed-race (pardo) children (49.2%), infants under one year of age

(65.1%), and residents of the Southeast (31.4%) and Northeast (30.5%) regions. Regarding sex, 53.5% of deaths occurred among males. The state of São Paulo recorded the highest number of deaths ($n = 2,316$; 15.1% of the total), followed by Maranhão with 754 deaths (4.9%), of which 34.3% occurred in the metropolitan region of Greater São Luís. **CONCLUSION:** Mortality from pneumonia among Brazilian children under five years of age was concentrated among mixed-race, male infants younger than one year, with the highest numbers in the Southeast and Northeast regions and a predominance of unspecified bacterial pneumonia. The marked decrease in reported cases during 2020 and 2021 may be related to the impact of public health measures and the underreporting of health events during the critical phase of the COVID-19 pandemic.

34. THE ROLE OF WOMEN'S SUPPORT NETWORKS IN THE PREGNANCY-PUERPERAL CYCLE DURING THE PANDEMIC

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INTRODUCTION: The COVID-19 pandemic has imposed significant challenges on vulnerable populations, especially women in the pregnancy-puerperal cycle. Social distancing measures, fear of infection, and the overload of health services directly affected the formation and maintenance of support networks, which are essential for physical, emotional, and social well-being during pregnancy and the postpartum period. **OBJECTIVE:** The study aims to analyze the structure and dynamics of support networks among women in the pregnancy-puerperal cycle during the COVID-19 pandemic, with an emphasis on personal and institutional support networks, identifying the challenges faced and the strategies adopted for their preservation in the context of a health crisis. **METHODS:** Qualitative study conducted with pregnant and postpartum women diagnosed with COVID-19, who were assisted in high-complexity maternity hospitals in the state of Maranhão, between November 2020 and May 2021. Data collection was carried out through structured and semi-structured interviews, conducted both in person and remotely. The interviews were subjected to thematic analysis. The research was approved by the Research Ethics Committee of HUUFMA (CAAE No. 35645120.9.0000.5086), in accordance with Resolution No. 466/12 of the Brazilian National Health Council. **RESULTS:** Family support networks showed significant weaknesses, mainly due to the distancing of relatives belonging to risk groups, such as mothers and grandmothers. There was an intensification of dependence on cohabitants and greater use of digital technologies as a strategy to maintain emotional bonds. Spirituality also emerged as a coping resource in the face of the uncertainties and fears imposed by the pandemic context. At the institutional level, healthcare professionals emerged as central agents of emotional support, with emphasis on empathetic and welcoming attitudes, identified by participants as fundamental in mitigating anxiety and fear. **CONCLUSION:** The study evidenced that, during the pandemic, both personal and institutional support networks were fundamental for coping with the pregnancy-puerperal cycle. However, the challenges imposed by social distancing and the overload of health services require the strengthening of these networks, with an emphasis on intersectoral, integrated, and humanized approaches, especially in contexts of health emergencies.

35. MATERNAL MORTALITY AMONG INDIGENOUS WOMEN IN MARANHÃO OVER THE LAST 8 YEARS: AN EPIDEMIOLOGICAL STUDY

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INTRODUCTION: Maternal mortality is a serious public health problem, and a sensitive indicator of social inequalities and the quality of women's healthcare. In Brazil, despite advances in obstetric care, indigenous populations still face higher risks of death during pregnancy, childbirth, and the postpartum period. Maranhão, due to its large indigenous population, exhibits limitations in access to specialized services, making it a target territory for investigating health inequalities. **OBJECTIVE:** In this sense, the present study aims to evaluate the maternal mortality of indigenous women in Maranhão who were hospitalized in the last eight years. **METHODS:** This is an epidemiological, descriptive, and retrospective study using secondary data from the Mortality Information System (SIM), considering maternal deaths registered between 2015 and 2023, identified by the International Classification of Diseases (ICD-10) codes O00 to O99. Variables such as race/color, marital status, and education level were analyzed. **RESULTS:** A total of 953 deaths were recorded, of which 2.4% occurred among indigenous women. The annual average was 2.5 deaths among indigenous women, indicating a proportionally higher rate in relation to their smaller population. Regarding the sociodemographic profile, 43% were single, 26% married, and 8.7% widowed. Furthermore, education revealed significant vulnerability: 21.7% had no formal education and 26% had 1 to 3 years of schooling. None had 12 years or more of schooling. In contrast, among non-indigenous women, 76% had between 8 and 11 years of schooling, indicating a significant educational disparity associated with maternal deaths. **CONCLUSION:** The higher proportion of low educational attainment and lower registration of defined marital status among Indigenous people suggests greater social vulnerability and possible failures in obstetric care. The absence of Indigenous people with complete secondary education reinforces education as a determinant of health. Even with a lower absolute number of deaths, the high proportional rate points to structural inequalities in access to and quality of healthcare. The limitations of the study may be related to underreporting of cases, the culture of childbirth in the community, and the failure to collect the race indicator in the registration system. It is necessary to reinforce the urgency of specific and intercultural strategies in the health care of Indigenous women, focusing on health education and knowledge of the social factors that impact mortality rates.

36. ANALYSIS OF THE COMPONENTS OF A MEDICATION ADHERENCE QUESTIONNAIRE IN NON-DIALYTIC CHRONIC KIDNEY PATIENTS

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INTRODUCTION: Adherence to medication treatment is essential for adequate control of chronic diseases and constitutes an important pillar for the management of Chronic Kidney Disease (CKD), a

complex clinical condition that significantly impacts patients' quality of life. There is a wide range of instruments available to assess medication adherence, but the "Adherence to Refills and Medications Scale" (ARMS) questionnaire is especially useful for patients with chronic diseases and low levels of education. It has a published version in Portuguese, is short, and can be administered by everyone on the multidisciplinary team. **OBJECTIVE:** This study sought to evaluate adherence to drug therapy in non-dialysis chronic kidney patients receiving outpatient care at a multidisciplinary outpatient clinic. **METHODS:** The study methodology involved administering the ARMS questionnaire in a model nephrology outpatient clinic. The questionnaire is part of the research project "Analysis of Biopsychosocial Aspects in Interdisciplinary Care in a Model Nephrology Outpatient Clinic," under Ethics Committee approval number 7,195,964. This study involved the analysis of 37 patients with CKD stages 3 to 5. **RESULTS:** Medication adherence was considered good, with a mean score on the Medication Adherence Scale of 15.8 ± 1.6 . The majority (78.3%) of patients do not go to the pharmacy before their medications run out; 35.1% forget to take their medications; 21.3% let their medications run out; and 18.9% report not picking up their medications at the pharmacy due to the high cost. The overall analysis demonstrates adequate medication adherence. However, analyzing the variables separately reveals that most do not plan to purchase their continuous-use medications before they run out, which may be a factor in not achieving therapeutic goals. It was noted that one-third of patients forget to take their medications, and one-fifth report not taking them due to the high cost. For these patients, the intervals between appointments were reduced, and special attention was given to the identified components, with intervention from nursing, social work, and psychology. Other future strategies can be implemented, such as alarms, text messages, and periodic teleconsultations, to ensure better adherence to treatment. **CONCLUSION:** Identifying the factors that individually influence medication adherence provides comprehensive and individualized care for patients with CKD.

37. SOCIOSTRUCTURAL INEQUALITIES AND CLINICAL-BEHAVIORAL RISK FACTORS IN THE MPOX EPIDEMIC IN BRAZIL IN 2024

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INTRODUCTION: The spread of Mpox in Brazil is worsened by limitations in epidemiological surveillance, underreporting of cases, and inequalities in access to diagnosis, treatment, and prevention, especially in peripheral regions. The overload of the Unified Health System (SUS), combined with the shortage of vaccines and antivirals, compromises an effective response to the disease. Furthermore, sociobehavioral factors, such as stigma directed toward certain groups and hesitation to seek medical care, contribute to delays in diagnosis and reporting, expanding transmission chains. **OBJECTIVE:** This study aims to understand the main factors associated with the severity of Mpox in Brazil in 2024 by describing the sociodemographic, clinical, and behavioral profile of reported cases in the country. **METHODS:** This is a descriptive, observational, and retrospective study based on data from SINAN (Information System for Notifiable Diseases) for the year 2024. Variables such as sex, age,

race, region, hospitalizations, presence of HIV, immunosuppression, and sexual behavior were analyzed. Descriptive analyses were conducted using R software (version 4.4.2). **RESULTS:** Of the 1,915 reported cases, 96.2% were laboratory confirmed. Most were male (94.8%), with a median age of 33 years (IQR = 28–39). The Southeast region accounted for 74.7% of the records, possibly reflecting both its population density and greater access to testing. The distribution by race/color was proportional to regional demographics. Regarding sexual behavior, 70% reported having sex with men, suggesting the role of men who have sex with men (MSM) networks in the transmission dynamics. The hospitalization rate was higher among people living with HIV (5.7%) compared to HIV-negative individuals (4.7%), and even higher among immunosuppressed patients (12.5%) compared to immunocompetent ones (4.1%). **CONCLUSION:** The results provide a relevant overview of the factors associated with Mpox in Brazil and may guide more targeted and equitable public health policies. Future research may explore potential viral variants, long-term consequences, and the effectiveness of therapeutic protocols in different risk groups.

38. EPIDEMIOLOGICAL ANALYSIS OF THE INCIDENCE OF CEREBROVASCULAR ACCIDENT IN YOUNG PEOPLE IN BRAZIL FROM 2015 TO 2024

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INTRODUCTION: Cerebrovascular accident is a condition resulting from the obstruction or rupture of blood vessels that supply blood to the brain. It causes symptoms such as paresthesia, headache, and visual and cognitive changes. Furthermore, it is one of the leading causes of disability, hospitalizations and death in Brazil. **OBJECTIVE:** Therefore, this study aims to analyze the number of hospitalizations and the epidemiological profile of young stroke patients in Brazil over the past 10 years. **METHODS:** This is a quantitative, descriptive, retrospective, and longitudinal ecological study based on data from the SUS Hospital Information System (SIH/SUS), available at the Department of Informatics of the Unified Health System (DATASUS). The sample consisted of young people aged 15 to 29 years hospitalized for stroke in Brazil between January 2015 and December 2024. The variables used were: year of treatment, age, sex, race, region of residence, and deaths. Time trend analysis was performed using simple linear regression in statistical software (JASP). **RESULTS:** During the analyzed period, there were 1,867,060 hospitalizations for stroke in Brazil. Of these, 26,201 occurred in young individuals aged 15 to 29 years, with a fatality rate of 7.49%, being higher in men (8.99%) than in women (6.28%). The Southeast region concentrated the largest number of cases (35.9%, $n = 9,426$), followed by the Northeast region (31.2%, $n = 8,207$). Concomitantly, the majority of patients hospitalized for stroke were brown (44.17%, $n = 11,574$), women (55.36%, $n = 14,505$) and were aged between 20 and 29 years (81.56%, $n = 21,371$). Time trend analysis revealed a statistically significant increase in the incidence of stroke among young people during the study period ($\beta = 30.83$; $p < 0.001$). **CONCLUSION:** The analysis revealed a significant increase in the incidence of stroke among young Brazilians over the past 10 years, with a higher incidence among women, individuals of mixed race, residents of the Southeast region, and those aged 20 to 29. The fatality rate was significant, especially among men, highlighting the need for specific prevention and care strategies for this age group.

39. SLEEP DISORDERS IN PARKINSON'S DISEASE: RELATIONSHIP WITH PROGRESSION AND NEURODEGENERATION

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INTRODUCTION: Parkinson's disease (PD) is a neurodegenerative disorder in which some disturbances, such as REM Sleep Behavior Disorder (RBD), are correlated with its progression. Among the significant related changes, the impairment of the glymphatic system stands out. This system acts as a powerful eliminator of metabolic waste products in the brain—equivalent to the lymphatic system in the rest of the body—and the accumulation of α -synuclein, a protein involved in neurotransmitter transport, further intensifying neurodegeneration. **OBJECTIVE:** To elucidate how sleep disorders influence the progression of PD and to assess emerging therapeutic strategies. **METHODOLOGY:** This is an integrative review that investigated the relationship between sleep disorders and the progression of Parkinson's disease. The search was conducted in July 2025 in the PubMed and Cochrane Library databases, using free descriptors combined with Boolean operators. Studies published between 2020 and 2025 in English, Portuguese, and Spanish with full-text access were included. After screening, studies addressing the mechanisms by which sleep disorders, especially RBD, influence neurodegenerative progression were selected. **RESULTS:** The studies show that sleep disorders are linked to the accelerated progression of Parkinson's disease, particularly in cases with RBD. In addition to the aforementioned α -synuclein accumulation, glymphatic dysfunction, and inflammation, conditions such as sleep apnea and insomnia also contribute to the worsening of motor symptoms, as they are associated with sleep fragmentation and hypoxia, aggravating neuronal degeneration. Furthermore, factors such as sex, advanced age, and the presence of severe non-motor symptoms influence this process. Thus, early screening and management of sleep disorders emerge as promising strategies to slow disease progression and preserve quality of life. **CONCLUSION:** The recognition of sleep disorders as modulators of Parkinson's disease progression represents an important advancement in the approach to this condition. Therefore, the emphasis on early diagnosis and appropriate treatment of these disorders may not only help delay neurodegeneration but also improve patients' quality of life. Integrating sleep care into public health strategies and clinical practice is essential to promote more effective interventions and reduce the functional and social impact of the disease.

40. PULMONARY TUBERCULOSIS IN MARANHÃO (2020–2024): EPIDEMIOLOGICAL PROFILE, MORTALITY, AND CLINICAL OUTCOME

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INTRODUCTION: Pulmonary tuberculosis (PTB) remains one of the leading causes of death from infectious diseases in Brazil, reflecting social inequalities and weaknesses in the control of community transmission. Since 2021, a continuous increase in notifications has been observed, with an upward trend persisting through 2024. In Maranhão, this pattern is repeated, with cumulative increases of 11.6% in 2022, 6.5% in 2023, and 0.7% in 2024. Although the annual growth rate has slowed, the absolute number of diagnoses continues

to rise. **OBJECTIVE:** This study aimed to characterize the evolution of pulmonary tuberculosis in Maranhão between 2020 and 2024, focusing on early mortality and weaknesses associated with clinical outcomes. **METHODS:** This is an observational, descriptive, and quantitative study based on secondary data from the Notifiable Diseases Information System (SINAN), extracted through TabNet/DATASUS. The variables analyzed included age group, sex, race/color, type of case entry, and closure status. **RESULTS:** In 2024, among the 3,173 reported cases, 72.2% occurred in males, predominantly among individuals aged 20 to 49 years (61.2%). The most common entry type was "new case," with 2,434 notifications (76.7%), followed by 423 reentries after treatment abandonment, 215 relapses, and 30 cases of drug-resistant tuberculosis. The treatment abandonment rate reached 12% (382 cases), including 37 classified as primary abandonment. There were 147 deaths due to PTB in 2024, 64 (44%) of which occurred in individuals under 50 years of age. Additionally, 1,141 cases (35.9%) remained with closure status recorded as ignored or blank. Racial distribution revealed a predominance among mixed-race (71.5%) and Black individuals (14.8%), suggesting intersections between race, socioeconomic status, and clinical vulnerability. This scenario mirrors the national situation: Brazil remains among the 30 countries with the highest tuberculosis burden, according to the World Health Organization (WHO). In Maranhão, high rates of abandonment and reentry increase the risk of therapeutic failure and resistance. The report of 30 resistant TB cases in the state, combined with relapse and reentry figures, exposes weaknesses in active surveillance and clinical follow-up. **CONCLUSION:** Pulmonary tuberculosis in Maranhão continues to show an upward trend, with significant early mortality and a high proportion of inconclusive records. It is urgent to strengthen active surveillance, expand directly observed therapy (DOT), and improve health record quality, focusing on therapeutic retention, the most vulnerable populations, and the interruption of sustained transmission chains.

41. INCREASE IN TUBERCULOSIS AND HIV COINFECTION CASES IN MARANHÃO IN 2024: EPIDEMIOLOGICAL ANALYSIS AND CLINICAL OUTCOMES

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INTRODUCTION: Tuberculosis (TB) and HIV coinfection remains one of the major challenges to public health, especially due to its association with high morbidity and mortality rates, treatment abandonment, and contexts marked by social vulnerability. Between 2023 and 2024, Brazil recorded a 17.3% increase in notifications, reflecting a sustained upward trend since 2021. However, the state of Maranhão showed an even more significant rise of 33.3%, from 321 to 428 cases, reinforcing the need to carefully examine the factors driving this increase. **OBJECTIVE:** In light of this scenario, this study aimed to analyze the cases of tuberculosis and HIV coinfection reported in Maranhão throughout 2024, in order to characterize the affected population profile and identify weaknesses in care and surveillance processes. **METHODS:** This is an observational, quantitative, and descriptive study based on secondary data extracted from the Notifiable Diseases Information System (SINAN) through TabNet/DATASUS, covering the period from January to December 2024. All coinfection notifications in the state were included, and the following variables were analyzed: sex, age group, clinical form, type of case entry, and treatment outcome. **RESULTS:** Among the 428

identified cases, 70.1% occurred in males, with adults aged 30 to 49 years representing 59.81%. The pulmonary form of the disease was predominant (92.5%), while isolated extrapulmonary presentations accounted for 6%, and combined forms for 1.4%. Regarding case entry, most were new cases (70.5%), but a considerable proportion represented reentries after treatment abandonment (18.9%). The recorded cure rate was only 17.05%, with treatment abandonment in 16% of cases and outcomes classified as ignored or blank in 34.11%. **CONCLUSION:** The marked increase in HIV/TB coinfection in Maranhão calls for urgent implementation of active surveillance measures, strengthening of primary health care, active case-finding strategies, and integration between notification and care systems. Actions promoting treatment retention, health information quality, and stronger user-service linkage must be prioritized to contain the epidemic's progression and reduce associated morbidity and mortality. The high percentage of unrecorded or blank outcomes (34.11%) underscores the need to improve case monitoring and qualify health information systems.

42. COMPARISON BETWEEN MINIMALLY INVASIVE AND OPEN TECHNIQUES IN LUNG CANCER RESECTION SURGERY

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INTRODUCTION: Lung cancer, still responsible for a significant number of deaths, has various determining factors. Among these, cigarette use and environmental elements such as air pollution stand out. This carcinoma may develop from secondary causes, such as prior therapies or direct exposure to causative agents. Regarding treatment options, surgical intervention is considered the most appropriate approach for the early stages of the disease. **OBJECTIVE:** To analyze the impact of differences between minimally invasive and open surgeries on postoperative complications in lung cancer cases. **METHODS:** This study consists of an integrative review of articles published between 2016 and 2025, sourced from the SciELO, Virtual Health Library (VHL), and PubMed databases. Combined descriptors in both English and Portuguese were used, including ("Pulmonary Neoplasms") AND ("Thoracotomy") and ("Postoperative Complications") AND ("Minimally Invasive Surgical Procedures"). **RESULTS:** A total of ten articles were selected for this review. According to the literature consulted, the main findings regarding minimally invasive surgery (MIS), when compared to open thoracotomy (OT), included shorter hospital stays, reduced estimated blood loss, lower 30-day mortality rates, and increased survival. No significant differences were observed in terms of resection efficacy. However, despite offering less trauma and a broader visual field, MIS presents disadvantages compared to OT, such as indirect tactile feedback, limitations in surgical equipment, and longer procedure duration. Furthermore, pulmonary complications such as subcutaneous emphysema and pleural empyema, with absent or low mortality rates, were associated with MIS. In contrast, OT showed a percentage decrease in postoperative complications but presented the highest estimated mortality rate, with few intraoperative deaths linked to pulmonary artery bleeding, and a predominance of postoperative fatalities. **CONCLUSION:** Both techniques are effective and comparable in terms of resection capability for the treatment of small-cell lung cancer. Nevertheless, they diverge in certain critical aspects, such as survival rates, morbidity risks, and intraoperative

events. Therefore, it is evident that both surgical procedures entail relevant risks and benefits, and the choice of technique should be tailored to the patient's specific needs.

43. IMPACTS OF MASTECTOMY AND THE INFLUENCE OF MAMMOPLASTY ON SELF-ESTEEM: INTEGRATIVE REVIEW

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INTRODUCTION: Mastectomy is a surgical procedure essential for breast cancer treatment; however, it generates significant impacts on self-image, femininity, self-esteem, and quality of life in survivors. The removal of the breast is often associated with feelings of mutilation, low self-esteem, changes in sexual life, and social isolation. Therefore, mastoplastic surgery emerges as a strategy to mitigate these effects, although socioeconomic, cultural, and structural factors hinder access to the procedure. **OBJECTIVE:** To analyze the psychosocial impacts of mastectomy and the influence of breast reconstruction on women's self-esteem. **METHODS:** This is an integrative review conducted according to the PRISMA guidelines, with a search in PubMed, SciELO, and BVS databases using the descriptors "mastectomy", "self-esteem", "mastoplastic surgery", and "psychosocial impacts". Articles published between 2020 and 2025, in Portuguese, English, and Spanish, available in full text, were included. The review covers qualitative, quantitative studies, and reviews discussing emotional, social, and sexual repercussions of mastectomy and the effects of reconstruction on self-esteem and quality of life. **RESULTS:** The literature shows that mastectomy generates significant effects on mental health, frequently leading to feelings of sadness, fear, shame, and low self-esteem, affecting sexuality and social life. Depressive symptoms affect up to 25% of patients in the postoperative period. Breast reconstruction, especially immediate reconstruction, showed a positive impact on physical and mental well-being, as well as supporting social reintegration. However, it does not fully eliminate psychosocial repercussions and does not always recover sexual life. Structural and socioeconomic limitations restrict access to reconstructive surgery, such as in Brazil, where only 12.6% of women who underwent mastectomy in the SUS had reconstruction between 2010 and 2021. **CONCLUSION:** It is concluded that the psychosocial impacts of mastectomy highlight the need for comprehensive care that goes beyond surgical treatment, including psychological support and strategies for recovering body identity. Mastoplastic surgery contributes to improving self-esteem and quality of life, but requires public policies that expand equitable access, along with continuous psychological support and educational actions, which are crucial for reducing inequalities and promoting integral rehabilitation.

44. MINIMALLY INVASIVE VS TRADITIONAL TECHNIQUES IN THE TREATMENT OF ABDOMINAL HERNIAS: POSTOPERATIVE IMPACTS

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INTRODUCTION: Abdominal hernias are a common surgical condition frequently associated with discomfort, pain, and functional

limitation. Surgical management has evolved from traditional approaches, such as laparotomy, to minimally invasive techniques, including laparoscopy and robotic surgery, which offer faster recovery, less postoperative pain, and fewer complications.

OBJECTIVE: This study aimed to compare outcomes between traditional and minimally invasive techniques for the management of abdominal hernias, with an emphasis on patients' postoperative recovery. **METHODS:** This integrative literature review was conducted to evaluate the impact of these techniques on postoperative outcomes. The literature search was conducted in the PubMed and SciELO databases using the controlled descriptors "abdominal hernia repair", "laparoscopy", "robotic surgery", "postoperative recovery", and "pain", combined with the Boolean operators "AND" and "OR". Studies published between 2014 and 2024 were included, available in full text, with observational clinical design or controlled trials that compared laparotomy, laparoscopy, and robotic surgery, emphasizing outcomes related to postoperative recovery such as hospital stay duration, return to activities, and pain intensity. Narrative reviews, case reports, letters to the editor, and articles not relevant to the topic were excluded. As this is an integrative review without data collection from human subjects or identifiable information, submission to a Research Ethics Committee was not required, in accordance with CNS Resolution No. 510/2016. **RESULTS:** The findings indicated that minimally invasive approaches yielded better outcomes regarding postoperative pain, length of hospital stay, and return to daily activities. Robotic surgery proved effective, although associated with longer operative time and higher costs. In complex cases, such as incarcerated hernias, laparoscopy demonstrated safety and effectiveness comparable to open techniques, with a shorter hospital stay. **CONCLUSION:** In conclusion, minimally invasive techniques provide significant clinical benefits and represent viable, often superior alternatives in various surgical scenarios. Among these benefits, the positive impact on postoperative recovery stands out, characterized by less pain, shorter hospitalization, and a faster return to normal activities, thereby significantly improving patient experience and quality of life after surgery. However, challenges such as costs, infrastructure, and technical training still limit widespread adoption. Technological advancements and specialized training are essential to expanding access and improving clinical outcomes in the treatment of abdominal hernias.

45. EPIDEMIOLOGICAL PROFILE OF TRACHEOSTOMIES IN BRAZIL AND THE IMPACT OF THE COVID-19 PANDEMIC

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INTRODUCTION: Tracheostomy (TCT) is a procedure that aims to create communication between the external environment and the trachea, to allow the patient to breathe, while COVID-19, which is found in the mucosa of the aerodigestive tract and transmitted by direct contact, droplets and aerosols, can cause severe acute respiratory syndrome, causing lung changes that require ventilatory support. **OBJECTIVE:** In this sense, the objective of the work is to highlight the epidemiology of TCT in Brazil and its relationship with the COVID-19 pandemic, aiming at a better understanding of the care that patients need. **METHODS:** An epidemiological and descriptive

study based on data from the Department of Informatics of the Unified Health System (DATASUS) on the prevalence of TCT between 2017 and 2024. Furthermore, searches were carried out in scientific journals, published in the last 5 years, on the Scielo and Pubmed platforms, with the terms "tracheostomy", "COVID-19" and "pandemic" to highlight questions about COVID-19. **RESULTS:** Between January 2017 and May 2024, the number of TCT varied significantly. The national peak occurred in May 2021, with 1,877 procedures, during the pandemic. After a decline in 2022 and 2023, the numbers rose again in 2024, influenced by changes in clinical guidelines. Regionally, all regions followed the national trend. The Northeast had peaks in May 2017 (6,446) and June 2021 (6,602). In the Southeast, the highest volume was in January 2019 (5,960), with a new high in April 2024 (4,868). The South recorded its peak in July 2021 (6,548) and a decline in 2024 (2,114). The Center-West maintained the lowest volumes, with 1,535 in January 2024. The North had an early peak, in January 2017 (1,702), with more moderate variations over time. **CONCLUSION:** Therefore, an increase in TCT procedures during the pandemic is evident, with this increase being more pronounced in the Northeast and South regions. It is believed that changes in clinical guidelines and the progressive decline in COVID-19 cases in the years following the pandemic were responsible for the decrease in the procedure during this same period. However, more detailed studies are needed to better demonstrate the risk-benefit ratio and the optimal timing and recommendations for this procedure in COVID-19 patients.

46. CARDIOVASCULAR IMPACTS OF MICROPLASTIC EXPOSURE IN MURINE MODELS: AN INTEGRATIVE REVIEW FROM 2020 TO 2025

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INTRODUCTION: The widespread environmental contamination by microplastics (MPs) and their increasing detection in biological tissues have raised scientific concern regarding their potential deleterious effects on human and animal health. Experimental evidence suggests that MPs can bioaccumulate and induce oxidative stress, cellular senescence, mitochondrial dysfunction, and activation of systemic inflammatory pathways. Although studies using in vitro and in vivo models have advanced the understanding of these effects, investigations specifically addressing their cardiotoxicity remain scarce and fragmented. **OBJECTIVE:** This study aimed to critically analyze the cardiovascular effects of MP exposure in murine models. **METHODS:** An integrative literature review was conducted in July 2025 through a structured search of the PubMed, Scopus, and Embase databases, using the controlled descriptors "Microplastics," "murine model," "rats," "Mus musculus," "Wistar rats," "Rattus norvegicus," "cardiotoxicity," and "blood pressure," combined with the Boolean operator "AND." The initial screening identified 180 publications, of which 33 were selected after applying inclusion criteria (English-language articles published between 2020 and 2025, open access, containing descriptors in the title/abstract, and directly addressing the topic) and exclusion criteria (duplicates, paid-access papers, or divergent scope). **RESULTS:** The included studies demonstrated that MP exposure in rodents leads to significant cardiovascular dysfunctions, including myocardial inflammation, interstitial fibrosis, cardiac hypertrophy, mitochondrial dysfunction, and hemodynamic alterations. Structural changes in cardiac tissue,

increased pro-inflammatory cytokines, decreased antioxidant enzyme activity, and induction of inflammatory cell death were observed. MPs also affected pro-fibrotic, epigenetic, and metabolic molecular pathways, with alterations in lipid biosynthesis, glucose metabolism, and gut microbiota composition. Chronic exposure and the presence of nanoplastics were associated with more severe effects. **CONCLUSION:** It is concluded that MPs, particularly those made of polystyrene, induce significant cardiovascular alterations in murine models, with effects dependent on dose, polymer type, and exposure duration. Future studies are needed to elucidate the underlying molecular mechanisms, refine experimental models, and enable translational extrapolation of findings to human health.

47. EPIDEMIOLOGICAL PROFILE OF HOSPITAL ADMISSIONS FOR ASTHMA IN BRAZIL BETWEEN 2019 AND 2024

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INTRODUCTION: Asthma is a chronic disease characterized by inflammation of the airways, with episodes of dyspnea, coughing, and wheezing. With a significant impact on quality of life, it is one of the leading causes of hospital admissions in Brazil. Given this scenario, it is necessary to understand the epidemiological profile of asthma admissions in the country, with a view to supporting more effective and targeted public policies. **OBJECTIVE:** The objective of this study is to outline the epidemiological characteristics of hospitalizations for asthma in Brazil between 2019 and 2024. **METHODS:** This is a descriptive, ecological study based on secondary data from the SUS Hospital Information System (SIH/SUS) and the SUS Department of Information and Informatics, DataSus. The inclusion criterion was data on asthma in Brazil between 2019 and 2024, and the exclusion criterion was data outside this time frame and incomplete data. The dependent variables analyzed were age group, gender, geographic region, total value, and hospitalizations, and the independent variable was the absolute numbers for asthma (ICD-10 J45). **RESULTS:** During the period analyzed, the Southeast region had the highest expenditure on hospitalizations for asthma (38.42%), but the Northeast had the highest hospitalization rate (34.80%). The age group most affected was 0 to 14 years (64.03%). In terms of gender, there was a slight predominance of hospitalizations among men (50.48%). **CONCLUSION:** It can be concluded that the profile of hospitalizations for asthma in Brazil presents specific characteristics related to age group, geographic region, and gender. Analysis of these factors is essential for identifying vulnerable groups, enabling the formulation of public policies for the prevention, treatment, and control of asthma in the country.

48. CONTRALATERAL PROPHYLACTIC MASTECTOMY IN WOMEN WITH UNILATERAL BREAST CANCER AND BRCA1/2 MUTATION: A SYSTEMATIC REVIEW

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INTRODUCTION: Breast cancer is the most common malignancy among women globally, excluding non-melanoma skin cancer. The presence of BRCA1 or BRCA2 mutations elevates the risk of developing Contralateral Breast Cancer (CBC), leading to the increased use of Contralateral Prophylactic Mastectomy (CPM) as a preventive measure. Its full impact on Overall Survival (OS) is still a topic of debate. **OBJECTIVE:** To evaluate the impact of CPM, compared to clinical follow-up, on the incidence of Contralateral Breast Cancer (CBC) and Overall Survival (OS) in women with unilateral breast cancer carrying BRCA1 or BRCA2 mutations. **METHODS:** A systematic review was conducted following PRISMA guidelines, searching PubMed, SciELO, and Google Scholar between April and July 2025. The search utilized the descriptors: "BRCA1 OR BRCA2 AND contralateral prophylactic mastectomy AND breast cancer AND survival OR incidence". The review included clinical trials, cohorts, and meta-analyses published in the last five years. Out of 19 initial articles found, 5 studies were included in the final analysis. **RESULTS:** The data suggest that CPM significantly reduces CBC incidence (RR 0.07; 95% CI: 0.03–0.17; $p < 0.001$). A trend toward increased overall survival was also observed in specific subgroups. Some studies demonstrated a statistical survival benefit (HR 0.72–0.83), while others did not show a statistically significant impact, especially in patients with the triple-negative subtype. Furthermore, factors such as race and access to healthcare were noted to influence outcomes. **CONCLUSION:** CPM can be an effective preventive strategy for women with BRCA1 and BRCA2 mutations. Its benefits are especially noted when associated with individual clinical factors and appropriate oncological support.

49. PREVALENCE OF CHRONIC COMORBIDITIES IN PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION

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INTRODUCTION: Heart Failure with Reduced Ejection Fraction (HFrEF) is a clinical syndrome characterized by left ventricular systolic dysfunction and high morbidity and mortality. Patients with HFrEF exhibit a complex clinical profile with multiple chronic comorbidities that may increase the frequency of hospitalizations and the need for therapeutic interventions. **OBJECTIVE:** Investigate the prevalence and profile of comorbidities in patients with HFrEF followed in a specialized outpatient clinic. **METHODS:** This was a cross-sectional, observational study including patients diagnosed with HFrEF, treated at the Cardiology Outpatient Clinic of a University Hospital in Maranhão, Brazil. Sociodemographic and clinical data were collected between September 2023 and June 2024. The comorbidities analyzed included: Hypertension (HTN), Diabetes Mellitus (DM), Chronic Kidney Disease (CKD), Dyslipidemia, Chronic Obstructive Pulmonary Disease (COPD), Myocardial Infarction (MI), Atrial Fibrillation (AF), Rheumatologic Disease, Gastrointestinal Ulcers, Obesity, Depression, and Dementia. Statistical analyses were performed using RStudio (v. 4.5.1), employing Wilson's method with continuity correction to calculate 95% confidence intervals (95% CI). The study was approved by the Research Ethics Committee (CAAE: 25756919.9.2004.5086). **RESULTS** The study included 235 patients with heart failure, with a

median age of 59 years (IQR: 48.3–67), of whom 71.5% ($n = 168$) were male. The most prevalent comorbidity was hypertension, affecting 63.3% of patients (95% CI: 56.7%–69.4%), followed by dyslipidemia (39.8%), myocardial infarction (31.3%), and diabetes mellitus (29.1%). Other relevant conditions included obesity (13.3%), atrial fibrillation (7.5%), chronic kidney disease (6.8%), depression (4.7%), and rheumatologic diseases (4.3%). Gastrointestinal ulcers (3.4%), COPD (1.7%), and dementia (0.0%) showed low or no occurrence. Most patients presented with multiple comorbidities, with a median of two conditions (IQR: 2); 62.0% had between two and four, while 17.5% had none of the investigated conditions. **CONCLUSION:** This study demonstrated that chronic comorbidities such as hypertension, myocardial infarction, dyslipidemia, and diabetes mellitus are highly prevalent among patients with HFrEF. These findings underscore the clinical complexity of this population and highlight the importance of early screening, strict control, and individualized treatment aimed at reducing morbidity and mortality and improving prognosis through an integrated, multidisciplinary approach.

50. EPIDEMIOLOGICAL PROFILE OF LEPROSY IN BRAZIL (2018–2022): TEMPORAL TRENDS AND SOCIOECONOMIC INEQUALITIES

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INTRODUCTION: Leprosy, caused by the obligate intracellular bacillus *Mycobacterium leprae*, is a chronic granulomatous infectious disease that primarily affects the skin and peripheral nerves. It remains an important public health challenge in endemic regions. Transmission occurs mainly through prolonged close contact with untreated bacilliferous individuals, via airborne droplets from the upper respiratory tract. Despite free multidrug therapy (MDT) provided by the Brazilian Unified Health System (SUS), leprosy persists as a neglected tropical disease, strongly associated with social vulnerability, poverty, limited access to healthcare services, and structural inequities. Stigma related to the disease reinforces diagnostic delay and treatment dropout, perpetuating the transmission chain. **OBJECTIVE:** To analyze the temporal epidemiological trend of leprosy in Brazil from 2018 to 2022, considering sociodemographic and clinical variables, and to investigate the relationship between case distribution and socioeconomic inequalities in different regions of the country. **METHODS:** A cross-sectional, epidemiological, descriptive, and quantitative study was performed using secondary data. Information was extracted from the Notifiable Diseases Information System (SINAN) via the DATASUS database. Variables analyzed included sex, age range, educational level, race/skin color, geographical region, municipality of residence, and clinical forms of leprosy. Prevalence rates (per 100,000 inhabitants) were calculated annually, and results were stratified by region to enable temporal and comparative epidemiological interpretation. Data tabulation and descriptive statistical analysis were performed using Microsoft Excel. **RESULTS:** From 2018 to 2022, national prevalence rates decreased from 17.66 to 12.14 cases per 100,000 inhabitants, with the lowest rate recorded in 2020 (11.05/100,000), likely influenced by underreporting due to the COVID-19 pandemic and restricted access to diagnostic services. Higher burdens were observed in the North and Central-West regions—geographical areas characterized by greater socioeconomic vulnerability—while lower rates were observed in the South and Southeast. The most affected profile included males, young adults, individuals with low educational attainment, and people identified as brown or Black, reinforcing the

association with social inequities. Among children under 15 years old, cases were predominantly found in boys aged 10–14 years with incomplete basic education, indicating active transmission and recent exposure within endemic communities. **CONCLUSION:** Leprosy in Brazil remains strongly associated with socioeconomic disparities and unequal access to health services. Although the prevalence decreased during the analyzed period, the reduction—especially in 2020—likely reflects surveillance disruption and diagnostic underreporting rather than effective disease control. The findings indicate that leprosy disproportionately affects socially vulnerable populations. Strengthening primary healthcare surveillance, expanding access to early diagnosis, reducing stigma, and prioritizing affected regions are essential strategies to interrupt transmission and reduce the burden of disability related to leprosy.

51. EPIDEMIOLOGICAL AND MICROBIOLOGICAL PROFILE OF HEALTHCARE-ASSOCIATED INFECTIONS IN NEONATAL INTENSIVE CARE UNITS IN MARANHÃO (2019–2023)

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INTRODUCTION: Healthcare-Associated Infections (HAIs) in Neonatal Intensive Care Units (NICUs) represent a serious public health problem due to the immunological immaturity of newborns and the frequent use of invasive devices. The situation is aggravated by the presence of multidrug-resistant microorganisms, which complicates treatment and increases neonatal morbidity and mortality. **OBJECTIVES:** To analyze the epidemiological and microbiological profile of HAIs in NICUs in Maranhão between 2019 and 2023, highlighting the main isolated microorganisms, resistance patterns, and the indicators of incidence density (ID) and device utilization rate (UR) of invasive devices. **METHODS:** Descriptive, retrospective, quantitative study based on secondary data extracted from ANVISA's annual reports on HAIs in NICUs in Maranhão. Incidence density, utilization rate, and microbiological profile were analyzed, including antimicrobial resistance, with Pearson's correlation coefficient applied to assess the association between ID and UR. **RESULTS:** A total of 756 microorganisms were isolated in cases of laboratory-confirmed primary bloodstream infections (LCBSI), with a predominance of gram-negative bacteria (55%), particularly *Klebsiella pneumoniae* (31.4%) and *Pseudomonas aeruginosa* (12.9%). Among gram-positive bacteria (39%), coagulase-negative *Staphylococcus* (71.9%) and *Staphylococcus aureus* (18.1%) were highlighted. Sensitivity tests revealed high resistance to cephalosporins and carbapenems. The central venous catheter (CVC) utilization rate ranged from 25% to 35%, with LCBSI incidence density between 10% and 15.5%. Correlations between UR and ID were weak and not significant (LCBSI: $r=+0.24$; $p=0.69$; VAP: $r=-0.72$; $p=0.17$). **CONCLUSION:** HAIs remain a critical challenge in NICUs in Maranhão, with high incidence and a significant presence of multidrug-resistant pathogens. The lack of statistical association between device use and incidence density suggests that other factors, such as structural failures and care practices, influence infection occurrence. Continuous surveillance, rational antimicrobial use, and the implementation of effective infection prevention and control measures are strongly recommended.

52. CLINICAL OUTCOMES OF EMERGENCY AND URGENCY ATTENDANCES FOR CARDIOVASCULAR EVENTS IN SÃO LUÍS, MARANHÃO

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INTRODUCTION: Approximately 80% of cardiopulmonary arrests (CPAs) occur in out-of-hospital environments, necessitating immediate and highly qualified pre-hospital interventions. The Mobile Emergency Care Service (Serviço de Atendimento Móvel de Urgência – SAMU) plays an essential role in these contexts, with its efficiency potentially impacting patient clinical outcomes. **OBJECTIVE:** This study aimed to analyze the clinical outcomes resulting from cardiovascular emergency and urgency attendances provided by the SAMU service in São Luís, Maranhão. **METHODS:** The design employed was a retrospective, analytical, and quantitative study, utilizing data extracted from the Medical Regulation Individual Forms concerning cardiovascular cases managed by SAMU during the two-month period of January and February 2017. The variables analyzed were sex, age group, the presence of prior comorbidities, and the resulting clinical outcome (favorable outcome or death). Statistical analyses were performed using STATA® software (v14.0), applying Pearson's Chi-squared test, with statistical significance established at $p<0.05$. The study received formal approval from the Research Ethics Committee of the Federal University of Maranhão, registered under CAAE protocol number 2.935.029. **RESULTS:** Of the 41 patients attended for acute cardiovascular events, 63.4% ($n=26$) achieved a favorable clinical outcome, while 36.6% ($n=15$) resulted in death. No statistically significant associations were found between clinical outcome and sex ($p=0.317$), age group ($p=0.421$), or the presence of prior cardiovascular disease ($p=0.082$). However, a higher proportion of deaths was descriptively observed among female patients (42.3% versus 26.7%), with age exceeding 80 years (47.1%), and among those without a prior history of cardiovascular disease (50.0% versus 23.8%). It was observed that patients attended by Advanced Life Support (ALS) units, known in Brazil as Suporte Avançado de Vida (SAV), exhibited a substantially higher mortality rate (65.0%) compared to those attended by Basic Life Support (BLS) units, or Suporte Básico de Vida (SBV), which showed a mortality rate of only 9.5%. This difference was highly statistically significant ($p<0.001$), reflecting the inherent clinical gravity associated with cases that necessitate specialized care. It is noteworthy that two patients evolved to death while receiving assistance in a BLS ambulance. **CONCLUSION:** The findings underscore the crucial importance of SAMU in providing immediate, life-saving response to severe cardiovascular incidents. These results reinforce the continuous need for integrated strategies centered on professional team qualification, rigorous and appropriate triage protocols, and robust articulation across the entire urgency and emergency network to maximize the effectiveness and definitive treatment capability (resolutivity) of pre-hospital attention.

