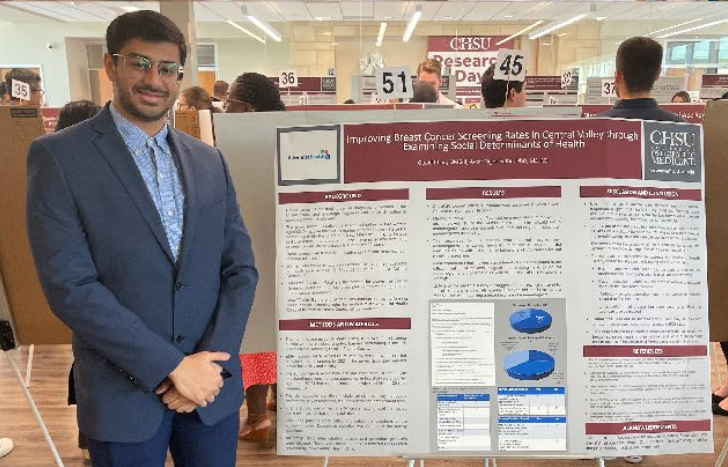
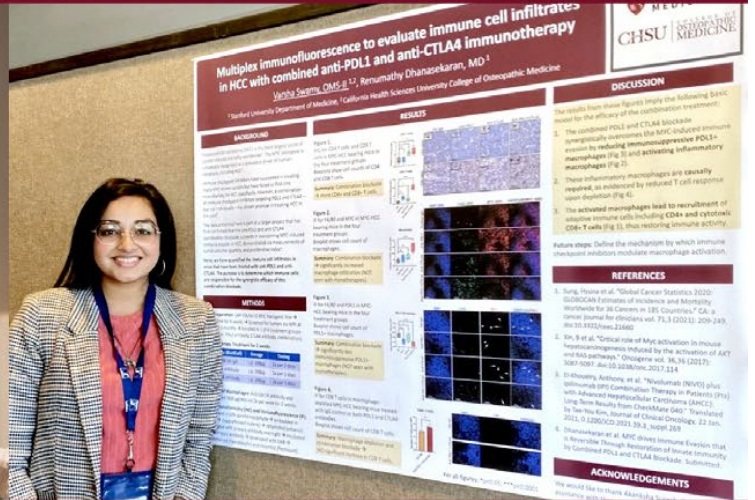


CHSU CALIFORNIA HEALTH SCIENCES UNIVERSITY

Research Day May 20, 2023



Welcome Attendees and Presenters,

On behalf of the CHSU Research and Scholar Committee, we thank you for attending this research showcase and hope you enjoy learning about research projects in our local area, many of which are from CHSU faculty and students.

We are excited about this year's CHSU Research Day program and have lots of share with you! We have 2 keynote speakers and more than 60 poster presentations for you to enjoy.

We are honored to have Eyad Almasri, MD, an established physician at UCSF Fresno. His presentation is titled "pulmonary diseases highly prevalent in the Central Valley."

After a short break, we will begin poster presentations. Feel free to browse the program booklet to determine which you would like to visit.

We will have a second keynote presentation from Antonio "Tony" Zamorano, DO, a Family Medicine Physician with his own practice, Whole Family Health in Glendora, CA. His presentation is titled "Family Medicine Frontlines: Short and Long-term COVID impacts to small clinics."

Refreshments and appetizers will be served. After these presentations, poster competition awards will be presented to the winners in each category: Faculty, Resident Physician/Pharmacist, and Student.

We look forward to meeting you and appreciate your support in making our Research Day a success!

The CHSU Research and Scholar Committee:

Edward Merino, PhD – emerino@chsu.edu

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CHSU Research Day

Agenda

May 20, 2023

8:00 am – 1:00 pm

- 8:00 – 8:30 **Registration and Coffee**
- 8:30 – 8:45 **CHSU Leadership Welcome**
Florence Dunn, President
Brian G. Kim, JD, Provost and Vice President for Academic Affairs
John Graneto, DO, Med, Dean of College Osteopathic Medicine
Mark Okamoto, PharmD, Dean of College of Pharmacy
Edward Merino, PhD, Associate Professor and COM Director of Scholarly Activity
- 8:45 – 9:30 **Keynote Address by Eyad Almasri, MD**
“Pulmonary diseases highly prevalent in the Central Valley”
- 9:30 – 10:15 **Poster Session I** (with break)
- 10:15 – 11:00 **Research Podium Address by Antonio Zamorano, DO**
“Family Medicine Frontlines: Short and Long-term COVID impacts to small clinics”
- 11:00 – 11:45 **Poster Session 2** (with lunch)
- 11:45 – 12:50 **Awards Ceremony**