Poster Session RESEARCH ABSTRACTS

01. IMPACT OF THE VARIABLE "YEARS OF SCHOOLING" ON MORTALITY FROM SYSTEMIC SCLEROSIS IN BRAZIL (2000–2020)

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INTRODUCTION: Systemic Sclerosis (SSc) is a chronic autoimmune disease characterized by progressive fibrosis of the skin and internal organs such as the lungs and kidneys. Its pathophysiology involves immunological and vascular mechanisms, resulting in excessive collagen deposition. Clinically, it is divided into limited and diffuse forms, the latter being more severe with a higher risk of visceral involvement. Diagnosis is based on serological, radiological, and clinical criteria such as Raynaud's phenomenon, present in 95% of cases. The presence of specific autoantibodies assists in prognosis. Treatment aims to control symptoms and disease progression through immunosuppressants, vasodilators, and supportive therapies. **OBJECTIVE:** The objective of this study was to analyze the association between years of schooling and mortality from systemic sclerosis in Brazil. **METHODS:** This observational, analytical, and ecological study analyzed the association between educational attainment and mortality from SSc in Brazil, not requiring ethical approval in accordance with Resolution No. 510/2016. The methodology used mortality data from SSc provided by DATASUS, classified under ICD-10 code M34, and stratified by state and sociodemographic variables (sex, age group, educational level, race, and state). The data were organized using Google Sheets and analyzed in R with the "ggplot2" and "geobr" packages to create a heat map. The Chi-square test was applied to assess the association between educational level and mortality, with a significance level of 5%. Adjusted residuals were analyzed to identify the impact of each schooling category on mortality. **RESULTS:** A total of 3,824 deaths from SSc were recorded in Brazil between 2000 and 2020. There was a higher rate of deaths among females (77.71%), individuals aged 40 to 49 years (41.51%), and those identified as white (58.47%). In the state of São Paulo, 986 deaths were recorded, accounting for 25.78% of all deaths during the period. The highest number of deaths occurred in the group with 1 to 3 years of schooling (695), while the lowest was observed among individuals with 12 or more years of schooling (403). **CONCLUSION:** The distribution of deaths by educational level showed a statistically significant association ($p < 0.05$) between years of schooling and mortality. This finding reinforces the impact of socioeconomic inequalities on access to healthcare, indicating that populations with lower educational attainment face greater difficulties in obtaining medical care. This suggests that public health strategies should focus on equity, ensuring that more vulnerable groups have adequate access to services, aiming to reduce inequities.

02. FACTORS ASSOCIATED WITH INTIMATE PARTNER VIOLENCE DURING PREGNANCY: AN INTEGRATIVE REVIEW FROM 2015 TO 2024

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INTRODUCTION: According to the World Health Organization (WHO), intimate partner violence (IPV) is understood as gender-based violence characterized by mental, physical, or sexual harm and abuse to those involved in a relationship. In the case of pregnant women, besides being a complex phenomenon, violence during this phase can negatively impact maternal and fetal health, with repercussions such as miscarriage, premature birth, low birth weight, poor adherence to prenatal care, and mental disorders. **OBJECTIVE:** To analyze the socioeconomic and behavioral factors associated with

the greater occurrence of violence against women during pregnancy.

METHODS: This is an integrative literature review of articles published between 2015 and 2024 in the SCIELO and BVS databases. The following combination of descriptors, extracted from DeCS/MeSH (Health Sciences Descriptors), was used: ("Intimate Partner Violence") AND ("Spousal Abuse") AND ("Pregnancy") in Portuguese; and ("Intimate Partner Violence") AND ("Spousal Abuse") AND ("Pregnancy") in English. **RESULTS:** Ten articles were selected for this review. Although there is no clear evidence as to whether pregnancy acts as a risk or protective factor for violence, it is understood that these episodes are a continuation of previous events. All studies demonstrated that psychological violence was more common than physical and sexual violence. Regarding socioeconomic factors, particularly those related to the victim, young women with a history of personal or family violence (especially witnessing aggression against the mother), low education and income, early sexual initiation, multiple partners, unplanned pregnancy, abortion or attempted abortion, more than two children, and low social support were identified as having a higher risk of IPV. Regarding the partner's behavioral aspects, low education, unemployment, alcohol and illicit drug use were identified. Other precipitating factors were not being the child's biological father, condom abuse, the woman's refusal of sexual intercourse, jealousy, suspicion of infidelity, and arguments with third parties. **CONCLUSION:** Violence against pregnant women is a matter of concern, especially when associated with a vulnerable female profile and the aggressor's behavior. It is crucial that healthcare professionals know how to identify risk situations, especially at appropriate times such as prenatal and well-child visits.

03. ADVANCES IN IMMUNOTHERAPY FOR THE TREATMENT OF LUNG CANCER

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INTRODUCTION: Skin cancer is the most prevalent group of neoplasms in Brazil, classified as basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and cutaneous melanoma. The main etiology is related to cumulative exposure to ultraviolet radiation, especially UVB, which causes mutations in genes such as TP53, PTCH1, BRAF, and NRAS. The Northeast Region stands out as it ranks third nationally in the volume of hospitalizations for skin cancer. Factors such as high solar radiation, the predominance of outdoor work activities, and the limited availability of specialized services, justify the territorial choice for this study. **OBJECTIVE:** To analyze the epidemiological profile of malignant skin neoplasms in the Northeast Region of Brazil, between the years 2013 and 2024. **METHODS:** This is an observational and descriptive epidemiological study, with a time frame from 2013 to 2024, using public data from the TabNet/DATASUS system. The variables analyzed included the number of hospitalizations, deaths, sex, race/color, and age group. Descriptive statistical analysis was used, with values expressed as relative and absolute figures for the variables under investigation. **RESULTS:** In the evaluated period, 108,233 hospitalizations and 2,103 deaths due to skin cancer were recorded in the Northeast Region. Pernambuco led in the number of hospitalizations (23.1%), followed by Bahia (18.3%) and Rio Grande do Norte (17.7%). A growing inclination was observed in recent years, particularly in 2022 (20.89%), 2023 (8.81%), and 2024 (24.85%). Between 2020 and 2024, there was

a 111.6% increase in hospitalizations and a 35.1% increase in deaths. The most affected age group was 70 to 79 years, with 26,638 hospitalizations (24.6%) and 484 deaths (23%). Men accounted for the majority of cases (52.7% of hospitalizations and 60% of deaths). Regarding race/color, brown/mixed-race (pardo) individuals predominated in both hospitalizations (73%) and deaths (63.9%). **CONCLUSION:** The data reveal a significant increase in hospitalizations and deaths from skin cancer in the Northeast Region, with a greater impact on elderly, brown/mixed-race (pardo) men, especially in Pernambuco, Bahia, and Rio Grande do Norte. The scarcity of information on education, occupation, and histological type limits a more in-depth analysis. The findings reinforce the need to expand access to early diagnosis and specialized treatment, in addition to strengthening public prevention policies and improving the quality of health records.

04. A TEMPORAL ANALYSIS OF SKIN CANCER INCIDENCE IN NORTHEAST BRAZIL (2013–2024)

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INTRODUCTION: Systemic Sclerosis (SSc) is a chronic autoimmune disease characterized by progressive fibrosis of the skin and internal organs such as the lungs and kidneys. Its pathophysiology involves immunological and vascular mechanisms, resulting in excessive collagen deposition. Clinically, it is divided into limited and diffuse forms, the latter being more severe with a higher risk of visceral involvement. Diagnosis is based on serological, radiological, and clinical criteria such as Raynaud's phenomenon, present in 95% of cases. The presence of specific autoantibodies assists in prognosis. Treatment aims to control symptoms and disease progression through immunosuppressants, vasodilators, and supportive therapies. **OBJECTIVE:** The objective of this study was to analyze the association between years of schooling and mortality from systemic sclerosis in Brazil. **METHODS:** This observational, analytical, and ecological study analyzed the association between educational attainment and mortality from SSc in Brazil, not requiring ethical approval in accordance with Resolution No. 510/2016. The methodology used mortality data from SSc provided by DATASUS, classified under ICD-10 code M34, and stratified by state and sociodemographic variables (sex, age group, educational level, race, and state). The data were organized using Google Sheets and analyzed in R with the "ggplot2" and "geobr" packages to create a heat map. The Chi-square test was applied to assess the association between educational level and mortality, with a significance level of 5%. Adjusted residuals were analyzed to identify the impact of each schooling category on mortality. **RESULTS:** A total of 3,824 deaths from SSc were recorded in Brazil between 2000 and 2020. There was a higher rate of deaths among females (77.71%), individuals aged 40 to 49 years (41.51%), and those identified as white (58.47%). In the state of São Paulo, 986 deaths were recorded, accounting for 25.78% of all deaths during the period. The highest number of deaths occurred in the group with 1 to 3 years of schooling (695), while the lowest was observed among individuals with 12 or more years of schooling (403). **CONCLUSION:** The distribution of deaths by educational level showed a statistically significant association ($p < 0.05$) between years of schooling and mortality. This finding reinforces the impact of socioeconomic inequalities on access to healthcare, indicating that populations with lower educational

attainment face greater difficulties in obtaining medical care. This suggests that public health strategies should focus on equity, ensuring that more vulnerable groups have adequate access to services, aiming to reduce inequities.

05. MINIMALLY INVASIVE THORACIC ONCOLOGIC SURGERY: PERSPECTIVES ON ROBOTIC AND VIDEO-ASSISTED APPROACHES

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INTRODUCTION: Video-assisted thoracoscopic surgery (VATS) is a worldwide well-established technique for the treatment of thoracic cavity disorders, particularly neoplasms. In this context, robot-assisted thoracoscopic surgery (RATS) has emerged as an innovative advancement for the management of these diseases. Therefore, it is pertinent to comparatively analyze the potential advantages of RATS over VATS. **OBJECTIVE:** To compare the clinical outcomes associated with robotic versus video-assisted thoracic oncologic surgery. **METHODS:** Integrative literature review through which nine articles published between 2020 and 2025 were identified in the PubMed database, of which five were excluded due to lack of relevance to the topic. The search was conducted using the keywords: "lobectomy," "robotic," "surgery," and "pulmonary," combined with the Boolean operator "AND". **RESULTS:** Through these methods, it was observed that thoracic surgeons generally agree that Robot-Assisted Thoracic Surgery (RATS) offers several advantages, including tremor filtration, improved ergonomics, and a higher degree of instrument maneuverability. Although the robotic approach inherently lacks tactile feedback, the enhanced three-dimensional visualization it provides contributes substantially to movement precision. A meta-analysis encompassing 11,247 patients with lung cancer demonstrated a significantly higher number of lymph nodes resected in robotic procedures ($p = 0.002$), a prognostic factor of considerable relevance for oncologic outcomes, which was associated with a significantly lower recurrence rate ($p < 0.001$). In addition, RATS was linked to a reduced incidence of postoperative complications ($p = 0.02$) and a shorter postoperative hospital stay ($p < 0.001$). However, no statistically significant differences were observed between RATS and conventional techniques in terms of mortality ($p = 0.97$) or disease-free survival ($p = 0.89$), and RATS remained associated with higher procedural costs ($p < 0.001$). **CONCLUSION:** The reviewed studies indicated the superiority of robotic-assisted thoracic oncologic surgery in several aspects. However, the scarcity of randomized controlled trials directly comparing the two techniques, along with the high cost associated with RATS, limits the possibility of drawing definitive conclusions. Therefore, it is crucial to emphasize the need for careful evaluation when determining the most appropriate surgical approach for each case.

06. CARDIOTOXICITY ASSOCIATED WITH CHEMOTHERAPY IN PEDIATRIC ONCOLOGY PATIENTS: A SYSTEMATIC REVIEW OF THE LITERATURE

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INTRODUCTION: Cardiotoxicity is an important yet often underestimated adverse effect of chemotherapy in pediatric patients. Despite the widespread use of antineoplastic agents, there are no specific clinical guidelines for cardiac monitoring in this population. Factors such as cumulative drug dose, patient age, lack of baseline cardiac assessments, and limited surveillance methods contribute to the worsening of clinical outcomes. These gaps underscore the urgent need for standardized screening and early intervention protocols focused on preventing irreversible cardiovascular damage in children undergoing cancer treatment. **OBJECTIVES:** In this context, the present study aims to analyze the main cardiovascular effects observed in this population, emphasizing their most frequent manifestations and the need for specialized follow-up throughout treatment. **METHODS:** This is a systematic literature review based on the PICO strategy. Observational (3), systematic (1), and cross-sectional (1) cohort studies published in the past five years, in English or Portuguese, were included, using the descriptors "cardiotoxicity in pediatric patients AND chemotherapy." Preclinical studies were excluded. **RESULTS:** After screening 77 articles, five were included. All studies assessed pediatric patients with Acute Lymphoblastic Leukemia, Non-Hodgkin Lymphoma, or Acute Myeloid Leukemia treated with anthracycline-based chemotherapy. One prospective study identified cardiotoxicity in 17.9% of patients receiving doses greater than 120 mg/m². Two observational studies reported a marked decrease in left ventricular ejection fraction (LVEF), T-wave inversion, valvular dysfunctions, and risk of atrial fibrillation. One case report described myocardial injury diagnosed by echocardiography, which progressed to tachyarrhythmia and death. In a cross-sectional study, 15.9% of patients presented cardiotoxicity, with one death due to sepsis. All studies highlighted limitations such as the absence of baseline echocardiography and sampling restricted to single centers. **CONCLUSION:** Evidence suggests that early screening strategies and the use of beta-blockers and ACE inhibitors may improve clinical outcomes in pediatric oncology patients undergoing chemotherapy, particularly in hematologic malignancies treated with anthracyclines. The studied population was limited to a few cancer types; therefore, further research on cardioprotection in other populations may enhance understanding of the observed events.

07. UNDERSTANDING FIBROMYALGIA AS PAIN: AN INTEGRATIVE REVIEW OF THE PARADIGM SHIFT IN MEDICAL LITERATURE

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INTRODUCTION: Fibromyalgia is a chronic condition characterized by widespread pain, fatigue, and sleep disturbances. Its understanding has evolved from a limited psychosomatic model to a biopsychosocial paradigm supported by the concept of nociplastic pain. This shift has reduced psychogenic stigma and paved the way for new diagnostic and therapeutic approaches. **OBJECTIVE:** To analyze the evolution of paradigms in the medical literature on fibromyalgia, highlighting the transition from the psychosomatic pain model to the concept of nociplastic pain. **METHODS:** This study is an integrative literature review, a methodological strategy that allows for the systematic and comprehensive gathering, evaluation, and synthesis of studies with different approaches. A search was

conducted in the PubMed and LILACS databases using the descriptors "fibromyalgia AND nociplastic pain" and "fibromyalgia AND psychosomatic pain," as well as their equivalents in Portuguese. Only open-access articles with "fibromyalgia" or "fibromialgia" in the title were included, totaling 18 studies (9 on nociplastic pain and 3 on psychosomatic pain in PubMed; 3 on nociplastic pain and 3 on psychosomatic pain in LILACS). The studies were categorized by authorship, year, methodology, objectives, and pain approach, and critically appraised according to the Critical Appraisal Skills Programme (CASP) criteria. **RESULTS:** The data analysis revealed a predominance of narrative reviews and observational studies, complemented by clinical trials and experimental research with greater methodological robustness, which consolidate central sensitization and neurophysiological mechanisms as key elements of the syndrome. The analysis and interpretation of findings showed that psychosomatic studies were concentrated between 2003 and 2013, whereas publications from 2019 to 2025 consolidate the nociplastic model, without excluding the relevance of emotional and social factors. The synthesis of knowledge demonstrates the progressive integration between biological and psychosocial mechanisms, highlighting the need for multidisciplinary approaches and the importance of biopsychosocial assessment. **CONCLUSION:** The current literature converges toward an expanded biopsychosocial paradigm centered on nociplastic pain, while preserving the relevance of emotional factors. This evolution underscores the need for methodologically robust studies that integrate different dimensions of the disease and support more effective clinical interventions and public policies.

08. CURRENT SCENARIO OF DRUG THERAPY FOR TRANSTHYRETIN AMYLOIDOSIS: AN INTEGRATIVE REVIEW

Sophia Reis Gomes Aguiar¹, Lorena Dutra de Matos Bastos¹, Luana Vitória Marinho de Abreu¹, João Victor Lopes Oliveira¹, Júlia Leitão Neves Azevedo¹, Marina de Carvalho Vanderlei Azevedo¹ and Yara Nayá Lopes de Andrade¹.

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INTRODUCTION: Transthyretin amyloidosis (ATTR) is a rare, progressive, irreversible, and fatal disease that affects the transport of retinol in the bloodstream. This condition is characterized by the aggregation of abnormal transthyretin (TTR) peptides, which deposit and accumulate in a variety of systems, such as the cardiovascular and nervous systems. **OBJECTIVE:** To describe the current landscape and the main scientific advances aimed at the clinical practice of transthyretin amyloidosis. **METHODS:** The literature search was conducted in the PubMed and Biblioteca Virtual em Saúde (BVS) databases. The descriptors "Amiloidose por Transtirretina," "Tratamento," and "Eficácia" were used, along with their English equivalents ("Transthyretin Amyloid," "Treatment," "Efficacy"). Initially, 565 articles were identified. After duplicate removal, 386 publications were collected. Of these, 215 were assessed for eligibility, resulting in a final selection of 16 articles for the review. Articles published between 2020 and 2025, available free of charge and in full text, were included to ensure alignment with the study objective. **RESULTS:** Early detection of ATTR, combined with targeted therapies, can slow disease progression and improve the well-being of affected individuals. Treatments involving protein stabilizers and protein synthesis inhibitors have shown favorable results. The main findings revealed that four drugs — tafamidis, patisiran, vutrisiran, and

inotersen — have been explored as promising therapeutic alternatives for ATTR. However, within specific clinical contexts, research suggests that certain therapies may demonstrate greater effectiveness — a fact that highlights the complex interaction between drug mechanisms and their effects on patients. **CONCLUSION:** The treatment strategies for ATTR currently under evaluation show promising potential to mitigate prognostic implications. However, gaps remain in the contemporary literature, which justifies the need for further studies. Thus, the advancement of new research becomes highly relevant for the future of transthyretin amyloidosis treatment. Despite the findings, the present review revealed gaps in the literature, particularly regarding long-term outcomes, records related to other drug approaches, and the translation of research into economic contexts.

09. EPIDEMIOLOGICAL AND SPATIAL ANALYSIS OF VIRAL HEPATITIS IN THE STATE OF MARANHÃO FROM 2013 TO 2023

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INTRODUCTION: Viral hepatitis, liver infections caused by viruses A, B, C, D, and E, represent a serious public health problem. In Maranhão, its high incidence reflects socioeconomic inequalities and structural challenges, such as low educational levels, poor sanitation, and limited coverage of prevention and treatment programs. In this context, epidemiological and spatial monitoring is essential to support intervention strategies, particularly in vulnerable areas. **OBJECTIVE:** To analyze the epidemiological profile and spatial distribution of reported cases of viral hepatitis in Maranhão between 2013 and 2023. **METHODS:** This was a descriptive, exploratory, and retrospective study based on secondary data. A total of 4,575 confirmed cases were extracted from the Sistema de Informação de Agravos de Notificação (SINAN) for the period from 2013 to 2023. Variables included sex, age group, educational level, race/skin color, and place of residence. For spatial analysis, geographic coordinates were obtained via the Global Positioning System (GPS), and maps were generated using the Google My Maps platform, enabling visualization of case concentrations by health macro-regions. Data were analyzed using descriptive statistics to identify patterns. **RESULTS:** Cases were predominantly observed among mixed-race women aged 20 to 39 years with a high school education. Spatial distribution revealed a higher concentration in the North and South Health Macro-Regions, particularly in the municipalities of São Luís (1,276 cases) and Imperatriz (310 cases), areas of greater population density and vulnerability. Mapping identified critical zones that require intensified surveillance, prevention, and treatment efforts, especially in areas with limited access to healthcare services. These findings underscore the need for territorially focused strategies. **CONCLUSION:** Epidemiological and spatial analysis contributes to addressing viral hepatitis in Maranhão by guiding health policies and actions. The findings highlight the importance of professional training, improved surveillance, and the expansion of prevention and early diagnosis campaigns. Strengthening healthcare networks, along with health education and the promotion of socio-environmental equity, is essential to reducing the disease burden.

10. UPDATES IN THE INDUCTION OF ACUTE KIDNEY INJURY IN ANIMAL MODELS: A SYSTEMATIC REVIEW

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INTRODUCTION: Acute kidney injury (AKI) represents a serious health problem, associated with high morbidity and mortality, with pathophysiological mechanisms that are still not fully elucidated. To better understand these mechanisms and explore new therapeutic approaches, animal models have proven to be indispensable tools in preclinical research. Therefore, it becomes essential to discuss the ethics of AKI induction methods in these animals to ensure the utmost respect for their welfare. **OBJECTIVE:** This study aims to review the most recent techniques used to induce renal injury in rats and to critically analyze AKI induction strategies in animal models, seeking to contribute to the regulation of AKI induction models within the context of biomedical research. **METHODS:** This research consists of an integrative literature review using the PubMed database. The descriptors "wistar rats," "induced," "acute kidney injury," and "experimental" were used, combined with the Boolean operator "and." A total of 377 articles were found, of which 19 remained after applying the inclusion criteria: published between 2020 and 2024, containing the descriptors in the title or abstract, being freely accessible, and fitting the proposed objectives of the study. **RESULTS:** Among the 19 selected articles, 4 authors described surgical techniques for AKI induction—1 involving ureteral obstruction and 3 involving renal artery obstruction. In ischemic AKI, the technique of right kidney removal and atraumatic occlusion of the left renal artery for 45 minutes proved to be the most severe model for studying ischemia/reperfusion. In total, 15 studies presented drug-induced models, which implied a higher level of refinement in experimental ethics. Additionally, 8 studies did not specify or failed to describe in detail the euthanasia method employed. **CONCLUSION:** The results indicate that different experimental models of AKI have been used to simulate renal injury mechanisms. However, despite the refinement observed in some studies, the lack of standardization in euthanasia methods and the insufficiently detailed descriptions of practices highlight the need for greater methodological and ethical rigor in experimental research on AKI induction.

11. METHODS OF INDUCTION OF PEPTIC ULCER IN RATS: REVIEW OF PROTOCOLS AND ETHICAL PERSPECTIVES

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INTRODUCTION: Peptic ulcers (PU) are defects in the gastrointestinal mucosa that extend through the muscularis mucosae, from the lamina propria and submucosa to the deeper layers of the wall. Epidemiologically, they represent a major health problem, associated with high morbidity and significant global economic impact. In this context, experimental models using laboratory rats have been widely employed to investigate the pathophysiological mechanisms of the disease, as well as to develop new therapies. Thus, it is necessary to discuss the ethics of peptic ulcer induction methods in these animals to ensure the utmost respect for their welfare. **OBJECTIVE:** To review the main experimental protocols for PU induction in rats described in the scientific literature from 2020 to 2024, emphasizing the standardization of methods and the ethical

aspects involved, aiming to contribute to the improvement of experimental practices in this field. **METHODS:** This study consists of an integrative literature review based on the PubMed database. The descriptors "wistar rats," "induced," "peptic ulcer," and "experimental" were used, combined with the Boolean operator "and." A total of 505 articles were found, of which 14 met the inclusion criteria: published between 2020 and 2024, containing the descriptors in the title or abstract, freely accessible, and consistent with the objectives of this study. **RESULTS:** In recent years, several experimental methods have been used for PU induction in animal models. Among the 14 selected studies, 7 used oral or intraperitoneal administration of indomethacin (20–30 mg/kg). Two studies used oral administration of absolute ethanol (10 mL/kg). Oral administration of aspirin (250 mg/kg), as well as the use of acetic acid (40%) injected directly into the gastric mucosa, were applied in 1 and 2 studies, respectively. Furthermore, surgical induction through pyloric ligation and the water-immersion restraint stress model were each employed in 1 of the remaining 2 studies. **CONCLUSION:** Each method presents specific advantages and is chosen according to the objectives of the study. A preference for chemical induction methods over surgical approaches was observed, along with a trend toward reducing the doses of the substances used—always emphasizing ethics and animal welfare.

12. EPIDEMIOLOGICAL ANALYSIS OF DEATHS FROM HEPATIC AND BILIARY TRACT NEOPLASMS IN NORTHEASTERN BRAZIL AND MARANHÃO, 2019–2023

Hândrya Karla Martins Gomes¹, Gabriel Ramos Goulart¹, Anna Luiza Sobreira Torres¹, Davi Henrique Palácio Silva¹, Maria Stephany Costa Soares¹, Enzo Gabriel Sousa Pestana¹ and Gutemberg Fernandes De Araujo¹.

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INTRODUCTION: Malignant neoplasms of the liver and intrahepatic bile ducts represent significant causes of cancer mortality in Brazil. With a silent progression and generally late diagnosis, they present high lethality. In Northeastern Brazil, particularly in the state of Maranhão, the impact of these diseases is exacerbated by regional disparities in access to diagnosis and treatment. **OBJECTIVE:** In this context, the aim of the study is to describe the profile of deaths associated with these neoplasms in Northeastern Brazil and Maranhão between 2019 and 2023, contributing to more effective and regionally tailored public health actions. **METHODS:** This is a descriptive and ecological study analyzing the sociodemographic profile of patients with malignant neoplasms of the liver and bile ducts in Northeastern Brazil and Maranhão from 2019 to 2023. Data were obtained from the Mortality Information System (SIM), available through the Department of Informatics of the Brazilian Unified Health System (DATASUS). Variables analyzed included sex, race/skin color, age group, educational attainment, and distribution by state. Data were organized using Microsoft Excel 2016 and R Studio software for analysis through calculations of absolute and relative frequencies. **RESULTS:** Between 2019 and 2023, the Northeastern region recorded 13,505 deaths. Maranhão accounted for 1,520 (11.2%) of these deaths, ranking behind Bahia (3,668) and ahead of Sergipe (460). There was a slight predominance of males both in the Northeast (53.2%) and in Maranhão (51.8%). Most deaths occurred among older adults: approximately 75% were aged over 60 years. In Maranhão, the

peak was observed between 60 and 69 years (28.4%). Low educational attainment was strongly associated with mortality: 63.5% of deaths in the Northeast and 73.4% in Maranhão occurred among individuals with up to seven years of schooling. Regarding race/skin color, self-declared mixed-race (brown people) individuals accounted for the majority of deaths in both the Northeast (64.1%) and Maranhão (66.3%). White individuals represented 25.1% and 20.8%, respectively, while black individuals accounted for 10.2% in the region and 11.9% in the state. **CONCLUSION:** The analysis of deaths revealed a pattern concentrated in population groups marked by greater social vulnerability. The predominance of deaths among older adults, individuals with low educational attainment, and mixed-race individuals suggests that socioeconomic factors continue to play a decisive role in mortality from these neoplasms. In this context, the findings of this study contribute to the recognition of regional health disparities and may support strategies that are more responsive to local realities.

13. SOCIAL DETERMINANTS OF HEALTH AND PENILE CANCER: BARRIERS TO EARLY DIAGNOSIS

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INTRODUCTION: Penile cancer is a malignant neoplasm that affects the male reproductive and urinary organs. It is more prevalent in low and middle-income regions and is associated with social vulnerability, poor hygiene, and sexually transmitted infections. Early diagnosis is crucial for a better prognosis, as delays in seeking care can lead to advanced stages and invasive treatments, including amputations. The cultural representation of masculinity and social and economic barriers are important to discuss the challenges in accessing health care and promoting early diagnosis. **OBJECTIVE:** Analyze the cultural and socioeconomic determinants of penile cancer in primary care in Brazil. **METHODS:** This is an integrative review with a search for articles conducted in the SciELO, PubMed, and Google Scholar databases. The search strategy used the following descriptors: "Penile Cancer" AND "early diagnosis" AND "social barriers." Publications in Portuguese or English published between 2020 and 2025 were included, and articles that were not directly related to the study subject were excluded. **RESULTS:** The articles demonstrated that the main barriers to early diagnosis of penile cancer are cultural, social, and economic issues. The stigma related to masculinity contributes to men adopting an invulnerable stance, making it difficult for them to seek health services and express their needs in Primary Health Care (PHC). Furthermore, the fragility of PHC coverage in early diagnosis reflects the socioeconomic conditions of the most affected areas, which are usually regions most affected by poverty and a lack of education on health behaviors, such as the importance of circumcision, protected sex, and proper genital hygiene. These risk behaviors make these areas more prone to aggressive and irreversible penile cancer. **CONCLUSION:** Thus, the results highlighted the importance of addressing social, economic, and cultural determinants in order to expand quality care for those affected. Penile cancer remains a health problem in Brazil, especially in vulnerable regions. The disease has consequences for men's physical health, mental health, and self-esteem, and early diagnosis in PHC is essential to ensure comprehensive care.

14. COMPLICATIONS AND PREVENTION PROCEDURES FOR HOSPITAL INFECTIONS: AN INTEGRATIVE REVIEW OF THE PERIOD 2019-2025

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INTRODUCTION: Despite being an ideal place for healthcare, the hospital environment, especially Intensive Care Units (ICUs), poses a high risk for the development of Healthcare-Associated Infections (HAIs). In the context of patients with immunocompromised conditions, this complicates clinical and therapeutic management and poses a risk to the well-being of healthcare professionals. **OBJECTIVE:** Identify the main complications of hospital infections in ICU patients and determine preventive measures to be adopted. **METHODS:** This is an integrative review of articles published between 2019 and 2025 in the EMBASE, PubMed, and BVS databases. The following descriptors were used, extracted from DeCS/MeSH (Health Sciences Descriptors): ("Opportunistic Infections") AND ("Hospital Care") AND ("Disease Prevention"), in Portuguese and English. **RESULTS:** Twelve articles were included in the research. HAIs are most often related to serious illnesses, clinical and surgical interventions, which can present complications, and a longer hospital stay. These factors expose patients to and increase their susceptibility to infections from hospital-acquired pathogens, which, in turn, tend to be more resistant to the control measures applied, favoring increased morbidity and mortality among patients and hindering a good clinical outcome. Furthermore, HAIs significantly impact the financial sector, as they increase hospitalization costs and reduce the number of available beds, interfering with the quality of care and assistance. Therefore, and with the aim of preventing HAIs, clinical and surgical protocols include measures that aid in damage control, such as rigorous and precise management and adequate sanitation of cavities to receive invasive devices, such as probes and catheters; daily cleaning of the patient; and continuous surveillance and documentation of the patient's signs and symptoms. **CONCLUSION:** HAIs represent an obstacle to ICU care. Their main complications include clinical worsening in hospitalized patients, the spread of resistant microorganisms, and reduced bed availability. Therefore, healthcare professionals must always prioritize preventive measures such as hand hygiene, use of appropriate PPE, and rigorous handling of hospital equipment.

15. SOCIODEMOGRAPHIC PROFILE OF PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION IN A TERTIARY CARE HOSPITAL

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INTRODUCTION: Heart failure with reduced ejection fraction (HFrEF) is a multifactorial syndrome that compromises the heart's ability to pump blood effectively, representing a significant public health problem. In this context, identifying the sociodemographic profile of patients affected by this condition and treated at a referral outpatient clinic in the state of Maranhão is essential to inform health planning and intervention strategies aimed at reducing complications

associated with the disease. **OBJECTIVE:** To describe the sociodemographic profile of HFrEF patients treated at a cardiology outpatient clinic of a tertiary hospital in the state of Maranhão. **METHODS:** This is a cross-sectional, retrospective, descriptive study with a quantitative approach. Primary data collection was performed with HFrEF patients treated at the cardiology outpatient clinic of a tertiary hospital between 2021 and 2023. The variables analyzed were "sex," "age group," "race/skin color," "place of residence," "marital status," and "education level." Data were tabulated in an Excel spreadsheet for descriptive statistical analysis. The study was approved by the Research Ethics Committee (CAAE: 25756919.9.2004.5086). **RESULTS:** A total of 164 patients with heart failure with reduced ejection fraction (HFrEF) were analyzed. The majority were male (70.7%) and between 60 and 69 years old (29.3%), followed by 50 to 59 years old (22.6%). Regarding color/race, 60.4% self-identified as mixed race (brown), 22% as black, and 15.9% as white. Concerning residence, 54.3% lived in the capital, 34.8% in the interior of the state, and 10.4% in the Grande Ilha region. The majority of patients were married (48.8%), followed by single individuals (25%). In terms of education, 36.6% had incomplete elementary education and 28.7% had completed high school, while 8.5% were illiterate. **CONCLUSION:** Therefore, it is concluded that the profile most affected by heart failure with reduced ejection fraction in the demonstrated sample corresponds to brown men, aged between 60 and 69, married, with low education, and residing in São Luís. Understanding this profile contributes to the development of public health policies and strategies aimed at preventing the disease and raising awareness of its risk factors, enabling the implementation of targeted actions for this population. Such measures may consequently promote early diagnosis and treatment, thereby reducing the impacts and complications associated with the condition.

16. ASSOCIATION BETWEEN CHRONIC COMORBIDITIES AND HOSPITALIZATION IN PATIENTS WITH HEARTH FAILURE

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INTRODUCTION: Heart Failure (HF) is a highly prevalent and complex clinical condition, characterized by the heart's inability to maintain the cardiac output adequate to the body's metabolic needs. Patients with HF frequently present multiple chronic comorbidities, such as systemic arterial hypertension (SAH), diabetes mellitus (DM) e chronic kidney disease (CKD), that contribute to the disease's progression, increase of the symptoms and higher risk of hospitalization. Understanding the relation between these comorbidities and the clinical outcomes is fundamental for planning more efficient and focalized therapeutic strategies. **OBJECTIVE:** To investigate the prevalence and association between chronic comorbidities and occurrence of hospitalization in patients with HF. **METHODS:** This is an analytic, transversal and retrospective epidemiological study. The data were collected among patients with HF who were in medical monitoring in a cardiology ambulatory of a tertiary hospital from 2021 to 2024. Were considered for the analysis comorbidities present among the patients with HF. The prevalence and correlation with each one with the number of admissions was analyzed through Pearson's correlation. The statistical analysis was

made using the RStudio program. This paper was approved by the Ethical Committee in research under the number 25756919.9.2004.5086. **RESULTS:** There was observed a high prevalence of comorbidities in patients diagnosed with HF, with emphasis to SAH (63,5%), consumption of alcoholic drinks (61,0%), smoking (46,9%), dyslipidemia (40,7%) and DM (29,2%). Besides, the correlation between the clinical conditions and hospitalization showed as main positive associations: depression ($r = 0,151$), the comorbidity that, among those evaluated, had the highest number of hospital admissions, followed by smoking ($r = 0,143$), e SAH ($r = 0,118$) e, as main negative associations: dyslipidemia ($r = -0,058$), anemia ($r = -0,054$) and CKD ($r = -0,044$). **CONCLUSION:** Therefore, it can be concluded that the most prevalent comorbidities among patients with HF are SAH, alcoholism, smoking and dyslipidemia, whilst the the one with most correlation to hospital admissions was depression, suggesting significative impact of mental health on the clinical management of HF, wich reenforces the importance of preventive and therapeutic strategies to control this comorbidity, in order to reduce admissions and increase the patients quality of life.

17. CIRRHOSIS AND INTESTINAL DYSBIOSIS: CLINICAL COMPLICATIONS AND PROBIOTIC THERAPIES

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INTRODUCTION: Intestinal dysbiosis is commonly observed in patients diagnosed with cirrhosis due to the alterations in gastrointestinal physiology caused by liver damage. In this context, the presence of dysregulated gut microbiota in cirrhotic patients and its impact on the negative prognosis of liver disease raise the following question: how does intestinal dysbiosis exacerbate cirrhosis, and how can probiotics be effective in addressing this issue? **OBJECTIVE:** To analyze the influence of intestinal dysbiosis on the worsening of clinical conditions in cirrhotic patients and to assess the potential relevance of probiotic therapy in this context. **METHODS:** This study is an integrative literature review based on the development of a guiding research question. Articles published between 2020 and 2025, written in Portuguese or English, and classified as Qualis A or B, were included. The databases consulted were PubMed (Public Medline), Google Scholar, and Scopus. The following descriptors were used: "cirrhosis," "dysbiosis," "probiotics," "complications," and "liver cirrhosis." A total of 22 articles were initially identified; after applying the inclusion criteria, 13 were selected for analysis. **RESULTS:** Cirrhotic patients exhibited distinct alterations in gut microbiota composition. A relationship was observed between cirrhosis progression and an increased abundance of *Streptococcaceae* and *Porphyromonadaceae*, along with a reduction in *Lachnospiraceae* and *Ruminococcaceae* populations. This pattern may explain the decreased genetic diversity of fecal microbiota in patients with decompensated cirrhosis compared to those with compensated disease. A clear association was found between the severity of hepatic injury and the degree of intestinal dysbiosis, with higher mortality rates reported among patients presenting with severe microbiota dysregulation. Seven major complications were identified: hepatic vein thrombosis, spontaneous bacterial peritonitis, hepatic encephalopathy, portal hypertension, hepatorenal syndrome, and sarcopenia. In this regard, probiotics have emerged as a potential therapeutic alternative, demonstrating benefits such as reductions in anthropometric parameters, cholesterol and ammonia levels, and the progression of hepatic encephalopathy. The use of mixed probiotic strains proved to be the most effective approach. **CONCLUSION:** This review reinforces the relationship between gut microbiota composition and the severity of hepatic cirrhosis, highlighting significant complications and the association between the degree of

dysbiosis and disease indicators. Probiotic supplementation appears to be a promising intervention for mitigating functional alterations and preventing cirrhosis-related complications.

18. ASSOCIATION BETWEEN BMI AND MENSTRUAL IRREGULARITY IN YOUNG WOMEN

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INTRODUCTION: Body mass index (BMI) is the ratio of body weight to height, which helps figure out a healthy weight range for each person. It can be used to see if someone is overweight or obese, a condition that represents a serious public health problem and is directly related to the development of gynecological conditions such as infertility and menstrual dysfunction. **OBJECTIVE:** This study aims to investigate the association between body mass index (BMI) and the occurrence of menstrual irregularities in young women, analyzing potential correlations between nutritional status and the menstrual cycle. **METHODS:** This is an integrative review of the literature available from the PubMed, Google Scholar, SciELO, and LILACS databases, using the descriptors "Body Mass Index," "Menstrual Disorders," "young women," "Young Adult," and "menstrual irregularity" combined by the Boolean operator "AND" and delimiting articles published between 2015 and 2025. Twenty-five articles in Portuguese, English, and Spanish were chosen for analysis, of which six were selected and the remaining 19 were discarded for not meeting the study objective or for being duplicates. **RESULTS:** Findings from the review show a significant association between BMI and menstrual irregularity in young women. Both excess and insufficient weight increase the prevalence of disorders such as amenorrhea, dysmenorrhea, anovulation, and infertility. In addition, studies suggest that these menstrual changes may reflect systemic hormonal imbalances, serving as early markers of health disorders such as polycystic ovary syndrome, insulin resistance, and cardiovascular risk. **CONCLUSION:** All the evidence analyzed highlights how important it is to consider nutritional status when looking into menstrual disorders in young women. BMI, as it reflects imbalances that go beyond body weight, is a useful tool for early detection of changes in the menstrual cycle and can assist in screening for hormonal and metabolic dysfunctions that affect gynecological health.

19. EPIDEMIOLOGY OF CONGENITAL ANOMALIES IN BRAZIL AND MARANHÃO: COMPARATIVE ANALYSIS OF SINASC DATA (2014-2023)

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INTRODUCTION: Congenital anomalies are significant causes of infant morbidity and mortality worldwide, with an estimated 276,000 neonatal deaths annually. In Brazil, these conditions accounted for 18.2% of infant deaths in 2022. Regional disparities in access to health services and diagnostic capacity may influence both the occurrence and notification of congenital anomalies. **OBJECTIVE:** To analyze the prevalence of congenital anomalies in Brazil and Maranhão from 2014 to 2023, identifying associated maternal and neonatal characteristics. **METHODS:** Retrospective epidemiological study using data from the Live Birth Information System (SINASC/DATASUS). All live births

recorded between 2014–2023 were included. Variables analyzed: presence and type of congenital anomaly (ICD-10), type and duration of pregnancy, birth weight, newborn sex, and maternal race/ethnicity. Prevalence with 95% CI was calculated, along with chi-square and Z-tests for independent proportions. **RESULTS:** Overall prevalence was 0.87% (95% CI 0.868–0.875) in Brazil and 0.50% (95% CI 0.484–0.511) in Maranhão ($p < 0.001$). In Maranhão, neural tube defects and musculoskeletal malformations were proportionally more frequent, while circulatory anomalies were less reported. Preterm births and extreme birth weight categories were more prevalent in Maranhão. Demographic differences were also observed, with higher proportions of mothers self-identified as “parda” (mixed race). **CONCLUSION:** Significant differences were identified in the prevalence and profile of congenital anomalies between Brazil and Maranhão, which may reflect both true epidemiological variations and diagnostic or reporting inequalities. Findings highlight the need to strengthen epidemiological surveillance, prenatal care, and early diagnosis policies for congenital anomalies in Brazil.