Keynote Speakers



Dr. Eyad Almasri, MD
UCSF Fresno

Dr. Almasri is an established physician at UCSF Fresno. He completed fellowships at the University of Pittsburgh and at Western Pennsylvania Hospital. Dr. Almasri specializes in pulmonary medicine and is board certified in Internal Medicine, Pulmonary, Critical Care and Sleep Medicine. His current position is Associate Clinical Professor of Medicine and Director of Research at UCSF Fresno. Dr. Almasri is a member of the American College of Chest Physicians (ACCP), the Society of Critical Care Medicine, and the American Medical Association. He has had ten manuscripts published in the last two years. His keynote will focus on Central Valley specific pulmonology.



Antonio "Tony" Zamorano, DO
Whole Family Health

Dr. Zamorano is a Family Medicine Physician with his own practice, Whole Family Health in Glendora, CA. He completed his medical school education at the New York College of Osteopathic Medicine. Dr. Zamorano's residency was at UC Irvine and Presbyterian Hospital. He is board certified in family medicine, cardiac life support (advanced and pediatric), and cosmetic injectables. Dr. Zamorano is a member of the American Medical Association (AMA), the American Academy of Family Physicians (AAFP), the American Osteopathic Association (AOA), and the California Academy of Family Physicians. His keynote presentation will describe how the COVID-19 pandemic altered small practices.

Poster #1

Syphilis Identification Via Ophthalmologic Findings of Subretinal Fibrosis: A Case Report

E. Baqai, P. Arakere

California Health Science University, Clovis Community Medical Center, St. Agnes Medical Center

Introduction Syphilis is often identified in its primary stages through genital lesions or presence of rash. However, in patients who may be incapacitated or altered due to a variety of reasons, early signs and presentation of syphilis may not be noticed. **Case presentation** We report the case of a 48 year-old man who presented to his ophthalmologist for “blurry vision” for the last several months. After findings on fluorescein stain exam were consistent with subretinal fibrosis, patient was referred to his primary care provider for testing for syphilis. Patient tested positive for syphilis IgG antibodies and returned for his first intramuscular penicillin shot. Patient was referred to the emergency department for a lumbar puncture given the possibility of neurosyphilis. **Discussion** Ocular manifestations of syphilis are easily ruled out given the relatively clear signs of presentation in primary syphilis that often are identified and treated quickly in the modern era. However, in vulnerable populations, early signs of syphilis may be missed, making attention to ocular presentations imperative for management and prevention of neurosyphilis.

Poster #2

A Rare Case of COVID-Related Guillain-Barre Syndrome: An Unexpected Etiology

T. Bautista, MD, Aseem Singh MD, Tiffany YuMD

Adventist Health Hanford Family Medicine Residency

Guillain-Barre syndrome (GBS) has been recognized as a rare complication following infection with SARS-CoV-2 (COVID-19). We report a case of GBS in a 69-year-old male with negative saliva test, but positive COVID serology. Considering that there were no other identifiable causes of infection, such as genitourinary or gastrointestinal, GBS-triggering medications, recent vaccinations, malignancy or rheumatological disorder, a post-COVID complication was strongly suspected due to the GBS-like presentation with eventual respiratory involvement. Due to the various clinical presentations of COVID, a lack of history or physical examination pointing to COVID can still precede GBS. In the context of an ongoing COVID pandemic, it is imperative for healthcare professionals to rule out post-COVID GBS in patients who present with muscle weakness or paresthesia after an asymptomatic or symptomatic COVID infection. Early diagnosis of GBS in COVID-19 patients is critical; management of the potentially severe disease course may require intensive care and mechanical ventilation.

Poster #3

Antiphospholipid Antibody Syndrome in SLE: A Rare Case

U. Rashid, H. Kaur, R. Zhu, J. Patri

Adventist Health Hanford

Amongst 40% of population with SLE who test positive for Antiphospholipid antibodies (aPL) only 7-15% of the patients develop Antiphospholipid antibody syndrome. Repeat aPL after a duration of 12 or more weeks and lack of continuity of care can sometime pose a challenge to establish a definitive diagnosis in medically underserved areas of the Central Valley. This patient case report highlights a young female patient with SLE, Diabetes Type II, hypothyroidism and recurrent abortions due to unknown etiology came in with fatigue, diaphoresis and progressive worsening of left arm pain for 2 days. Pertinent physical exam findings showed generalized tenderness and swelling in the left arm with Raynaud's phenomenon in bilateral upper extremity digits and no focal weakness. Initial evaluation ruled out ACS and hypoglycemia. US doppler LUE vein showed venous thrombosis of the mid and distal left brachial, the left basilic, left ulnar and left radial as well as the cephalic vein. Rheumatology and Hematologist were consulted. Further workup during the course of 12 day stay at Adventist Health Hanford showed triple +ve aPL profile. Patient was treated and discharged on warfarin for DVT and continued home dose of Hydroxychloroquine. Repeat outpatient follow up at Consultant Rheumatologist clinic after a period of nearly 5 months showed elevated aPL, thus confirming the diagnosis of APS. Mortality of APS associated with SLE. SLE-APS patients exhibit more severe clinical profiles with higher frequencies of major organ involvement, greater damage accrual and higher mortality than SLE-aPL and SLE patients. Antithrombotic therapy with warfarin or aspirin may reduce the risk of recurrent thromboembolic complications but does not eliminate the risk.

Poster #4

Insertion of Etonogestrel Implant on First Visit

H. Lopez MD, V. Dhillon MD

QI project Aim- Insertion of Etonogestrel implant on first clinic visit. Introduction-Current clinical practice mandates 2 clinical visits for Etonogestrel implant, first to rule out pregnancy with urine pregnancy test and then additional wait of 7 days for repeat urine pregnancy test and insertion of implant. Method- Using current CDC/AAFP/ACOG recommendations, clearly manifesting, insertion of Etonogestrel implant on the first visit with introduction of pregnancy related questionnaire and urine pregnancy test. Comparing outcome and benefits of two visits Etonogestrel implant insertion with single visit insertion. Benefits noticed- Among patient with Etonogestrel Implant insertion on the first visit; Post insertion questionnaire indicated higher satisfaction rate, lower no show rate, no coordination efforts were required by office staff for scheduling the patient for second visit. Decrease in billing cost was noticed with initial visit placement as compared to second visit insertion. End Result- Since 12/2022 patient at our clinic coming for Etonogestrel Implant insertion get benefit of same day procedure completion.

Poster #5

Mucormycosis with Necrotizing Fasciitis in a Diabetic Patient

J.Maddela, S.Cherwoo, F.Entabi, S.Veranyan, M.Khan

Adventist Health Tulare

Mucormycosis is an Angioinvasive fungal infection caused by the fungi order Mucorales. It is a rare disease affecting 1.7 people per every 1,000,000 in the general population with an overall all-cause of mortality rate of 54%. We present the case of a 66 yo m w/ Hx of T2DM, HTN, Esophageal CA s/p Partial Esophagectomy and Partial Gastrectomy who presented to the ED after sustaining a laceration on his scalp, which developed initially a scab and subsequently developed redness, pain, and swelling spreading to his forehead and left eye. Exam notable for necrotic area in the middle of the scalp with surrounding erythema spreading to the left forehead. Labs revealed lactic acidosis, leukocytosis, hyperglycemia. CT Head showed possible frontal area hematoma. Wound culture showed Cuti bacterium Propionibacterium acnes. Scalp Tissue pathology revealed Necrotizing Fasciitis with vascular and neural invasion by Mucormycosis. Pt started on empiric IV Vanc, Zosyn, and Diflucan. General Surgery performed Multiple debridements. Once pathology showed Mucormycosis, Pt was started on IV Amphotericin B and transferred to Tertiary Center for L FESS and Left Orbital Decompression, left supraorbital abscess washout, and further scalp debridement. Pt was transferred back to Tulare and continued on Amphotericin IV, electrolytes aggressively repleted, then discharged to SNF on Posaconazole. Mucormycosis is very uncommon. Diagnosis is dependent on pathology report and imaging is used to see the extent of disease. Surgical intervention and high-dose liposomal Amphotericin B are strongly recommended. Early identification of the disease and prompt medical and surgical intervention is required to prevent high mortality associated with mucormycosis.