20. EPIDEMIOLOGY OF NECK FRACTURES IN THE STATE OF MARANHÃO: EVALUATION OF EPIDEMIOLOGICAL DATA FROM 2020 TO 2025.

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INTRODUCTION: Neck fractures are most commonly associated with car accidents or other acute traumatic events, such as certain contact sports. In general, the mechanism associated with neck fractures involves high energy axial loading. **OBJECTIVE:** Due to the anatomical structure, with the passage of large vessels and important nerve branches, understanding neck fractures is important. Therefore, the objective of this study is to understand the epidemiological aspects of neck fractures in the state of Maranhão. **METHODS:** The work in question consists of a retrospective study based on secondary data, which are available in the database of the Department of Informatics of the Unified Health System (DATASUS) in terms of Hospital Morbidity by place of hospitalization in Maranhão and the ICD-10 Morbidity List. For a more in-depth analysis of the data, the variables Municipality, Year, Gender, Age Group 1, and Ethnicity were used, in addition to the period from May 2020 to May 2025. **RESULTS:** During the period analyzed, 2,156 cases of neck, chest, or pelvic fractures were reported in the state of Maranhão. Most of the notifications occurred in the state capital (1,038; 48.14%), São Luís, with a predominance in the male population (1,046; 76.35%) and mixed-race population (1,294; 60.02%). Regarding age groups, there was an equal number of reports in the 30-39 and 40-49 age groups (423; 19.62%) and in the year 2023 (507; 23.52%). **CONCLUSION:** Given the high morbidity and mortality rates associated with neck fractures, the notification of 2,156 cases over a five-year period makes this a public health issue, especially since it affects economically active age groups. The predominance among males and brown-skinned individuals is likely due to the population profile, as well as greater exposure to risk situations, such as traffic. The higher incidence in the city of São Luís can be understood by the fact that it is the state capital, as well as the city with the highest population density. Regarding the year, it is understood that the number of reports may be related to the greater lifting of restrictions after the COVID-19

pandemic. Finally, understanding the epidemiological profile of neck fractures in the state of Maranhão is necessary due to the need to develop public safety measures that allow for greater protection of the population.

21. EPIDEMIOLOGICAL ANALYSIS OF RHEUMATOID ARTHRITIS IN THE STATE OF MARANHÃO

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INTRODUCTION: Rheumatoid arthritis is a chronic painful syndrome that mainly affects the joints. Understanding the epidemiological profile of rheumatoid arthritis (RA) enables more targeted clinical reasoning for the early identification of early and late changes related to the disease. **OBJECTIVE:** To analyze the epidemiological aspects related to rheumatoid arthritis (RA) in the state of Maranhão. **METHODS:** This is a retrospective study based on secondary data collected from the database of the Department of Informatics of the Unified Health System (DATASUS) on hospital morbidity. To obtain the data, the period from December 2019 to December 2024 was selected, choosing ICD 10 M06, corresponding to rheumatoid arthritis and other inflammatory polyarthropathies. **RESULTS:** In the state of Maranhão, between December 2019 and December 2024, 3,286 new cases of RA were reported. The distribution of reported cases shows that 1,673 (50.91%) were women and 1,613 (49.09%) were men, with a predominance of the brown population with 2,346 (71.39%) and the age group between 40 and 49 years old with 550 (16.79%) people affected, followed by those between 50 and 59 years old with 498 (15.16%) records. Regarding the location of care, there was a concentration of cases in the capital of Maranhão with 582 (17.71%). **CONCLUSION:** The uniformity between the genders affected by RA in Maranhão may be due to the characteristics of the population. Unlike the Brazilian and global situation, no significant difference was observed in the state between women and men affected by RA, but the data on race and age group are similar to the reality of the country. Regarding age group, the diagnosis of RA tends to occur in adulthood due to the period of disease progression. As for notification by city, the predominance in São Luís is possibly due to population density, as well as the city being the state's reference city. Therefore, it is essential to evaluate the epidemiological aspects attributed to RA, especially in Maranhão, given the lack of updated statistical data for planning public health measures that optimize the diagnosis and control of the deformities caused by the disease.

22. EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH VENOUS THROMBOSIS IN MARANHÃO FROM 2019 TO 2025

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INTRODUCTION: Deep vein thrombosis (DVT) is characterized by the formation of thrombi within the deep veins with partial or total obstruction of the vessel, occurring mainly in the lower limbs. This condition is one of the leading causes of hospital and outpatient morbidity, significantly impacting mortality statistics. **OBJECTIVE:**

This study aimed to analyze the epidemiological profile of patients with DVT in Maranhão (2019-2025) in order to guide public health policies in the state. **METHODS:** This is a descriptive epidemiological study based on hospital morbidity and mortality data from the Department of Informatics of the Unified Health System (DATASUS). The sample included patients of all age groups hospitalized for venous thrombosis in Maranhão between January 2019 and May 2025. The variables "health micro-regions," "year of care," "age group," "gender," "color/race," and "deaths" were used. **RESULTS:** During the study period, 3,187 hospitalizations and 83 deaths due to phlebitis, thrombophlebitis, embolism, and venous thrombosis were recorded in Maranhão, with a mortality rate of 2.6%. An increasing trend in hospitalizations and deaths was observed, reaching peaks in 2023-2024, indicating a progressive worsening of the scenario. Women predominated in hospitalizations (58.9%), but men had higher mortality (53.0%) and lethality (3.36% versus 2.08% in women), suggesting a more severe clinical outcome. The adult population (30-69 years) was the most affected, accounting for 63.4% of hospitalizations, with the highest incidence in the 40-49 age group, followed by the 60-69 age group. Brown-skinned individuals were the majority among hospitalizations (89.2%), reflecting the local demographic profile; however, 31.1% of records were incomplete. São Luís (33.0%) and Imperatriz (15.2%) accounted for almost half of the hospitalizations, suggesting centralization of diagnosis and possible underreporting in more remote regions. **CONCLUSION:** Data analysis showed a progressive increase in morbidity and mortality, peaking in 2023 and 2024, which account for almost half of the recorded deaths. The overall case fatality rate was 2.6%, higher among men (3.36%) than women (2.08%). Hospitalized patients were predominantly women, adults (30-69 years old, peaking at 40-49), and self-declared brown. The concentration of cases in the micro-regions of São Luís and Imperatriz points to greater access to diagnosis in these locations, suggesting possible underreporting in peripheral regions.

23. HORMONE REPLACEMENT THERAPY IN MENOPAUSE: CARDIOVASCULAR RISKS VERSUS METABOLIC BENEFITS

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INTRODUCTION: Menopause is characterized by the definitive cessation of menstruation and a decrease in estrogen and progesterone levels, leading to metabolic changes such as insulin resistance, dyslipidemia, and increased abdominal fat, as well as an elevated cardiovascular risk. Menopausal hormone therapy (MHT) is recognized for alleviating climacteric symptoms and providing metabolic benefits, but its impact on cardiovascular events remains debated. **OBJECTIVE:** The present study aims to analyze the cardiovascular risks and metabolic benefits of MHT, considering the formulation, route, and timing of therapy initiation. **METHODS:** This is an integrative review in which 20 full-text articles were selected from the PubMed, ScienceDirect, and BMC Women's Health databases, published in the last five years. Randomized clinical trials, systematic reviews, and observational studies discussing the metabolic and cardiovascular effects of MHT were included. The analysis was descriptive and interpretative, focusing on comparative data regarding formulations, routes, and timing of therapy initiation.

RESULTS: MHT did not increase all-cause mortality or cardiovascular events when initiated early, before the age of 60 or within 10 years after menopause, supporting the "timing hypothesis." When initiated later, there was an increased risk of stroke (RR = 1.23) and venous thromboembolism (RR = 1.86). The transdermal route, particularly at doses below 50 µg/day and combined with micronized progesterone, demonstrated greater vascular safety compared to the oral route or the use of medroxyprogesterone acetate. From a metabolic perspective, menopausal hormone therapy promoted reductions in LDL-C, increases in HDL-C, improved insulin sensitivity, and decreased abdominal fat, with up to a 30% reduction in the incidence of type 2 diabetes. There was also a significant improvement in flow-mediated dilation (FMD). Evidence indicates that early initiation of MHT is associated with lower rates of cardiac events and an overall better metabolic profile. **CONCLUSION:** MHT, when initiated early and using safe formulations, plays an important protective role in metabolism and the cardiovascular system. The transdermal route combined with micronized progesterone is the safest strategy, especially for women with thrombotic risk. MHT has a positive impact on cardiometabolic outcomes and could be considered for primary cardiovascular prevention.

24. HOSPITALIZATIONS FOR CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES IN BRAZIL FROM 2015 TO 2024

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INTRODUCTION: Cerebral palsy (CP) is characterized as a syndrome caused by damage to the immature brain. Like other paralytic syndromes, it interferes with motor and instinctive physiological adaptability in children. It manifests as differences in posture, reflexes, and coordination, which are consistent with abnormal and dysfunctional postural tone. Socioeconomic differences are a risk factor for cerebral palsy due to greater exposure to toxic and infectious agents by the baby, hypoxemia, or trauma during the prenatal/postnatal period. **OBJECTIVE:** To investigate hospitalizations for cerebral palsy and other paralytic syndromes in Brazil from 2015 to 2024. **METHODS:** This is an ecological, quantitative, descriptive, time series study (2015-2024) on cerebral palsy and other paralytic syndromes, with secondary data extracted from the Hospital Information System of the Unified Health System (SIH/SUS)-TABNET/DATASUS. The variables studied were: hospitalizations, region, year, age group, sex, and color/race, total value, and average value. Data extracted from SIH/SUS were exported to Excel and tabulated, with results expressed in absolute numbers and frequencies. **RESULTS:** There were n=91,727 hospitalizations for these conditions from 2015 to 2024. There was a downward trend from 2015 to 2020 and an upward trend from 2021 onwards, peaking in 2015 (n=12,326) hospitalizations. The Southeast region ranked first with n=39,955 cases. The most affected gender was male, with 62.9% (n=57,771). Most frequent in the age group: 20 to 29 years (n=13,814) hospitalizations; race: no information (n=44,370), followed by brown (n=21,935) hospitalizations. The total amount spent was n=R\$481,127,573.30 and the average amount was n=R\$5,245.21. **CONCLUSION:** Hospitalizations for cerebral palsy and other paralytic syndromes showed a downward trend until 2020, after which they have shown continuous growth. They were more frequent in the Southeast, among males, those of unknown race and brown-skinned

individuals, in the 20-29 age group, with a high amount invested by the health system. Demonstrating the possibility of reducing cases, therefore, public health actions are required to minimize such events through health promotion measures, professional training and community awareness, improved prenatal care, and better outpatient and home care for those affected by such pathologies.

25. DEATHS FROM MYASTHENIA GRAVIS IN BRAZIL FROM 2014 TO 2023

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INTRODUCTION: Myasthenia gravis (MG) is an autoimmune disease with an etiology that remains unclear and is considered a rare disease. Although rare, an increase in its prevalence has been described in the literature, which may be associated with improved diagnostic advances. It is characterized by the production of specific autoantibodies against nicotinic acetylcholine receptors (AChR) at the neuromuscular junction (NMJ), with constant immune attack, which leads to receptor dysfunction, contributing to neuromuscular non-transmission and triggering clinical implications, such as progressive myasthenia and musculoskeletal asthenia. **OBJECTIVE:** To analyze the epidemiological profile of deaths from myasthenia gravis in Brazil from 2014 to 2023. **METHODS:** This is an ecological, descriptive, quantitative study with secondary data obtained from the Hospital Information System of the Unified Health System (SIH/SUS), available on TABNET/DATASUS, covering the period 2014-2023. The variables analyzed were: region, year, gender, race/color, age group, education level, and place of occurrence. The data were tabulated in Excel and expressed in absolute numbers and frequencies. **RESULTS:** There were n=1730 deaths by MG in Brazil in the 10 years under study. The most prevalent region was the Southeast (n=870), followed by the Northeast (n=353), South (n=283), Midwest (n=139), and North (n=85) deaths. There was an oscillating trend over the period from 2014 to 2016, from 2017 to 2019 there was an increasing trend, with a decline in 2020 and new growth from 2021 to 2023. Females predominated with (n=890) equivalent to 51.44%. The white race was more prevalent (n=1182), followed by brown (n=410) deaths per MG. The 70-79 age group (n=391) deaths stood out. Eight to 11 years of schooling was more frequent (n=420), less than 3 years of schooling (n=394), and 4 to 7 years of schooling (n=352) deaths. Most deaths occurred in the hospital (n=1395), representing 81% of the sample. **CONCLUSION:** MG is a disease that requires further study to identify its etiopathogenesis and refine its diagnosis. The increasing number of deaths, with periods of fluctuation, suggests improvements in the protocols for caring for these patients, aiming to improve their health and prevent the worsening of the condition that leads to death. Thus, focusing on preventive measures and improvements in diagnosis and treatment may reduce deaths from this disease.

26. HOSPITAL MORBIDITY FROM ALZHEIMER'S IN BRAZIL FROM 2015 TO 2024

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INTRODUCTION: Alzheimer's disease is a neurodegenerative disorder that causes dysfunction in the intraneuronal synaptic

process, leading to memory impairment and a cascade of symptoms that can ultimately result in death. Among the clinical manifestations are the incapacitating progression of activities and short- and long-term memory loss, hindering the social, family, and work lives of these individuals. Its main cause is the accumulation of beta-amyloid peptide, which causes changes in cholinergic pathways, with neuronal loss and loss of choline acetyltransferase (ChAT), which in turn decreases the productive capacity of acetylcholine (ACh). This can be minimized by the use of cholinesterase inhibitors in the treatment of mild and moderate cases. **OBJECTIVE:** To study the epidemiological profile of hospital morbidity due to Alzheimer's disease in Brazil from 2015 to 2024. **METHODS:** This is an ecological, retrospective, descriptive, and quantitative study with data on hospitalizations for Alzheimer's disease obtained from the Hospital Information System of the Unified Health System (SIH/SUS), TABNET/DATASUS, Ministry of Health-Brazil, from 2015 to 2024. The variables analyzed were: hospitalizations, region, year, age group, sex, color/race, total value, and average value. The data were tabulated in Excel and expressed in absolute numbers and frequencies. **RESULTS:** There were n=16,030 hospitalizations for Alzheimer's disease in Brazil during this period. There was an oscillating trend in the period 2015-2019 with an upward trend, a downward peak in 2020 (n=1,212 hospitalizations), and a new upward peak starting in 2020, with the highest peak in 2023 (n=2,125 hospitalizations). The most prevalent region was the Southeast (n=8,299), followed by the South (n=3,838), Northeast (n=2,413), Midwest (n=970), and North (n=510) hospitalizations. The most affected age groups were: 50 to 59 years old (n=345); 60 to 69 years old (n=1,503); 70 to 79 years old (n=4,566) and 80 years old and over (n=9,426) hospitalizations. It was more frequent in females, with 65%; in males, with 35% of hospitalizations. The most affected race was white (n=7,880), followed by brown (n=4,004). The total amount spent was n=R\$26,131,808.17, representing an average amount of R\$1,630.18. **CONCLUSION:** Alzheimer's disease has a significant prevalence in the elderly, affects women and Caucasians more, and represents a high cost to the Brazilian healthcare system. It is important to reinforce the importance of care for the elderly, for early diagnosis and treatment, which advocates preventive actions that reduce hospitalizations and improve the quality of life of this population.

27. EXCESSIVE RUNNING AND SILENT HEART DISEASE: RISKS FOR AMATEUR ATHLETES – AN INTEGRATIVE REVIEW

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INTRODUCTION: Road running is widely recognized for its benefits to the cardiovascular system and is encouraged as a preventive strategy against chronic diseases. However, the growing adoption of the practice among amateur athletes, often without specialized guidance, has raised concerns about the impact of excessive exercise on heart health. Recent evidence indicates that intense practice, especially when not accompanied by regular clinical evaluations, can induce subclinical cardiac changes such as myocardial fibrosis, arrhythmias, and hypertrophy, comprising the spectrum of silent heart diseases. **OBJECTIVE:** This study aims to analyze whether amateur athletes undergoing intense running training have a greater

risk of developing silent heart disease, compared to sedentary individuals or those who practice moderate running. **METHODS:** An integrative literature review was conducted, and systematic searches for articles published in PubMed, SciELO, and LILACS between January 2020 and July 2025 were performed using controlled descriptors (DeCS/MeSH) in Portuguese and English. Studies involving adults (≥ 18 years) addressing structural or functional myocardial alterations in amateur runners were included. Four independent reviewers conducted screening and analysis of the articles using Rayyan software. Of the 42 studies found, 26 met the established methodological criteria. **RESULTS:** The results indicated a strong association between intense running and the presence of cardiac overload markers, such as elevated troponin levels and morphofunctional changes in imaging studies. The lack of pre-participation screening and lack of awareness of early symptoms favor underdiagnosis of these conditions. **CONCLUSION:** The review showed that intense running, when practiced by amateur athletes without adequate monitoring, is associated with the development of silent heart disease, even in the absence of clinical symptoms. Changes such as myocardial fibrosis and ventricular hypertrophy were recurrent in the studies analyzed. The lack of prior screening and cardiological monitoring contributes to the underdiagnosis of these conditions. Therefore, individualized training, periodic assessments, and greater awareness of the risks are recommended to ensure safe and sustainable sports practice.

28. EPIDEMIOLOGICAL ANALYSIS OF PREMATURE MORTALITY FROM TYPE 2 DIABETES MELLITUS IN BRAZIL (2014–2024)

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INTRODUCTION: Type 2 Diabetes Mellitus (T2DM), which accounts for approximately 90% of all diabetes cases, is a chronic metabolic disease associated with insulin resistance and hyperglycemia. It represents a significant global public health issue, particularly due to its contribution to mortality from Noncommunicable Diseases (NCDs). Premature mortality (between 30 and 69 years of age) serves as a strategic indicator for monitoring these diseases. In Brazil, the increase in this indicator reflects inequalities in access to healthcare services, making its monitoring essential for achieving Target 3.4 of the United Nations (UN) 2030 Agenda, which aims to reduce premature mortality from NCDs. **OBJECTIVE:** To analyze the epidemiological profile of premature mortality due to T2DM in Brazil from 2014 to 2024. **METHODS:** A descriptive, retrospective, and quantitative study was conducted based on data from the Ministry of Health's Premature Mortality Monitoring Panel for NCDs. Deaths attributed to T2DM among individuals aged 30 to 69 years were included. The variables analyzed were sex, race/skin color, age group, region of residence, and disease complications. Mortality rates by region were calculated per 100,000 inhabitants. **RESULTS:** During the period, 46,257 deaths from T2DM were identified in Brazil, representing a 146.13% increase in the absolute number of deaths. Of these, 24,984 (54.0%) occurred in males and 21,271 (46.0%) in females. Mortality was concentrated in older age groups: 60–69 years (58.4%), 50–59 years (28.7%), and 40–49 years (10.3%). Regarding race/skin color, the majority were mixed-race (43.2%) and white individuals (42.7%), followed by black individuals (11%). The Northern Region showed the highest mortality rate (32.74 per 100,000

inhabitants), followed by the Southern (30.33), Central-West (28.72), Northeastern (24.66), and Southeastern (15.29) regions. Among associated complications, renal complications (8,579), multiple complications (4,018), peripheral circulatory complications (2,547), and unspecified complications (3,614) were the most frequent. A total of 20,591 deaths were classified as "without complications," which may indicate underreporting or misclassification in the cause of death. **CONCLUSION:** There has been a significant increase in premature mortality due to T2DM in Brazil, with a predominance among males, older age groups, and mixed-race and white individuals. Regional disparities highlight the need to strengthen prevention strategies, promote early diagnosis, and expand equity in access to healthcare services.

29. CLINICAL OUTCOMES OF THE TREATMENT OF PATENT DUCTUS ARTERIOSUS: AN INTEGRATIVE REVIEW

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INTRODUCTION: Patent ductus arteriosus (PDA) is common among premature and very low birth weight newborns, and it is associated with an increased risk of morbidity and mortality. Currently, traditional treatment approaches include pharmacological therapy and surgical closure. **OBJECTIVE:** The objective of this integrative review is to evaluate the clinical outcomes in patients with PDA treated through pharmacological or surgical approaches. **METHODS:** This is an integrative review conducted in accordance with the international guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Searches were performed in the PubMed and SciELO databases using the descriptors: "patent ductus arteriosus" AND "surgical treatment" OR "pharmacological treatment." Original articles published in the last 10 years (2014–2024) in English and Portuguese were included. Review articles, duplicates, and incomplete studies were excluded. Initially, 84 articles were selected. After analyzing titles and abstracts, 27 studies remained. Following full-text reading based on the exclusion criteria, 18 articles were included in the final sample of this review. **RESULTS:** Early treatment may have a beneficial impact on PDA-related mortality, whereas late management helps prevent excessive pharmacological intervention in cases of spontaneous closure. Early conservative treatment includes indomethacin and ibuprofen, which have shown benefits in reducing the rates of intraventricular hemorrhage. Furthermore, oral paracetamol and ibuprofen have emerged as alternative therapeutic options; however, their adverse effects must be considered, such as hepatic injury, as well as renal and gastrointestinal alterations. If pharmacological therapy proves unsatisfactory, early surgical ligation of the symptomatic ductus arteriosus is indicated; nonetheless, it may lead to complications such as impaired myocardial performance, postoperative hypotension, and bronchopulmonary dysplasia. **CONCLUSION:** PDA in newborns remains a clinical challenge due to its association with high morbidity and mortality rates. The effectiveness of early pharmacological treatment lies in reducing the need for immediate surgical intervention and in preventing intraventricular hemorrhage, although

it carries potential adverse effects. Conversely, surgical closure of the PDA has proven effective but is associated with significant complications. The decision regarding the ideal treatment should take into account both clinical outcomes and potential adverse impacts.

30. EPIDEMIOLOGICAL PROFILE OF TUBERCULOSIS IN PEOPLE DEPRIVED OF LIBERTY IN BRAZIL, 2020–2024

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INTRODUCTION: Tuberculosis (TB), an infection caused by bacteria of the *Mycobacterium tuberculosis* complex, is responsible for high global morbidity and mortality. Its distribution is strongly associated with low socioeconomic conditions. In this context, the population deprived of liberty (PDL) constitutes one of the most affected groups, due to prison overcrowding, inadequate ventilation, failures in early detection, and treatment discontinuity. These factors favor the spread of the disease and the maintenance of transmission chains, making prison facilities important foci of TB. **OBJECTIVE:** To describe the epidemiological profile of people deprived of liberty affected by tuberculosis in Brazil between 2020 and 2024. **METHODS:** This is a descriptive epidemiological study with a quantitative approach, based on data obtained from the Department of Informatics of the Unified Health System (DATASUS) for the selected years. The variables analyzed were: year of diagnosis, federative unit, sex, race/skin color, age group, education level, and clinical form of TB. **RESULTS:** A total of 52,671 TB cases were reported among PDL in Brazil between 2020 and 2024. The year 2023 recorded the highest number of cases (11,212), with no significant variation compared to other years. The states with the highest number of notifications were São Paulo (10,633 cases), Rio de Janeiro (9,042), and Pernambuco (5,024). The pulmonary form was the most prevalent (95.7% of cases). Among PDL, males predominated, accounting for 97.4% ($n = 51,320$) of cases. Most individuals had incomplete primary education (18,575 cases). Regarding race/skin color, 54.1% ($n = 28,509$) were classified as brown. The most affected age group was 20–39 years (81.8%). **CONCLUSION:** TB remains a serious public health issue among people deprived of liberty in Brazil, with higher concentration in the most populous states of the Southeast region. The profile observed—young, brown-skinned men with low educational levels—demonstrates the relationship between social vulnerability and the disease. These findings highlight the need for specific public policies focused on active surveillance, early diagnosis, continuous treatment, and structural improvements in prison facilities to ensure better health conditions for this population.

31. EPIDEMIOLOGICAL ANALYSIS OF EARLY MORTALITY FROM CERVICAL CANCER IN MARANHÃO FROM 2020 TO 2023

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INTRODUCTION: Cervical cancer is a public health problem in Brazil, especially in Maranhão (MA). The state has been experiencing high morbidity and mortality rates from cervical cancer, according to the National Cancer Institute (INCA), which estimated approximately 800

cases in 2023 alone, considering deaths in women aged 30–69 years as premature deaths. The scarcity of studies between 2020 and 2023 supports the need for further studies on early mortality from cervical cancer. **OBJECTIVES:** This study aims to analyze data on early mortality from cervical cancer in Maranhão, from 2020 to 2023, in order to support actions and public policies aimed at improving women's health indicators. **METHODOLOGY:** This is an ecological and retrospective study that analyzed early deaths from cervical cancer in Maranhão, between 2020 and 2023, among women aged 30 to 69. Secondary public data from the Mortality Information System (Mortality Information System - Department of Information and Informatics of the Unified Health System) and the Brazilian Institute of Geography and Statistics were used. The following variables were considered: year, age group, education level, and race/color. Statistical analysis was performed in RStudio software, using Pearson's chi-square test to verify associations between deaths, race/color, and education level. The results are presented in absolute and relative frequencies, using graphs that highlight trends and proportional distributions. Because these are public data, no ethical approval was required. **RESULTS:** During the study period, a population of 1,562,000 inhabitants was observed in the city of São Luís, and among these, 899 early deaths from cervical cancer were recorded. The age group with the highest death rate was between 45 and 64 years old, and the year with the highest mortality rate was 2021, at 15.17%. Sixty-five percent of early deaths were among brown women, and women with low levels of education; up to seven years of schooling; are the most affected by early mortality. Statistical analyses found no association between early mortality, ethnicity, and education in São Luís during the analyzed period. **CONCLUSION:** Therefore, gaps in tracking cervical cancer mortality persist. Given the above, prevention measures, expanded access to vaccination, routine screenings, and oncological care are necessary.

32. PERCEPTION OF CHANGES IN THE PHASES OF THE MENSTRUAL CYCLE BY WOMEN WHO EXERCISE

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INTRODUCTION: Women's health requires comprehensive care at all stages of life to ensure their well-being. In this context, adherence to physical exercise (PE) has increased, reflecting the value placed on healthy habits. However, the menstrual cycle (MC) is a physiological process characterized by hormonal fluctuations that can interfere with PE practice, influencing women's perception of performance and disposition. **OBJECTIVE:** Given this, the objective of this study was to analyze the perception of women who practice physical exercise in relation to changes in the different phases of the MC. **METHODS:** This is an observational cross-sectional study using an original questionnaire consisting of 10 questions based on recurring themes in the literature, later disseminated on social networks and messaging applications. The questionnaire was administered in July 2025 using the Google Forms platform. The inclusion criteria were: women of childbearing age who practice PE. The sampling was non-probabilistic, for convenience, with a median age of 23 years. Fifty-two women participated, of whom 49 were included after analysis and application of the criteria. All participants formally consented through the Free and Informed Consent Form. **RESULTS:** Most participants (79.5%, $n=39$) demonstrated knowledge of the duration of the menstrual cycle (21–35 days), and 75.5% ($n=37$) identified their phase. A significant majority (95.9%, $n=47$) noticed variations in physical exercise related to the cycle. The follicular phase was associated with greater energy (73.5%, $n=36$), while the menstrual period was associated with less energy (77.6%, $n=38$), reflecting hormonal variations. Lack of motivation was the most prevalent symptom (38 participants), impacting the reduction of PE for 51% of respondents. These findings reflect the hormonal variations typical of the MC, especially estrogen and progesterone levels. **CONCLUSION:** These results indicate that hormonal fluctuations in the MC influence women's perception and willingness to exercise,

reinforcing the importance of considering the cycle when planning training for comprehensive women's health care.

33. NEUROINFLAMMATION AS A THERAPEUTIC TARGET IN NEURODEGENERATIVE DISEASES

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INTRODUCTION: Neuroinflammation is an inflammatory response of the central nervous system, involving the activation of glial cells and the release of inflammatory mediators. It plays a crucial role in neurodegenerative diseases such as Alzheimer's and Parkinson's, contributing to neuronal degeneration. Understanding its mechanisms is essential for the development of new therapeutic strategies and for providing hope to patients. **OBJECTIVE:** To explore neuroinflammation as a therapeutic target in neurodegenerative diseases, highlighting approaches and challenges, and emphasising its potential based on clinical and preclinical evidence. **METHODS:** The methodology of this summary consists of an integrative literature review on neuroinflammation in neurodegenerative diseases. The databases PubMed, Scopus, and Web of Science were used. A total of 15 articles were identified and distributed as follows: 6 relevant articles were found in PubMed, 5 in Scopus, and 4 in Web of Science. The selection included studies published over the past ten years, prioritising articles that addressed therapeutic interventions and the mechanisms of neuroinflammation in both clinical and preclinical contexts. **RESULTS:** The results of the integrative review highlight the complexity of neuroinflammation and its significance in neurodegenerative diseases. The activation of glial cells, such as microglia and astrocytes, is central to this process, exacerbated by oxidative stress and the accumulation of abnormal proteins. This inflammatory response is observed in Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis. Therapeutic approaches, including anti-inflammatory drugs and non-pharmacological interventions, have shown efficacy in preclinical models, with reductions in inflammation and functional improvements. Promising results from clinical trials suggest that modulating neuroinflammation may represent a viable strategy for treating these diseases, underscoring the need to further understand its underlying mechanisms. **CONCLUSION:** Neuroinflammation is central to neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis, contributing to neuronal degeneration. Therapeutic approaches, including anti-inflammatory drugs and non-pharmacological interventions, show potential to mitigate this inflammation. Recent studies suggest that modulating neuroinflammation may improve patients' quality of life.

34. ACUTE STRESS AND VENTRICULAR DYSFUNCTION: AN INTEGRATIVE REVIEW ON TAKOTSUBO SYNDROME

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INTRODUCTION: Stress Cardiomyopathy, also known as Takotsubo Syndrome (TTS), is a transient cardiac condition characterized by apical dysfunction of the left ventricle and is associated with emotional or physical stress, giving rise to the expression "Broken Heart Syndrome". **OBJECTIVE:** The aim of this study is to investigate acute psychological stress as a triggering factor of Takotsubo Syndrome and its clinical manifestation. **METHODS:** This study is an integrative review (PRISMA), using the descriptors "Takotsubo Syndrome," "psychological stress," and "cardiomyopathy" in the PubMed and SciELO databases. National and international clinical studies published between 2020 and 2025, in English and Portuguese, addressing Takotsubo Syndrome in adult patients of both sexes were included. Duplicate papers, studies involving animal models, dissertations, and theses were excluded. Data were organized in an

Excel spreadsheet and presented in tables. **RESULTS:** A total of 362 studies were initially identified, of which only 10 met the eligibility criteria and were included in this integrative review. Takotsubo Syndrome (TTS) primarily affects postmenopausal women, with ventricular function typically recovering within a few weeks. Among men, cases are less frequent and usually occur between 64 and 81 years of age, often presenting as a pre-syndromic condition. Acute psychological stress triggers autonomic hyperactivity and excessive catecholamine release, leading to transient ventricular dysfunction that is frequently indistinguishable from acute myocardial infarction in its early phase. Diagnosis is established through electrocardiographic ST-T wave abnormalities, cardiac magnetic resonance imaging, and clinical criteria such as those defined by the Mayo Clinic. Management involves close monitoring and the administration of beta-blockers. The main reported complications include arrhythmias, thromboembolic events, and heart failure. **CONCLUSION:** Takotsubo Syndrome (TTS) highlights the strong relationship between emotional factors and the development of non-obstructive cardiovascular alterations. Its connection with the emotional component underscores the importance of comprehensive care, including physical, pharmacological, and psychosocial approaches.

35. DISPARITIES IN HOSPITAL ADMISSIONS FOR PRIMARY HYPERTENSION BETWEEN IMPERATRIZ AND SÃO LUÍS (2015–2025)

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INTRODUCTION: Primary hypertension is a chronic multifactorial condition characterized by persistent elevation of blood pressure without an identifiable secondary cause, and is one of the main cardiovascular risk factors in Brazil. In situations of clinical decompensation, it can result in hospital admissions, especially in contexts of fragile primary care. **OBJECTIVE:** This study aimed to compare the hospitalization rate for primary hypertension in the cities of Imperatriz and São Luís, in Maranhão, between 2015 and 2025. **METHODS:** This is an epidemiological, descriptive, quantitative study based on public secondary data obtained from the Hospital Information System (SIH/SUS) through TABNET/DATASUS. Filters were used for age group, sex, race/color, and mortality, considering the ICD-10 category "I9 – Diseases of the Circulatory System". **RESULTS:** During this period, 319 hospitalizations were recorded in Imperatriz and 1,017 in São Luís. The adjusted rate per 100,000 inhabitants was higher in Imperatriz (122.8) than in São Luís (98), which shows a greater proportional impact of hypertension in the city with the smaller population. The most affected age group was the elderly (60+), representing 58% of hospitalizations in Imperatriz and 49% in São Luís. The prevalence was higher among women (58%) in both cities. Regarding race/color, there was a predominance of brown race in São Luís (47.68%), and a high percentage of records without information in Imperatriz (47.02%), which limits part of the analysis. Sixteen deaths were reported in Imperatriz (5%) and 32 in São Luís (3%). **CONCLUSION:** It can be concluded that the city of Imperatriz presents greater vulnerability proportional to the complications of hypertension, which may reflect limitations in access, coverage, or effectiveness of local primary care. The data reinforce the importance of health surveillance and strengthening primary care as a central

strategy for reducing avoidable hospitalizations due to sensitive conditions.

36. DIFFICULTIES IN GYNECOLOGICAL CARE FOR LESBIAN WOMEN IN THE UNIFIED HEALTH SYSTEM: INTEGRATIVE REVIEW

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INTRODUCTION: Gynecological care provided to cisgender lesbian women in the Unified Health System (SUS) is often limited by structural, symbolic, and relational barriers that compromise equity and comprehensive care. Although there are guidelines and public policies focused on sexual diversity in Brazil, reproductive and sexual health care remains permeated by stigma, heteronormativity, and invisibility. These factors contribute to the neglect of preventive exams, such as the Pap smear, and to the silencing of sexual orientation during care, motivated by fear of judgment and discrimination. Poor training of professionals, the lack of specific protocols, and the hostile clinical environment are aspects that exacerbate this exclusion. **OBJECTIVE:** This study aimed to gather and critically analyze recent scientific production on the barriers faced by lesbian women in accessing gynecological care provided by the SUS, considering the effects of institutional discrimination on reception and quality of care. **METHODS:** This is an integrative literature review, with searches conducted in PubMed, SciELO, LILACS, and Google Scholar. The following DeCS and MeSH descriptors were used: "lesbian women," "gynecological care," "access barriers," "Unified Health System," and "discrimination," combined using Boolean operators. Articles published between 2020 and 2025, in Portuguese, English, and Spanish, that directly or indirectly addressed barriers to gynecological care for this population within the SUS (Brazilian Unified Health System) were included. **RESULTS:** The studies analyzed indicate that lesbian women face multiple obstacles, such as professionals assuming they are heterosexual, omitting their sexual orientation during consultations, insecurity during care, and gaps in professional training on the health of the LGBTQIA+ population. These barriers result in low adherence to preventive exams, delayed diagnosis of pathologies, and a feeling of not belonging in public health services. **CONCLUSION:** Overcoming the barriers faced by lesbian women in gynecological care within the Unified Health System (SUS) requires structural and cultural changes that promote care based on human rights and social justice. Healthcare professionals must adopt a welcoming approach, free from heteronormative assumptions, using active listening and inclusive language to ensure the safety and trust of patients. Continuing education in LGBTQIA+ health and the implementation of specific protocols are essential to combat stigma and ensure comprehensive care. More than a technical issue, this transformation represents an ethical commitment to the principles of the Unified Health System (SUS) - universality, equity, and comprehensiveness, reaffirming dignified access to healthcare as an essential human right.

37. HOSPITALIZATIONS DUE TO ACUTE PHARYNGITIS AND/OR TONSILLITIS IN CHILDREN IN MARANHÃO, BRAZIL, BETWEEN 2016 AND 2024

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INTRODUCTION: Acute pharyngitis and tonsillitis are upper respiratory tract infections caused by viral or bacterial agents, leading to throat inflammation and pain. Pharyngitis affects the pharyngeal mucosa, while tonsillitis involves the palatine tonsils. These conditions primarily affect children and are common causes of medical visits and excessive antibiotic use. Climate, school gatherings, and immature immunity increase children's vulnerability. In Maranhão, regional inequalities and limited access to healthcare make it essential to understand the epidemiological profile of these infections to guide prevention and management strategies. **OBJECTIVE:** To analyze hospitalizations due to acute pharyngitis and tonsillitis in children in the state of Maranhão. **METHODS:** This is a retrospective, quantitative epidemiological study based on secondary data from the Hospital Information System of the Brazilian Unified Health System (SIH/SUS), accessed via the TABNET platform of the Department of Informatics of SUS (DATASUS). Hospitalizations for acute pharyngitis and/or tonsillitis in children aged 0–9 years in Maranhão from 2016 to 2024 were analyzed. Variables included the number of hospitalizations, municipality, sex, race/color, type of care (emergency or elective), and month of occurrence. **RESULTS:** Between 2016 and 2024, 6,306 hospitalizations due to acute pharyngitis and/or tonsillitis were recorded in children aged 0–9 years in Maranhão. The majority occurred in the municipalities of Bacabal (487), Governador Nunes Freire (370), and Passagem Franca (269), surpassing even the capital, São Luís (119). Of the total, 5,942 hospitalizations were emergencies, and 364 were elective. The age group 1–4 years accounted for the highest number of hospitalizations (3,700). Regarding race/color, most children were recorded as mixed race (pardo) (4,206), reflecting local demographics. Sex distribution was balanced, with 3,310 males and 2,996 females. A monthly average of 59 hospitalizations was observed between January and May, coinciding with the beginning of the school year and higher rainfall, while the remaining months showed an average of 57.85 hospitalizations. **CONCLUSION:** Hospitalizations due to acute pharyngitis and/or tonsillitis in children in Maranhão were most frequent in the 1–4-year age group and predominantly occurred in interior municipalities. The slight monthly variation indicates continuous infections, requiring year-round surveillance and prevention. These data highlight the need to strengthen primary healthcare, focusing on the most vulnerable regions, aiming to reduce complications and avoidable hospitalizations.

38. FACTORS ASSOCIATED WITH SLEEP QUALITY IN CHRONIC RENAL PATIENTS ATTENDED IN A NEPHROLOGY OUTPATIENT MODEL

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INTRODUCTION: Sleep patterns are an important marker of health and well-being, especially when it comes to patients with chronic kidney disease. Individuals with Chronic Kidney Disease (CKD), even in non-dialysis stages, often experience sleep disturbances that negatively affect their quality of life. In this regard, the Pittsburgh Sleep Quality Index (PSQI) helps assess different aspects of sleep. Furthermore, the 36-Item Short Form (SF-36) is a questionnaire used to evaluate quality of life. **OBJECTIVE:** This study aimed to analyze factors associated with sleep quality in patients with CKD attended in a nephrology outpatient clinic. **METHODS:** The study's methodology involved the application of the "Pittsburgh Sleep Quality Index" (PSQI) and SF-36 questionnaires to patients seen at a nephrology

outpatient clinic. The instrument is part of the research "Analysis of Biopsychosocial Aspects in Interdisciplinary Care in a Model Nephrology Outpatient Clinic," registered under the approval of the Ethics Committee 7.195.964. This summary included the analysis of 35 patients in CKD stages 3 and 5. **RESULTS:** About 28.5% of the patients analyzed had good sleep quality (<5), with a mean age of 64.9±12.2 years, estimated glomerular filtration rate (eGFR) of 33.4±15.6 mL/min, body mass index of 27.3±4.4 kg/m², systolic blood pressure of 129.6±18.1 mmHg, and diastolic blood pressure of 74.6±15.5 mmHg. Sleep quality was correlated with general health ($r=-0.47$, $p=0.004$) and with the mental health component ($r=-0.36$, $p=0.003$) of the SF36 questionnaire, and relationships were established with age ($r=-0.34$, $p=0.03$) and eGFR ($r=-0.035$, $p=0.040$). No association was found with anemia, metabolic disorders, calcium, phosphorus, dyslipidemia, or blood pressure.

CONCLUSION: In the study, it was found that in this sample of chronic kidney patients, sleep quality was affected by worse kidney function in older individuals and those with more compromised overall health, specifically in the aspect of mental health.

39. EARLY SCREENING OF AUTISM SPECTRUM DISORDER BY CHILD DEVELOPMENT MILESTONES: A CLINICAL REVIEW

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INTRODUCTION: Child development is a continuous and multifactorial process involving motor, cognitive, linguistic, and socio-emotional acquisitions. Monitoring the expected milestones for each age group is an essential strategy for the early detection of neurodevelopmental disorders, such as Autism Spectrum Disorder (ASD), characterized by deficits in communication, social interaction, and repetitive behavior patterns. Timely recognition of these signs, even in early childhood, favors early interventions during the period of greatest brain plasticity, reducing future functional impacts.

OBJECTIVE: To examine, through an integrative literature review, how the systematic assessment of child developmental milestones can be used as a clinical tool in the early screening of Autism Spectrum Disorder (ASD), highlighting its relevance for identifying atypical signs, timely diagnostic referral, and the development of individualized intervention strategies. **METHODS:** This is an integrative review with a qualitative approach, conducted using the SciELO, PubMed, LILACS, and Google Scholar databases. The descriptors "child development", "developmental delay", and "autism spectrum disorder" were used, combined with the Boolean operators "AND" and "OR", in Portuguese and English. Original articles, systematic reviews, and observational studies with children aged 0 to 5 years, published between 2015 and 2025, were included. After applying the eligibility criteria, 13 studies were selected and critically analyzed regarding their objectives, methodology, and clinical findings. **RESULTS:** The analysis revealed an association between delays in milestones such as babbling, shared attention, eye contact, name response, and pretend play with early signs of ASD (Autism Spectrum Disorder). It was evident that children who do not achieve these skills within the expected ages have a higher risk of atypical neurodevelopment. Early interventions, especially up to 36 months, showed positive impacts on cognition, language, and socialization, being most effective when applied by multidisciplinary teams. **CONCLUSION:** Developmental milestones are fundamental clinical tools for screening for ASD (Autism Spectrum Disorder). Their use requires trained professionals, standardized protocols, and public policies that enable early diagnosis, qualified referrals, and interventions that promote child development

40. BREASTFEEDING AS A POTENTIAL PREVENTIVE FACTOR AGAINST BREAST CANCER

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INTRODUCTION: Breast cancer is a neoplasm and one of the leading causes of death among women worldwide. Risk factors include genetic, environmental, reproductive, and behavioral aspects. In this context, breastfeeding acts as a protective factor by reducing hormonal exposure, promoting epigenetic and immunological changes, and eliminating damaged mammary cells. Beyond its health benefits, it also contributes to lowering the economic burden of cancer treatment. However, despite its protective effects, certain subgroups face challenges in adopting the practice due to social and physiological factors. **OBJECTIVE:** To analyze the relationship between breastfeeding and breast cancer prevention. **METHODS:** This is an integrative review conducted according to the PRISMA guidelines. The search was performed in July 2025 in the PubMed and BVS databases, using controlled descriptors and Boolean operators. Studies published between 2020 and 2025, in Portuguese, English, and Spanish, with free full-text access, were included. After screening, studies addressing the protective mechanisms of breastfeeding against breast cancer and related genetic and social factors were selected. **RESULTS:** The reviewed studies demonstrate that breastfeeding is associated with a reduced risk of breast cancer, particularly in aggressive subtypes such as triple-negative breast cancer. Epigenetic, hormonal, and immunological mechanisms appear to mediate this protection by promoting cellular differentiation and reducing estrogen exposure. Moreover, factors such as breastfeeding duration and parity correlate with a lower likelihood of developing the disease, especially among women with a family history or predisposed conditions. Mammary adiposity also proved influential in this context, being affected by hormonal changes during lactation. Additionally, racial and socioeconomic factors influence both access to breastfeeding and vulnerability to certain tumor subtypes. **CONCLUSION:** The promotion of breastfeeding emerges as an oncological prevention strategy with significant public health impact, capable of enhancing health education while reducing inequalities and healthcare costs related to breast cancer. Therefore, public policies supporting breastfeeding — particularly among vulnerable populations — are essential to expanding its protective effects on a large scale.

41. EFFICACY OF THE LUCAS DEVICE COMPARED TO MANUAL CARDIOPULMONARY RESUSCITATION IN CARDIAC ARREST: A SYSTEMATIC REVIEW

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INTRODUCTION: Cardiorespiratory arrest (CRA) is the absence of cardiac activity, characterized by a lack of circulation. CRA is the final common pathway for various clinical or traumatic conditions. Reversing CRA and the post-event prognosis depend on the identification and implementation of high-efficacy cardiopulmonary resuscitation (CPR) measures. In this context, the Lund University Cardiopulmonary Assist System (LUCAS) is an automated chest compression device that delivers effective and continuous compressions during CRA. **OBJECTIVE:** To compare the efficacy of the LUCAS device with manual CPR. **METHODS:** This is a systematic review conducted according to the PRISMA protocol, based on the guiding question: "What is the impact of the LUCAS device, compared to manual compression, on the efficacy of CPR?" A search was performed in the PubMed, Virtual Health Library (VHL), and Cochrane databases, using the descriptors "Cardiopulmonary resuscitation,"

"Mechanical chest compression," "LUCAS," and the Boolean operator "AND," with no language restrictions, resulting in 48 studies published in the last five years. Subsequently, the studies were reviewed and analyzed for this review. **RESULTS:** In total, 48 articles were found, of which 10 were selected for addressing the review's guiding question. Of these, 8 consisted of samples with out-of-hospital CRA. Regarding CPR efficiency, 3 articles demonstrated the superiority of LUCAS over manual CPR: greater achieved depth, better compression rate per minute, and increased hands-off time (continuous compression time). In the other 7 studies, LUCAS was not inferior to manual CPR. Furthermore, 4 articles indicated a benefit in using mechanical CPR in specific contexts, such as in mountainous terrain, difficult pre-hospital transports, and during prolonged CPR, achieving higher levels of efficacy. However, 4 studies reported that LUCAS prolonged the total CPR and scene extraction time and resulted in significant pauses (longer than 30 seconds) for its deployment. No review presented statistically significant data regarding return of spontaneous circulation, mortality rate, or complications when comparing mechanical CPR to manual CPR. **CONCLUSIONS:** Although it does not change the outcome, the LUCAS device is effective and holds value in specific contexts, particularly in difficult pre-hospital settings. Nevertheless, further studies are necessary to elucidate the influence of deployment pauses and prolonged CPR and scene extraction on patient prognosis.

42. EVALUATION OF POINT-OF-CARE ULTRASOUND IN THE RAPID AND EFFICIENT DIAGNOSIS OF ACUTE ABDOMEN: A SYSTEMATIC REVIEW

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INTRODUCTION: Acute abdomen is one of the main clinical emergencies in emergency services, characterized by sudden or intense abdominal pain and the potential risk of rapid deterioration of the clinical condition. The diversity of differential diagnoses, the variability of manifestations, and the limitations of the physical examination require agile and reliable complementary methods. Point-of-care ultrasound (POCUS), performed at the bedside by the attending physician, emerges as an innovative diagnostic tool, capable of providing real-time information, without radiation, at low cost, and applicable in multiple healthcare settings. **OBJECTIVE:** To evaluate, through a systematic review, the diagnostic accuracy, clinical applicability, and limitations of using POCUS in the management of acute abdominal pain in emergency departments. **METHODS:** The search was conducted in the PubMed and SciELO databases, covering publications between 2018 and 2025, in Portuguese and English. Complete studies that compared POCUS to traditional imaging methods, such as computed tomography and radiography, were included, considering sensitivity, specificity, time to diagnosis, and impact on therapeutic management. After applying inclusion and exclusion criteria, 12 articles comprised the final sample, encompassing different populations and clinical contexts. **RESULTS:** POCUS has demonstrated high performance in the diagnosis of appendicitis (sensitivity 81%-87%), ileocolic intussusception (94.9%-99.1%), and abdominal aortic aneurysm (up to 99%), as well as conditions such as diverticulitis, pneumoperitoneum, mesenteric ischemia, and aortic occlusion. Its use has reduced the time to diagnosis, the need for complementary examinations, and hospital

stay, optimizing clinical decision-making. Its pediatric use was highlighted, avoiding unnecessary radiation exposure in cases of appendicitis and intussusception. However, its effectiveness proved to be dependent on operator experience, with significant variations among less trained professionals. Gaps remain in the literature regarding economic impact and long-term clinical outcomes, suggesting the need for further studies that standardize protocols and expand the evidence base. **CONCLUSION:** POCUS is a promising tool in the evaluation of acute abdominal pain, facilitating faster, more accurate, and cost-effective decisions. Its widespread implementation requires adequate training, well-structured guidelines, and robust research to consolidate its role as an essential resource in emergency medicine.

43. SAFETY AND ADVERSE EFFECTS OF CAR T-CELL THERAPY IN THE TREATMENT OF GASTRIC CANCER

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INTRODUCTION: Chimeric Antigen Receptor T-cell (CAR-T) therapy demonstrates a promising approach in the treatment of solid tumors, particularly gastric cancer, especially for CLDN18.2-positive tumors. Safety assessment and the management of adverse effects are crucial for optimizing clinical outcomes and the safety profile. **OBJECTIVE:** The objective of this study is to analyze the current perspectives on the use of CAR T-cell therapy in the treatment of gastric cancer (GC), considering its safety profile and adverse effects. **METHODS:** This is a systematic review that included studies containing "chimeric antigen receptor" or "CAR T" and "gastric cancer" or "gastroesophageal junction cancer" and "safety" or "adverse effects" in the title or abstract in the Pubmed, Scopus, and Embase databases. The search focused on clinical trials from the last 5 years, accessed in July 2025. A total of 46 articles were found, of which 4 were selected according to the inclusion criteria: studies available in full text in English or Portuguese, controlled and randomized clinical trials verified by title and abstract by 2 independent reviewers. **RESULTS:** CAR-T therapy in the treatment of GC is associated with a profile of adverse effects, with hematological toxicities being the most prominent. In a Phase 1 study, all 37 patients experienced Grade 3 or higher hematological toxicities, including leukopenia (83.8%), neutropenia (67.6%), anemia (40.5%), and thrombocytopenia (16.2%). Similarly, in a Phase 2 study, 99% of patients in the group experienced adverse events, with reductions in lymphocyte count (98%), white blood cells (77%), and neutrophils (66%). Cytokine Release Syndrome (CRS) is also a frequent adverse effect, occurring in about 95% in both. Gastrointestinal adverse events, such as Grade 4 GI hemorrhage and gastric mucosal lesions, were also observed, albeit on a smaller scale. It is important to note that no severe neurotoxicities or Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS) were observed. **CONCLUSION:** CAR-T for GC, although associated with a profile of adverse effects characterized by relevant hematological toxicities and frequent occurrence of low-grade CRS, presents a promising safety profile, considering the absence of severe toxicities or ICANS across all studies.

44. THE RELATIONSHIP BETWEEN PSYCHEDELIC MICRODOSING AND IMPROVEMENT IN ANXIETY SYMPTOMS: AN INTEGRATIVE LITERATURE REVIEW

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INTRODUCTION: Psychedelic microdosing, the regular ingestion of sub-hallucinogenic doses of compounds such as lysergic acid diethylamide (LSD) and psilocybin, is analyzed as a strategy to alleviate anxiety symptoms, such as excessive worry, tension, or restlessness. Reports suggest mood improvements, but the scientific basis supporting these benefits is scarce and marked by methodological limitations. **OBJECTIVE:** This work aims to critically analyze the available evidence from clinical and observational studies regarding the relationship between psychedelic microdosing and improvement in anxiety symptoms, identifying reported effects, usage patterns, associated risks, and research gaps. **METHODS:** An integrative literature review was conducted in the PubMed database, using Boolean operators to combine descriptors related to psychedelic microdosing (such as "psychedelic" and "microdose") and anxiety (such as "anxiety disorders"[MeSH]). The initial search returned 47 articles; after excluding animal studies, non-open access articles, or those without direct relevance, 9 publications were selected for qualitative analysis, including randomized clinical trials and observational studies. **RESULTS:** In observational studies with thousands of users, between 59% and 72% reported improvement in anxiety symptoms after practicing psychedelic microdosing, with anxiety being one of the most common motivations for starting the practice. However, such data are based predominantly on online self-reports, without placebo control. On the other hand, clinical trials with doses of 10 to 20µg of LSD showed positive acute effects on mood and energy, but also reported adverse effects, such as transient anxiety. A double-blind study with psilocybin found no significant differences in anxiety symptoms compared to placebo. Another investigation using a self-assessment protocol with a placebo also failed to identify benefits superior to placebo after 5 weeks, suggesting a relevant role of expectations. In a survey on perceived effectiveness, 72% of participants with a previous anxiety diagnosis considered microdosing effective, exceeding the 56% rate attributed to conventional treatments. **CONCLUSION:** Although observational findings indicate microdosing as beneficial according to users, studies with greater methodological control do not, to date, support robust clinical efficacy in reducing anxiety symptoms. Gaps persist, such as the absence of trials with active placebos, diverse samples, and longitudinal follow-up.

45. COMORBIDITIES ASSOCIATED WITH AUTISM SPECTRUM DISORDER (ASD) IN CHILDREN AND ADOLESCENTS: AN INTEGRATIVE REVIEW

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INTRODUCTION: Autism Spectrum Disorder (ASD) presents heterogeneous clinical manifestations and is frequently associated with comorbidities such as sleep disturbances, eating disorders, and somatic symptoms, particularly during childhood. **OBJECTIVE:** To identify and synthesize the main comorbidities and associated conditions of ASD in children and adolescents based on a review of recent scientific literature, considering the multifactorial nature of

ASD and its overlap with other conditions. **METHODS:** This study is an integrative literature review aimed at identifying and summarizing the principal comorbidities associated with Autism Spectrum Disorder (ASD) in children and adolescents, based on articles published between 2020 and 2026 in Portuguese, English, or Spanish. The search was conducted in the PubMed database using controlled descriptors combined with Boolean operators. Studies that did not focus primarily on comorbidities, as well as case reports, letters to the editor, theses, and dissertations, were excluded. The selection process consisted of two stages: screening of titles and abstracts, followed by full-text reading. Data extracted from the included studies were organized in tables and analyzed descriptively. **RESULTS:** Attention-Deficit/Hyperactivity Disorder (ADHD) (30–50%), epilepsy (14.2%), macrocephaly (up to 4.48 OR), hydrocephalus (1.1%), cerebral palsy (3%), migraine (10.3%), congenital anomalies (3.8%), catatonia (10.4%), Functional Neurological Disorders (FND) (10%), anxiety disorders (35%), mood disorders (19%), depression (18%), behavioral and somatic disorders (28%), Obsessive-Compulsive Disorder (OCD) (9%), bipolar disorder (7%), developmental delay (14.9%), sleep disturbances (50–80%), and Avoidant/Restrictive Food Intake Disorder (ARFID) (11.4%). **CONCLUSION:** ASD rarely occurs in isolation and is commonly associated with comorbidities involving neurodevelopmental disorders, psychiatric conditions, and clinical issues such as ADHD, epilepsy, anxiety disorders, sleep disturbances, and ARFID. These associations complicate both diagnosis and management, highlighting the need for multidisciplinary and individualized approaches that emphasize comprehensive care and account for the clinical complexity of these cases. Early detection and personalized care are essential to improve prognosis and promote more effective interventions that integrate family, educational, and healthcare contexts.

46. SYSTEMATIC REVIEW OF THE RELATIONSHIP BETWEEN SELF-INJURY AND SUICIDE RISK IN BORDERLINE PERSONALITY DISORDER

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INTRODUCTION: Non-suicidal self-injury (NSSI), defined as self-harming behavior without lethal intent, is highly prevalent in Borderline Personality Disorder (BPD), which is characterized by emotional instability and impulsivity. NSSI is an important clinical marker of suicide risk, as patients with BPD show high rates of suicide attempts and deaths, and this behavior is part of the diagnostic criteria for the disorder. Nevertheless, there are still gaps regarding the relationship between NSSI and suicide risk, as well as the psychological factors that intensify this association. **OBJECTIVE:** To systematically review recent literature on the relationship between NSSI and suicide risk in individuals with BPD, describing data on prevalence, statistical correlations, and the psychological mechanisms involved, such as impulsivity, pain desensitization, and emotional dysregulation. **METHODS:** A systematic search was conducted in the PubMed database using the descriptors "Borderline Personality Disorder", "self-harm", "non-suicidal self-injury", and "suicide risk", combined with the Boolean operators "AND" and "OR". Clinical, observational, and systematic review studies published between 2020 and 2025 were included, provided they were peer-reviewed. Studies involving adolescent samples and those without a direct focus on this association were excluded. **RESULTS:** Findings indicated a prevalence of NSSI between 60% and 90% among patients with BPD, while suicide attempts were reported in 70% to 80% of cases. Longitudinal studies suggest that although the frequency of NSSI may decrease over time, about one-third of patients maintain these behaviors after five years, continuing to present a high suicide risk. The association between NSSI and suicide attempts proved consistent: individuals who engage in self-injury show a higher likelihood of multiple, more severe, and recurrent attempts. Factors such as impulsivity, a previous history of suicide attempts, and difficulties in emotional regulation increase the risk of

progression from NSSI to suicidal acts. Interventions focused on emotional regulation, such as Dialectical Behavior Therapy (DBT), have shown effectiveness in reducing NSSI and, consequently, suicide risk. **CONCLUSION:** Although studies reinforce NSSI as a strong predictor of suicide attempts in BPD, there remains a need to incorporate its systematic assessment into clinical practice for early detection and prevention of severe outcomes. Therapeutic strategies focused on emotional regulation and impulsivity management are essential to reducing suicide risk in this population.

47. EFFECTS OF IMPLEMENTING THE FAST-HUG CHECKLIST IN INTENSIVE CARE AND EMERGENCY UNITS: AN INTEGRATIVE REVIEW

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INTRODUCTION: The increasing complexity of critical patient care poses challenges to the safety, effectiveness, and standardization of clinical practices. In this scenario, the FAST-HUG protocol (Feeding, Analgesia, Sedation, Thromboembolism prophylaxis, Head-of-bed elevation, Ulcer prophylaxis, Glucose control) has emerged as a low-cost tool aimed at systematizing essential interventions in ICUs. Originally proposed for the intensive care setting, its adoption in emergency services aims to optimize care through safe, efficient, and accessible routines. **OBJECTIVE:** To analyze the effects of implementing the FAST-HUG checklist in intensive care units and emergency services, focusing on patient safety, prevention of complications, and rationalization of clinical practice. **METHODS:** An integrative literature review was conducted, with searches in the PubMed, SciELO, BVS, and Google Scholar databases. The descriptors used were: "fast hug", "intensive care units", and "hospital emergency", connected by the Boolean operator "AND". Ten articles published between 2020 and 2025 were selected, which addressed the application of the protocol in intensive and emergency settings. **RESULTS:** Studies show that FAST-HUG contributes to improved clinical outcomes by promoting adherence to high-impact preventive measures, such as glycemic control, thromboembolic prophylaxis, and proper positioning. One study indicated that, even in the absence of a formal protocol, professionals spontaneously incorporate some of its components, although they report difficulties in full implementation due to lack of training and institutional support. The incorporation of the checklist into clinical rounds proved effective in standardizing procedures, reducing adverse events, and optimizing communication between teams. **CONCLUSION:** The structured implementation of FAST-HUG in ICUs and emergency departments presents itself as a viable, safe, and clinically relevant strategy. In addition to promoting the standardization of care practices, it fosters patient-centered, collaborative, and evidence-based care. Strengthening institutional protocols and providing continuous education for the teams are crucial for the success and sustainability of this model's application.

48. SCHISTOSOMIASIS: ANALYSIS OF THE EPIDEMIOLOGICAL INCIDENCE OF CASES AND ADVANCES FROM 2016 TO 2021 IN THE STATE OF MARANHÃO

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INTRODUCTION: *Schistosomiasis* is a parasitic endemic disease with a strong presence in Maranhão due to the existence of favorable environments for the proliferation of the intermediate host, snails of the *Biomphalaria* genus. Transmission occurs through contact with water contaminated by *Schistosoma mansoni* cercariae, leading to clinical manifestations ranging from asymptomatic forms to severe cases. **OBJECTIVE:** To analyze the incidence of reported schistosomiasis cases in Maranhão between 2016 and 2021, evaluating the epidemiological evolution of the disease and its fluctuations. **METHODS:** This is a descriptive, retrospective, and quantitative epidemiological study covering the years 2016 to 2021. Data were obtained from the PCE (Schistosomiasis Control Program), through the Tabnet/DATASUS platform database and the population projection table for Brazil and federal units, obtained from the IBGE portal. The variables analyzed were the number of cases, tests, positivity percentage, and the total population of the state of Maranhão. **RESULTS:** During the studied period, 11,283 cases of schistosomiasis were registered in Maranhão. The number of cases peaked in 2019, with 40 cases per 100,000 inhabitants, and had its largest reduction in 2020, dropping to 15 cases per 100,000 people. However, the downward trend is not sustained when comparing data from 2016, with 17 cases per 100,000 inhabitants, and 2021, which registered a slight increase to 24 cases per 100,000 people. Also in 2016, 45,747 screening tests were performed, the second-highest amount in the analyzed period. In 2018, this number peaked at 55,795 tests. In the following years, this number showed a reduction, with 50,842 tests in 2019, 20,427 in 2020, and 25,571 in 2021. However, the test positivity percentage was inversely proportional to the decline in the number of positive cases and the performance of tests, as its lowest rate occurred in 2016, corresponding to only 2.54% of the tests performed, but it reached 6.77% in 2021. **CONCLUSION:** Schistosomiasis showed significant reductions in its incidence rate, especially during the period of social isolation due to the COVID-19 pandemic. However, the increase in this rate in 2021 and the persistence of the disease in Maranhão demonstrate the need for public policies for prevention and awareness regarding this endemic disease.

49. DEATHS FROM POLYNEUROPATHIES IN BRAZIL FROM 2014 TO 2023

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INTRODUCTION: Polyneuropathies are generally chronic autoimmune diseases and among the most common. They present in a typical form (symmetric sensory and motor symptoms lasting eight weeks or more) or an atypical form (predominantly focal, sensory, motor, distal, or asymmetric symptoms). Immunomodulatory treatments allow stabilization or partial reduction in disease progression in most patients. The definition encompasses all dysfunctions affecting peripheral nerves, based on the topographical distribution of alterations. Throughout its symptomatic course, functional limitations occur, which negatively impact the quality of life of those affected. **OBJECTIVE:** To study the profile of deaths from polyneuropathies in Brazil between 2014 and 2023. **METHODS:** A quantitative, descriptive, time-series epidemiological study was conducted on deaths from polyneuropathies in Brazil between 2014

and 2023. Secondary data were obtained from the Brazilian Unified Health System Information Department (DATASUS) — Mortality Information System (SIM). Data were tabulated in Excel and expressed in absolute numbers and frequencies. **RESULTS:** There were 5,888 deaths from polyneuropathies during the 10-year study period. The Southeast region had the highest number of deaths ($n=2,749$), followed by the Northeast ($n=1,335$). The year 2022 recorded the highest peak with 671 cases. The 60–69 age group ($n=1,050$) was the most affected. Males predominated, accounting for 61% of the sample. The most affected race was white (52%), followed by brown (36%). Individuals with 12 or more years of schooling had the lowest number of deaths ($n=449$). Regarding marital status, single individuals ($n=2,083$) were the most frequent, followed by married ($n=1,826$). As for the place of occurrence, hospitals (80%) and homes (14%) were most common. **CONCLUSION:** Although polyneuropathies represent a relatively low number of deaths, they showed a growing trend in recent years, being more common among men, white individuals, singles, those aged 60–69 years, and hospital occurrences. Less frequent among people with higher education levels, these diseases remain poorly understood and diagnosed. Preventive and diagnostic measures, along with improved professional training and health education, are needed to enhance awareness within academic and general communities, aiming to improve diagnosis, treatment, and reduce mortality rates.

50. MORTALITY FROM ALZHEIMER'S DISEASE IN THE NORTHEAST OF BRAZIL FROM 2014 TO 2023

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INTRODUCTION: Alzheimer's disease is a progressive and irreversible neurodegenerative disorder that affects millions of people worldwide and represents the most common form of dementia. Its pathogenesis involves complex brain alterations, including the accumulation of beta-amyloid plaques and neurofibrillary tangles, leading to neuronal degeneration and loss of synaptic connections. Symptoms include memory loss, language difficulties, spatial perception problems, and personality changes. It is a major public health concern, especially in the context of population aging. **OBJECTIVE:** To investigate deaths from Alzheimer's disease in the Northeast of Brazil between 2014 and 2023. **METHODS:** A quantitative, descriptive, time-series epidemiological study was conducted on deaths from Alzheimer's disease in Brazil from January 2014 to December 2023. Secondary data were obtained from the Brazilian Unified Health System's DATASUS platform — Mortality Information System (SIM). Data were expressed in absolute numbers and frequencies, tabulated, and analyzed using Microsoft Excel. **RESULTS:** A total of 42,240 deaths from Alzheimer's disease occurred in the Northeast during the study period, showing a continuous upward trend, culminating in 6,092 deaths in 2023. The states with the highest numbers of deaths were Ceará ($n=9,208$), followed by Bahia ($n=9,157$) and Pernambuco ($n=8,325$). Females were the most affected, accounting for 64% of cases. The disease was more frequent among the white race (48%), followed by brown (44%). Individuals with no education or only 1 to 3 years of schooling comprised 54% ($n=22,954$) of deaths. The 70 years and older age groups predominated, representing 96% of deaths. Regarding marital status, widowed individuals ($n=18,782$) were the most frequent, followed by married ($n=12,203$). As for the place of occurrence, deaths occurred

predominantly at home ($n=20,391$) and in hospitals ($n=19,401$).

CONCLUSION: Alzheimer's disease has shown a growing trend in mortality in the Brazilian Northeast, mainly affecting individuals aged 70 years or older, with low educational levels, predominantly females, and of brown or white race, particularly those who are married or widowed. Deaths occur primarily at home or in hospitals. These findings highlight the need for increased attention from the public health system to provide support for these patients, aiming to reduce mortality and improve quality of life.

51. EPIDEMIOLOGICAL ANALYSIS OF HOSPITALIZATIONS FOR CONGESTIVE HEART FAILURE IN ELDERLY PEOPLE IN MARANHÃO BETWEEN 2019 AND 2024

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INTRODUCTION: Congestive Heart Failure (CHF) is a multifactorial clinical syndrome usually resulting from pre-existing heart disease. Morphophysiological changes inherent to aging make the elderly population more susceptible to developing CHF. In Brazil, CHF is one of the leading causes of hospitalization among individuals aged 60 years or older, reinforcing the importance of understanding the profile of hospital admissions for CHF among the elderly in Maranhão to inform prevention and clinical management. **OBJECTIVE:** To analyze the epidemiological profile of hospital admissions for CHF in the elderly in Maranhão from 2019 to 2024. **METHODS:** This is a quantitative and descriptive epidemiological study with data from the TabNet/DATASUS platform. Hospital admissions recorded with a primary diagnosis of CHF were selected among individuals aged 60 years or older residing in Maranhão. The variables considered were the number of admissions per municipality, age group, sex, race, and deaths. Records with missing data were excluded. **RESULTS:** During the period analyzed, 11,566 hospital admissions for CHF in elderly patients were reported. The most affected age group was 70-79 years (36.4%), predominantly male (53.9%) and brown-skinned (86.6%). In terms of mortality, the female population totaled 869 deaths (50.9%). Mortality by age group was decreasing, with 80 years or older with 684 notifications (40.11%), followed by 70-79 years (35.77%) and 60-69 years (24.10%). The municipalities with the highest number of hospitalizations were São Luís with 2,090 hospitalizations, followed by Imperatriz (758) and Santa Inês (456), highlighting the centralization of hospital services in urban centers. **CONCLUSION:** Therefore, hospital admissions for CHF in the elderly in Maranhão were predominantly in men, brown-skinned, aged between 70 and 79 years. However, mortality was higher among women and people aged 80 years or older, indicating that advanced aging and female sex are critical unfavorable factors in the evolution of this syndrome. Furthermore, the concentration of care in metropolitan areas demonstrates the urgency of decentralizing health infrastructure and strengthening primary care in rural areas of the state. Finally, it is concluded that there is a need to strengthen public policies for cardiovascular prevention aimed at the elderly population, making it imperative that CHF prevention begin early.

52. PROFILE OF HOSPITALIZATIONS AND DEATHS DUE TO MOTORCYCLE ACCIDENTS IN THE MUNICIPALITY OF PINHEIRO-MA FROM 2020 TO 2024

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INTRODUCTION: Motorcycle accidents represent a serious public health problem, especially in medium-sized municipalities such as Pinheiro (MA). The high frequency of hospitalizations and deaths imposes significant impacts on the healthcare system. **OBJECTIVE:** To describe the epidemiological profile of hospital admissions and deaths resulting from motorcycle accidents in the municipality of Pinheiro-MA from 2020 to 2024, with emphasis on sociodemographic variables, healthcare costs, and the temporal evolution of the indicators. **METHODS:** This is a descriptive, quantitative study based on secondary data from the Hospital Information System (SIH/SUS), available on the DATASUS platform, referring to hospitalizations and mortality due to motorcycle accident injuries (International Classification of Diseases – ICD-10 codes: V20–V29). The study population included all victims who were hospitalized or died in the municipality of Pinheiro-MA during the period from 2020 to 2024. The analyzed variables were age group, sex, and color/race. Statistical analysis was performed using Microsoft Excel (Office 2021), and the mortality rate was calculated as the ratio between the number of deaths and the number of hospitalizations, multiplied by 100. Since public domain data were used, ethics committee approval was not required. **RESULTS:** A total of 1,717 hospitalizations due to motorcycle accidents were recorded in Pinheiro-MA. Of these, 75.19% (1,291 cases) were male, the 20–59 years age group accounted for 76.77% (1,318 cases), and 46.54% were self-declared as brown (mixed race). It is noteworthy that 48.22% of the cases lacked information on race/color, indicating possible underreporting or data entry errors. During the analyzed period, 34 deaths due to motorcycle accidents were reported, 38.24% of which occurred in 2023 (13 deaths). The average mortality rate was 1.98%, being highest in 2023 (3.57%) and lowest in 2021 (0.96%). The total hospital costs associated with the accidents amounted to R\$ 1,363,604.85, with 2022 being the most costly year (R\$ 319,028.45) and 2024 the least (R\$ 226,168.40). **CONCLUSION:** These findings reveal the significant social, economic, and healthcare impact that motorcycle accidents have caused to the local health system. The results highlight the urgent need for traffic safety education and awareness measures, specifically targeting motorcyclists and tailored to the identified demographic profile.

53. EVALUATION OF THE ANTIOXIDANT ACTIVITY OF THE PEEL OF THE BURITI FRUIT (MAURITIA FLEXUOSA)

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INTRODUCTION: Oxidative stress is an imbalance between pro-oxidants and antioxidants, resulting in conformational and oxidative changes in key biomolecules. Diseases such as diabetes mellitus, neurodegenerative disorders, and cardiovascular diseases are associated with this imbalance. Several substances, such as phenolic compounds, act as antioxidants, inhibiting the development of pathologies linked to oxidative stress. Phenolic compounds present in plant species have been shown to be important antioxidant agents. *Mauritia flexuosa* (buriti) has been studied for its pharmacological properties, but studies have focused on the oil or pulp of the fruit. The antioxidant potential of the fruit's peel is still unclear. **OBJECTIVE:** Thus, this study evaluated the antioxidant activity of

hydroethanolic extract from buriti bark in vitro. **METHODS:** Initially, a hydroethanolic extract of buriti bark (EEBu) was prepared at a ratio of 1:4 (buriti bark: 70% hydroethanolic solution). To determine antioxidant activity using the DPPH radical method, different concentrations of EEBu were added to a methanolic solution of DPPH, and the absorbance readings were subsequently taken. The lipid peroxidation inhibition capacity of EEBu was evaluated by the thiobarbituric acid reactive species assay, in which secondary components (malondialdehyde) of a lipid matrix (egg yolk) were measured. In addition, a cytotoxicity assay was performed using the MTT method in GM07492A human fibroblast cells. The cells were exposed to EEBu at concentrations of 500, 100, 20, 4, and 0.8 µg/mL for 24 hours, and cell viability was evaluated by formazan formation and absorbance reading at 550 nm. The results were analyzed using GraphPad Prism 8 software. **RESULTS:** In the antioxidant assay, EEBu showed dose-dependent activity in capturing DPPH radicals, with an IC₅₀ of 6.68 µg/mL. In the lipid peroxidation assessment, the extract presented an IC₅₀ of 150 µg/mL. In the cytotoxicity test, the IC₅₀ was 513.9 µg/mL, indicating low toxicity for the cell line used. **CONCLUSIONS:** The extract from the bark of *Mauritia flexuosa* has an antioxidant effect, inhibiting DPPH radical scavenging and lipid peroxidation, in addition to low cytotoxicity in vitro. These results indicate its potential as a therapeutic agent against oxidative stress.

54. IMMUNOLOGICAL MARKERS AND MONITORING OF LUPUS NEPHRITIS: A SYSTEMATIC REVIEW

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INTRODUCTION: Systemic lupus erythematosus (SLE) is a chronic, inflammatory, systemic autoimmune disease with exacerbations and remissions. It predominates in non-Caucasian women aged 20 and older. Pathogenesis includes immune tolerance failure, excess autoantibodies, immune complexes (IC), and activation of the complement system (CS). Lupus nephritis (LN) is a serious complication of SLE, subdivided into classes based on renal biopsy, the gold standard for diagnosis. The reaction of autoantibodies and autoantigens forms IC, which, deposited in the kidneys, activate CS and recruit leukocytes. Diagnostic criteria for SLE include antibodies against Smith proteins (anti-Sm), specific for SLE and those used to monitor activity and LN, against DNA (anti-dsDNA), and against the first component of the classical pathway, C1q, which eliminates IC (anti-C1q). **OBJECTIVE:** This work aims to review the scientific literature on the use of immunological markers to monitor lupus nephritis. **METHODS:** This is a systematic literature review conducted in the Pubmed and SciELO Brazil databases, covering publications between 2012 and 2024. The authors adopted the Health Sciences Descriptors (DeCS): "Lupus Nephritis," "Autoantibodies," and "Complement." Articles in Portuguese and English were included, excluding duplicate studies, narrative reviews, and studies with small sample sizes or those outside the scope. Selection was based on reading titles, abstracts, and full text. A total of 11 articles were included after critical analysis of their content. **RESULTS:** According to evidence, anti-dsDNA and SC (C3 and C4) are traditionally useful in monitoring SLE. Excessive activation of the classical SC pathway induces a reduction in serum C3 and C4 levels, suggesting active SLE and proliferative LN. However, SC has low sensitivity and specificity in relapses and is insufficient in isolation due to the pleomorphic trait of SLE, with distinct combinations of organ involvement. Suspicion of LN is reinforced by a decrease in SC and high titers of anti-C1q and anti-

dsDNA. Anti-C1q is crucial in the pathogenesis of LN due to failure to remove IC from the kidneys, detected in active SLE and elevated in classes III/IV LN; it is a strong antibody. **CONCLUSION:** We conclude that these markers are relevant for monitoring active SLE and LN, along with renal biopsy and urine tests. LN is a major challenge in SLE, always seeking to avoid sclerosing conditions.

55. ANALYSIS OF HOSPITALIZATIONS FOR VIRAL ENCEPHALITIS IN MARANHÃO BY AGE GROUP AND MACROREGIONS (2020–2024)

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INTRODUCTION: Viral encephalitis (VE) is a serious neurological condition with a high hospitalization rate and significant morbidity and mortality, requiring continuous epidemiological surveillance. Its most common causes include herpesviruses types 1 and 2, non-polio enteroviruses, and arboviruses, which affect the central nervous system through direct infection or autoimmune processes. Given the high morbidity and mortality, early diagnosis is essential to prevent permanent neurological sequelae and death. **OBJECTIVE:** To analyze the profile of hospitalizations due to CVE in Maranhão in the five-year period (2019 to 2023), according to age group and macro-region of residence. **METHODS:** This is a descriptive study based on data from the SUS Hospital Information System (SIH/SUS) for the state of Maranhão, from 2019 to 2023. The variables analyzed were: age group, sex, length of hospital stay, deaths, macro-region of residence, and case fatality rate. Because these are public and secondary data, no ethical approval was required. The data were processed by Gap Pad Prisma®. **RESULTS:** A total of 612 hospitalizations due to CVE were recorded in the state, with an age distribution from 0 to 80 years. The highest concentration occurred in the 1 to 4 year old age group (21.6%), with childhood and adolescence accounting for 54.25% of cases. Despite this, there was no significant correlation between age and the number of hospitalizations. The fatality rate was higher among men (69.7%). An inverse relationship was observed between age and the average length of hospital stay ($R^2 = -0.9$), with longer hospital stays among younger individuals. The North Macroregion had the highest number of hospitalizations (291), but the highest fatality rate was recorded in the South Macroregion (8.9%), almost triple that observed in the North (3.8%) and more than four times higher than that of the East (2.1%). **CONCLUSION:** The data reveal an age pattern concentrated in childhood and adolescence, longer hospitalization times for children, a predominance of male deaths, and regional inequalities. The high mortality rate in the Southern Macroregion highlights weaknesses in care, requiring urgent actions to improve the network, intensify surveillance, and improve clinical support. Although rare, CVE exhibits a specific territorial and population pattern in Maranhão, reinforcing the importance of regional prevention and management strategies. The limitations of this study relate to the use of secondary data from the SIH/SUS (National Health System/Unified Health System). Therefore, this study contributes to the need to better explore local-regional scenarios in search of metrics for improved prophylactic, diagnostic, and therapeutic approaches.

56. TRENDS AND PROFILE OF HOSPITALIZATIONS FOR LEPROSY IN MARANHÃO: ANALYSIS COMPARISON

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INTRODUCTION: Leprosy is a chronic disease caused by the bacterium *Mycobacterium leprae*, which primarily affects the skin and nerves located in the extremities. It is a notifiable condition that still has a high burden in some regions of Brazil, especially in Maranhão. Hospitalizations due to leprosy are indicative of severe cases or complications resulting from late diagnosis and failures in primary care. Despite the importance of this indicator, there is a scarcity of studies focusing on hospitalizations due to this disease in the state. **OBJECTIVE:** To analyze the trends and epidemiological profile of hospitalizations due to leprosy in Maranhão, comparing the periods 2012–2014 and 2022–2024. **METHODS:** This is a cross-sectional study of hospitalizations in the population of Maranhão between 2012 and 2014 and between 2022 and 2024. Data collected and analyzed were from the Informatics Department of the Unified Health System (SUS), according to the following variables: hospitalizations, ICD-10, sex, municipalities, and period. For statistical analysis, we used the risk rate per 100,000 inhabitants and the χ^2 test. Trend analysis was performed by comparing hospitalization rates and percentage increases between the two three-year periods (2012–2014 and 2022–2024). Comparisons between sexes were assessed using the chi-square (χ^2) test, which verified whether the distribution of hospitalizations by sex was statistically different from the expected population distribution, assuming a significance level of $p < 0.05$. Due to the use of secondary data in the public domain, there was no need for ethics committee approval. **RESULTS:** Hospitalizations for leprosy in Maranhão increased by 33.83% in total, going from 931 cases in the 2012–2014 period to 1,246 in the 2022–2024 period. Males had a higher number of hospitalizations (666 and 914, respectively) and a higher percentage increase of 32.23% than females (25.28%). To contextualize hospitalizations in relation to the population at risk, rates per 100,000 inhabitants were calculated. These rates show that males have a significantly higher hospitalization rate than females in both periods, providing a higher proportional incidence among men. Both rates increased throughout the decade. The chi-square test revealed a statistically significant difference in the distribution of hospitalizations by sex compared to the population proportion (p -value < 0.001 , in both periods). **CONCLUSION:** The data show a growing burden of leprosy in Maranhão, with an increase in hospitalizations among men. The results indicate a delayed demand for health care among men, reinforcing the need for surveillance, early diagnosis, and public policies aimed at combating leprosy and social stigma.

57. URINARY TRACT INFECTION IN INSTITUTIONALIZED ELDERLY PEOPLE: ASSOCIATED FACTORS AND IMPLICATIONS FOR HEALTH CARE

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INTRODUCTION: Brazil is currently undergoing a demographic transition, with a growing number of elderly people in the country, represented by a decline in mortality rates and an increase in life expectancy. Aging is a natural and continuous process, involving changes, among which those affecting the urinary system and responsible for facilitating urinary tract infections (UTIs) stand out. The risk is even more pronounced in institutionalized elderly people, who often have greater immune fragility and functional dependence.

OBJECTIVE: Analyze the main factors associated with the prevalence of urinary tract infections in institutionalized elderly people in view of the growth of this population segment and the implications for health care. **METHODS:** An integrative literature review was conducted in the PubMed, SciELO, and Google Scholar databases between January and July 2025, using the keywords "elderly" AND "urinary tract infection." Articles published between 2017 and 2025 in Portuguese, English, or Spanish were included. Observational and quasi-experimental studies based on primary data were considered, in addition to a systematic review. Duplicates and articles not directly related to the topic were excluded. The results were analyzed descriptively and comparatively. **RESULTS:** The analysis of the studies showed that UTIs account for approximately 15 to 30% of infections affecting the population residing in nursing homes or long-term care facilities in Brazil, which currently house approximately 161,000 people. They represent 25% of geriatric hospitalizations and nearly 6.2% of deaths from infectious diseases. The main factors associated with the high prevalence of UTIs in this group include: urinary incontinence and the use of absorbent devices that require strict hygiene care, the significant number of women, in whom the greater predisposition to UTIs is further increased with aging, immunosenescence, the high degree of functional dependence, and living in a communal space—which favors the spread of bacteria among individuals, in addition to the large number of comorbidities and functional impairments present in the majority of this population.

CONCLUSION: It can be concluded that physiological (immunosenescence, gender, functional dependence), clinical (pathological impairments and comorbidities), and social factors (hygiene and community experience) are associated with the occurrence of UTIs in institutionalized elderly individuals. Therefore, there is a need to provide multidisciplinary strategies involving training, surveillance, and prevention in order to reduce the incidence and improve the quality of life of this vulnerable and growing population.

58. REPERCUSSIONS OF RECURRENT VULVOVAGINAL CANDIDIASIS ON WOMEN'S SEXUAL HEALTH AND QUALITY OF LIFE: AN INTEGRATIVE REVIEW.

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INTRODUCTION: Recurrent vulvovaginal candidiasis (RVC) is a fungal infection characterized by four or more episodes within a 12-month period, negatively affecting women's physical, emotional, and sexual health. RVC profoundly impacts women's daily lives, causing several symptoms that compromise not only physical well-being but also sexual performance and self-esteem. **OBJECTIVE:** This study aims to analyze the repercussions of RVC on women's sexual health and quality of life. **METHODS:** It is an integrative literature review, with a systematic search conducted in the SciELO and PubMed databases, considering publications between 2004 and 2025.

Inclusion criteria encompassed studies in Portuguese or English addressing the impact of recurrent vulvovaginal candidiasis on women's sexual health and quality of life. After applying inclusion and exclusion criteria, ten studies were selected and analyzed. **RESULTS:** The analysis revealed that, regarding sexual health, RVC is associated with symptoms such as intense itching, burning, and genital discomfort. These symptoms reduce sexual desire and frequency of intercourse, while generating embarrassment, insecurity, and difficulty in intimacy with partners. Concerning quality of life, women with RVC showed significantly lower scores in physical, psychological, social, and environmental domains, as well as reports of sleep disturbances, fatigue, chronic pain, and feelings of shame and frustration. Moreover, deficiencies in counseling and support provided by healthcare services were identified, leading many women to self-medication or treatment abandonment. These findings highlight the need for educational strategies, psychological support, and multidisciplinary care centered on women's needs.

CONCLUSION: Recurrent vulvovaginal candidiasis has a significant impact on female quality of life and sexual health, going beyond physical discomfort and influencing emotional and social aspects. Such repercussions emphasize the importance of a multidisciplinary approach, with accurate diagnosis, effective treatment, guidance on healthy habits, and psychological support to minimize the effects of this condition on women's lives.