Poster #6

Myelopathy secondary to Transverse Myelitis consistent with Neuromyelitis Optica Spectrum Disorder in a patient with Congenital Learning Disabilities

J Asunto, MD, MSc; A. Omole, MD; M. Nameni, DO; J Patri, MD; V Royter, MD; G Sammons, PhD; M Khan MD, FAAFP

Adventist Health

Neuromyelitis Optica Spectrum Disorders (NMOSD) aka's Devic Disease or Neuromyelitis Optica (NMO) is a rare disease. It has 10x high predilection to female than male, ages 32-41, primarily African American and Afro-Caribbean with diagnosing criteria that must include the core clinical symptoms plus positive AQP4-IgG Ab, and exclusion of another diagnosis, including Multiple Sclerosis (MS) and Myelin Oligodendrocyte Glycoprotein Ab Disease (MOGAD). Brain MRI is often normal or nonspecific, but if present, there will be cloud enhancement changes in the area postrema, perit-third/fourth ventricle, splenium, diffuse corpus callosum, and a pencil-thin ependymal. CSF usually lymphocytic but can be neutrophilic or eosinophil. Typically relapsing and usually without secondary progression. It is also attack-related accumulation of disability. Owing to its rarity, the patient scenario has involved multi-disciplinary specialties, including Family/Internal Medicine, Infectious Disease, Neurology, Neuro-oncology, Nephrology, PT/OT, Pharmacy, Social Services, and Case Management teams. The MRI revealed trans-ependymal edema, and abnormal signal from mid and upper thoracic spinal cord. The CSF was positive for AQP-4 Ab, and the brain biopsy was suggestive of demyelinating disease in R temp lobe. The initial running diagnosis was bacterial vs viral vs fungal meningitis, and then the appropriate treatment was initiated once NMOSD diagnosis was established. The patient was placed on methylprednisolone IV 1 g qOD x5d; PLEX qOD x5; eculizumab IV 900 mg weekly x4w, followed by 1200 mg x 1week, & then 1200 mg q2weekly, and has recovered well. He was later transferred to Hanford Hospital for further studies, and elevated level of care.

Poster #7

Her CD4 count was WHAT?! A case of HIV infection leading to AIDS complicated with Pneumocystis pneumonia (PCP).

Natasha Ahmed, MD Joshua Strunk, DO Jyothi Patri, MD, MHA, FAAFP, HMDC
Adventist Health Hanford Family Medicine Residency

Pneumocystis pneumonia (PCP) is caused by Pneumocystis Jirovecii. HIV is an RNA retrovirus that infects CD4 (T-helper) cells, which drop from normal level of 600-1000 cells/mm³ at rate of 50-100 per year in untreated people. CDC defines HIV+ person as having AIDS when CD4 count drops below 200 cells/mm³ or AIDS-defining illness develops, including opportunistic infections, malignancies, or neurological diseases. We present a case of 39 yo female with PMH of GERD and asthma who presented to ED with 2-week history of productive cough, chest pain, and dyspnea. She was feeling sick for 4-5 months and lost 40 pounds weight. On admission, she met sepsis criteria and had respiratory distress. White plaques on the soft palate and oral ulcers. Lungs clear to auscultation, although using accessory muscles. No abd pain or rash. Basic blood and urine testing normal. Respiratory Viral Panel neg. Chest X-ray with bilateral pulmonary infiltrates. HIV 1 RNA PCR revealed 692088 copies/ml and absolute CD4 count was 2!! Quantiferon TB Gold testing was indeterminate. CT scan of the chest showed ground glass opacities in bilateral lungs. Bronchoscopy showed Candida albicans and Beta-D-Glucan testing was positive. Bronchoalveolar Lavage PCR positive for Pneumocystis Jirovecii. Patient diagnosed with AIDS due to HIV complicated by Pneumocystis pneumonia (PCP). ID team was consulted. The patient was started on high-dose TMP-SMX, Fluconazole and Prednisone. HAART was started. Patient discharged in stable condition with HIV specialist appt. HIV remains serious public health issue. Primary Care Physicians play vital role in reducing the spread of HIV by screening routinely, and prescribing PrEP and PEP. HAART can remarkably reduce HIV-associated morbidity and mortality and decrease transmission.