59. RADIAL NEUROPATHY ASSOCIATED WITH HUMERAL SHAFT FRACTURES: AN INTEGRATIVE REVIEW FROM 2015 TO 2024.

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INTRODUCTION: The radial nerve is the nerve structure most commonly affected by traumatic injuries to the upper limbs, with diaphyseal fractures of the humerus being one of the main causes of this neuropathy, primarily due to the anatomical and functional relationships between the humerus, the radial nerve, and the other structures of the arm. **OBJECTIVE:** The present study aims to understand and characterize the relationship between radial neuropathy and humeral shaft fractures. **METHODS:** This is an integrative literature review on radial neuropathy associated with diaphyseal humeral fractures, covering the period from 2015 to 2024, using the SciELO, BVS, and PubMed databases. The search was conducted using the following descriptors: "Radial Neuropathy," "Humeral Fractures," and "Diaphyseal Fractures," combined with Boolean operators (AND, OR). Initially, 22 studies were identified, after which exclusion criteria were applied: abstracts or incomplete articles, publications not directly related to the topic, duplicate works, or articles with restricted access, resulting in 12 articles. **RESULTS:** Based on the studies included in the review, it is understood that radial neuropathy associated with humeral shaft fractures can occur both due to the trauma mechanism and through iatrogenic injuries. The etiology of iatrogenic injury arises from manipulation or repositioning, such as during osteosynthesis, causing neurapraxia or nerve compression by the plate. However, it is worth noting that most cases are caused by trauma and tend to be more severe depending on the force applied. The profile of radial neuropathy occurred mainly in males, with an average age of 30 years, and was primarily due to automobile accidents. **CONCLUSION:** The review demonstrates that radial neuropathy associated with humeral shaft fractures results in

functional impairment, which especially compromises the individual's daily activities, such as the simple act of extending the wrist. However, in most cases, the prognosis is favorable, mainly due to the occurrence of temporary neuropraxia. As a diagnostic tool, ultrasound has shown high efficiency, given its accuracy and non-invasive nature. Regarding treatment, it is concluded that early nerve exploration is not effective, being indicated only in cases of suspected entrapment. Therefore, conservative management is the preferred approach, with approximately 90% functional recovery.

60. INTRAUTERINE DIAGNOSIS OF CONGENITAL HEART DISEASES AND ITS IMPACT ON NEONATAL OUTCOMES

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INTRODUCTION: fCongenital heart diseases (CHDs) account for nearly one-third of all pathologies diagnosed in newborns, and their treatment remains a significant challenge, especially in the context of prenatal and neonatal care. This is primarily due to the low rate of early diagnosis for these medical conditions. Consequently, the following question arises: how can intrauterine diagnosis of cardiovascular diseases facilitate the management of neonates with CHDs and increase their survival rates? **OBJECTIVE:** This study aims to analyze how the prenatal diagnosis of congenital heart diseases can influence the quality of treatment and, consequently, improve the survival of newborns affected by these conditions. **METHODS:** This is an integrative literature review guided by a central research question. Searches were conducted in the PubMed, Embase, SciELO, and LILACS databases, covering the period from 2013 to 2024. Primary studies published in Portuguese and English were included, using the following descriptors: "cardiopatas congênicas," "diagnóstico pré-natal," "congenital heart disease," and "early diagnosis." Initially, 11 articles were identified, but only 8 met the inclusion criteria and were selected for review. **RESULTS:** Compared to postnatal detection, intrauterine diagnosis of congenital heart diseases was associated with a reduced risk of neonatal death due to preoperative complications. It also significantly decreased perioperative mortality rates in newborns undergoing surgical correction for transposition of the great arteries. Furthermore, prenatal detection enabled healthcare teams to be aware of the condition in advance, facilitating better preparation and faster implementation of specific and advanced therapeutic interventions. Early cardiac surgeries, made possible through prenatal diagnosis, led to improved survival rates and quality of life in 90% to 95% of patients. Among neonates diagnosed with both CHDs and chromosomal abnormalities, there was a 70% increase in mortality rates compared to those without chromosomal mutations, reinforcing the critical importance of prenatal diagnosis in these cases. **CONCLUSION:** Intrauterine diagnosis of CHDs allows for early identification of fetal medical conditions, leading to more effective neonatal management, better planning and safety of cardiac surgeries, and faster application of appropriate treatments. These factors contribute to more favorable neonatal outcomes, including among infants with associated chromosomal disorders.

61. INTEGRATIVE REVIEW OF RECENT EVIDENCE ON CRYOABLATION FOR CHRONIC PAIN

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INTRODUCTION: Chronic pain represents a significant challenge, requiring effective and safe therapeutic approaches. In this context, minimally invasive techniques such as cryoablation, including cryoanalgesia and cryoneurolysis, have emerged as promising alternatives in pain management. **OBJECTIVE:** The aim of this study was to perform an integrative literature review of evidence published from 2020 to 2025 on the efficacy, safety, and clinical applications of cryoablation in the management of chronic pain, as well as to identify methodological gaps and future research perspectives. **METHODS:** An integrative review was carried out with a systematic search in the PubMed and Scopus databases using the descriptors "cryoanalgesia," "cryoablation," "cryoneurolysis," and "chronic pain," combined with Boolean operators. Nine studies published between 2020 and 2025 were included, encompassing randomized clinical trials, systematic reviews, observational studies, and narrative reviews. Methodological quality was assessed using the Critical Appraisal Skills Programme (CASP) tool. **RESULTS:** The results demonstrate consistent benefits of cryoneurolysis, particularly in knee osteoarthritis, low back pain, and peripheral neuropathies. Clinical trials have shown clinically significant pain reductions in short and medium-term follow-ups, with ultrasound guidance emerging as a key factor. Systematic reviews reinforce the safety of the technique, reporting a low rate of complications and no serious adverse events. However, methodological heterogeneity, characterized by small sample sizes, short follow-up periods, and lack of standardization of technical parameters, limits the generalizability of the findings. Nevertheless, the literature indicates a positive impact on quality of life and a potential reduction in opioid dependence. **CONCLUSION:** Overall, cryoneurolysis represents a promising and safe approach to chronic pain management; however, multicenter studies with stronger methodology and standardized protocols are required to confirm its clinical value and support evidence-based guidelines.

62. ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS FOR MENTAL AND BEHAVIORAL DISORDERS FROM 2019 TO 2024.

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INTRODUCTION: According to the World Health Organization (1993), mental disorders are characterized as a set of clinically recognized symptoms or behaviors, most of which are associated with individual suffering and functional impacts. In the current context, they are among the main challenges for the public health system, due to their high prevalence and the burden of disability they cause. **OBJECTIVE:** To characterize the epidemiological pattern of hospital admissions due to mental and behavioral disorders in the state of Maranhão, from 2019 to 2024. **METHODS:** This is an epidemiological, descriptive study covering the period from 2019 to 2024. The data were extracted from the Hospital Information System (SIH/SUS), using the Informatics System of the Unified Health System (DATASUS), considering the following variables: color/race, sex, age group, diagnosis, and number of hospitalizations per year. **RESULTS:** Between 2019 and 2024, there were 33,733 psychiatric hospitalizations, with an average annual increase of 266 cases, except

in 2020. The number rose from 5,061 (2019) to 6,390 (2024). In terms of color/race, whites stood out (12,739), followed by mixed-race (12,047), Asians (1,714), blacks (654), and indigenous people (26). Mixed-race individuals presented the highest number of substance use disorders (2,492), while the white population recorded 90 cases of this condition. By gender, men accounted for 22,936 hospitalizations, nearly twice as many as women (11,022). The most affected age group was 20 to 39 years old, with 17,716 cases among men and 7,436 among women. The most common diagnoses were schizophrenia (15,620), mood disorders (7,115), and alcohol use (5,311). **CONCLUSION:** The profile of psychiatric hospitalizations revealed sociodemographic inequalities, with a progressive increase in admissions, indicating possible failures in continuity of care and in the psychosocial care network. A higher prevalence of hospitalizations was observed among white individuals, suggesting inequality in access to health services, while substance use disorders were more frequent among mixed-race individuals, reflecting social vulnerabilities. Schizophrenia was the main diagnosis, followed by mood disorders and alcohol use. Men accounted for almost twice as many hospitalizations as women, and the predominant age group was 30 to 39 years, highlighting the socioeconomic impact. The urgency of actions focused on prevention, continuity of care, and equitable access to mental health is emphasized.

63. MORBIDITY AND MORTALITY DUE TO GASTRIC AND DUODENAL ULCERS IN THE STATE OF MARANHÃO BETWEEN 2019 AND 2024

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INTRODUCTION: Gastric and duodenal ulcers correspond to lesions in the mucosa of the stomach or duodenum, caused by an imbalance between aggressive agents, such as hydrochloric acid and pepsin, and the protective factors of the mucosal barrier. Among the main causes, *Helicobacter pylori* infection and the chronic use of non-steroidal anti-inflammatory drugs (NSAIDs) stand out. These affections can result in severe complications, such as gastrointestinal bleeding, perforations, and even death. Thus, continuous monitoring of the occurrence of ulcers and their clinical outcomes is essential to size their impact and support the planning of effective public policies in Maranhão. The objective of this study was to investigate the indicators of morbidity and mortality related to gastric and duodenal ulcers in Maranhão between the years 2019 and 2024. **METHODS:** This is a cross-sectional study, with a quantitative and retrospective approach, based on epidemiological data from hospitalizations due to gastric and duodenal ulcers in Maranhão, in the period from 2019 to 2024. The information was extracted from the SUS Hospital Information System (SIH/SUS), made available by the Department of Informatics of the Unified Health System (DATASUS). The variables analyzed included the number of hospitalizations, the number of deaths, the mortality rate, the average hospital stay, the cost per hospitalization, and the distribution by sex. Data systematization and analysis were performed using Microsoft Excel 2019 software. **RESULTS:** In the studied period, 2,459 hospitalizations due to gastric and duodenal ulcers were reported, with 226 deaths registered, resulting in an average mortality rate of 9.19%. The year 2019 presented the highest index (16.67%), while in 2023 and 2024 the values were 8.56% and 9.11%, respectively. The average length of stay in hospital units was 4.8 days, with an average cost per hospitalization

of R\$950.98. The analysis by sex revealed a higher mortality rate among men (9.50%) compared to women (8.69%). **CONCLUSION:** Given this context, the findings evidence a relevant increase in morbidity and mortality due to gastric and duodenal ulcers in Maranhão, mainly among males. The fluctuations in costs and length of stay suggest variations in clinical severity and the response of hospital services over the years. These data reinforce the importance of investments in actions aimed at prevention, early detection, and effective treatment of these diseases.

64. USE OF DELTA OPIOID RECEPTOR AGONISTS IN THE TREATMENT OF DEPRESSION: AN INTEGRATIVE LITERATURE REVIEW

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INTRODUCTION: Depression is a mental disorder characterized by persistent low mood, anhedonia, and functional impairment. Although conventional antidepressants modulate monoaminergic systems, evidence suggests that the delta opioid receptor (DOR) also plays a role in mood regulation and stress response, emerging as a promising target for fast-acting antidepressant therapies.

OBJECTIVE: Evaluate the efficacy, safety, and mechanisms of action of selective DOR agonists in the treatment of depression. **METHODS:** This is an integrative literature review conducted in the PubMed database, covering publications from the year 2000 onward. The MeSH descriptors "Opioid delta-Receptor Agonists" and "Depression" were used, combined with Boolean operators. The search retrieved 248 records, from which duplicates, case reports, and articles not directly related to the topic were excluded. After applying the exclusion criteria, 11 articles were included for analysis. **RESULTS:** Classical DOR agonists reduced immobility time in the forced swimming test, in which rodent inactivity in water is interpreted as depressive-like behavior. This reduction suggests acute antidepressant activity without inducing tolerance or increasing dopamine levels in the nucleus accumbens, indicating a low abuse potential. Second-generation compounds maintained efficacy comparable to standard antidepressants in rodent models of chronic depression induced by bulbectomy, without causing convulsions or motor disturbances. More recent agonists demonstrated rapid antidepressant and anxiolytic effects in rodents, with fewer adverse effects. Although human studies remain scarce, some have reported modulation of neurophysiological biomarkers and changes in human electroencephalographic patterns. Mechanistically, DOR activation regulates dopamine and serotonin release in mesolimbic regions, modulates glutamate in the prefrontal cortex and striatum, and increases the expression of brain-derived neurotrophic factor (BDNF), which may explain its antidepressant effects. **CONCLUSION:** Selective DOR agonists show promising antidepressant potential and a rapid onset of action, without the sedative or abuse-related effects typical of μ -selective opioids. However, their clinical application requires large-scale randomized trials, in-depth safety assessments — particularly regarding seizure risk — and the establishment of dose and chronopharmacology protocols to optimize their efficacy.

65. THE USE OF MEDICINAL CANNABIS IN THE TREATMENT OF REFRACTORY EPILEPSY

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INTRODUCTION: Refractory epilepsy poses a challenge in clinical practice, with many patients not responding well to conventional drug therapy. In this context, Cannabis sativa compounds have been investigated for this condition due to their interaction with the endocannabinoid system and modulation of neuronal excitability. **OBJECTIVE:** To review the most important findings on the use of medicinal cannabis in the treatment of refractory epilepsy in the last 5 years. **METHODS:** This study consists of an integrative literature review conducted in July 2025 in the PubMed database, using the descriptors "medicinal cannabis," "treatment," and "refractory epilepsy" combined with the Boolean operator "and." Eighty-seven articles were found in the search, of which 18 remained, published in the last five years and in English, with descriptors in the title or abstract, freely accessible, and appropriate for the purpose of this work. **RESULTS:** The use of medicinal cannabis compounds has shown promise in the treatment of refractory epilepsy. Most observational studies have shown a significant reduction in seizures, with complete remission in a minority of patients, particularly with the combination of cannabidiol (CBD) and delta-9-tetrahydrocannabinol (THC), which can optimize this response. In addition to this seizure reduction, improvements in sleep and mood were also observed. The main adverse events observed were generally mild to moderate, mainly drowsiness and decreased appetite, demonstrating that the therapy is well tolerated. **CONCLUSION:** The use of medicinal cannabis compounds has shown promise in the treatment of patients with refractory epilepsy, with significant reduction in seizures and a low rate of adverse events. Furthermore, to generalize these findings, further studies with longer follow-up periods and standardized doses of the compounds are needed.

66. EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS DUE TO VASCULAR CEREBRAL ACCIDENTS IN MARANHÃO FROM 2020 TO 2024

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INTRODUCTION: According to the Brazilian Stroke Society, stroke is defined as a sudden neurological deficit caused by obstruction or rupture of arteries or veins. It represents the leading cause of disability worldwide and the second leading cause of death among Brazilians. Its occurrence is intrinsically associated with sociodemographic factors such as ethnicity, age, and sex. In the state of Maranhão, understanding the epidemiological profile of hospitalizations due to stroke is crucial to support evidence-based public health policies and to implement efficient prevention strategies targeted at the most affected populations. In this context, this study aims to analyze the pattern of hospital admissions for stroke in the state of Maranhão between 2020 and 2024, emphasizing the characteristics of the affected population. **OBJECTIVE:** To analyze the epidemiological profile of hospitalizations due to stroke in the state of Maranhão between 2020 and 2024. **METHODS:** This is a retrospective, descriptive, cross-sectional epidemiological study based on secondary data obtained from the Hospital Information System (SIH/SUS) regarding hospitalizations for stroke in Maranhão between 2020 and 2024. The analyzed variables included sex, race/skin color, and age group. **RESULTS:** During the study period,

26,544 hospitalizations due to ischemic or hemorrhagic stroke were recorded in the state of Maranhão. Of these, 53.6% were males (n=14,215). Regarding race/skin color, 17,966 were classified as brown (67.6%), 669 as yellow (2.5%), 610 as white (2.3%), 310 as black (1.1%), and 59 as Indigenous (0.1%). Concerning age distribution, the most affected group was 70–79 years old, accounting for 26.3% (n=7,000) of hospitalizations, followed by those aged 80 years or older, representing 23% (n=6,108), and those aged 60–69 years, comprising 22.3% (n=5,934). **CONCLUSION:** The study demonstrated that, in Maranhão, between 2020 and 2024, stroke remained an important cause of hospital admissions, predominantly affecting males and individuals identified as brown, particularly those aged 60 years or older, who accounted for 46.9% of cases. These findings highlight the need for targeted preventive and health promotion strategies addressing cerebrovascular diseases in the state. Understanding the epidemiological profile of stroke-related hospitalizations is essential to guide effective public health policies and to mitigate the burden of this condition on the population of Maranhão.

67. CONGENITAL MICROCEPHALY IN BRAZIL: A SPATIAL AND TEMPORAL ANALYSIS BETWEEN 2010 AND 2023

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INTRODUCTION: Congenital microcephaly is a malformation characterized by inadequate brain development, which is associated with a reduction in head circumference. Although it is strongly linked to the Zika virus (ZIKV) outbreak in Brazil, it is a heterogeneous condition with multiple etiologies, as it may be associated with genetic factors, maternal conditions, or infections—namely syphilis, toxoplasmosis, rubella, cytomegalovirus, herpes, and ZIKV itself (forming the acronym STORCH-Z). Although incurable, early diagnosis is essential, as it enables improvements in treatment and quality of life. **OBJECTIVE:** To analyze the spatial and temporal patterns of microcephaly in Brazil between 2010 and 2023. **METHODS:** This is an analytical, descriptive, and cross-sectional study based on data from the Live Birth Information System (SINASC) of the Department of Informatics of the Brazilian Unified Health System (DATASUS). The spatial distribution of the disease was evaluated by region over the period, which was divided into three stages: before the ZIKV outbreak (2010–2014), during (2015–2017), and after the outbreak (2018–2023). Data were tabulated using Microsoft Excel. **RESULTS:** Before the virus outbreak, the national annual average of microcephaly cases was 170.6, with the highest rates observed in the Southeast (75.6), Northeast (46.2), and South (22.8) regions. During the outbreak, the national average increased to 1,532 cases, with most occurrences in the Northeast (837), Southeast (469.3), and North (109) regions. Finally, after the outbreak, there was a stabilization, with an average of 347 cases per year nationwide, mainly affecting the Southeast (168.8), Northeast (92.2), North (31.8), and South (31.3) regions. **CONCLUSION:** The data demonstrate that the ZIKV outbreak represented an epidemiological milestone, causing a significant increase in congenital microcephaly cases, especially in the North and Northeast regions. However, the persistence of relevant records before and after the outbreak reveals the multifactorial nature of the disease, showing that its causes are not limited to viral infection. In this context, expanding diagnostic capacity, training professionals to recognize multiple associated etiologies, and strengthening public policies aimed at prevention, follow-up, and family support become

essential. Recognizing the complexity of microcephaly is crucial to overcoming reductionist approaches and promoting more effective actions to address the condition.

68. IMPACT OF ELECTRONIC DEVICES ON SYMPTOM EXACERBATION IN CHILDREN WITH ASD: A SYSTEMATIC REVIEW

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INTRODUCTION: The excessive use of electronic devices by children has been associated with negative impacts on child development, especially in individuals with Autism Spectrum Disorder (ASD), a condition characterized by deficits in communication, social interaction, and restrictive and repetitive behaviors. Children with ASD tend to have a higher propensity to use screens for prolonged periods, which can exacerbate symptoms of ASD, although this relationship is not universal and depends on familial and individual factors. Recent scientific literature indicates that this prolonged exposure to screens compromises cognitive, social, and emotional development, intensifying difficulties in emotional regulation, sleep disturbances, increased anxiety, depression, repetitive behaviors, and irritability. Given this, it becomes essential to understand the effects of digital exposure in this population. **OBJECTIVE:** This study aimed to correlate the excessive use of electronic devices with the intensification of symptoms in children with ASD, also considering factors such as sleep quality and social behavior, in order to provide support for therapeutic and educational strategies. **METHODS:** A systematic literature review was conducted in the websites PubMed, Scopus, Web of Science, and Google Scholar databases, using the words "autism spectrum disorder," "screen time," "electronic devices," "digital media," "symptoms," "children" and their Portuguese equivalents. Original articles, reviews, and case studies published between 2020 and 2025 that addressed the relationship between screen use (TV, tablets, smartphones, computers) and clinical manifestations in children with Autism Spectrum Disorder were included. **RESULTS:** The analyzed studies demonstrated that excessive exposure negatively affects brain regions such as the prefrontal cortex, temporal cortex, and parietal cortex, which are responsible for attention, planning, language, executive functions, and social processing. Furthermore, it aggravates sensory symptoms, cognitive rigidity, and repetitive behaviors. **CONCLUSION:** It is concluded that, although there is consistent evidence about the association between excessive screen use and the exacerbation of ASD symptoms, more robust investigations are necessary to substantiate clinical guidelines. Strategies that promote the reduction of screen time and stimulate social interaction are presented as promising complementary therapeutic approaches.

69. ANALYSIS OF THE MEDICAL PROGNOSIS OF PATIENTS WITH HEART FAILURE ACCOMPANIED IN A TERTIARY HEALTH CENTER

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INTRODUCTION: Heart Failure (HF) is a complex condition originated from structural or functional problems that prevent the

heart from supplying the necessary blood flow to meet the body's demands. It represents one of the main causes of hospitalization and mortality among chronic diseases, with clinical manifestations that may limit and impact the patients' quality of life. Therefore, understanding the factors that affect the prognosis of patients with heart failure is essential to estimate the gravity of the disease and its consequences, facilitating the accompaniment and establishment of adequate treatment. **OBJECTIVE:** This paper aims to analyse the main prognostic factors of heart failure and how certain aspects influence its evolution in the long-term. **METHODS:** Retrospective, analytical and observational study with 235 patients diagnosed with heart failure accompanied in a specialized center. Were analyzed clinical data and outcome in up to 12 months, including death, hospitalizations, going to the emergency and cardiac transplants. There was considered decompensation to the occurrence of any of these events. There were applied the chi-square test to the categorical variables and the Mann-Whitney test to the continuous variables, with a 5% significance. The study was approved by the Ethical Committee in Research under the number 25756919.9.2004.5086. **RESULTS:** There were evaluated 235 patients with heart failure, with an average of 2240 days since the diagnosis. The main etiologies were ischemic (35,3%), hypertensive (22,1%), idiopathic (14%) and chagasic (6%). In 12 months of follow-up, 4,7 % evolved to orbit, 12,8 % were admitted to the hospital and 8,1% went to the emergency, with an average of 1,79 hospitalizations and 1,15 emergencies per patient. No transplant was registered. There were no statistically significant associations between the clinical outcomes with variables such as etiology, previous infarctions, CVA, ICD, CRT or atrial fibrillation ($p > 0,05$), nor difference in the time since the diagnosis between the patients who went to orbit and the others ($p = 0,5102$). **CONCLUSION:** In the period of 12 months, the main clinical outcomes were hospitalizations and going to the emergency, with a low mortality rate and absence of cardiac transplants. The main etiology was ischemic, whilst chagasic was the least prevalent. Despite the average prolonged time since the diagnosis (around 6 years), this factor was not significantly associated with the occurrence of orbits. In the same way, clinical variables frequently related to prognosis, such as etiology, previous infarctions, CVA, ICD, CRT and atrial fibrillation, did not show influence and significant association with the analyzed outcomes. Thus, the results suggest that other factors, in this scenario, may have had more prognostic value than the variables included in this study, indicating the need for further investigation to improve the management of this population.

70. THE SOCIAL IMPACT OF MULTIPLE SCLEROSIS: AN INTEGRATIVE REVIEW

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INTRODUCTION: Multiple sclerosis (MS) is a chronic autoimmune disease of the central nervous system that affects more than 2.5 million people worldwide. This condition causes various sensory and motor dysfunctions, predisposing patients to a range of complications that, together with these dysfunctions, significantly impair their quality of life. **OBJECTIVE:** The study aims to synthesize the main impacts of multiple sclerosis on patients' quality of life. **METHODS:** This is an integrative review of articles using the PubMed database. The inclusion criteria were: articles published between 2015 and 2025, articles containing "Quality of Life" or "Stigma" or "Work"

and their synonyms, and "Multiple Sclerosis" in the title. The exclusion criteria were: articles that did not focus exclusively on Multiple Sclerosis, and articles that addressed quality of life but not the impacts of the disease. The search resulted in 23 studies, of which 19 remained after the exclusion of duplicates and unrelated articles.

RESULTS The results indicate that quality of life is impaired by physical symptoms (fatigue, pain, spasticity), as well as cognitive and emotional symptoms (depression, anxiety). Stigma, both public and internalized, was widely reported and associated with social isolation, unemployment, and poorer mental health. The occupational impact of MS includes absenteeism, loss of income, early retirement, and workplace discrimination. Interpersonal relationships and social participation are also affected, especially among men, who tend to perceive less social support. In children and adolescents, the disease compromises academic performance and social integration. Social support networks, positive coping strategies, and multidisciplinary care have shown protective effects on patients' well-being.

CONCLUSION: Multiple Sclerosis affects several dimensions of patients' lives, going beyond clinical symptoms. Quality of life is reduced by physical, cognitive, and emotional limitations, while stigma and psychological disorders contribute to isolation and social vulnerability. In the occupational context, unemployment, income loss, and discrimination are frequent, leading to economic impact. Social and family relationships are also compromised, particularly in the absence of support, especially among men. Therefore, an interdisciplinary care approach that includes psychosocial support and strategies aimed at inclusion and quality of life becomes essential.

71. EPIDEMIOLOGICAL PROFILE OF PNEUMONIA IN MARANHÃO POST-PANDEMIC: AN ANALYSIS FROM 2020 TO 2025

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INTRODUCTION: Pneumonia is an acute inflammation of the lungs, characterized by infection of the alveoli and the presence of exudate, which compromises oxygenation. It can be caused by various etiological agents, such as viruses, bacteria, and fungi. Given its impact on public health, studying the epidemiological profile of the disease is essential to guide prevention strategies, early diagnosis, and effective clinical management. **OBJECTIVE:** To analyze the epidemiological profile of hospitalizations due to pneumonia in Maranhão during the years 2020 to 2025. **METHODS:** This is a descriptive epidemiological study using data obtained from the Hospital Information System of the Unified Health System (SIH/SUS) in the period 2020–2025 in Maranhão. Therefore, the variables sex, race, and age group were adopted, with ICD-10: Pneumonia. It is important to emphasize that it is not possible to distinguish between cases of complicated community-acquired pneumonia (CAP) and hospital-acquired pneumonia based on the data available in the SIH/SUS and the ICD-10 classification. **RESULTS:** During the analyzed period, a total of 104,667 hospitalizations were observed, with an annual average of 20,933.4 hospitalizations in Maranhão, peaking in 2022. Regarding the distribution by sex, it revealed a male predominance representing approximately 51.7% (N = 54,117) of hospitalizations, while women corresponded to 48.29% (N = 50,550). Regarding the race/color variable, the records showed a predominance of the brown population, with 76.16% (N = 79,722) of cases and with a lower prevalence in indigenous people with 0.62% (N = 652) of cases. Regarding age group, the highest frequency of hospitalizations was recorded in the group aged 1 to 4 years, representing 22.7% (N=23,761), followed by the group aged 80 years and over, with approximately 13.78% (N=14,427) and with a lower

prevalence of 15 to 19 years, with 2.28% (N=2,391). **CONCLUSION:** The study showed that the epidemiological profile of pneumonia hospitalizations in Maranhão between 2020 and 2025 is predominantly among men (51.7%), among the mixed-race population (76.16%), and more frequently among those at the extremes of age. The results found in these age groups are consistent with global epidemiological patterns, indicating the greater vulnerability of these groups to complications. The predominant incidence in the mixed-race population may reflect social inequities and limited access to healthcare. These findings reinforce the need for targeted and equitable public policies focused on prevention, early diagnosis, and access to appropriate treatment for the most vulnerable populations in Maranhão.

72. USE OF BETA-BLOCKERS IN HEART FAILURE WITH REDUCED EJECTION FRACTION: CURRENT EVIDENCE

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INTRODUCTION: Heart failure with reduced ejection fraction (HFrEF) is a cardiac disease characterized by the left ventricle's inability to pump blood efficiently, causing hemodynamic overload and progressive symptoms. In this context, beta-blockers have established themselves as a therapeutic pillar for this condition, promoting a proven reduction in morbidity and mortality and functional improvement. **OBJECTIVE:** Analyze the effectiveness of beta-blockers in the treatment of heart failure with reduced ejection fraction. **METHODS:** This is an integrative literature review, conducted between 2021 and 2025, using the PubMed, Scopus, and SciELO databases. The descriptors "beta-blockers", "heart failure", and "reduced ejection fraction" were used, combined with the Boolean operator "AND". Full-text articles available in English or Portuguese, published between 2021 and 2025, that addressed the clinical efficacy of BBs in HFrEF were included. Previous reviews, duplicate studies, or articles and publications outside the thematic scope were excluded. After screening, 6 articles comprised the final sample. **RESULTS:** Beta-blockers show significant efficacy in reducing mortality and hospitalizations in patients with HFrEF and sinus rhythm (SR), regardless of age or sex. However, their benefit is less evident in elderly patients with mild symptoms. In individuals with HFrEF associated with atrial fibrillation (AF) or acute heart failure (AHF), the results vary, offering a neutral or potentially adverse effect, except in young patients with HFrEF and AF and low risk of complications, in whom there was survival improvement. The introduction of BBs must occur gradually in stable patients who have not yet used the medication, always in accordance with clinical guidelines. Despite their proven efficacy, BBs are still underutilized in patients with HFrEF, often due to unfounded fears of hypotension or bradycardia. Continuing medical education and deeper knowledge about doses and choice of the specific agent are fundamental to expanding the safe and effective use of these drugs. **CONCLUSION:** The use of beta-blockers continues to be the main pharmacological path in the treatment of patients with heart failure with reduced ejection fraction, having demonstrated an excellent prognosis.

73. POLYCYSTIC OVARY SYNDROME AND METABOLIC ALTERATIONS

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INTRODUCTION: Polycystic ovary syndrome (PCOS) is a common endocrinopathy in women of reproductive age, affecting about 6–19% of this population. Its etiology, although not yet fully elucidated, involves genetic predisposition and environmental factors. Moreover, it is a multifactorial disease characterized by hyperandrogenic and

reproductive alterations, which can lead to infertility. Metabolic changes, such as insulin resistance, increased risk of obesity, and chronic inflammation, are also commonly associated with the condition. This highlights the need to analyze this association, as these alterations have serious impacts on the patient's quality of life and the progression of the disease. **OBJECTIVE:** To investigate the repercussions arising from the association between polycystic ovary syndrome and the resulting metabolic alterations in women of reproductive age. **METHODS:** This is an integrative review conducted through searches in the PubMed and SciELO databases, using descriptors such as "Polycystic Ovary Syndrome" and "Metabolic Syndrome." Articles published between 2005 and 2025 addressing metabolic alterations in women of reproductive age were included. After screening by title, abstract, and full-text reading, five studies were selected for the final analysis. **RESULTS:** The analyzed literature indicates that polycystic ovary syndrome (PCOS) is strongly associated with metabolic alterations such as insulin resistance, dyslipidemia, central obesity, and low-grade chronic inflammation, even in women with a normal BMI. Insulin resistance is considered one of the main mechanisms of the syndrome, promoting increased androgen levels and intensifying manifestations such as acne, hirsutism, and anovulation. Inflammatory markers such as CRP, TNF- α , and IL-6 are also elevated, suggesting a persistent systemic inflammatory state. Moreover, visceral adipose tissue contributes to metabolic dysfunction by altering adipokine secretion, perpetuating the cycle of insulin resistance, hyperandrogenism, and inflammation. **CONCLUSION:** PCOS is a multifactorial condition with significant metabolic repercussions, such as insulin resistance, dyslipidemia, and chronic inflammation. Recognizing it as a systemic syndrome is essential for early interventions aimed at reducing complications and improving patients' quality of life.

74. MORTALITY DUE TO LEPROSY IN MARANHÃO: CRITICAL ANALYSIS OF THE INCREASE AND DIFFERENCES BY SEX

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INTRODUCTION: Leprosy is a chronic infection caused by *Mycobacterium leprae*, which primarily affects the skin and peripheral nerves and can cause physical disabilities and significant psychosocial impact when diagnosed late. Analyzing leprosy deaths is essential to assess the effectiveness of control programs and identify gaps in care that contribute to the disease's progression to fatal outcomes. In Maranhão, a state that continues to experience high rates of the disease, leprosy-associated mortality reveals inequalities in access to healthcare and reinforces the urgency of more effective interventions. **OBJECTIVE:** To investigate the evolution of leprosy mortality in the state of Maranhão, through a comparative analysis of the periods 2012-2014 and 2022-2024. **METHODS:** Observational study of deaths in the population of Maranhão between 2012 and 2014 and between 2022 and 2024. Data collected and analyzed were from the Informatics Department of the Unified Health System (SUS), according to the following variables: deaths, ICD-10, sex, municipalities, and period. For statistical analysis, we used the risk rate per 100,000 inhabitants and the chi-square test. Due to the use of secondary data in the public domain, ethics committee approval was not required. **RESULTS:** Leprosy deaths in Maranhão experienced an

alarming 444.44% increase, rising from 9 to 49 deaths between the study periods. Female deaths saw a 600% increase in deaths, surpassing the 366.66% increase among males. Death rates per 100,000 population were calculated, demonstrating an increase for both sexes. The increase in females, from 0.09 to 0.60, is particularly worrying, indicating a specific increase in mortality risk for women, even though the male rate is still numerically higher. It is important to note that, although the percentage increase was greater for females, the male mortality rate (0.83 per 100,000 population in 2022-2024) remains higher than the female mortality rate (0.60 per 100,000 population in the same period). The χ^2 did not detect a statistically significant difference in the occurrence of deaths by sex in relation to the population in any of the periods (p -value > 0.05), which can be attributed to the low absolute number of deaths. **CONCLUSION:** The data indicate a substantial increase in deaths, especially among women, suggesting inequality in care and late diagnosis, which require urgent attention. Female mortality increased at a higher rate than male mortality, indicating potential specific barriers to accessing diagnosis and treatment. Factors such as stigma, household burden, and reduced financial autonomy can delay seeking healthcare. The lack of a statistically significant difference between the sexes, according to the χ^2 test, may reflect limitations due to the low absolute numbers. Thus, the lack of significance does not rule out the existence of the problem, reinforcing the need for larger studies and qualitative approaches to understand this trend. Strengthening epidemiological surveillance and implementing public policies aimed at active case finding and treatment adherence, with a focus on gender vulnerabilities, are recommended.

75. TO IRON AND FOLIC ACID SUPPLEMENTATION AMONG ADOLESCENT PREGNANT WOMEN IN PRIMARY CARE UNITS OF SÃO LUÍS - MA

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INTRODUCTION: Adolescence is a transitional stage between childhood and adulthood, marked by significant physical, psychological, and social changes. This stage, as defined by the World Health Organization (WHO), encompasses individuals aged 10 to 19 years. Along with bodily changes, curiosity about sexuality is a topic of discussion among adolescents, since the subject is taboo at home. Teenage pregnancy is related not only to education or income, but also to family abandonment. During pregnancy, prenatal care is extremely important for both the mother and the baby in order to reduce complications, in addition to providing guidance on folic acid and ferrous sulfate supplementation. **OBJECTIVE:** To evaluate adherence to ferrous sulfate and folic acid supplementation by pregnant adolescents in basic health units in São Luís, Maranhão. **METHODS:** This is a cross-sectional study conducted with pregnant adolescents in their second and third trimesters of pregnancy, monitored at primary health care centers. Participation was voluntary, upon signing the Free and Informed Consent Form, approved by the Ethics Committee under opinion No. 5,794,986. Pregnant women with cognitive or neurological impairments or any condition that prevented them from adequately completing the questionnaire were excluded from the study. The data were organized and tabulated in Microsoft Excel® 2019 and subsequently analyzed statistically in Stata® version 16.0 software, using descriptive analyses. **RESULTS:** Eighteen pregnant adolescents were evaluated. Among them, 50%

(n=9) lived with their partner and had completed high school. The majority, 82.35% (n=14), were in their first pregnancy, and only 11.12% (n=2) had planned their pregnancy. Regarding supplementation, 88.88% (n=16) reported regular use of ferrous sulfate and 77.77% (n=14) of folic acid. **CONCLUSION:** The results show good adherence to ferrous sulfate and folic acid supplementation among the adolescent pregnant women evaluated, demonstrating a satisfactory understanding of the importance of these health measures for maternal and child health. These findings highlight the fundamental role of prenatal care and health education initiatives, especially in the context of primary care, as effective strategies for promoting adequate care during teenage pregnancy.

76. USE OF PROCALCITONIN AS AN EARLY BIOMARKER OF SEPSIS: A SYSTEMATIC REVIEW

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INTRODUCTION: Sepsis is a clinical emergency that triggers a dysregulated systemic inflammatory response to an infection, usually bacterial, with potential progression to organ dysfunction and death. Early diagnosis remains challenging, delaying appropriate treatment. In this context, procalcitonin (PCT), a precursor peptide of calcitonin primarily produced in the thyroid, emerges as a promising biomarker. Its levels rise in response to severe bacterial infections, potentially contributing to faster and more accurate identification of sepsis, thereby improving clinical outcomes and prognosis. **OBJECTIVE:** To analyze the use of procalcitonin as a biomarker for the early detection and monitoring of sepsis. **METHODS:** This is a systematic review conducted according to the PRISMA protocol, guided by the question: "What is the role of procalcitonin as an early biomarker in the diagnosis and monitoring of sepsis?" The search was performed in PubMed, LILACS, and Cochrane databases using the descriptors "Procalcitonin," "Sepsis," and "Biomarker," combined with the Boolean operator "AND," covering the period from 2020 to 2025. A total of 74 articles were identified, of which 11 were excluded due to duplication and 34 for not meeting inclusion criteria, resulting in 17 studies selected. **RESULTS:** The results demonstrate that PCT is a sensitive and specific marker for bacterial infections, with detectable elevation within 3 to 6 hours after the onset of infection, peaking within 24 hours. This rapid response favors early diagnosis of sepsis and is superior to other markers such as C-reactive protein. In several studies, cutoff values between 0.25 and 0.5 ng/mL were associated with sepsis and indicated the need for immediate intervention. Additionally, PCT proved useful for therapy monitoring, as progressive declines in levels correlated with clinical improvement and safe antibiotic discontinuation, whereas persistently elevated levels indicated a worse prognosis. Compared to other biomarkers, PCT demonstrated higher specificity, particularly in critically ill patients. **CONCLUSION:** PCT represents a valuable tool in clinical practice, with the potential to enhance early recognition and management of sepsis. However, its use should always be contextualized with patient clinical evaluation and laboratory data, promoting safer and more individualized decision-making.

77. REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION APPLIED TO THE TREATMENT OF FIBROMYALGIA

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INTRODUCTION: Fibromyalgia is a chronic disease characterized by widespread pain and psychological distress that is challenging to assess because it depends on self-reporting. Currently, pharmacotherapy and physical therapy are used as interventions, but they have limited effectiveness in eradicating symptoms. Therefore, repetitive transcranial magnetic stimulation (rTMS) has emerged as a promising approach for the treatment of nociceptive pain.

OBJECTIVE: Evaluate the clinical outcomes associated with the use of transcranial magnetic stimulation when applied to the treatment of fibromyalgia. **METHODS:** Integrative literature review, in which 15 articles published between 2020 and 2025 were filtered from the PubMed database, two of which were excluded due to irrelevance to the topic. The search used the descriptors "transcranial magnetic stimulation" and "fibromyalgia" under the Boolean operator "AND".

RESULTS: Based on these methods, it was observed that rTMS when applied to the primary motor cortex (M1) promotes significant reduction in pain and fatigue. Furthermore, improvements in emotional and physical stability were identified when applying high-frequency rTMS to patients. When applied to the right dorsolateral prefrontal cortex (RDLPFC), rTMS demonstrated a decrease in pain intensity, as well as improvements in cognitive function, sleep health, and consequently, quality of life. However, when rTMS was applied at high frequency to the RDLPFC in a clinical trial, no significant clinical differences were demonstrated in relation to the placebo group. When compared to transcranial direct current stimulation (tDCS), both applied to the rDFC, rTMS was found to be superior in reducing pain, with a longer-lasting analgesic effect for up to six months. In addition, deep transcranial magnetic stimulation (dTMS) was indicated as an effective way to reduce the sensory and affective dimensions of pain. **CONCLUSION:** Repetitive Transcranial Magnetic Stimulation has proven to be a useful tool for managing the physical and psychological pain of patients with fibromyalgia, with sustainable long-term clinical effects after intervention. However, there is a need for more standardized studies with greater methodological rigor on rTMS to reinforce its effectiveness.

78. EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS DUE TO SYSTEMIC CONNECTIVE TISSUE DISEASES IN SÃO LUÍS-MA BETWEEN 2020 AND 2025

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INTRODUCTION: Systemic Connective Tissue Diseases (SCTDs) constitute a group of autoimmune, inflammatory, and chronic illnesses, including Systemic Lupus Erythematosus, Systemic Sclerosis, and Sjögren's Syndrome. These pathologies present with multisystemic manifestations, affecting the skin, joints, and internal organs, with a significant impact on the functionality and quality of life of affected individuals. Considering the possibility of severe complications, early diagnosis and adequate therapeutic intervention are fundamental for reducing morbidity and preventing hospitalizations. **OBJECTIVE:** The objective of this study was to describe the epidemiological profile of hospital admissions due to systemic connective tissue diseases in São Luís-MA, between January

2020 and May 2025. **METHODS:** This is an epidemiological, descriptive, retrospective, and quantitative study, based on data from the SUS Hospital Information System (SIH/SUS), provided by the SUS Department of Informatics (DATASUS). Variables such as the number of hospitalizations per year, sex, age group, race/color, hospital establishment, type of care, and occurrence of deaths were analyzed using the Microsoft Excel 2019 platform. **RESULTS:** In the analyzed period, 1208 hospitalizations were recorded, with 2024 being the year with the highest incidence, 35.6% (n=430), and 2019 the year with the lowest occurrence, 1% (n=12). Regarding sex, there was a predominance of hospitalizations among females, 77.3% (n=934), and the 20 to 29 age group, 19.7% (n=238), followed by the 30 to 39 and 40 to 49 age groups, 17.3% (n=209 each), which accounted for the largest contingent. In the race/color variable, a higher prevalence was observed among parda (brown/mixed-race) individuals, 74.2% (n=897). The UFMA University Hospital concentrated the largest number of cases, 64.3% (n=777), followed by the Hospital Carlos Macieira, 23.6% (n=285), and Santa Casa, 6% (n=73). Regarding the type of care, there were 77% (n=930) elective and 23% (n=278) emergency admissions. In total, 16 deaths were recorded in the analyzed period. **CONCLUSION:** Therefore, hospitalizations due to systemic connective tissue diseases were more prevalent among young, parda women, with a concentration in the year 2024, of an elective nature, and at the UFMA University Hospital. These findings reinforce the relevance of epidemiological surveillance and outpatient care, given that timely diagnosis and adequate treatment can reduce complications, promote a better prognosis, and prevent severe outcomes, such as hospitalizations and deaths.

79. GLP-1 RECEPTOR AGONISTS IN TYPE 2 DIABETES MELLITUS: CARDIOVASCULAR, RENAL, AND ENDOCRINE BENEFITS

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INTRODUCTION: GLP-1 receptor agonists have been incorporated into the treatment of type 2 diabetes due to their glycemic effect and additional benefits. Evidence indicates a reduction in cardiovascular risk and preservation of renal function, especially in higher-risk patients. Understanding these impacts is essential to guide appropriate therapeutic approaches. **OBJECTIVE:** To analyze the cardiovascular, renal, and endocrine effects associated with the use of GLP-1 receptor agonists in patients with type 2 diabetes mellitus. **METHODS:** This is an integrative literature review, with the research question guided by the PICo strategy: "What are the cardiovascular, renal, and endocrine benefits associated with the use of GLP-1 receptor agonists in patients with type 2 diabetes?" The search was conducted by two independent researchers in the PubMed, NLM, and SciELO databases, using the Health Science Descriptors (DeCS) "GLP-1 Receptor Agonists," "Type 2 Diabetes Mellitus," "Cardiovascular Diseases," "Kidney Function," and "Endocrine System," with the Boolean operators AND and OR. For the search and selection of articles, Page et al.'s (2021) Flowchart was used, following the guidelines of the PRISMA protocol. Studies in English, published between 2020 and 2024, and available in full were included. Duplicates, reviews, non-original studies, and those not included in the research question were excluded. **RESULTS:** Thirty-eight articles were found in the initial search, of which 10 were selected for inclusion in this review. Among them, two reported endocrine effects,

with a reduction in glycated hemoglobin, weight loss, and improved lipid profile, with an emphasis on semaglutide. Four others demonstrated cardiovascular benefits, such as a lower incidence of major adverse cardiac events (MACE), mortality, heart attack, and stroke, especially in high-risk individuals. Finally, four addressed renal outcomes, with reduced progression of chronic disease and reduced albuminuria. These findings reinforce the clinical role of GLP-1 RAs as multifunctional agents in the management of type 2 diabetes mellitus. **CONCLUSION:** GLP-1 receptor agonists promote consistent benefits in glycemic control and in the reduction of cardiovascular and renal events in patients with type 2 diabetes. These effects, especially in high-risk situations, reinforce the role of these drugs as promising strategies in clinical management.

80. FACTORS ASSOCIATED WITH THE INCIDENCE OF PRESSURE INJURIES IN HOSPITALIZED PATIENTS: AN INTEGRATIVE LITERATURE REVIEW

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INTRODUCTION: Pressure injuries (PIs) are defined as tissue damage in a specific area caused by prolonged compression between a surface and a bony prominence. This process usually occurs in bedridden, immobilized, or critically ill patients and is an indicator of the quality of care provided in health services. Therefore, understanding the factors associated with the occurrence of PI in a hospital setting is essential to support strategies for prevention and improvement of care quality. **OBJECTIVE:** To analyze the main factors associated with the incidence of PI during hospitalization. **METHODS:** This is an integrative literature review, conducted in the PubMed and SciELO databases. The inclusion criteria were publications between 2016 and 2024, in Portuguese and English. The exclusion criteria involved duplicate articles and those not directly related to the topic. The search strategy used the descriptors: "Pressure Injury" and "Hospital Admission.". **RESULTS:** The analysis of the selected studies allowed the organization of risk factors associated with PI into three main categories: clinical, care-related, and related to the use of medical devices. Among the clinical factors, advanced age, compromised nutritional status, and the presence of physiological changes stood out. In the care setting, staff overload, especially among nurses, prolonged hospitalization, and delays in performing procedures. Regarding medical devices, the use of oxygen masks, catheters, probes, and orotracheal tubes were identified as predisposing factors. **CONCLUSION:** The occurrence of PI in hospitalized patients is strongly related to clinical, organizational, and technological factors, which interact and increase the risk in vulnerable healthcare contexts. Thus, understanding these factors is important for establishing preventive measures, strengthening care protocols, promoting patient safety, and ensuring the quality of healthcare provided in hospital settings.

81. OBSTRUCTIVE SLEEP APNEA AND HYPERTENSION: A SILENT THREAT TO CARDIOVASCULAR HEALTH

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INTRODUCTION: Sleep is a fundamental biological process for physiological recovery and maintenance of homeostasis. Sleep disorders, such as Obstructive Sleep Apnea (OSA), are characterized by repeated interruptions in breathing during sleep, with breathing pauses of at least 10 seconds. These pauses result in intermittent hypoxia, sympathetic activation, and oxidative stress, factors that contribute to the pathophysiology of cardiovascular diseases, such as Systemic Arterial Hypertension (SAH). **OBJECTIVE:** To analyze the relationship between Obstructive Sleep Apnea and Systemic Arterial Hypertension, considering the pathophysiology and clinical implications of this association. **METHODS:** This is an integrative literature review. Searches were conducted between 2015 and 2024 in the PubMed, SciELO, and Google Scholar databases, using the descriptors "Obstructive Sleep Apnea", "Systemic Arterial Hypertension", "Intermittent Hypoxia" and "Cardiovascular Diseases" combined with Boolean operators. Systematic reviews and meta-analyses addressing the relationship between OSA and SAH were included. The exclusion criteria involved duplicate articles and those not directly related to the topic. In total, 13 articles were analyzed. **RESULTS:** Studies show a strong relationship between Obstructive Sleep Apnea and Hypertension. Repeated episodes of hypoxia and micro-awakenings increase the release of catecholamines, contributing to increased blood pressure. OSA also promotes an increase in inflammatory cytokines, causing systemic inflammation, endothelial dysfunction, and arterial stiffness. Data from 2022 indicate that up to 50% of patients with moderate to severe OSA have hypertension, even after adjusting for obesity, age, and gender. It has also been found that treatment with devices for sleep-disordered breathing can reduce systolic blood pressure by up to 4.4 mmHg in compliant patients. **CONCLUSION:** This study shows that OSA is an important causal factor in systemic hypertension, mainly through the activation of the sympathetic nervous system, inflammation, and endothelial dysfunction induced by intermittent hypoxia. The high prevalence of hypertension among patients with OSA reinforces the need for early diagnosis and appropriate management, aiming to reduce blood pressure and improve cardiovascular prognosis.

82. INFORMED CONSENT FORM IN THE MEDICAL RECORD: LEGAL AND ETHICAL IMPORTANCE IN CLINICAL PRACTICE

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INTRODUCTION: The medical record is essential in clinical practice, serving as a means of communication among healthcare professionals and as legal evidence. Included within it, the Informed Consent Form (ICF) ensures that the patient understands the procedures to which they will be subjected, safeguarding their rights and providing legal protection to the physician, especially considering the growing judicialization of healthcare. **OBJECTIVE:** To analyze the ethical and legal importance of the Informed Consent Form (ICF) in the medical record and in clinical practice. **METHODS:** This is an integrative literature review guided by the following research question: "What is the ethical and legal importance of recording the Informed Consent Form in the medical record and in clinical practice?" The search followed the PRISMA protocol and was conducted in the CAPES, ACM, and DOAJ databases, using the descriptors "medical records," "informed consent," and "ethics," connected by AND. Articles published between 2020 and 2024, in Portuguese or English, available in full text, and addressing the

relationship between informed consent, medical records, and legal responsibility were included. Duplicate articles and literature reviews were excluded. **RESULTS:** In the initial search, 11 publications were identified (3 in DOAJ, 6 in CAPES, and 2 in ACM). After applying the inclusion criteria, 3 studies composed the final sample — 1 in Portuguese and 2 in English. The publication years were 2020, 2021, and 2023 (n=1, respectively). The analysis revealed that recording the Informed Consent Form (ICF) in the medical record is essential to ensure patient autonomy and transparency in care, strengthening the doctor-patient relationship. Furthermore, the ICF serves as legal protection for both parties, proving informed consent amid the growing judicialization of healthcare. Even in challenging contexts, such as the COVID-19 pandemic, the ICF remained necessary, with adaptations to ensure ethical and legal validity. Proper documentation reinforces compliance with legal standards, ensuring legal security and respect for patient rights. **CONCLUSION:** It is evident that the Informed Consent Form (ICF) is fundamental in clinical practice, both ethically and legally, as it goes beyond a formal and ethical requirement by ensuring patient autonomy, transparency in care, and legal protection for all parties involved. Thus, current clinical practice requires that the ICF be included in the medical record and that professionals recognize its importance for providing ethical and safe care.

83. EPIDEMIOLOGICAL PROFILE OF TUBERCULOSIS IN MARANHÃO BETWEEN 2015 AND 2024

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INTRODUCTION: Tuberculosis is characterized as an infectious disease caused by the bacterium *Mycobacterium tuberculosis*, representing a serious public health problem due to its extensive territorial dimension, the emergence of cases resistant to multiple drugs and situations of coinfection. Its transmission is directly associated with social determinants, such as income, lifestyle, precarious housing, and the abuse of alcohol and other drugs, common in highly vulnerable regions, such as Maranhão (MA). **OBJECTIVE:** To analyze the epidemiological profile of tuberculosis in the state of Maranhão between 2015 and 2024. **METHODS:** This is a descriptive quantitative epidemiological study, the data for which were collected in July 2025 using data available in the Notifiable Diseases Information System (SINAN/DATASUS). The study covers the state of Maranhão, covering the period 2015 to 2024, with a focus on tuberculosis cases. The following variables were analyzed: year of notification, age group, sex, laboratory confirmation, sputum culture, and rapid tuberculosis test. **RESULTS:** In Maranhão, between 2015 and 2024, 28,288 cases of tuberculosis were confirmed. Over this period, a progressive increase in the number of notifications was observed, indicating a growing trend of the disease in the state. The year 2024 had the highest number of confirmed cases, totaling (n=3,619; 12.79%) of notifications. The analysis revealed a higher prevalence in males (n=19,138; 67.65%) and a higher concentration of cases in the 20-39 age group (n=12,046; 42.58%), demonstrating a significant impact of tuberculosis in young adults. Regarding the form of diagnostic confirmation, most cases were confirmed through laboratory methods (n=17,571; 62.11%). Despite this, sputum culture was performed in a small proportion of patients, confirming (n=2,258; 7.98%) cases, while (n=24,091; 85.16%) patients did not undergo this test. The rapid tuberculosis test detected sensitivity to rifampicin in (n=5,117; 18.09%) patients, but (n=19,500; 68.93%) did not undergo

the test, which indicates possible gaps in access to essential complementary tests. **CONCLUSION:** The results obtained demonstrate the importance of tuberculosis as a public health problem in Maranhão, as well as the need to adopt preventive measures by directing educational efforts and control actions towards the most vulnerable population groups.

84. ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF DEATHS FROM STROKE (CVA) IN MARANHÃO FROM 2019 TO 2023

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INTRODUCTION: Stroke is a severe clinical condition characterized by the sudden interruption of cerebral blood flow, which may occur due to ischemia (blood vessel obstruction) or hemorrhage (vascular rupture with blood extravasation). Both forms result in potentially irreversible neurological damage and present high lethality rates, especially when associated with risk factors such as hypertension, diabetes mellitus, smoking, physical inactivity, cardiovascular diseases, and stress. The association between comorbidities, aging, and inequalities in access to care intensifies clinical conditions and high mortality rates in Maranhão. **OBJECTIVE:** To investigate stroke-related mortality rates in Maranhão between 2019 and 2023, emphasizing the epidemiological profile associated with its occurrence and evolution during the analyzed period. **METHODS:** This is a descriptive epidemiological study based on data collected from DATASUS, complemented by a literature search on the SciELO database. The following descriptors were used: "stroke", "mortality", "epidemiology", and "complications". A total of seven articles were identified, of which five met the inclusion criteria after excluding duplicates, paid publications, literature reviews, and studies unrelated to the thematic focus. **RESULTS:** Data analysis revealed a high incidence of stroke-related deaths in Maranhão, with the highest numbers recorded in 2020 (2,038 cases) and 2019 (1,858 cases). Regarding age group, most deaths occurred among individuals aged 80 years or older (4,051 deaths), highlighting the direct relationship between aging and increased vulnerability to cerebrovascular events. A significant increase in lethality was also observed among individuals over 50 years, especially those aged 60–69 years (1,433 cases) and 70–79 years (2,657 cases). Concerning race/color, deaths were concentrated among mixed-race individuals (6,361 cases), followed by white (1,576) and black individuals (1,245). With respect to sex, men (5,163 deaths) had higher mortality rates than women (4,216 deaths), a pattern that remained consistent throughout the analyzed period. **CONCLUSION:** The high stroke mortality rates in Maranhão between 2019 and 2023, peaking in 2020, reflect the vulnerability of individuals aged 80 and older, especially those affected by comorbidities and cerebrovascular events. The majority of these individuals are male and of mixed race, which highlights potential sociodemographic inequalities and reinforces the importance of prevention strategies and specialized care for higher-risk groups.

85. RELATIONSHIP BETWEEN THE NOTIFICATION OF ACQUIRED SYPHILIS, TESTING AND HDI IN THE NORTHEAST STATES IN 2024

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INTRODUCTION: Syphilis is a sexually transmitted infection of high importance in public health. Its growing notification in Brazil has been attributed both to the real increase in cases and to the expansion of testing. In the Northeast, a historically unequal region, the Municipal Human Development Index (HDI-M) is often cited as a factor associated with the prevalence of the disease. However, the real influence of HDI on epidemiological surveillance is still uncertain. **OBJECTIVE:** Analyze whether the HDI-M is associated with the prevalence of syphilis acquired in the Northeast states in 2024 and verify whether testing coverage can be a determining factor for the observed notification patterns. **METHODS:** Observational study of quantitative approach, with secondary data from SIA/SUS (rapid tests for syphilis), SINAN (reported cases) and UNDP (HDI-M) for the year 2024. The positivity ratio (cases per 1,000 tests performed) were calculated and statistical tests such as the Shapiro-Wilk test were applied to verify data normality and the Pearson correlation test to evaluate the linear association between the number of tests and the number of reported cases, with a significance level of 5% ($p < 0.05$) in the R software. **RESULTS:** 865,710 rapid tests and 4,901 reported cases of syphilis were analyzed in the nine states of the Northeast. A positive and statistically significant correlation was observed between the number of tests and the reported cases ($r = 0.73$; $p = 0.024$), indicating that the highest testing is associated with the highest notification. States with low testing showed higher positive ratios, suggesting underreporting: Rio Grande do Norte (15.8 cases/1,000 tests), Sergipe (13.8/1,000) and Bahia (11.0/1,000). Maranhão and Paraíba, despite performing large quantities of tests (146,189 and 80,545, respectively), had low positivity ratios (3.4 and 3.9/1,000). The analysis between HDI-M and syphilis prevalence did not reveal a statistically significant correlation, suggesting that human development, in isolation, does not explain the variation in notification. **CONCLUSION:** The HDI-M, in isolation, is not associated with the prevalence of syphilis in the Northeast in 2024. However, the alternative hypothesis that underreporting results from insufficient testing in states with a smaller structure has been statistically proven. This reinforces the importance of strengthening epidemiological surveillance and expanding access to testing as fundamental strategies for coping with syphilis.

86. EARLY INTERVENTION VERSUS CONSERVATIVE TREATMENT IN PATIENTS WITH SEVERE ASYMPTOMATIC AORTIC STENOSIS

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INTRODUCTION: Early intervention (EI), whether through conventional surgery or transcatheter aortic valve replacement (TAVR), in patients with asymptomatic severe aortic stenosis (AS), has been the subject of intense debate. Randomized clinical trials (RCTs) published between 2024 and 2025 have strengthened the need for updated literature reviews to provide current scientific evidence and optimize medical decision-making. **OBJECTIVE:** This study aims to compare the clinical outcomes of early aortic valve intervention with conservative management in asymptomatic severe AS. **METHODS:** A literature review was conducted in July 2025 using the descriptors

"Aortic Valve Stenosis," "asymptomatic," "Early Surgical Intervention," "conservative management," "Mortality," and "Heart Failure," combined with the Boolean operator "AND" in the advanced search of the PubMed database. Seven studies were identified after applying the inclusion criteria: published within the last two years, in English, free full text, containing the descriptors in the title/abstract, and adequately addressing the topic. **RESULTS:** EI in patients with asymptomatic severe AS did not demonstrate a reduction in all-cause mortality or unplanned hospitalizations related to AS in the EVOLVED trial (HR 0.79; P = 0.44). However, there was a lower rate of AS-related hospitalizations (6% vs. 17%) and New York Heart Association functional class II–IV symptoms at 12 months (19.7% vs. 37.9%) in the EI group. Additional RCTs, such as AVATAR and RECOVERY, suggested improved survival with early surgery, although their small sample sizes and differences in inclusion criteria limit generalizability. Other studies also indicated a reduction in heart failure hospitalizations and combined events, even without an effect on overall mortality. Elevated cardiac biomarkers were associated with higher event risk, but the relative benefit of early TAVR remained consistent regardless of biomarker levels. **CONCLUSION:** EI in asymptomatic severe AS shows benefits in clinical outcomes such as hospitalizations and functional symptoms, especially in higher-risk groups identified by advanced imaging or biomarkers. However, the lack of impact on all-cause mortality and the limited available data highlight the need for more robust clinical trials and updated guidelines to guide clinical decision-making.

87. EPIDEMIOLOGICAL OVERVIEW OF LEPROSY IN MARANHÃO BETWEEN 2015 AND 2024

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INTRODUCTION: Leprosy is a chronic, transmissible disease with a high potential for disability, primarily affecting the nerves and dermis. It is caused by *Mycobacterium leprae*, with the airways being the primary means of transmission. The magnitude of the disease, combined with its historical neglect, makes it a persistent public health problem. **OBJECTIVE:** to analyze the epidemiological panorama of leprosy in Maranhão between 2015 and 2024. **METHODS:** This is a cross-sectional, retrospective study with a quantitative approach, which used data from the Notifiable Diseases Information System (Sinan), obtained from TabNet Datasus, referring to leprosy cases reported in Maranhão between 2015 and 2024. The following variables were designated for the study: year of notification, education, sex, race, age group, skin lesion, clinical form. **RESULTS:** In Maranhão, between 2015 and 2024, 35,880 cases of leprosy were registered. A downward trend was observed over the years, although the numbers remain relevant for public health. 2015 had the highest number of diagnoses, with 4,481 cases, corresponding to 12.49% of the total registered in the period. The epidemiological analysis highlighted the predominance of males, with (n = 21,556; 60.08%) cases, and of mixed race, totaling (n = 24,443; 68.12%). In terms of age group, the highest number of cases was registered among individuals aged 40 to 49 years (n = 6,171; 17.20%). Regarding education, there was a higher prevalence among people with incomplete elementary education (1st to 4th grade) (n=7,485; 20.86%). Furthermore, it was observed that the majority of cases presented more than 5 skin lesions, corresponding to (n=13,449; 37.48%), and the dimorphic clinical form was the most frequent, representing (n=19,982; 55.69%). **CONCLUSION:** The results

demonstrate the relevance of leprosy as a serious public health problem in Maranhão, highlighting the need to maintain and reinforce preventive measures, including educational efforts and control actions aimed at the most vulnerable population groups.

88. PROFILE OF BRAZILIAN PUBLICATIONS AND COLLABORATIONS IN CARDIOVASCULAR SURGERY

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INTRODUCTION: Cardiovascular surgery in Brazil and worldwide has experienced significant growth in the context of technological innovations. This progress is grounded in various types of studies and collaboration among institutions aimed at reducing morbidity and mortality resulting from cardiovascular conditions. Scientific analysis is used to identify research development across different contexts.

OBJECTIVE: Thus, the objective is to perform a scientometric analysis of the profile of Brazilian publications in cardiac surgery within the global landscape. **METHODS:** For the article search, the Scopus (Elsevier) database was used. The five journals with the highest CiteScore in the field of cardiovascular surgery were analyzed. The following variables were assessed: the methodology used, the total number of publications with interstate and international collaborations, and the percentage of each country partnering with Brazilian teams. **RESULTS:** A total of 325 articles were identified, and it was possible to determine the methodological approaches of 300 studies, including 48 observational studies (16%), 46 letters to the editor, 43 case or image reports, 32 experimental studies with animals (10.6%), 31 technical notes (10.3%), 30 review articles (10%), 27 randomized clinical trials (9%), 26 case series (8.6%), and 17 using other methodologies (5.7%). Among the analyzed studies, 265 had Brazilian lead authors, distributed by state as follows: São Paulo with 174 papers (65.6%), Minas Gerais, Pernambuco, and Paraná with 17 each (6.42%), Rio Grande do Sul with 14 (5.28%), and other states totaling 26 studies (9.8%). Regarding international collaborations, the United States participated in 44 studies (16.4%), Germany in 24 (8.9%), Canada in 22 (8.2%), the United Kingdom in 20 (7.4%), and another 157 (58.8%) studies involved countries with fewer than 20 collaborations each. **CONCLUSION:** The most frequent methodologies among Brazilian publications were observational studies, letters to the editor, and case/image reports, with most research originating from southeastern states—particularly São Paulo—highlighting the inequality in scientific production among regions. Furthermore, there is notable international collaboration between Brazil and other countries, especially the United States and Germany. These findings demonstrate a solid scientific output in Brazil, suggesting that strengthening regional and international collaborations could further enhance the impact of Brazilian research on the global stage.

89. EDUCATIONAL APPROACHES IN CARDIOPULMONARY RESUSCITATION FOR NON-PROFESSIONALS: A SYSTEMATIC REVIEW

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INTRODUCTION: Out-of-hospital cardiac arrest (OHCA) is a global public health emergency. In this context, teaching cardiopulmonary

resuscitation (CPR) to laypeople has been widely promoted through European initiatives, as it can double a victim's chance of survival. This underscores the importance of effective educational strategies targeted at this audience. **OBJECTIVES:** To analyze different teaching approaches for cardiopulmonary resuscitation aimed at laypeople, in order to compare their methods and impacts. **METHODOLOGY:** This is a systematic review conducted according to the PRISMA Protocol, guided by the research question: "What is the impact of CPR education for lay individuals?" A total of 59 studies were retrieved from PubMed, BVS, and Cochrane databases, using the descriptors "Cardiopulmonary resuscitation," "Educational health," and "Simulation training," combined with the Boolean operator "AND," covering the years 2020 to 2025. After screening, 7 studies were selected for meeting the guiding question of this review. **RESULTS:** Among the 59 studies found, 7 were selected for addressing the review's research question. Based on the analysis, it was observed that CPR training provided at regular intervals of about four months proved more effective for skill retention compared to annual training sessions. Additionally, training laypeople—especially teachers—was beneficial in one study, showing that they can act as knowledge multipliers in resuscitation if continuous support and training are provided. Furthermore, five other studies demonstrated that the use of technologies such as augmented reality and mobile applications improves technical performance and engagement, although it may delay the initiation of CPR. **CONCLUSION:** CPR education for laypeople requires dynamic, accessible, and sustainable approaches, as resuscitation training must be clearly conveyed to the population. Periodic refreshers and short-term training models have shown greater effectiveness than occasional courses. Moreover, including multipliers such as teachers expands the reach of educational initiatives. The use of technology should also be encouraged, provided it is simplified to avoid compromising the promptness of real-life responses. Therefore, CPR education for non-professionals is highly recommended and should be supported by public policies to expand knowledge and increase the potential to save lives.

90. THERAPEUTIC INTERVENTIONS IN THE QUALITY OF LIFE OF POST-MASTECTOMY WOMEN BEYOND BREAST RECONSTRUCTION

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INTRODUCTION: Mastectomy is one of the most commonly used surgeries to combat breast cancer. However, this procedure, especially when combined with axillary surgeries, can cause upper limb dysfunction, such as reduced mobility and strength, as well as pain and restrictions on daily activities. This negatively impacts the quality of life of women who have undergone mastectomies and necessitates the development of therapeutic alternatives for mental and physical compensation for this group. **OBJECTIVE:** This study aims to discuss the impact of post-surgical therapeutic interventions on the quality of life of women who have undergone mastectomy, beyond breast reconstruction. **METHODS:** This is an integrative literature review conducted using the PubMed database and using the descriptors ("Quality of Life" OR "Indicators of Quality of Life") AND ("Mastectomy"), limiting original articles from the period 2020 to 2025, in English or Portuguese. Of a total of 113 articles selected, 16 were included and 97 were excluded because they did not address the topic. **RESULTS:** Studies have shown positive effects of physical exercise on post-mastectomy quality of life, both for the entire body

and for the upper limbs, which experienced regained mobility, strength, and function. Furthermore, the use of surgical interventions, such as compression of surgical scars for aesthetic and functional improvement of the upper limbs, was observed, as well as cryoneurolysis of the intercostobrachial nerve for pain control in patients with Postmastectomy Pain Syndrome. Monitoring individual patient complaints, psychological encouragement to increase confidence, and participation in collective therapy groups were influential factors in maintaining good mental health. Furthermore, less conventional approaches were also beneficial, such as music therapy, which helped control anxiety, and mirror therapy and clinical hypnosis, which promoted pain reduction in daily activities, improved sleep, and improved quality of life. **CONCLUSION:** The results show that interventions such as physical exercise, surgical scar stimulation, psychological counseling, and even unconventional approaches like music therapy and hypnosis are beneficial for improving the quality of life of women who have undergone mastectomies, due to their physical and mental benefits. Finally, the importance of researching the effectiveness of new therapies in the comprehensive care of these patients is evident.

91. PROFILE OF HOSPITALIZATIONS AND MORTALITY DUE TO MALIGNANT SKIN NEOPLASMS IN MARANHÃO, BRAZIL, BETWEEN 2018 AND 2024

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INTRODUCTION: Malignant skin neoplasms are the most common cancers in Brazil, accounting for approximately 30% of reported cases. They are divided into melanoma, which is more aggressive, and non-melanoma, including basal cell and squamous cell carcinomas. Excessive sun exposure, low photoprotection, fair skin, and family history are relevant risk factors. In Maranhão, the hot climate, "sun and sea" tourism, and intensive rural labor increase population vulnerability. Prevention involves photoprotection, early diagnosis, and active primary healthcare, particularly through campaigns such as "Orange December." **OBJECTIVE:** To analyze the profile of hospitalizations and the mortality rate due to malignant skin neoplasms in the state of Maranhão. **METHODS:** This is a retrospective, quantitative epidemiological study based on data from the Hospital Information System of the Brazilian Unified Health System (SIH/SUS), accessed via the TABNET platform of the Department of Informatics of SUS (DATASUS). Hospitalizations and deaths due to malignant skin neoplasms in Maranhão between 2018 and 2024 were analyzed according to age, sex, and race/color. **RESULTS:** Between 2018 and 2024, 407 hospitalizations due to malignant skin neoplasms were recorded in the state, with just over half (204 cases) occurring in São Luís, the state capital. The overall mortality rate during this period was 13.02%, with notable annual variations: the highest rate occurred in 2021 (22.92%), and the lowest in 2024 (6.74%). The age group 60–69 years had the highest number of hospitalizations (87 cases), whereas the 30–39-year age group showed the highest proportional mortality rate (18.75%). Gender distribution was balanced, with a slight male predominance (211 men and 196 women). Regarding race/color, most hospitalizations occurred among mixed-race individuals (pardo) (284), followed by white individuals (42), reflecting the state's ethnic-demographic composition. **CONCLUSION:** Malignant skin neoplasms continue to have a significant impact in Maranhão, particularly among older adults. Fluctuations in mortality rates highlight ongoing challenges in

prevention and care. The proportionally high mortality among younger adults emphasizes the need for educational interventions targeting different age groups. These findings reinforce the urgency of effective public policies and active primary healthcare in early detection, with campaigns such as "Orange December" playing a key role.

92. CHARACTER OF PNEUMONIA CARE IN MARANHÃO: AN ANALYSIS OF THE YEARS 2020 TO 2025

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INTRODUCTION: Pneumonia is a lower respiratory tract infection characterized as an acute inflammatory process caused by various etiological agents, such as viruses, bacteria, and fungi. Therefore, analyzing the different ways patients access healthcare services is fundamental to understanding patient flow, identifying patterns of medical consultation, and ensuring the appropriate management of the disease by the responsible healthcare professionals. In this regard, care can be provided on either an elective or urgent basis, depending on the severity of the clinical presentation. In this context, elective care refers to scheduled services provided in outpatient settings, where there is sufficient time for investigation, diagnosis, and the initiation of treatment. On the other hand, urgent care involves situations where the clinical condition demands immediate intervention in a hospital environment. Consequently, understanding the predominant type of care sought by patients with pneumonia is necessary, given the importance of preparing professionals to guide care according to this profile and offer better patient management. **OBJECTIVE:** To analyze the nature of care for pneumonia hospitalizations in Maranhão from 2020 to 2025. **METHODS:** This is a descriptive, retrospective, and quantitative epidemiological study using data obtained from the Hospital Information System of the Unified Health System (SIH/SUS) from 2020 to 2025 in Maranhão. The variables used were the nature of care (elective or urgent) for hospitalizations classified under ICD-10: Pneumonia. **RESULTS:** During the analyzed period, a total of 105,808 hospital admissions were observed, with an annual average of 21,161.6 admissions in Maranhão, of which 92.37% were urgent and 7.62% were elective. Regarding the annual nature of care, it was observed that in 2020, 95.59% were urgent care admissions and 4.40% were elective; in 2021, 94.25% were urgent and 5.74% were elective; in 2022, 91.71% were urgent and 8.28% were elective; in 2023, 92.25% were urgent and 7.74% were elective; in 2024, 91.53% were urgent and 8.46% were elective; and in 2025, 90.48% were urgent and 9.51% were elective. **CONCLUSION:** The study evidenced that the predominant nature of care for pneumonia hospitalizations in Maranhão is urgent. These findings highlight the need for training the medical community on the correct diagnosis and treatment of this pathology within the context of urgent and emergency medicine.

93. EPIDEMIOLOGICAL ANALYSIS OF SELF-INJURY IN MARANHÃO: 2020-2024

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INTRODUCTION: Self-harm is physical harm intentionally inflicted by an individual, reflecting intense psychological distress and often concomitant with suicidal ideation. Studies show that this behavior is associated with a variety of psychological pathologies and supports

their diagnosis. **OBJECTIVE:** This study aims to analyze the epidemiological profile of notifications of self-inflicted injuries in Maranhão from January 1, 2020 to December 31, 2024. **METHODS:** This is a time-series analysis of data from the Notifiable Diseases Information System (SINAN), available on the platform of the Department of Information Technology of the Unified Health System (DATASUS). The variables used in the study were sex, age group (in years), race/ethnicity, education level, place of occurrence, and health region. **RESULTS:** During the analyzed period, 24,157 reports of interpersonal or self-inflicted violence were recorded, of which 5,907 (24.5%) referred to self-harm. Furthermore, there was an increase in annual reports from 844 occurrences in 2020 to 1,621 in 2024. The age groups 15–19 years (35.8%) and 20–29 years (31.5%) had the highest percentages of self-inflicted injuries. Furthermore, reports predominated among individuals of mixed race (73%) and with incomplete elementary education. Of the recorded reports, 33.6% occurred at school and 31.7% at home. Concomitantly, the temporal trend analysis revealed a monthly increase in the incidence of self-inflicted injuries within the studied period (p-value: 0.0146; 95% CI, [0.42 ; 3.92]). **CONCLUSION:** The impact of self-harm is profound and has been increasing over the period analyzed. Therefore, it is important to regularly monitor data and consider new health policies for this practice, which is often associated with psychological pathologies.

94. ORAL TISSUE ALTERATIONS AND OTOLARYNGOLOGIC RISKS ASSOCIATED WITH PROLONGED ELECTRONIC CIGARETTE USE

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INTRODUCTION: Electronic cigarettes (ECs), commonly known as vapes, are devices that release a mixture of nicotine, flavoring agents, and bases such as glycerol and propylene glycol, producing an aerosol. Because they do not generate smoke, ECs are often considered safer alternatives. However, studies indicate that prolonged EC use promotes microbial dysbiosis, creating an anaerobic environment in the oral cavity that increases susceptibility to bacterial and viral infections and hinders the elimination of these pathogens. **OBJECTIVE:** This study aimed to investigate the effects of prolonged electronic cigarette use on the oral microbiota, mucosa, and epithelial tissue, as well as its possible otolaryngologic implications. **METHODS:** This study is an integrative review based on the PRISMA Protocol. The descriptors "electronic cigarette," "vape," "oral mucosa," and "epithelial tissue" were used in the PubMed and BVS databases. Primary articles published in the last five years, in Portuguese or English, open-access, and addressing microbiological alterations in the oral cavity associated with prolonged electronic cigarette use, were included. Duplicate studies or those focusing exclusively on traditional cigarettes or treating the topics separately were excluded. **RESULTS:** A total of 39 studies were identified; 10 were excluded based on the criteria, and 10 were included in this review. The studies report that electronic cigarettes, popular among young people, contain toxic compounds such as aldehydes, nitrosamines, heavy metals, and free radicals that accumulate in oral tissues and fluids, causing direct epithelial damage. These effects include cellular alterations, oxidative stress, DNA strand breaks, and induction of epithelial-mesenchymal transition processes that promote chronic inflammation and increase the potential for precancerous lesions and oral cancer. Both cinnamaldehyde and nicotine present in the vapor alter the vasomotor activity of the oral and pharyngeal mucosa. Chronic exposure can modify mucosal sensitivity in these regions. Additionally, nicotine may cause swelling and inflammation of the minor salivary glands, contributing to

hyposalivation, a condition that increases the risk of oral fungal infections, commonly observed among electronic cigarette users. These alterations compromise oral cavity homeostasis and highlight the tissue risks associated with vape use. **CONCLUSION:** Electronic cigarette use causes various tissue damages in the oral cavity. The substances contained in ECs alter the integrity of the oral epithelium and increase the risk of precancerous lesions. Thus, vaping represents a significant risk factor for oral health and deserves clinical, scientific, and preventive attention in light of the growing use of the device, especially among young individuals.

95. HOSPITAL MORBIDITY AND MORTALITY DUE TO CEREBRAL INFARCTION IN BRAZIL FROM 2015 TO 2024

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INTRODUCTION: The second leading cause of death in the world is stroke, and approximately 10% of those with this disease will develop cerebral infarction, progressing to malignancy in most cases. Cerebral infarction (CI) is a neurological condition with a high mortality rate, in addition to being disabling, which is why it is classified as a serious disease. **OBJECTIVE:** The objective of this work was to investigate hospital admissions for cerebral infarction in Brazil, from 2015 to 2024. **METHODS:** This is an epidemiological, exploratory, quantitative-descriptive, time-series study, covering the years 2015 to 2024. Data were extracted from the Hospital Information System (SIH/SUS) - TABNET/DATASUS, Ministry of Health, Brazil. The variables analyzed include the number of hospitalizations, hospital deaths, age group, sex, color/race and geographic region. **RESULTS:** There were $n = 219,037$ hospitalizations for HF in Brazil in the decade studied, with a continuous increasing trend, involving some peaks and discrete oscillations. The year 2015 ($n = 17,998$) had the lowest number and 2024 ($n = 25,356$) had the highest number of hospitalizations for pathology. The region with the most cases was the Southeast ($n = 100,366$), followed by the South ($n = 54,571$). The age groups most affected were: 50 to 59 years ($n = 36,318$), 60 to 69 years old ($n = 56,380$), 70 to 79 years old ($n = 55,032$), and 80 and over ($n = 39,076$) hospitalizations. The predominant sex was male ($n = 11,4910$) hospitalizations. The white race ($n = 84,431$) was the most affected, followed by the brown race ($n = 75,096$). The total amount spent on these hospitalizations was R\$ 454,339,098.82 and the average value was R\$ 2,074.26. There were $n = 32,765$ deaths from HF, corresponding to a mortality rate of $n = 14.96$, from HF in Brazil. **CONCLUSION:** The IC presents a high number of hospitalizations, with an increasing trend over the period, which generates an alert for the control of these cases. Recognizing the epidemiological profile favors the screening of the disease among the risk group described as men, in the age group over 50 years old, and mainly 60-79 years old, especially in the Southeast and South, and due to the pathophysiology, those who suffered a stroke.

96. HOSPITAL MORBIDITY AND MORTALITY OF MULTIPLE SCLEROSIS IN BRAZIL FROM 2015 TO 2024

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INTRODUCTION: Multiple Sclerosis (MS) is characterized by the generation of the myelin sheaths (membranes that surround the fibers of the Central Nervous System), which ensures the speed of electrical impulses of neurotransmission with precision, at various points. Damage to this sheath allows its regeneration without any impairment of function, however certain inflammations can trigger irreversible damage and loss of standard function. As it is a chronic disease and incapacitates the sufferer, Multiple Sclerosis requires adaptation from the patient and their life cycle. **OBJECTIVE:** The objective of this study was to investigate the epidemiological profile of hospital morbidity and mortality due to MS in Brazil from 2015 to 2024. **METHODS:** This is an epidemiological, quantitative, descriptive study with secondary data from the SUS Hospital Information System (SIH-SUS) - TABNET/DATASUS, Ministry of Health, for the period (2015-2024). Variables studied: hospitalizations, hospital deaths, age group, sex, color/race, region, average value, total value spent and mortality rate. The data were exported to EXCEL, tabulated and expressed in absolute numbers and frequencies. **RESULTS:** The number of hospitalizations due to MS was 50,304 cases in the 10 years of the study. It presents an increasing trend, surpassing the presumed trend in 2024. In 2015, there were 2,078 and in 2024, there were 8,375 hospitalizations. The highest number of cases was in the Southeast ($n=35,934$), followed by the South ($n=5,629$). The age group most affected was 30 to 39 years old ($n=14,509$) hospitalizations. There was a high predominance of females (70%) and males (30%). The white race predominated with 2,7364 and brown ($n=15,286$) hospitalizations. Total amount spent ($n=R\$27,475,434.29$); average amount ($n=R\546.19). There were $n=318$ hospital deaths from MS, with a national mortality rate ($n=0.63$), although the North region has the highest mortality rate ($n=3.08$). **CONCLUSION:** Multiple sclerosis is a disease with serious consequences for its sufferers and their support network, due to disabling injuries and difficulties in daily activities. The number of deaths reflects the need for improvement in its management, demonstrating several fluctuations that may reflect the absence of protocols or difficulties in implementing health measures that are based on preventive results for such hospitalizations. These data can support measures to encourage the prevention of hospitalizations, as well as the promotion of health in the face of MS, improving its treatment and increasingly minimizing its deaths.

97. PREVALENCE AND PROFILE OF CESAREAN DELIVERIES IN BACABAL: AN ANALYSIS OF SECONDARY DATA FROM 2018 TO 2023

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INTRODUCTION: In Brazil, between 2000 and 2021, the rate of cesarean deliveries ranged from 37.2% to 57%, far exceeding the 15% limit recommended by the World Health Organization (WHO). In the municipality of Bacabal, there is a high prevalence of cesarean sections, influenced by cultural factors such as fear of vaginal delivery and maternal preferences. **OBJECTIVE:** To conduct a survey of the profile of deliveries of live births in Bacabal – MA, analyzing the mode of delivery and the impacts of cesarean section on child health. **METHODS:** This is a cross-sectional epidemiological study conducted in Bacabal–MA, using secondary data from DATASUS for the period 2018–2023. The analyzed variables included ethnic group, prenatal care, maternal age, mode of delivery, type of pregnancy, and congenital anomalies. Data were organized in electronic spreadsheets and analyzed using SPSS 21.0, applying frequency distributions and

the chi-square test ($p < 0.05$). **RESULTS:** The study revealed an exceptionally high prevalence of cesarean deliveries in Bacabal-MA between 2018 and 2023, reaching 75.8%, far exceeding the OMS recommendation. Cesarean sections predominated across all age groups and ethnic categories, especially among mixed-race (79.6%) and white women (82.5%), while Black women had a higher proportion of vaginal births. There was a significant association between delivery type and number of prenatal consultations ($p < 0.001$): 83.5% of women with seven or more consultations underwent cesarean delivery. Other variables (age, type of pregnancy, and congenital anomalies) also showed a predominance of cesarean section, indicating medicalization of childbirth and inequalities in obstetric care. Child-health impacts reported were respiratory disorders, including allergic rhinitis, asthma, and transient tachypnea. **CONCLUSION:** It is observed that a high rate of cesarean deliveries occurred, especially among young mixed-race women. Black women showed the second highest proportion of vaginal births. Indigenous women exhibited a high prevalence of cesarean sections, diverging from other regional contexts. The need for further studies on the impacts of cesarean delivery on child health and the social determinants influencing the choice of delivery method is highlighted. Campaigns promoting vaginal delivery are recommended.

98. RESTRICTIVE VERSUS LIBERAL FLUID STRATEGY IN ADULTS WITH SEPTIC SHOCK: A SYSTEMATIC REVIEW

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INTRODUCTION: Septic shock is a high-mortality condition characterized by circulatory dysfunction and tissue hypoperfusion, whose initial management is centered on fluid resuscitation. The optimization of fluid therapy after the initial phase is crucial, as both hypovolemia and fluid overload are associated with poorer clinical outcomes. In this context, the debate over adopting a restrictive or liberal fluid strategy has become a central focus in modern intensive care. **OBJECTIVE:** This study aims to synthesize evidence from major clinical trials comparing the efficacy and safety of restrictive versus liberal fluid strategies in adult patients with septic shock. **METHODS:** This is a systematic review. The search was conducted in July 2025 in the PubMed, Cochrane Library, and Embase databases, using the descriptors (Septic Shock[MeSH Terms] OR Sepsis[MeSH Terms]) AND (Fluid Therapy[MeSH Terms]) AND (restrictive OR liberal) AND (Randomized Controlled Trial[Publication Type]). We included randomized clinical trials published in the last 5 years, with no language restriction, that directly compare fluid strategies in adult patients with septic shock. **RESULTS:** The analysis of 13 randomized clinical trials, involving over 16,500 patients, found no statistically significant difference in the primary outcome of 90-day mortality. In the CLASSIC trial, mortality was 42.3% in the restrictive group versus 42.1% in the liberal group. Analysis of the aggregated data confirmed this equivalence, with a Relative Risk (RR) of 0.99 (95% Confidence Interval [CI]: 0.93 to 1.05). The restrictive approach was safe, with no increase in the incidence of serious adverse events such as ischemic events or the need for renal replacement therapy. It also achieved its goal, resulting in a cumulative fluid balance nearly 2 liters lower than

the liberal group over 5 days. **CONCLUSION:** The search for the optimal fluid strategy in septic shock has been a major debate. The results, based on the strongest available evidence, demonstrate that neither the restrictive nor the liberal strategy offers a survival advantage. However, by confirming the safety of the restrictive approach, this study reinforces that the clinical priority should be the prevention of fluid overload, allowing clinicians to individualize management without fear of causing harm from hypoperfusion.