Poster #8

Erythema Nodosum as a Lone Presenting Symptom of Coccidioidomycosis

I. Laguna MDP. Watanakunakorn MD
Sierra View Medical Center

No abstract submitted.

Poster #9

Impacts of a Community-Based Education Model on Asthma Education and Knowledge

P. Navarro, R. Manzo PhD, J. Gonzalez MPH MPP, M. Yopez, L. Sainz, M. Sandoval
University of California, Berkeley, University of California, Merced

Background: Cultural competence and humility are vital components of healthcare, and aid in closing disparity gaps among underserved populations. One way to incorporate cultural competence and humility is through community-based education models that cater to a population's needs and concerns. In collaboration with Camarena Health, a virtual home visitation and asthma management program, led by Promotoras (community health workers), was implemented among patients in the San Joaquin Valley. This study assesses the program's impacts on the participants' asthma knowledge and control. Methods and Analysis: Promotoras from Camarena Health conducted 5-week-long virtual asthma intervention programs from June 2021 to June 2022 amongst 67 participants in the San Joaquin Valley. Surveys were conducted before and after the program to evaluate the participants' knowledge and control of asthma, and home characteristics. Statistical analysis of survey data was performed using IBM SPSS, ver. 29.0. Results: After the intervention, participants demonstrated improvement in management and knowledge of asthma: in the education module, average scores increased from 53% to 77% and there was a significant decrease in "not sure" responses" from 20.5% to 5% ($p < 0.001$). There was an increase in adult asthma control in the "somewhat/well/completely controlled" category from 86.4% to 95.5% ($p < 0.001$). There was also an increase in the number of participants that consulted with a provider or Promotora compared to 12 months before the intervention. Overall, participants reported that this program greatly helped them in improving their control, knowledge, and approach toward asthma.

Poster #10

A Case of Pregnancy-Associated Spontaneous Coronary Artery Dissection
J. Patel, S. Limvalencia, B. Reddy, A. Anumandla, P. Watanakunakorn, N. Obad
Sierra View Medical Center

No abstract submitted

Poster #11**Getting Down to the Bone! Charcot Marie Tooth Style**

M. Nameni, DO, M. Khan, MD, FAAFP, H. Laimer, DO, FAAFP
Adventist Health Tulare

Foot wounds are important to be taken care of and treated early on as they may cause complex medical problems, including osteomyelitis. This can lead to difficult multi-faceted treatment options, even amputation. Preventing foot wounds, especially in patients with more complex medical histories may prevent life-altering foot amputations and mobility limitations, as more than half of all foot ulcers end up in amputation. We present the case of a young male with PMH of Charcot Marie Tooth (CMT) disease and a prior history of trans-metatarsal amputation of 5th digit bilaterally, who presented to the hospital complaining of wound to his right foot after a minor trauma. Patient was admitted on the inpatient service and diagnosed with osteomyelitis and cellulitis based on history, exam, labs, and imaging. He was managed with IV antibiotics initially. Due to metal in his foot, MRI could not be completed. CT scan could not rule out osteomyelitis. Triple Phase Bone Scan was performed and confirmed osteomyelitis involving the fifth metatarsal. Patient had a surgical debridement with I&D and bone biopsy. Wound culture grew staph aureus and simulans. His antibiotics were ultimately deescalated. PICC line was placed, and patient was discharged to a skilled nursing facility to continue IV antibiotics for 6 weeks. This case was an example of a foot wound that turned into osteomyelitis and required a multi-regimen treatment approach, including surgery. In patients with CMT disease, the complication of hereditary sensory motor neuropathy may pose an increased risk of osteomyelitis due to sensory deficits.