99. POLYPHARMACY IN THE ELDERLY AND THE RISK OF DRUG INTERACTIONS

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INTRODUCTION: The risks associated with polypharmacy among the elderly are recognized as a global health problem, with a growing prevalence in countries like Brazil. Polypharmacy, defined as the combination of more than five medications, can initially have positive effects on disease control and treatment. However, drug interactions and the potential for adverse effects can reduce vitality and quality of life in older adults, in addition to favoring dangerous and potentially fatal clinical outcomes. Therefore, understanding the risks associated with polypharmacy is essential for developing a safer and more effective therapeutic approach for the elderly. **OBJECTIVE:** Analyze the risks associated with polypharmacy in the elderly and the risk of deleterious drug interactions. **METHODS:** The methodology consisted of a systematic literature review of PubMed, LILACS, and Google Scholar databases, using health descriptors related to polypharmacy, older adults, and drug interactions. Boolean operators and filters for freely available full-text articles published between 2015 and 2025 were applied. The selection prioritized original studies and reviews directly related to the risks and factors associated with polypharmacy in older adults. **RESULTS:** The prevalence of polypharmacy in the elderly (≥ 65 years) varies from 30% to 60% in studies, being associated with a higher risk of adverse reactions, hospitalizations, and poorer quality of life. The risk of drug interactions was directly proportional to the number of medications being used, ranging from 13% with two medications to 82% with seven or more. Furthermore, the most significant interactions involved common combinations such as antidiabetics and beta-blockers or nonsteroidal anti-inflammatory drugs (NSAIDs) and diuretics, leading to negative clinical impacts, the main ones being hypotension, kidney damage, and gastrointestinal bleeding. **CONCLUSION:** Therefore, it can be concluded that polypharmacy in the elderly represents a significant public health challenge, being directly associated with an increase in adverse events, drug interactions, and a reduced quality of life. Therefore, early identification and continuous monitoring of treatments are essential to minimize risks. In this sense, multidisciplinary strategies and periodic prescription review are essential to promote the rational use of medications in this population.

100. RELATIONSHIP BETWEEN THE CLINICAL PRESENTATION OF HEART FAILURE AND THE NUMBER OF HOSPITAL ADMISSIONS DUE TO DECOMPENSATION

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INTRODUCTION: Heart failure (HF) is a clinical syndrome characterized by the inability of the heart to pump blood effectively to meet tissue metabolic demands. It is one of the leading causes of hospitalization among adults and the elderly and is associated with high mortality and readmission rates. The clinical presentation of HF is heterogeneous and may directly reflect the severity of the condition and possible prognoses, such as hospital admissions, requiring further investigation. **OBJECTIVE:** Analyze the relationship between clinical presentation and prognosis of hospitalization for decompensated HF. **METHODS:** This is an observational, retrospective, historical cohort study conducted with patients treated at a specialized service in Maranhão between 2021 and 2024. The data were tabulated and organized in Excel, and statistical analysis was performed using R Studio software (version 4.4.1). Spearman's correlation, Kruskal-Wallis, and Mann-Whitney tests were used for inferences, adopting a significance level of 5%. The research was approved by the Ethics Committee (CAAE: 25756919.9.2004.5086). **RESULTS:** A total of 233 patients were analyzed. Regarding the epidemiological profile, there was a predominance of males (68.5%) and brown-skinned individuals (61.87%), with a median age of 59 years, ranging from 17 to 90 years. Furthermore, regarding the association between clinical signs of HF and the number of hospitalizations, a statistically significant difference was identified between the number of hospitalizations and the stage of HF ($p = 0.0066$), which is reinforced by a low-magnitude positive correlation ($\rho = 0.18$), indicating that as the stage of HF worsens, there is a tendency for an increase in the number of hospitalizations. A statistically significant difference was also observed between the number of hospitalizations and the ethnicity of the patients ($p = 0.033$). **CONCLUSION:** Therefore, based on the study, it can be observed that males and individuals of mixed race are predominant among patients with HF. In addition, there is a significant association between the higher number of hospitalizations and the worsening of the disease stage and ethnicity. These findings point to the need to target actions at the most vulnerable social groups and to develop health actions that prevent the worsening of the disease, aiming at early diagnosis, reduction of hospitalizations, and improvement of clinical outcomes.

101. OPHTHALMOLOGICAL SIGNS AS A SCREENING TOOL FOR THE DIAGNOSIS OF SYSTEMIC DISEASES: AN INTEGRATIVE REVIEW

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INTRODUCTION: Systemic diseases are those that affect multiple organs and tissues of the body, rather than being limited to a specific area. The eyes have rich vascularization and innervation, which can be observed noninvasively through certain examinations, such as ophthalmoscopy. Therefore, many systemic diseases have ocular repercussions, and early diagnosis is essential for effective treatment and the prevention of complications. A thorough ophthalmological evaluation is a highly important diagnostic tool in general clinical practice, allowing for the detection of pathological changes both locally and as a screening method for other systemic diseases. Thus, this review is essential to analyze and understand the events related to the topic. **OBJECTIVE:** To highlight, through medical literature, the importance of ocular semiology in early diagnosis. **METHODS:** This is a integrative literature review. The searches were conducted in the PubMed and SciELO databases between June and July 2025, using the following controlled descriptors: "ocular manifestations," "diabetic retinopathy," and "early diagnosis." The terms were combined with the Boolean operators AND and OR to broaden and refine the results, and articles published between 2019 and 2025 were analyzed. **RESULTS:** Several systemic diseases present ocular manifestations that can serve as screening tools for early diagnosis. For instance, in systemic lupus erythematosus, retinal vasculitis and microangiopathy detectable through fundus examination are frequent findings. Another example is Behçet's disease, in which posterior uveitis and retinal vasculitis may precede cutaneous and oral lesions. In spondyloarthritis and rheumatoid arthritis, anterior uveitis is a

common finding and may indicate systemic inflammatory activity. Infectious diseases such as syphilis and tuberculosis also present ophthalmological manifestations, including chorioretinitis and vasculitis, making ocular examination essential for the early differential diagnosis of these conditions. **CONCLUSION:** Based on this, ocular evaluation can reveal early clinical signs such as uveitis, vasculitis, and optic neuropathies that precede classic systemic symptoms. Therefore, recognizing these changes allows for faster diagnosis and early implementation of treatment, reducing the risk of irreversible visual sequelae and improving the patient's overall prognosis.

102. EPIDEMIOLOGICAL PROFILE OF GESTATIONAL TOXOPLASMOSIS AMONG INDIGENOUS PREGNANT WOMEN IN THE NORTHEAST REGION OF BRAZIL (2019–2025)

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INTRODUCTION: Gestational toxoplasmosis is caused by the protozoan *Toxoplasma gondii*, whose primary infection during pregnancy can result in serious consequences for the fetus, such as neurological and visual impairments and, in severe cases, fetal death. In Brazil, the high prevalence of the parasite combined with inequalities in access to adequate prenatal care makes this infection a major public health problem. Thus, Indigenous pregnant women often face greater vulnerability due to the combination of racial discrimination, gender inequality, and socioeconomic precariousness. **OBJECTIVE:** This study aims to analyze the epidemiological profile of gestational toxoplasmosis among indigenous pregnant women reported in the Northeast Region. **METHODS:** This is an epidemiological, descriptive, and retrospective study using secondary data extracted from the Notifiable Diseases Information System (SINAN), from the Datasus platform, between 2019 and 2025. Confirmed cases of gestational toxoplasmosis in self-identified Indigenous pregnant women living in the Northeast region were included. The variables analyzed were: year and region of notification, age group, and education level. **RESULTS:** A total of 138 cases of gestational toxoplasmosis were reported in Indigenous pregnant women in the Northeast region. There was a progressive increase in notifications, peaking in 2024 ($n=41$ cases). Most pregnant women were aged 20 to 39 years ($n=98$), followed by 15 to 19 years ($n=32$). Regarding education, complete high school ($n=35$) stood out, followed by incomplete high school ($n=19$) and complete elementary school ($n=12$). Only 1 pregnant woman had incomplete higher education, and 6 had completed higher education. Regarding the distribution by state, the highest concentration of cases occurred in Bahia ($n=39$) and Pernambuco ($n=36$). Most cases occurred in 2023 ($n=34$) and 2024 ($n=41$), suggesting possible improvements in surveillance and notification. **CONCLUSION:** The data show an increase in reports of gestational toxoplasmosis among Indigenous pregnant women in the Northeast, especially among young women with up to high school education. The findings reinforce the need for public policies aimed at expanding early diagnosis, prenatal care, and prevention strategies in Indigenous communities. Ensuring equal access to information, diagnosis, and healthcare, especially during prenatal care, is essential to mitigate the impacts of toxoplasmosis, protecting pregnant women and newborns in different contexts.

103. CESAREAN SECTION AND EARLY NEONATAL MORTALITY: AN EPIDEMIOLOGICAL ANALYSIS IN THE NORTHEASTERN STATES OF BRAZIL

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INTRODUCTION: The increase in cesarean section rates in Brazil, especially in the North and Northeast regions, raises concerns about associated neonatal outcomes, such as early neonatal mortality. Although cesarean delivery is an important alternative birth method, its excessive use, often without clinical indication, may be related to greater risks for the newborn. **OBJECTIVE:** In this context, the present study aims to analyze whether the states in the Northeast region with the highest percentage of cesarean births also have higher rates of early neonatal mortality in the period from 2015 to 2023. **METHODS:** This is an epidemiological, descriptive, and retrospective study using secondary data from the Live Birth Information System (SINASC) and the Mortality Information System (SIM) of the nine northeastern states of Brazil. The proportions of cesarean sections and early neonatal mortality rates (deaths per thousand live births) were calculated. The data were organized in a spreadsheet for comparative analysis. **RESULTS:** The states with the highest proportions of cesarean births were Bahia (45.5%), Ceará (59.8%), Alagoas (53.7%), and Paraíba (60.2%). Regarding early neonatal mortality, the highest rates were observed in Bahia (8.9 per thousand), Maranhão (8.0), and Pernambuco (6.8). Although some regions with high cesarean rates also showed high neonatal mortality, such as Alagoas (7.0) and Bahia (8.9), a direct proportional relationship was not observed in all states, as exemplified by Sergipe (43.8% cesarean births and 8.3% mortality) and Ceará (59.8% cesarean births and 6.5% mortality). **CONCLUSION:** The data suggest that there is no simple correlation between the percentage of cesarean deliveries and the early neonatal mortality rate in the states of Northeast Brazil. Although states with high cesarean rates may have higher early neonatal mortality, other contextual factors—such as the quality of obstetric and neonatal care, hospital infrastructure, and regional inequalities—likely influence the outcomes. Analytical studies are recommended to further investigate this relationship.

104. EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS DUE TO RESPIRATORY DISEASES IN CHILDREN UNDER 1 YEAR OF AGE IN MARANHÃO (2015–2024)

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INTRODUCTION: In the first years of life, the respiratory system is still developing, which makes children more vulnerable to infections. Acute respiratory infections (ARIs), such as pneumonia, bronchiolitis, and influenza, remain an important public health challenge and are among the leading causes of hospitalizations and child deaths in Brazil. In Maranhão, a state marked by social vulnerabilities, understanding the profile of these infections in children under 1 year of age is essential to guide effective prevention and care strategies. **OBJECTIVE:** To analyze the frequency, most common causes, and mortality associated with ARIs in children under 1 year of age in Maranhão, from 2015 to 2024. **METHODS:** This is a descriptive,

retrospective study using data from the Department of Informatics of the Unified Health System (DATASUS), extracted from the Hospital Information System (SIH/SUS). Hospitalizations and deaths recorded under Chapter X of ICD-10 (Diseases of the Respiratory System) were included, considering children under 1 year of age from 2015 to 2024. The variables analyzed were: year, main cause, municipality of occurrence, and outcome (discharge or death). **RESULTS:** Between 2015 and 2024, Maranhão recorded 46,473 hospitalizations due to respiratory diseases in children under 1 year of age, representing 10.2% of the 454,109 hospitalizations for these diseases across all age groups. The year 2023 had the highest number of hospitalizations (6,749). Pneumonia was the leading cause of hospitalizations (26,001) and deaths (329). In total, 594 deaths in children under 1 year of age were recorded due to respiratory diseases, with a peak in 2018 (44 deaths from pneumonia). São Luís accounted for the highest number of hospitalizations (8,153) and deaths (292), followed by Imperatriz (5,030 hospitalizations, 95 deaths) and Santa Inês (3,575 hospitalizations). **CONCLUSION:** ARIs continue to significantly impact child health in Maranhão. Pneumonia accounts for more than half of the deaths in children under 1 year of age. The findings highlight the urgency of strengthening prevention measures, such as expanding vaccination coverage, early monitoring of symptoms, and investing in health infrastructure in the most affected municipalities. Continuous monitoring of these indicators is crucial to reducing preventable mortality and ensuring healthier childhoods, especially in the most vulnerable areas.

105. PREMATURITY AND ASSOCIATED FACTORS: AN ANALYSIS OF NORTHEAST BRAZIL BETWEEN 2019 AND 2023

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INTRODUCTION: Prematurity, defined as birth before 37 completed weeks of gestation, is a public health challenge due to its associated risks, such as neonatal morbidity and mortality, and respiratory and neurological disorders. Several factors contribute to its occurrence, including social and gestational aspects. **OBJECTIVE:** Analyze the main factors associated with prematurity. **METHODS:** This was a cross-sectional, retrospective, quantitative, observational epidemiological study. Secondary data from the Live Birth Information System (SINASC) were processed and analyzed in RStudio. Complete singleton birth records in the Northeast region between 2019 and 2023 were included. The dependent variable was prematurity, and the independent variables included maternal age, education, number of living children, prenatal visits, mode of delivery, and newborn sex. Statistical analysis used the Kolmogorov-Smirnov test, Mann-Whitney test, Pearson's chi-square test, and odds ratio calculation with a 95% confidence interval. **RESULTS:** The sample included 3,231,819 live births, with a prevalence of prematurity of 10.68% (n=345,242), with an increase in Ceará (12.27%) and Rio Grande do Norte (11.99%). Women aged 40 years or older had a 67.5% higher risk of prematurity (OR=1.67). The absence of prenatal consultations was associated with the outcome with a 3.38-fold higher risk (OR=3.38). Cesarean delivery demonstrated a lower risk of prematurity (OR=0.94). Furthermore, mothers with 11 to 15 children had a 77% higher predisposition to premature births (OR=1.77). Mothers with 12 or more years of education had a protective effect

(OR=0.63), as did female gender (OR=0.92). **CONCLUSION:** Given the data presented, it is noteworthy that extreme maternal age, inadequate prenatal care, and high parity can influence the occurrence of prematurity. Cesarean delivery, education level, and the female sex of the newborn act as protective factors against this outcome. Thus, the importance of public policies focused on health education, expanded prenatal coverage, and special attention to groups of women in situations of social vulnerability in the Northeast is reinforced.

106. MORBIDITY AND MORTALITY DUE TO ACUTE BRONCHIOLITIS AND BRONCHITIS IN INDIGENOUS AND NON-INDIGENOUS PEOPLE IN MARANHÃO (2015-2025)

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INTRODUCTION: Acute bronchiolitis and bronchitis are respiratory infections that affect the lower airways and are among the main causes of hospitalizations in Brazil, representing a serious public health problem, especially in Maranhão, which is among the states with an incidence at an alert level in 2025. These pathologies, when associated with social vulnerability factors, can evolve seriously and result in death, especially in indigenous populations, historically marked by inequalities in access to health care. **OBJECTIVE:** In this context, the present study aims to analyze the profile of hospitalizations and the mortality rate due to acute bronchiolitis and bronchitis among indigenous and non-indigenous people in the period from 2015 to 2025. **METHODS:** This is an ecological, descriptive, and retrospective study, based on secondary databases such as the Brazilian Institute of Geography and Statistics (IBGE) and the Department of Information and Informatics of the Unified Health System (DATASUS), through the SUS Hospital Information System (SIH/SUS). The variables analyzed were the number of hospitalizations, race/color, age group, and mortality rate over the last 10 years. **RESULTS:** Based on the data collected, it was observed that of the 22,473 hospitalizations reported during this period, only 133 corresponded to the Indigenous community, which represents 0.59% of the total number of hospitalizations. This scenario suggests possible underreporting in the state of Maranhão and difficulties in accessing health care for the Indigenous community. Furthermore, of the 133 hospitalizations, 110 occurred among children under 4 years of age, 78 in children under 1 year of age and 32 between 1 and 4 years of age, highlighting the higher incidence in infants. On the other hand, regarding the mortality rate, it was observed that the Indigenous population has the highest rate (0.75), compared to other racial categories: White (0.14); Asian (0.24); Mixed Race (0.29); Black (0.37); and No Information (0.49). Therefore, it is clear that indigenous people affected by acute bronchiolitis and bronchitis tend to develop more seriously, reflecting the considerable health inequities experienced by indigenous peoples, such as factors related to socioeconomic conditions and access to health care. **CONCLUSION:** Therefore, the data reinforce the need to strengthen inclusive policies, with investments aimed at reducing social inequities and expanding access to comprehensive and equitable health care.

107. HYPERTENSION IN MARANHÃO: ECOLOGICAL STUDY OF HOSPITALIZATIONS AND ASSOCIATED FACTORS IN THE TEN LARGEST CITIES

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INTRODUCTION: Systemic Arterial Hypertension (SAH) is a major public health challenge, being the leading preventable cause of serious cardiovascular diseases, such as stroke and heart attack. In Brazil, its high prevalence and resulting complications reflect failures in primary care. As a Primary Care-Sensitive Condition (PCSC), SAH highlights the effectiveness of PHC—where high hospitalization rates indicate system weaknesses. In Maranhão, a state marked by social and structural inequalities, this situation is even more critical. This study analyzes the state's 10 most populous municipalities to identify patterns of hospitalizations due to SAH, aiming to inform public policies that strengthen PHC, reduce inequalities, and prevent avoidable hospitalizations. **OBJECTIVE:** To analyze hospitalizations for Systemic Arterial Hypertension (ICD-10 I10-I15) and their relationship with socioeconomic and infrastructure indicators of Primary Health Care in the ten most populous municipalities of Maranhão between 2022 and 2024, characterizing the municipal profile. **METHODS:** This is an ecological study, with a quantitative and descriptive approach, carried out between 2022 and 2024. The ten most populous municipalities of Maranhão were selected, according to IBGE estimates (2022), adopting the municipality as the unit of analysis. Secondary data were obtained from the TABNET/DATASUS system and SIH/SUS in the module "Hospitalizations by Municipality", considering the "ICD-10 Chapter: Diseases of the Circulatory System" and the diagnosis "Essential (primary) hypertension". The information was organized into electronic spreadsheets, including the number of hospitalizations, place of residence, and year of occurrence. Additionally, demographic and socioeconomic data from the IBGE (Brazilian Institute of Geography and Statistics) were consulted. **RESULTS:** The analysis of hospitalizations due to Systemic Arterial Hypertension (SAH) between 2020 and 2024 in the ten most populous municipalities of Maranhão reveals a general downward trend in the number of hospitalizations. The statewide total fell from 7,111 hospitalizations in 2022 to 4,778 in 2024, representing an approximate reduction of 32.8%. Among the municipalities, São Luís maintained the highest absolute number of hospitalizations, with a significant drop from 200 cases in 2023 to 87 in 2024, indicating potential progress in primary care management and the monitoring of hypertensive patients. Imperatriz showed fluctuations, with a slight increase in 2024 (39 cases) after a decline in 2023. Medium-sized cities, such as Codó and Bacabal, maintained intermediate levels, while Timon and Caxias showed decreasing and low numbers, possibly reflecting better disease control. The absence of records in some municipalities, such as São José de Ribamar and Paço do Lumiar, is noteworthy, which may indicate underreporting or inconsistencies in the information system (SIH/SUS). **CONCLUSION:** We conclude that, despite the overall reduction in hospitalizations for hypertension, significant disparities persist between municipalities. The observed decrease may reflect the gradual strengthening of primary care, greater adherence to treatment, and better monitoring of hypertensive patients. However, the lack of records in some municipalities and the fluctuating numbers in others highlight weaknesses in surveillance and information consistency. These findings reinforce the need for continued investment in PHC infrastructure, in the qualification of health teams, and in improving

recording and monitoring systems, ensuring greater data reliability and supporting chronic disease prevention strategies.

108. ANALYSIS OF INFLUENZA VACCINATION COVERAGE IN THE TEN LARGEST CITIES IN POPULATION IN THE STATE OF MARANHÃO: AN ECOLOGICAL STUDY

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INTRODUCTION: Immunization against the influenza virus represents one of the most effective public health strategies for preventing severe cases, hospitalizations, and deaths. However, the socioeconomic and structural heterogeneity observed in Brazil poses challenges to the homogeneity of vaccination coverage. The state of Maranhão, characterized by marked regional disparities, clearly illustrates this scenario, where adherence to vaccination campaigns varies significantly between municipalities. **OBJECTIVE:** To analyze influenza vaccine coverage and its correlation with socioeconomic and health infrastructure indicators in the ten most populous cities of the state of Maranhão (São Luís, Imperatriz, São José de Ribamar, Timon, Caxias, Paço do Lumiar, Codó, Açailândia, Bacabal, and Balsas), in order to identify factors associated with immunization performance. **METHODS:** This is an ecological study with a quantitative and descriptive approach, analyzing the period from 2022 to 2024. The ten most populous municipalities in the state were selected, according to IBGE estimates (2022). Secondary data were obtained through the TABNET/DATASUS platform, using the descriptors "National Influenza Vaccination Campaign," "Campaign Year," "Federal Unit (Maranhão)," and "Municipality." The variables collected included the target population, the total number of doses administered, and the percentage of vaccination coverage achieved in each municipality. The results analysis stage involved calculating vaccination coverage and comparing it between municipalities, considering their performance in relation to the national goal of 90% coverage. **RESULTS:** Data analysis shows a progressive downward trend in immunization rates, both at the municipal and state levels. In 2022, the state average reached 81.7%, approaching the recommended target of 90%. However, in 2023, it dropped to 79.0%, and in 2024, coverage dropped sharply to 51.7%, even with the increase in the number of target individuals. Among the municipalities evaluated, significant heterogeneity in campaign performance was observed. In 2022, Caxias (115%), Bacabal (101.3%), São José de Ribamar (98.9%), and Açailândia (96.9%) exceeded the established target, indicating good operational efficiency of local actions. However, most cities experienced a significant reduction in coverage in subsequent years, especially in 2024, when none reached the recommended level. The 2024 data reveal the most critical scenario: no municipality achieved 65% coverage, and the state recorded a drop of more than 30 percentage points compared to 2022. This decline may be associated with factors such as reduced population participation, logistical challenges in the campaign, misinformation, and weakening of active contact strategies in Primary Health Care. **CONCLUSION:** We conclude that influenza vaccination coverage in the ten most populous municipalities of Maranhão showed a significant reduction between 2022 and 2024, highlighting weaknesses in the maintenance of immunization strategies. Although some municipalities exceeded the 90% target in 2022, none managed to repeat this performance in subsequent years, reflecting a progressive decline in population participation and possible failures in the operationalization of the campaigns. These findings indicate

that vaccine availability alone does not guarantee high coverage. It is essential to strengthen Primary Health Care, expand social communication in health, and adopt strategies adapted to local realities to reverse the low coverage scenario.

109. RELATIONSHIP BETWEEN BASIC SANITATION AND ACUTE DIARRHEAL DISEASE IN MARANHÃO: EPIDEMIOLOGICAL STUDY (2019–2025)

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INTRODUCTION: The lack of basic sanitation is a critical social determinant of health that favors the spread of pathogens, through waterborne or fecal-oral transmission, responsible for enteric infections such as Acute Diarrheal Disease (ADD). This condition is particularly prevalent in areas with poor access to drinking water and sewage systems. **OBJECTIVE:** In this context, the present study seeks to analyze the relationship between low basic sanitation coverage and the number of hospitalizations due to Acute Diarrheal Disease, as well as the epidemiological profile of the disease in Maranhão between 2019 and 2025. **METHODS:** This is an ecological, descriptive, and retrospective study, based on secondary databases such as the Brazilian Institute of Geography and Statistics (IBGE) and the Department of Information and Informatics of the Unified Health System (DATASUS), through the SUS Hospital Information System (SIH/SUS). The variables analyzed were age group, sex, race/color, basic sanitation coverage, and number of hospitalizations between 2019 and 2025. **RESULTS:** From this, it was observed that in this period the highest proportion of hospitalizations for ADD occurred in the age group of 1 to 4 years, with a prevalence of the female sex (20.81% higher than the male) and of the brown race (82.33%). Furthermore, municipalities with lower sewage network coverage, such as São Luís Gonzaga do Maranhão (8.7%), Lago da Pedra (16.9%) and Bacabal (30.3%), presented hospitalization rates of 2,611.1, 852.3 and 132.9 per 100,000 inhabitants, respectively, in 2024. In contrast to this scenario, cities with greater sanitation coverage, such as São Luís (65.4%), presented only 24 hospitalizations per 100,000 inhabitants in the same year. These data highlight the negative impact of the lack of basic sanitation on hospital admission rates for ADD, reinforcing that the absence of adequate sanitary infrastructure increases exposure to enteric pathogens. **CONCLUSION:** Therefore, increasing sanitation coverage in Maranhão is an essential measure to reduce hospitalizations due to preventable infectious diseases, which directly contributes to improving public health indicators and ensuring equity in access to a healthy environment.

110. ORA-PRO-NÓBIS AS AN ALTERNATIVE IN THE COMBAT OF IRON-DEFICIENCY ANEMIAS

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INTRODUCTION: Unconventional Food Plants (UFPs), despite their rich nutritional potential, are often neglected. UFPs represent an accessible solution to complement and diversify diets, in addition to

reducing costs, especially for vulnerable populations. In this context, *ora-pro-nóbis* (*Pereskia aculeata* Miller) emerges as an alternative for mineral supplementation, including iron, standing out for its high content, which surpasses that of foods commonly associated with this mineral. Anemia, defined by a low concentration of red blood cells or hemoglobin, is a serious public health problem, with iron deficiency being its most common cause. The daily requirement for iron varies significantly with age, sex, and physiological conditions. Children need 7-10 mg/day during early childhood. Adolescents, on average, require 13 mg/day. For adults, men require 8 mg/day, while women of reproductive age need approximately 18 mg/day. **OBJECTIVE:** This study aimed to explore the potential of *ora-pro-nóbis* in the combat of iron-deficiency anemia. **METHODS:** This study is based on an exploratory literature review. The research was conducted using the scientific databases Scielo and PubMed. Articles written in English, Portuguese, and Spanish were included, with no restriction on the publication date. The search used the following keywords: *ora-pro-nóbis*, Unconventional Food Plants (UFPs), *Pereskia aculeata* Mill., and iron-deficiency anemia. **RESULTS:** The analyzed studies confirm that *ora-pro-nóbis* is an exceptional nutritional source, standing out for its high iron content, which is frequently superior to that of vegetables such as spinach, making it a promising ally in the fight against iron-deficiency anemia. The results indicate iron levels ranging from 14.20 mg to 20.56 mg per 100g. Its robustness and ease of cultivation in domestic environments reinforce its role as an accessible and low-cost dietary alternative, crucial for improving nutritional status. **CONCLUSION:** *Ora-pro-nóbis* emerges as a UFP of notable relevance for food and nutritional security, especially in regions like Maranhão, where its cultivation and use can be further encouraged. The reviewed studies confirm its excellent nutritional profile, particularly highlighting its high iron content, which positions it as an accessible alternative in the fight against iron-deficiency anemia.

111. CONTINUOUS MEDICAL TRAINING: THE ROLE OF MOBILE TECHNOLOGIES AND WEARABLES IN SURGICAL EDUCATION

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INTRODUCTION: The development of surgical skills is a fundamental component of medical education, traditionally based on didactic methods, laboratory simulation, and supervised training. With the advancement of digital technologies, new teaching modalities have emerged, including Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), and mobile devices, offering immersive and interactive learning environments. These Extended Reality (XR) technologies promise to overcome the limitations of conventional methods by providing standardized, repeatable, and safe training without risks to patients (MAO et al., 2021). The increasing availability of these tools in medical education demands a systematic evaluation of their effectiveness in developing surgical competencies and their feasibility for implementation in various professional training contexts (CO et al., 2023; WOODALL et al., 2024). **OBJECTIVE:** To synthesize existing evidence from systematic reviews published between 2015 and 2024 to evaluate the comparative effectiveness of Extended Reality (XR) technologies (VR, AR, MR), mobile technologies, and wearables versus traditional methods in the development of surgical

competência. **METHODS:** This study is a synthesis of systematic reviews published between 2015 and 2024 in English or Portuguese. The search was conducted in the PubMed, SciELO, Google Scholar, and BMC Medical Education databases. The descriptors used focused on "surgical education," "medical training," "mobile technologies," "wearables," and "extended reality." Duplicate articles or those not directly related to the topic were excluded. **RESULTS:** 10 articles were analyzed out of 50 found. Virtual/Augmented Reality technologies demonstrated superior effectiveness compared to traditional methods in developing surgical skills. Immersive Virtual Reality, in particular, provided significant improvements in technical performance, including 18-43% reductions in procedure time and higher accuracy (MAO et al., 2021), in addition to enhanced speed and performance (PATEL et al., 2024). While VR proved superior to didactic training, it showed equivalence or inferiority to "dry lab" in some contexts (CO et al., 2023). In orthopedic surgery, it resulted in faster performance with fewer errors (LONGO et al., 2021), with immersive technologies generally superior in technical proficiency and time, and conferring greater user confidence (SADEK et al., 2023). Although VR/AR demonstrated better information retention (SADEK et al., 2023) and superiority over didactic teaching (CO et al., 2023), other studies found no significant difference in knowledge acquisition (WOODALL et al., 2024). However, user satisfaction, engagement, and confidence were consistently positive and high across all evaluations (MAO et al., 2021; WOODALL et al., 2024; PATEL et al., 2024; ARJOMANDI RAD et al., 2021). **CONCLUSION:** XR technologies represent a promising tool for surgical training, especially for developing technical and procedural skills. Although they demonstrate consistent superiority over traditional didactic methods, their effectiveness varies according to the specific context. The main obstacles to widespread implementation include high costs, technical limitations, and usability issues, reported in six of the ten analyzed studies. The heterogeneity of studies and the need for more robust cost-effectiveness analyses limit the generalization of findings to different medical training contexts.

112. INGUINAL HERNIOPLASTY VIDEO-ASSISTED VERSUS ROBOTIC: A COMPARISON OF SURGICAL APPROACHES

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INTRODUCTION: Inguinal hernioplasty is one of the most common surgeries performed by general surgeons. It is estimated that, globally, more than 20 million procedures for the treatment of this condition are performed annually. Therefore, it is essential to deepen the analysis of the available surgical approaches, highlighting the robotic and laparoscopic techniques. **OBJECTIVE:** To compare the postoperative effects of robotic and laparoscopic approaches in the treatment of inguinal hernia in adults. **METHODS:** Integrative literature review, in which six articles published between 2020 and 2025 were selected from the PubMed database, all of which were relevant to the topic. For the search, the descriptors "robotic," "laparoscopic," and "inguinal hernia" were used, combined with the Boolean operator "AND." **RESULTS:** In a meta-analysis involving 1,120 patients, no statistically significant differences were observed in the variables of postoperative pain, hospital length of stay, or complication rate. Additionally, the readmission rate and the

incidence of seroma did not show different results between the two techniques. However, when analyzing the variable "surgical site infection," a threefold higher likelihood of infection was found in robot-assisted surgeries compared to the laparoscopic approach. Moreover, it was noted that the 3D, high-definition imaging provided by robotic surgery facilitates dissection of the retropubic space, especially in patients who have undergone prostatectomy. **CONCLUSION:** The articles confirm that the robotization of medicine provides opportunities for greater dexterity and precision. However, the increase in operative time, costs, and potential infections poses a challenge to this process and highlights the need for careful evaluation when indicating different surgical techniques.

113. EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS FOR ACUTE MYOCARDIAL INFARCTION IN ELDERLY PEOPLE IN THE MUNICIPALITY OF IMPERATRIZ FROM 2020 TO 2024

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INTRODUCTION: Acute myocardial infarction (AMI) is a condition characterized by the death of heart cells due to a lack of blood supply, which causes obstruction of the coronary arteries and impairs blood flow to the heart muscle. Chest pain is characteristic of this condition, with the possibility of radiation to other parts of the body. This pathology mainly affects the elderly and can be caused by aging and diseases that are common in this social group, such as hypertension, diabetes, and obesity. **OBJECTIVE:** This study aimed to characterize the epidemiological profile of AMI hospitalizations in the elderly in the city of Imperatriz over the last 5 years, from 2020 to 2024. **METHODS:** This is a retrospective and quantitative study based on data obtained from the Department of Informatics of the Unified Health System (DATASUS) using the TabNet platform. The variables of mortality rate and hospitalizations were analyzed based on color/race, age group, and sex between 2020 and 2024. **RESULTS:** This is a retrospective and quantitative study based on data obtained from the Department of Informatics of the Unified Health System (DATASUS) through the platform's data tabulation system (TABNET). The variables of mortality rate and hospitalizations were analyzed based on race/color, age group, and gender between 2020 and 2024 in the municipality of Imperatriz, Maranhão. During this period, there were 1,870 hospital admissions for AMI in the elderly in Imperatriz, 1,160 of which were in the elderly, approximately 62.00%. The most affected age groups were 65 to 69 (160) and 70 to 74 years (161). This group had a mortality rate of 14.51%, while in non-elderly individuals it was 5.33%. When looking at gender, it was noted that the majority were men, with 461 cases (64.90%), while women accounted for 249 (35.10%) of hospitalizations. However, the mortality rate was higher in women (17.67%) when compared to men (12.80%). In terms of race/color, the brown group stood out, with 305 of the hospitalization cases (42.90%). When analyzing the period of hospitalizations, a greater number of these were observed in 2023 (158) and an increase in numbers over the last 5 years. **CONCLUSION:** There is a clear need for prior action to prevent AMI, especially in the elderly. It is worth emphasizing, therefore, the importance of engaging in public health policies that promote early diagnosis in this risk group, in order to reduce overcrowding in the basic health system and harmful effects

on patients, with treatment already in the early stages. This will minimize the number of elderly people, already in early old age, affected by this life-threatening disease.

114. EPIDEMIOLOGICAL PROFILE OF CONGENITAL SYPHILIS AS A MARKER OF PRENATAL CARE FAILURES IN MARANHÃO, BRAZIL: AN ANALYSIS FROM 2017 TO 2023

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INTRODUCTION: Congenital syphilis is a notifiable infectious disease and a crucial indicator of prenatal care quality. Despite advances in screening and treatment, the state of Maranhão (Brazil) continues to present high incidence rates. Studies highlight that failures in early diagnosis, prenatal follow-up, and treatment adherence compromise the prevention of vertical transmission. **OBJECTIVE:** To investigate the epidemiological profile of congenital syphilis cases among pregnant women in Maranhão from 2017 to 2023, analyzing indicators of failures in surveillance and continuity of prenatal care. **METHODS:** This retrospective, descriptive, and quantitative epidemiological study analyzed confirmed cases of congenital syphilis in Maranhão (2017–2023) obtained from the SINAN database via TABNET/DATASUS, following the criteria of the Brazilian Ministry of Health. Cases involving maternal infection during pregnancy and recorded prenatal care were included, while incomplete or missing data were excluded. Data collection was performed independently by the authors and validated jointly. Sociodemographic, clinical, and geographic variables were analyzed using absolute and relative frequencies. As this study used public and anonymized data, ethical approval was not required, in accordance with CNS Resolution No. 510/2016. **RESULTS:** Among the 4,258 reported cases of congenital syphilis in Maranhão (2017–2023), 1,777 occurred in pregnant women diagnosed during prenatal care. Most were of mixed race (56.3%, n=1,001), followed by white (4.4%, n=78) and black women (1.5%, n=27). The predominant age groups were 20–24 years (24.3%, n=432) and 15–19 years (14.4%, n=255). Regarding education level, complete secondary education (20.3%, n=361) and incomplete primary education (13.8%, n=245) were most frequent. Only 18.7% (n=332) of sexual partners received treatment, while 34.1% (n=606) did not. Most cases were classified as recent congenital syphilis (65.8%, n=1,170). The highest numbers of notifications were recorded in São Luís (31.2%, n=554) and Imperatriz (11%, n=197). **CONCLUSION:** Congenital syphilis remains a significant public health problem in Maranhão, particularly among young women of varying educational levels. Despite prenatal follow-up, treatment failure among partners and late diagnoses reveal critical gaps in clinical management. The predominance of recent cases indicates persistent weaknesses in intervention strategies and continuity of care. Strengthening epidemiological surveillance, improving treatment adherence, and integrating primary care actions are essential to prevent vertical transmission and enhance maternal and child health outcomes.

115. ANALYSIS OF MENTAL HEALTH ACTIONS DEVELOPED BY THE SCHOOL HEALTH PROGRAM IN SÃO LUÍS, IN THE YEARS 2023-2024

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INTRODUCTION: The mental health of children and adolescents is a fundamental aspect of the overall development and well-being of this population. In recent years, especially during and after the COVID-19 pandemic, there has been a significant increase in cases of anxiety, depression, and socialization difficulties among children and adolescents, aggravated by social isolation and the interruption of in-person school activities. In response to this scenario, the Ministry of Health published Technical Note No. 05/2023, which guides the resumption and strengthening of mental health actions in the School Health Program (PSE), highlighting the role of school environments as strategic spaces for mental health promotion, prevention, and care. In this context, the PSE takes a leading role in coordinating health and education for actions aimed at the psychosocial well-being of students. **OBJECTIVE:** Analyze the mental health actions developed by the PSE in the municipality of São Luís, in the state of Maranhão, in the years 2023 and 2024. **METHODS:** A cross-sectional study with a descriptive quantitative approach was conducted by analyzing data available in the Primary Care Health Information System (SISAB) for the municipality of São Luís, Maranhão, in 2023 and 2024. Records of collective mental health activities developed by the PSE were considered, as well as the total number of participants who benefited. **RESULTS:** In 2023, São Luís registered 49 collective mental health actions through the PSE, with the participation of 3,003 people. In 2024, there was a significant increase in reach: there were 288 activities, covering 15,543 participants. In total for the two-year period, the PSE developed 337 mental health activities, impacting 18,546 participants. **CONCLUSION:** Mental health actions under the PSE in São Luís show significant progress, especially in 2024, reflecting the strengthening of national post-pandemic guidelines. In this context, the positive impact of Technical Note No. 05/2023 from the Ministry of Health stands out. With this regulation, there has been a quantitative expansion of activities and a strengthening of strategies for integration between health and education. In addition, the increase in activities and the number of participants highlights the joint commitment of these sectors to promoting psychosocial care, which is essential for the healthy development of children and adolescents. Therefore, the expansion and continuity of these actions are essential to address current and future challenges related to child and adolescent mental health.

116. EVALUATION OF IMMEDIATE AND DELAYED BREAST RECONSTRUCTIONS IN MASTECTOMIZED BREAST CANCER PATIENTS IN THE SUS

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INTRODUCTION: Breast cancer is the most common cancer among women in Brazil. Mastectomy, although effective, can cause psychosocial impacts. Reconstruction aims to restore quality of life. Immediate reconstruction, performed at the same time as the mastectomy, reduces the number of procedures and emotional effects. Delayed reconstruction, performed after cancer treatment, is

indicated in cases such as adjuvant radiotherapy. In the Brazilian Unified Health System (SUS), access to reconstruction still faces challenges, such as a shortage of professionals and limited infrastructure. **OBJECTIVE:** Analyze clinical, surgical, and psychosocial outcomes of immediate and delayed breast reconstruction in women who underwent mastectomy through the SUS, considering clinical profile, resources, and adjuvant therapies. **METHODS:** Integrative literature review, with searches in the SciELO, PubMed, and LILACS databases between 2010 and 2023. The descriptors "breast reconstruction," "mastectomy," "SUS," and "breast cancer" were used. Qualitative analysis identified patterns in comparative studies on reconstructive techniques in the SUS. **RESULTS:** The choice of breast reconstruction technique should be individualized, considering the patient's profile, the team's experience, resources, and costs. This integrative review analyzed clinical evidence on immediate and delayed techniques in mastectomized women, focusing on the reality of the SUS. The retrospective study showed that 73% of reconstructions were immediate, with a predominance of implants, expanders, and flaps (TRAM and latissimus dorsi). Implants had shorter surgical times; flaps required greater complexity and recovery. Major complications occurred in 16.5% of cases, mainly necrosis, infection, and prosthesis extrusion, which were more common in patients undergoing radiotherapy, chemotherapy, or who smoked. The results reinforce the importance of careful evaluation and equitable access in the SUS, with investment in training and infrastructure to ensure safe and comprehensive reconstruction in oncological care. **CONCLUSION:** Breast reconstruction represents an important step in physical and emotional rehabilitation after mastectomy. The data analyzed reinforce the predominance of the immediate technique in the SUS, with emphasis on the use of implants, although flaps are still necessary in more complex cases. Complications such as necrosis and infection are more common in patients undergoing radiotherapy or with risk factors such as smoking. The importance of individualized assessment, comprehensive care, and equal access to reconstruction in the SUS is highlighted.

117. IMPACTS OF SEMAGLUTIDE ON DIABETIC RETINOPATHY

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INTRODUCTION: Diabetic retinopathy (DR) is a common complication of type 2 diabetes (T2D) and the leading cause of preventable blindness in adults. Semaglutide, a GLP-1 receptor agonist used to control T2D and obesity, has shown neuroprotective and anti-inflammatory potential, with favorable effects on the retina. Preclinical studies suggest that it reduces neuroinflammation and vascular leakage in the retina, independently of glucose. However, clinical trials such as SUSTAIN-6 have indicated an increase in adverse retinal events in patients with prior DR, while observational studies have shown that semaglutide does not accelerate the progression of DR. Therefore, it is crucial to clarify the effects of semaglutide on DR for clinical practice. **METHODS:** This is an integrative review, collecting data from complementary secondary sources. Articles were selected from PubMed, MEDLINE, and ScienceDirect, using the descriptors "type 2 diabetes," "diabetic retinopathy," and "semaglutide" in Portuguese and English. Studies that addressed the

relationship between semaglutide and DR progression were included, resulting in nine selected sources. **RESULTS:** Semaglutide, used to treat type 2 diabetes, has varied effects on diabetic retinopathy. In some cases, temporary worsening is observed, especially in patients with pre-existing DR, due to the rapid reduction in blood glucose levels, which overloads the retina and accelerates damage. However, semaglutide can reduce retinal inflammation and preserve ocular vessels, with reports of improvements in advanced stages. Although it poses risks in certain profiles, its clinical benefits are clear. Continuous medical monitoring, especially in the first few months and in patients with a history of retinal changes, is essential. **CONCLUSION:** Semaglutide, recognized for its glycemic control and reduction of cardiovascular events in type 2 diabetes, has a complex impact on diabetic retinopathy. Although it can reduce inflammation and preserve retinal vascular integrity, there are also reports of transient worsening of the disease in patients with a sudden drop in glycated hemoglobin. Treatment requires careful planning and ophthalmological monitoring, with an emphasis on safety. Further long-term studies are needed to clarify its impact on the retina and ensure patient safety.

Oral Presentations

CASE REPORTS AND EXPERIENCE REPORTS

01. PROMOTING VACCINATION AMONG UNIVERSITY STUDENTS: EXPERIENCE REPORT AT A HIGHER EDUCATION INSTITUTION IN MARANHÃO

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INTRODUCTION: Vaccination is one of the most effective ways to prevent vaccine-preventable diseases, promote public health, promote epidemiological surveillance, and mitigate outbreaks. However, many adults, especially college students, keep their vaccination records out of date, compromising individual and collective protection. **OBJECTIVE:** Report the extension experience of the project "Vaccine in Action: Protection for Life", developed at a higher education institution in Imperatriz (MA), focusing on raising awareness about vaccination in young adults. **EXPERIENCE REPORT:** First, a brochure illustrating the vaccination schedule for the 20-59 age group was created, containing accessible information on vaccines, preventable diseases, and the importance of keeping vaccination records up to date for individual and collective health. Subsequently, posters with QR codes providing access to the digital content were distributed and posted in academic circulation areas to facilitate easy access to this information. Finally, project volunteers conducted in-person health education activities with university students during peak times, such as waiting in meal lines, in the school's hallways, and in common areas such as the food court. On these occasions, volunteers approached students, distributed brochures, and answered questions. Twenty-five university students actively participated, demonstrating interest, engagement, and receptiveness. These mechanisms facilitated the dissemination of the content and ensured greater knowledge about the university vaccination record among students. **REFLECTION ON THE EXPERIENCE:** The extension experience proved to be highly relevant to society. Many questions about vaccination were answered, health education was provided, and the university population received appropriate guidance. **CONCLUSIONS AND RECOMMENDATIONS:** The outreach project "Vaccine in Action: Protection for Life"

promoted primary prevention in a critical, participatory, and accessible way. This tool expanded knowledge, promoted mass awareness, and debunked much misinformation about vaccines among academics.

02. NEPHROTIC SYNDROME SECONDARY TO GASTRIC NEOPLASIA IN A YOUNG PATIENT: CASE REPORT

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INTRODUCTION: Nephrotic syndrome (NS) can be primary or secondary to infections, medications, and/or neoplasms. In the latter case, it is more common in the elderly, with a median age of 60. NS in young patients, therefore, is uncommon, but possible and should not be overlooked when investigating nephrotic patients, even young ones. Access to the patient's data was authorized by the Research Ethics Committee (CEP) under opinion number 5.836.575/2022.

OBJECTIVE: To report a clinical case of a young patient with nephrotic syndrome secondary to gastric neoplasm. **CASE DESCRIPTION:** A 36-year-old, male, farmer, from Pinheiro - Maranhão, presented with anasarca that began in September 2023 and was associated with foamy urine. He had a history of acute myocardial infarction in June 2023 and was undergoing treatment for hypothyroidism. He also had a family history of premature death of his father and brother from stroke, both at the age of 35. Initial investigation confirmed NS, with proteinuria of 6.9g/24h, hypoalbuminemia of 2.67g/dL, and severe dyslipidemia (LDL >300mg/dL; triglycerides >500mg/dL). Renal function was initially preserved (creatinine 0.72mg/dL; GFR >90mL/min), and etiological investigation, including serology and autoantibodies, was negative. Renal ultrasound revealed no abnormalities. The patient developed hypercoagulability manifested by deep vein thrombosis (DVT) of the left subclavian vein in May 2024, which delayed renal biopsy due to the need for anticoagulation. He was maintained on antiproteinuric agents until clearance for renal biopsy. He was admitted for biopsy in February 2025, when he had a new DVT, this time in the inferior vena cava. An abdominal CT scan during this admission revealed an image suggestive of gastric neoplasia, confirmed by endoscopic biopsy as a grade 12 gastric neuroendocrine tumor (NET). Membranous NS was presumed to be a paraneoplastic syndrome, dispensing with renal biopsy. The patient developed deteriorating renal function (creatinine: 4.33 mg/dL; GFR: 19 mL/min), generalized edema, and signs of protein-calorie malnutrition. Renal function worsened due to probable renal vein thrombosis. He awaits oncological surgery and will continue to be monitored in the nephrology outpatient clinic. **CONCLUSION:** Although rare, NS secondary to neoplasia in young patients can occur and should not be overlooked during the investigation, so as not to delay the diagnosis of the underlying disease and early treatment of life-threatening conditions.

03. CITIZEN RESCUER: TRAINING FIRST AID MULTIPLIERS IN A SCHOOL IN ALCÂNTARA

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INTRODUCTION: The early action of community rescuers reduces the time between cardiorespiratory arrest and the start of cardiopulmonary resuscitation (CPR), positively impacting survival. Annual CPR training for schoolchildren aged 12 and older is recommended as an effective strategy to broaden the community response to out-of-hospital cardiac arrests. **OBJECTIVE:** Report on first aid training conducted by an academic league from the medical

course in a high school in Alcântara - MA. **EXPERIENCE REPORT:** The Citizen Rescuer project, promoted by an academic medicine league, offers basic life support (BLS) education to the lay public. On 05/25/2024, in a federal high school in Alcântara, 6 students trained 60 laypeople, including students, teachers, and community members. The reception was excellent, and the school environment proved to be welcoming and attentive to the need for health care. The course included theoretical classes on CPR, choking maneuvers, and initial burn management, followed by practical stations for adult and pediatric CPR, choking simulations, and initial care. Original slides produced by the league members under faculty supervision were used, in addition to eight CPR manikins (four adult and four pediatric). **REFLECTION ON THE EXPERIENCE:** Self-confidence is highlighted in the literature as a key predictor of good performance in emergencies. The practical training increased the participant's perception of competence. Education in schools is effective because adolescents are excellent multipliers of knowledge for their families and communities. The invitation received to provide training in another municipality demonstrates recognition and demand for the project, showing that training laypeople is an advance in how BLS is socially perceived. The enthusiasm of the participants, coupled with the interest in replicating the acquired knowledge, shows that educational actions in first aid have the potential to create a culture of prevention and rapid response both within and outside the school environment. **CONCLUSIONS AND RECOMMENDATIONS:** The training in Alcântara demonstrated that the school environment is strategic for disseminating first aid, forming multiplying agents who influence families and communities. The expansion to neighboring municipalities reinforces the need to integrate such training as a policy for permanent health education.

04. INTERGENERATIONAL EDUCATION ON THE SAFE USE OF MEDICINAL PLANTS WITH ELDERLY IN UNIVERSITY EXTENSION PROGRAM

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INTRODUCTION: Health education is understood as a combination of planned learning experiences aimed at empowering individuals to gain greater control over the determinants of health and their related behaviors, as recommended by the World Health Organization (WHO). Among the intergenerational educational practices, a university extension program aimed at the elderly stands out, which promotes thematic workshops with the participation of students from the health area, uniting academic and popular knowledge in a mutual training process. In this context, an educational action was developed focusing on the safe use of medicinal plants in aging, fundamental to prevent risks associated with inappropriate use, valuing traditional knowledge and promoting self-care. **OBJECTIVE:** Report the experience of holding classes in phytotherapy with elderly people, within a university extension program, with emphasis on health education, valorization of traditional knowledge and humanized training of medical students. **EXPERIENCE REPORT:** The activities took place between April and July 2025, with weekly in-person meetings in a university space designed for seniors. Sixty-five seniors enrolled in the program, four students, and one healthcare professor participated. Classes were organized around thematic areas - cardiovascular, renal, and dermatological phytotherapy - that addressed the safe use of medicinal plants for controlling

hypertension, regulating urine output, treating dermatitis, and promoting healing. Each meeting included discussion groups, interactive presentations, and hands-on workshops. Educational activities included memory games, role-playing, themed drawings, and the collective construction of "popular knowledge maps", aimed at recognizing collective knowledge and aligning it with Freire's methodology. Educational products included an illustrated popular booklet with traditional recipes and guidelines on the safe use of medicinal plants, as well as a vertical garden made from plastic bottles to encourage home cultivation. Furthermore, affective memory cards were produced in which participants reported family experiences with medicinal plants, with the purpose of strengthening cultural ties. **REFLECTION ON THE EXPERIENCE:** The experience highlighted the transformative potential of intergenerational health education. A space for dialogue between scientific knowledge and popular culture was established, recognizing the knowledge accumulated throughout the lives of older adults and legitimizing traditional practices within the scope of health interventions. For the students, the activity resulted in the development of sensitive listening, empathy, and communication skills, contributing to a more humanized education aligned with the sociocultural realities of the region. The active participation and enthusiasm of older adults in the workshops indicated a demand for educational practices that recognize their knowledge and promote autonomy in self-care. These findings highlight the importance of incorporating community perspectives into training programs and primary health care strategies. **CONCLUSIONS AND RECOMMENDATIONS:** The experiment proved to be a powerful strategy for promoting health in aging, by integrating scientific and traditional knowledge in a respectful and critical way. The use of medicinal plants, when performed with adequate guidance, can promote safe self-care and autonomy of the elderly person. It is recommended the expansion of similar actions in university extension programs and primary health care, with encouragement to interdisciplinarity, integrative practices and appreciation of popular wisdom as a legitimate form of care.

05. FOREIGN BODY ASPIRATION IN A PATIENT WITH FACIAL TRAUMA: A CASE REPORT.

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INTRODUCTION: Foreign Body (FB) obstruction is a condition characterized by the total or partial inability of air to pass through the respiratory tract. This condition represents a public health concern, as the inflammatory response it triggers may lead to hospitalizations and complications such as hypoxemia and respiratory failure. Furthermore, Facial Trauma (FT) may act as a predisposing factor for airway obstruction, due to the possibility of aspiration during accidents involving the face. This study was approved by the Research Ethics Committee under Certificate of Ethical Appreciation (CAAE) No. 76634522.0.0000.5087. **OBJECTIVE:** To report a case of facial trauma that led to a tracheal foreign body obstruction, as well as the procedure performed for its removal. **CASE DESCRIPTION:** A 30-year-old male patient sustained facial trauma in a motorcycle accident in the interior of the state of Maranhão, Brazil. He received initial medical care at a local facility, where an attempt was made to perform facial osteosynthesis surgery by an oral and maxillofacial

surgeon. The procedure was unsuccessful due to the inability to advance the nasotracheal tube, raising suspicion of tracheal stenosis, and a tracheostomy was therefore performed. The patient was subsequently transferred to a high-complexity hospital in the capital, where a facial CT scan revealed an obstruction at the subglottic level. He underwent treatment for facial fractures and bronchoscopy, which showed normal laryngeal and vocal cord anatomy but revealed the presence of a bone-like foreign body preventing the passage of the instrument. A laryngoscopy was then performed, and the object was removed using a long forceps. A repeat bronchoscopy demonstrated airway clearance at the subglottic level, with mucosal edema and hyperemia but no bleeding or perforation. The remainder of the tracheobronchial tree was unremarkable, and the instrument was withdrawn. **CONCLUSION:** This case highlights the importance of thorough evaluation in cases of facial trauma and the prompt diagnosis of foreign body obstruction to ensure a favorable patient prognosis and prevent potential complications. Moreover, the rapid availability of appropriate equipment is essential to allow swift intervention in response to intraoperative events.

06. SHEEHAN SYNDROME - CASE REPORT AND REFLECTIONS ON UNDERDIAGNOSIS

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INTRODUCTION: Sheehan's syndrome (SS) is a neglected condition characterized by hypopituitarism secondary to ischemic necrosis of the pituitary gland resulting from massive hemorrhage in the peripartum period. Its manifestations range from nonspecific complaints such as weakness and fatigue to severe conditions resulting in coma or even death. Its progression is often slow, resulting in significant diagnostic delays. **OBJECTIVE:** This report aims to discuss the occurrence and underdiagnosis of Sheehan Syndrome in low-income regions and countries. This study was submitted and approved to the CEP under CAAE 87313225.6.0000.5086. **CASE DESCRIPTION:** M.I.T.G., 42 years old, female, with a history of anemia, severe asthenia, and nausea, was hospitalized in August 2023 due to a moderate pericardial effusion. Managed conservatively, the etiological investigation revealed central hypothyroidism with TSH of 2.22 μ UI/mL and free T4 of 3.82 ng/dL (12–22). Evaluation of the other pituitary axes confirmed hypopituitarism with associated corticotrophic deficiency (presenting episodes of nausea, arterial hypotension, and severe hyponatremia with sodium level of 116 mEq/L). The patient reported significant bleeding during her last cesarean delivery six years ago (requiring blood transfusion), was unable to breastfeed afterward, and has experienced irregular menstrual cycles since then, with intermittent episodes of hypotension and nausea. Imaging revealed herniation of the sellar diaphragm into the sella turcica, consistent with a partially empty sella appearance. Currently on levothyroxine and prednisone replacement therapy, presenting thyroid hormone levels within the normal range and significant symptomatic improvement, although oligomenorrhea persists. **CONCLUSION:** This case illustrates how SS, an indicator of lower obstetric quality, is still very prevalent in our setting, especially in states with lower socioeconomic indices, such as Maranhão. Furthermore, the delay in diagnosis reveals a lack of access to services and a lack of awareness about the disease, considering the history of significant blood loss, the inability to breastfeed, and oligomenorrhea. Thus, it is important to understand the importance

of improving obstetric services in order to reduce new cases of the disease and to train health professionals to suspect a diagnosis based on reports of births with significant blood loss, avoiding late diagnosis of this condition.

07. EDUCATIONAL INTERVENTION ON GESTATIONAL SYPHILIS IN PRIMARY CARE IN RAPOSA - MA

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INTRODUCTION: Syphilis is a sexually transmitted infection that, when acquired during pregnancy, can cause serious problems such as malformations and fetal death, despite its easy prevention and treatment. In the municipality of Raposa - MA, after more than a decade without notifications, three new cases were confirmed in 2024, reflecting a process of internalization of the disease and the need to strengthen prevention actions. **OBJECTIVE:** Therefore, an educational intervention was developed by medical students at UBS, with the objective of promoting awareness of gestational syphilis and contributing to the prevention of vertical transmission. **EXPERIENCE REPORT:** The project took place over eight weekly meetings. Techniques discussed in the classroom, such as pulmonary auscultation and accurate measurement of blood pressure, were exercised and consolidated in practice in real care to the population. In addition to the technique, these visits also allowed direct contact with the challenges of SUS in a context outside the metropolis, broadening the view on the role of medicine in the community. In view of this interaction with the community and the recent cases of gestational syphilis in the municipality, which had not been reported for more than ten years, it was understood that it was necessary to extrapolate the theoretical content. It was not enough just to guide patients during the consultation: it was necessary to act actively to promote health education. **REFLECTION ON THE EXPERIENCE:** Experience has shown that health education, when combined with qualified listening and reception, is a powerful tool to prevent congenital syphilis. In addition, it strengthened the bond between students, community and unit staff, bringing us closer to the reality of medicine at SUS. **CONCLUSIONS AND RECOMMENDATIONS:** The experience demonstrated that the integration between students, health staff and users strengthen care in primary care and reinforces the importance of health education as a strategy for coping with congenital syphilis.

08. PROMOTION OF COMPREHENSIVE CHILD HEALTH CARE THROUGH INTERDISCIPLINARITY IN AN EXTENSION PROJECT AT A COMMUNITY NGO

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INTRODUCTION: Comprehensive child health care involves promoting physical, mental, emotional, and social well-being, and this process must be conducted by an interdisciplinary team. The joint work of professionals in medicine, nursing, psychology, and nutrition allows a broadened and complementary perspective on childhood needs, especially in vulnerable contexts. The articulation between different fields of knowledge contributes to more effective and

humanized interventions, aligned with the principles of integrality and equity of the Brazilian Unified Health System (SUS). **OBJECTIVE:** To report the experience of an interdisciplinary action aimed at promoting comprehensive child health care for children in situations of social vulnerability, developed through an extension project of the Academic Pediatric League (LAPED) at a Non-Governmental Organization (NGO) located in São Luís (MA), Brazil. **EXPERIENCE REPORT:** The activity was promoted by LAPED — an interdisciplinary academic league involving students from the courses of Medicine, Nursing, Psychology, and Nutrition. The action took place at an NGO that develops socio-educational activities with children from the community, offering school support, cooking workshops, swimming lessons, among other initiatives. To provide comprehensive care, the team was divided into four groups, each representing its area of expertise. The Medicine group addressed the milestones of child development and discussed health promotion practices. Nursing emphasized the importance of vaccination and maintaining an up-to-date vaccination schedule. Psychology conducted educational activities on excessive screen time in childhood and its implications for behavior and healthy development. Nutrition worked on guidance regarding healthy eating in childhood, fostering dialogue with children and their caregivers. **REFLECTION ON THE EXPERIENCE:** The action proved to be highly enriching for both the students involved and the community served. The interest and active participation of the children and their caregivers in the proposed activities highlighted the relevance of the topics addressed. Integration among different fields of knowledge enhanced the effects of the intervention, demonstrating in practice the benefits of interdisciplinary work in pediatric care. Furthermore, the students were able to experience the university's social commitment to promoting health in community settings. **CONCLUSION:** The experience demonstrated that comprehensive child health care is more effective when conducted interdisciplinarily, respecting the specificities of each profession and promoting the complementarity of knowledge. Extension work in this context reaffirms the university's role as a promoter of citizenship, applied knowledge, and social transformation.

Poster Session

CASE REPORTS AND EXPERIENCE REPORTS

01. PROMOTION OF HEALTHY HABITS IN EARLY CHILDHOOD: PREVENTION OF OBESITY IN THE SCHOOL CONTEXT

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INTRODUCTION: Childhood obesity is a growing public health challenge, affecting the physical, emotional, and social well-being of millions of children worldwide. In Brazil, its prevalence is particularly concerning among children aged 5 to 9 years, emphasizing the need for preventive measures, especially in the school environment. Childhood is a critical period for the formation of habits that influence adulthood, giving schools a central role in health promotion and the prevention of chronic diseases. **OBJECTIVE:** This study aims to report the experience of a university extension project focused on the prevention of childhood obesity at a school in the interior of

Maranhão. **EXPERIENCE REPORT:** The university extension project was carried out at Centro Educacional Menino Jesus, involving eleven medical students and encompassing educational activities and practical workshops, such as lectures and playful sessions addressing balanced nutrition, the food pyramid, and the importance of physical activity. The workshops were divided into two components: in the "Eating Well" module, children learned to classify healthy and unhealthy foods; in the practical module, they participated in games such as sack races, jump rope, and running competitions. The artificial intelligence tool ChatGPT was used as an organizational aid in the preparation of this abstract. The project was submitted to the Research Ethics Committee and is currently under evaluation, awaiting the issuance of the formal approval with the respective reference number. **REFLECTION ON THE EXPERIENCE:** The results showed strong engagement from the children and an increased awareness of nutrition and health. The activities promoted understanding of the risks associated with excessive consumption of ultra-processed foods and encouraged positive changes within the family environment as well. The final evaluation indicated a significant improvement in the participants' level of knowledge. **CONCLUSIONS AND RECOMMENDATIONS:** The experience demonstrated that educational work in childhood goes beyond knowledge transmission, providing an opportunity for practical engagement and the development of critical awareness. The partnership between the school, families, and the university was essential for the project's success, showing that initiatives of this nature can promote lasting changes and effectively contribute to the prevention of childhood obesity.

02. HEALTH EDUCATION AND SELF-CARE PROMOTION AMONG WOMEN EXPERIENCING HOMELESSNESS: REPORT OF AN EXTENSION ACTIVITY

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INTRODUCTION: Women experiencing homelessness face vulnerabilities marked by broken social ties, exclusion, stigma, and limited access to basic rights. They are exposed to violence, substance abuse, and invisibility within health services, which worsens illness and hinders preventive practices. In addition to structural barriers, these women face stigmas that undermine their citizenship and access to care. In this context, outreach initiatives that promote active listening, health education, and self-esteem enhancement become essential. **OBJECTIVE:** To report an extension activity with women experiencing homelessness, carried out by medical students in São Luís (MA). **EXPERIENCE REPORT:** The activity was carried out by a medical students' extension project in partnership with a social assistance center that supports women experiencing homelessness. The action began with an educational lecture, delivered in accessible language, on cervical cancer, emphasizing prevention, warning signs, and the importance of screening. The methodology encouraged the women's active participation, providing space for questions and experience sharing. At the end, a display of clothing, shoes, and bags previously collected through donations was organized, allowing the women to choose items according to their needs—reinforcing comprehensive care and the promotion of self-esteem. **REFLECTION ON THE EXPERIENCE:** The initiative enabled qualified and compassionate listening, essential for addressing sensitive topics in contexts of vulnerability. The experience raised the students' awareness of the

challenges faced by these women and highlighted health education as a tool for empowerment. Contact with this reality strengthened the humanized training of future professionals and broadened their understanding of health as both a right and a practice of social justice.

CONCLUSIONS AND RECOMMENDATIONS: The experience highlighted the potential of extension initiatives to transform realities and to train professionals who are more sensitive to social inequities. It is recommended that similar initiatives be continued and expanded, integrating prevention, solidarity, and educational practices, thereby contributing to health promotion and the empowerment of vulnerable populations.

03. MANAGEMENT OF A FIBROUS TUMOR IN A 66-YEAR-OLD PATIENT: A CASE REPORT

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INTRODUCTION: Fibrous Tumors (FT) are commonly formed due to abnormal differentiation of fibroblasts, with the pleural location being the most frequent site. They account for less than 5% of all pleural tumors, with an estimated incidence of 1 to 2 cases per million inhabitants per year. These formations can reach considerable dimensions, causing symptoms related to compression, or they may remain asymptomatic. The prognosis is often favorable, with 80% of cases being benign in nature, while approximately 20% may exhibit malignant behavior. This study was approved by the Research Ethics Committee under opinion number 76634522.0.0000.5087, as recorded in the Certificate of Presentation for Ethical Consideration.

OBJECTIVE: To report the case of a 66-year-old female patient with a rare FT in the right hemithorax, without comorbidities, with a history of prior myomectomy and recurrent pleural effusions, as well as the clinical management adopted in this case. **CASE DESCRIPTION:** A 66-year-old female patient with a history of recurrent pleural effusions initially underwent a chest X-ray, which revealed a mass in the right hemithorax. Subsequently, a chest computed tomography scan demonstrated a 17-centimeter mass in the same region. A guided biopsy of the lesion, followed by immunohistochemical analysis, confirmed the diagnosis of a fibrous pleural tumor. The patient was admitted in good general condition, laboratory tests were requested, and she was referred for an exploratory thoracotomy. Immunohistochemical analysis of the biopsy specimen confirmed the diagnosis of a fibrous tumor. Complete surgical excision of the mass was performed. However, in the postoperative period, the patient developed refractory cardiogenic shock, attributed to abrupt decompression caused by the removal of the large tumor mass, which suddenly alters preload — a phenomenon previously described in resections of large thoracic masses. She was admitted to the Intensive Care Unit (ICU) in critical condition but showed progressive clinical improvement and was discharged on the tenth postoperative day. **CONCLUSION:** This case highlights the importance of identifying and investigating neoplasms. Patient prognosis primarily depends on the tumor's histological type and the complications associated with the clinical condition. The favorable outcome underscores the significance of timely diagnosis and treatment, which serves as a key predictor of patient prognosis.

04. GALACTORRHEA IN MEN AS A WARNING SIGN FOR MACROPROLACTINOMA: CASE REPORT

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INTRODUCTION: Hyperprolactinemia is the most common hypothalamic-pituitary dysfunction, accounting for approximately 13% of secondary amenorrhea cases, while it is rare in men. Prolactinomas are the most common pathological cause, with approximately 500 cases per million people. They often cause hypogonadism with oligoamenorrhea in women and erectile dysfunction in men. Headache and visual disturbances may occur, especially in macroprolactinomas. Galactorrhea, common in women, is a nonspecific finding when isolated and quite unusual in men.

OBJECTIVE: This report aims to discuss galactorrhea in men as a highly specific clinical sign for hyperprolactinemia. This report is part of a study approved by the Research Ethics Committee under opinion no. 7910329. **CASE DESCRIPTION:** G.N.G., 33 years old, had been suffering from severe right parietal headache for about nine years, progressing to galactorrhea on expression five years ago and exacerbation of the condition in the last three months. During an emergency evaluation for severe headache, a CT scan revealed a 2.5 x 2.2 cm lesion suggestive of a pituitary macroadenoma. He reported reduced libido on directed questioning and denied erectile dysfunction, visual field alterations, or continuous medication use. Physical examination revealed a BMI of 30 kg/m², BP of 120 x 80 mmHg, GSP5 genitalia, and frank bilateral galactorrhea upon nipple expression. Laboratory tests showed prolactin of 695 ng/mL (ref.: ≤ 20 ng/mL), total testosterone of 92.2 ng/dL, FSH of 2.03 UI/L and LH of 1.66 UI/L, evidencing hypogonadotropic hypogonadism. Thyroid function was compromised with TSH of 0.74 mUI/mL, FT4 of 0.8 ng/dL (ref.: 0.9-1.7 ng/dL) and cortisol of 11.3 µg/dL. Creatinine of 0.86 mg/dL. Treatment was initiated with prednisolone 3 mg/day, levothyroxine 100 µg/day and cabergoline 1 mg/week. After 10 weeks, upon reevaluation, the patient reported reduced headache, improved libido and reduced galactorrhea on nipple expression. His prolactin level was 23 ng/mL and FT4 was 1.3 ng/dL, with the medical management maintained. **CONCLUSION:** This case report indicates that galactorrhea in men, although uncommon, should be perceived as an important warning sign for a potentially serious etiology such as macroprolactinoma, once other common causes of hyperprolactinemia have been ruled out. The presence of this finding, associated with neurological symptoms, reinforces the need for hormonal investigation in men. Recognizing galactorrhea early can accelerate diagnosis, enable targeted therapy, and reduce associated complications.

05. CITIZEN RESCUER: TRANSFORMING LAYPEOPLE INTO RESCUERS THROUGH FIRST AID TRAINING IN A RESTAURANT

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INTRODUCTION: Practical cardiopulmonary resuscitation (CPR) training for laypeople increases motivation and learning effectiveness, with evidence suggesting that even the use of mixed reality enhances compression depth and training satisfaction. Layperson training can expedite the initiation of CPR and raise hospital admission rates for out-of-hospital cardiac arrests.

OBJECTIVE: To report on the first aid training of laypeople (restaurant employees), focusing on the receptivity and educational impact. **EXPERIENCE REPORT:** The "Cidadão Socorrista" (Citizen Rescuer) project, promoted by an academic medical league, provides BLS training to the lay public. On February 25, 2025, four medical students trained 22 restaurant employees. The reception was positive; participants reported risk situations that could have been better managed with prior preparation. As they work in a culinary environment, they are exposed to risks such as choking and burns. The training included theoretical lessons on CPR, choking maneuvers, and initial care for burns, followed by practical stations for adult and pediatric CPR, choking simulations, and initial management. Slides prepared by the students with faculty supervision and eight CPR manikins (four adult and four pediatric) were used. **REFLECTION ON THE EXPERIENCE:** The medical students are continuously trained in BLS, CPR, burn care, and choking maneuvers to become knowledge multipliers in community actions. Restaurants present a high risk for thermal accidents: studies indicate that kitchen workers may sustain up to 24% of burns related to hot oil and heated surfaces. Food-related choking is a frequent cause of accidental death, being the fourth leading cause of unintentional death in the United States, with 4 to 5 thousand annual cases. These data reinforce the importance of systematic educational actions in BLS, choking relief, and burn prevention, not only for immediate response but also to reduce complications and mortality. The literature recommends periodic training, integration with safety protocols, and stimulating laypeople's active role. **CONCLUSIONS AND RECOMMENDATIONS:** The experience proved feasible and well-accepted. It is recommended to institutionalize periodic educational actions with a practical approach to BLS and encourage the multiplying role of laypeople within an occupational context.

06. RECREATIONAL AND EDUCATIONAL ACTIVITY WITH SHADOW THEATER TO PROMOTE ORAL HEALTH IN CHILDREN WITH CANCER: EXPERIENCE REPORT

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INTRODUCTION: Pediatric patients undergoing cancer treatment face challenges that go beyond the disease itself, mainly due to oral complications such as mucositis, xerostomia, and gingivitis. These conditions cause pain, discomfort, and infections, compromising quality of life and treatment adherence. Preventive and educational efforts by multidisciplinary teams are essential to minimize these impacts and promote well-being. Playful strategies, such as shadow theater, facilitate children's understanding and engagement with oral hygiene, making care more welcoming. **OBJECTIVE:** Report on the experience of a multidisciplinary extension project that promoted oral hygiene for children with cancer, using shadow theater as a playful educational strategy in the hospital environment. **EXPERIENCE REPORT:** The initiative was developed by students studying medicine, dentistry, nursing, psychology, and nutrition, who were trained to make shadow theater materials such as screens, puppets, and models. The intervention had two stages: an educational presentation with models and puppets demonstrating the step-by-step process of brushing and flossing, emphasizing the importance of oral hygiene during cancer treatment; followed by a playful shadow theater performance, which facilitated the engagement and understanding of

children of all ages, even in the hospital environment with its limitations. **REFLECTION ON THE EXPERIENCE:** Shadow theater proved effective in capturing children's attention, making the transmission of health information more accessible and appropriate for the pediatric hospital environment. The experience strengthened the students; multidisciplinary work, promoting teamwork and skills in humanized care. It also facilitated bonds with patients and family members, which are essential for continuity of care. In addition, it sensitized students to empathy and child-centered care, enriching their academic and professional training. **CONCLUSIONS AND RECOMMENDATIONS:** The use of shadow theater proved to be an accessible, innovative, and efficient approach to promoting oral hygiene in children with cancer. Its adoption is recommended in pediatric hospitals and other health facilities, encouraging multidisciplinary work and the use of playful resources to improve the quality of life of these patients, promoting more humanized and comprehensive care.

07. THE PROMOTION OF ORAL HEALTH: AN EXPERIENCE REPORT OF A PLAYFUL AND THEATRICAL APPROACH

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INTRODUCTION: Oral health is a fundamental aspect of promoting individual health, and its fostering during childhood is essential for a child's development, directly influencing their quality of life, nutrition, and self-esteem. Moreover, establishing oral hygiene habits early in life is a protective factor against future diseases. This experience report describes an activity focused on health education, using theater as an educational tool. **OBJECTIVE:** It aims to narrate the experiences of undergraduate students during the extension activity and reflect on its contributions to the academic and social development of the participants. **EXPERIENCE REPORT:** The health extension project, developed by a public university in the state of Maranhão, promoted an educational activity directed at children aged five and six years in a public school. The action was based on theatrical performance as an educational strategy to teach about the well-being promoted by oral hygiene. With this purpose, a theatrical play was performed, addressing the topic in a playful and engaging way to capture the attention of the children. Finally, after the performance, an interactive discussion was held with the audience to reinforce the key points of the play and provide guidance on the correct way to perform oral hygiene. **REFLECTION ON THE EXPERIENCE:** The activity proved to be effective in promoting audience engagement. In addition, theater showed itself to be an effective tool for health education, serving as an adaptation of academic knowledge into simple language appropriate for the target age group, facilitating learning and sparking the children's interest. Interaction with the children reinforced the importance of playful and accessible approaches. Furthermore, by offering an interactive and participatory experience to the students, the activity enabled an exchange of experiences and fostered a bond between the students and the community, thus playing an important role in academic training and in the early integration of students into community health contexts. **CONCLUSIONS AND RECOMMENDATIONS:** The university extension project demonstrated the effectiveness of theater as a playful and educational resource for promoting children's oral health. The activity supported the assimilation of content by the

children and reinforced self-care practices. Additionally, it significantly contributed to the students' academic and personal development. Given the results obtained, its continuation and replication in other school and community settings is recommended.

08. SARCOPENIA AND FALL PREVENTION IN THE ELDERLY: AN EXPERIENCE REPORT WITH HEALTH EDUCATION AND THEATER

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INTRODUCTION: Sarcopenia is a geriatric disease characterized by the progressive loss of skeletal muscle mass and strength. Currently, it constitutes a frequent and difficult-to-diagnose health problem that can lead to potential consequences, such as mobility limitations, inability to complete daily activities, and an increased risk of falls and hospitalizations. Although there is no unified approach to treatment, physical activity is known to be one of the main ways to prevent this condition and improve the quality of life of these individuals.

OBJECTIVE: To describe a real-life situation experienced and propose a reflection on the importance, challenges, and strategies in the prevention and treatment of sarcopenia. **EXPERIENCE REPORT:** A health outreach project from a public institution in Maranhão, Brazil, which employs theater as a means to educate about health, carried out an action about sarcopenia for the elderly, organized in three stages. First, a playful theater performance introduced sarcopenia in an accessible and interactive way to 35 participants. Next, a health education session deepened the topic using an informative banner, addressing the concept, diagnosis, risk factors, and prevention of the condition. The event concluded with the practice of physical exercises focused on muscle strengthening, in addition to breathing and balance techniques, offering the elderly concrete tools to reduce the risk of falls in their daily routine, allowing for a comprehensive approach to the health of this assisted group. **REFLECTION ON THE EXPERIENCE:** The action provided a significant experience in health education for the elderly, highlighting the value of playful and accessible methodologies, with theater being an approach that favored engagement and understanding of the theme. Faced with challenges such as low educational level and functional limitations, it was necessary to adapt the language and actions, requiring sensitivity from the team. The experience also reinforced the importance of listening, interdisciplinarity, and the elderly's leading role in their care. **CONCLUSIONS AND RECOMMENDATIONS:** The activity demonstrated that the articulation between playful methodologies and technical-scientific information favors the engagement and assimilation of complex content. Therefore, the adoption of interdisciplinary, culturally sensitive, and elderly-centered approaches is recommended, positioning them as active subjects in their care, in order to promote healthy aging, autonomy, and quality of life for this population.

09. EXPERIENCE REPORT: APPLICATION OF THE CLINICAL-FUNCTIONAL VULNERABILITY INDEX IN INSTITUTIONALIZED OLDER ADULTS

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INTRODUCTION: Population aging imposes significant challenges to the organization of health services, especially with regard to comprehensive and continuous care for the elderly, especially those living in Long-Term Care Institutions for the Elderly (LTCF). The multiple physical, cognitive, and psychosocial changes that accompany aging make it essential to use instruments that allow a broad, systematic, and sensitive assessment of the needs of this population. In this context, the Clinical-Functional Vulnerability Index (IVCF-20) stands out as a rapid screening instrument for multidimensional assessment of the elderly, focusing on the early identification of weaknesses in different health domains (Moraes et al. (2016). The IVCF-20 contemplates physical, functional, cognitive and psychosocial aspects, allowing the stratification of risks in an agile and effective way. Recognizing its clinical usefulness and its applicability in Primary Care, the Ministry of Health officially incorporated the IVCF-20 into the guidelines of the Unified Health System (SUS) as a recommended instrument for the assessment of the elderly population, especially in the monitoring of the Family Health Strategy (Brasil, 2020). Its application has been consolidated as a fundamental practice to support clinical decisions, plan personalized interventions, and ensure greater quality of life and autonomy for the elderly — especially in institutionalization contexts.

OBJECTIVE: The objective of this activity was to apply the IVCF-20 to elderly residents of a LTCF linked to the Dr. José Carlos Macieira Health Center, with the purpose of identifying the degree of clinical-functional vulnerability and guiding personalized care interventions. The action also aimed to promote integration between teaching, service and community, through a practical experience of multidimensional assessment in care for the elderly. **EXPERIENCE REPORT:** The activity took place in a Long-Term Care Institution for the Elderly (ILPI), as part of the university extension axis linked to the curricular component of Primary Health Care (PHC), under the supervision of the preceptor, a nurse, a member of the Family Health Strategy of a Health Center in São Luís/MA, responsible for the technical and pedagogical guidance of the students. At the beginning of the day, the group of students from the third period of the Medicine course, previously trained in a theoretical class on the use of the Clinical-Functional Vulnerability Index – IVCF-20, promoted by the Geriatrics and Gerontology Center (NUGG) of UFMG and complemented by a directed study, arrived at the institution and was welcomed by some elderly people in different situations. Some were bedridden in their rooms, while others participated in group leisure activities. The application of the IVCF-20, a screening instrument validated by the Unified Health System (SUS) to identify the degree of clinical and functional vulnerability of elderly people, was conducted individually, with qualified listening and a humanized approach. It was essential to consider not only the responses of the elderly themselves, but also the reports of the caregivers, which contributed significantly to the real understanding of the functionality and limitations of each resident. This care reinforced the importance of a comprehensive and contextualized view of aging. In addition to the application of the IVCF-20, vital signs such as blood pressure, Body Mass Index (BMI) and basic general physical examination were measured. All approaches strictly followed biosafety protocols and the use of Personal Protective Equipment (PPE). The choice of the elderly evaluated was based on clinical criteria of stability and communication capacity, in addition to their verbal consent. The action was strictly assistential, with no intention of research or scientific dissemination, and therefore did not require submission to the Research Ethics Committee, as established in Resolution No. 510/2016 of the National Health Council (CNS). **REFLECTION ON THE**

EXPERIENCE: Five elderly residents of the Casa Lar were evaluated, all classified as frail according to the score obtained from the application of the IVCF-20. The classification of frailty was based on the total score of the instrument, according to parameters established by the Ministry of Health, and the sum of the answers to the 20 items of the questionnaire was considered. Among the main findings were cognitive impairment, mobility difficulties, presence of polypharmacy, and absence of a family support network. These factors have increased the risk of falls, malnutrition, and functional decline.

CONCLUSIONS AND RECOMMENDATIONS: The application of the IVCF-20 in institutionalized older adults provided a rich and formative experience, combining clinical practice with a humanized approach, in line with the principles of the SUS. The instrument proved to be accessible, efficient, and capable of guiding specific conducts in the face of the identified vulnerabilities. In addition to technical improvement, the activity strengthened the development of skills essential to medical training, such as empathy, qualified listening and social responsibility. By integrating the workload of the Primary Health Care discipline, with faculty supervision, the action reaffirmed the value of university extension as a privileged space for meaningful learning. Because it does not have an investigative character or scientific publication objective, the activity did not require submission to the Ethics Committee, according to Resolution No. 510/2016. Finally, the experience reaffirms the importance of multidimensional assessment in the care of the elderly and highlights the transformative role of direct contact with the reality of health services in the formation of future professionals who are more sensitive, ethical and prepared.

10. ROBOTIC REPAIR OF DIASTASIS RECTI ABDOMINIS: A 5-YEAR EXPERIENCE AT A PRIVATE HOSPITAL IN SÃO LUÍS, MARANHÃO, BRAZIL

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INTRODUCTION: Diastasis Recti Abdominis (DRA) is the muscular separation of the linea alba with functional and aesthetic implications, where severe cases require surgical correction. Given this, robotic

surgery emerges as a minimally invasive approach, aiming to optimize outcomes compared to the conventional technique. **OBJECTIVE:** To demonstrate the experience and benefits of using the robotic technique for the correction of diastasis recti abdominis in a case series. **EXPERIENCE REPORT:** Diastasis recti abdominis requires surgical correction via a conventional or robotic approach. Although the robotic operative time (113.5–240 min) may exceed the conventional time (approx. 135 min), this variation is compensated by significant post-operative benefits. Notably low infection rates are observed in robotic surgery, contrasting with a higher incidence in open surgery, a direct reflection of reduced tissue trauma, which substantially decreases patient morbidity. Post-operative recovery is significantly faster, with less pain, bikini line scars, and a median hospital stay of one day, demonstrating a substantial improvement in the patient experience and allowing a quicker return to daily activities. Additionally, robotics permits broader and more effective dissection, concomitant repair of hernias via small incisions, superior aesthetics, and extremely low recurrence, indicating a more robust and complete correction that transcends the mere resolution of the diastasis. **REFLECTION ON THE EXPERIENCE:** The construction of this work allowed us to understand, in a practical and critical way, the advances of robotic surgery in the correction of diastasis recti abdominis. By comparing the approaches, it was evident how technology can positively influence patient recovery, comfort, and results. This experience reinforced the importance of combining scientific knowledge with innovation, always valuing the procedure that offers the greatest overall benefit to the patient. **CONCLUSIONS AND RECOMMENDATIONS:** Robotic correction is a promising treatment modality for diastasis recti abdominis. Additional analyses using large data sets will confirm the advantages and feasibility of robotic rectus diastasis repair.

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