Poster #12**Population Health: Integration of the Community Medicine curriculum via utilization of the Mobile Care Clinic**

J Asunto, MD, MSc; S Cherwoo, MD; G Sammons, PhD, H Laimer, DO; M Khan, MD, FAAFP
Adventist Health

Community Medicine rotation is paramount in Family Medicine residency education to learn about the application of Population Health science in addressing the Social Determinants of Health (SDoH) impacting vulnerable and underserved populations. A mobile van is a practical solution to improve healthcare access by bringing healthcare services to the community being served in limited-resource settings. The Adventist Health mobile care unit provides healthcare services to underserved and vulnerable populations in the Tulare community, including homeless shelters. The medical staff on the mobile van deliver comprehensive care which includes vital sign checks, Point-Of-Care testing, immunizations, wound care, Sports Physicals, and health check-ups. For complex medical care, differentials are generated, and appropriate disposition is determined by residents who are supervised by attending physicians. Transport is provided to patients who need further healthcare services. The mobile van's primary goal is to learn about the application of population health science and deliver community service to the underserved and vulnerable populations. It provides an opportunity for the resident physicians to gain experience in community medicine and develop the skills needed to address SDoH. The mobile van has successfully provided healthcare services to the Tulare community, and there are plans to expand the equipment to include more specialized medical services.

Poster #13**Latinx Perspective from the Community**

T. Anes, A. Alvarez, E. Her, J. Magana, V. Martinez, G. Verduzco
Alliant International University

This study will aim to identify the Latino/a/e/x communities' perspectives regarding the term Latinx. The term originated in the early 2000s and began gaining popularity with the media around 2010 (Guidotti-Hernández, 2017). The term later gained traction in academia a decade later. The term began circulating in the Latino/a/e/x and LGBTQ+ community as a term of identification that left out the inherent gender use of the Spanish language. However, there is a misconception that the term Latinx originated outside the Latino/a/e/x community. Recent polls from the Pew Research Center show a general dislike for the term from the Latino/a/e/x community (2020). This study proposes to expand on the literature regarding the favorability of the term while also questioning why the community is hesitant to embrace the term Latinx. The researchers hypothesize that the Latino/a/e/x community has not embraced the term due to prejudice, bias, and the belief that the community itself did not create it. The hypothesis was generated after an analysis of the existing literature. It should be noted that literature regarding why the Latino/a/e/x community has not embraced the term is sparse. For the study, the researchers will aim to recruit approximately 220 participants from the Latino/a/e/x community; this estimate will ensure that power remains at .08 (Frost, 2022). The survey will be administered in English and Spanish and include an acculturation scale. The researchers hope the findings will give the field of psychology and academia a better understanding of the term Latinx from the community it seeks to represent.

Poster #14**Identifying and Addressing Barriers in Health Literacy Among Patients with Diabetes in Tulare County**

C. Dean, S. Ahmed, K. Azizi, C. Brar, J. Cho, N. Dang, T. Dang, B. De Guzman, A. Nijjer-Sidhu Ph.D, R. Mazo Ph.D
California Health Sciences University College of Osteopathic Medicine

The focus of this research project is to identify health literacy and social barriers among Hispanic patients with diabetes at the United Health Centers (UHC) Dinuba clinic. The SMART aim is to identify barriers in those who are seen at Dinuba United Healthcare Clinic through a general patient survey by the end of May 2023. The literature review highlights previous research that has identified significant correlations between poor diabetes management and improper food choice, medication non-compliance, and lack of diabetes knowledge among the population in Tulare county. The research methodology utilizes a modified version of the Diabetes Self-Management Questionnaire (DSMQ) survey. The target population is patients with diabetes in a rural area, Dinuba, California, who seek medical care at the United Health Care clinic, and additional eligibility criteria include patients 18 years and above, Spanish or English speaking. The survey was to be handed out by student researchers and medical assistance for patients to fill out during their inpatient visit or during their time in the waiting room. Responses to the survey were then collected and used to determine the most common causes that patients face in controlling their blood glucose levels.

Poster #15

Colorism Concerning the Latino/a/e/x Community

T. Anes, A. Alvarez, D. Bekerian, E. Her, J. Magana, V. Martinez, G. Verduzco
Alliant International University

Colorism Concerning the Latino/a/e/x Community This study examines colorism and the stereotypes regarding skin tone concerning the Latino/a/e/x community. The research focuses on whether skin color pigmentation is associated with racial categorization. First, it is hypothesized that Latino/a/e/x adults will state they have experienced racial categorization based on skin tone. Additionally, the researchers hypothesize there will be a relationship between darker skin color and being categorized as Hispanic or Latino/a/e/x. The hypothesis is based on previous research that argues darker-skinned Latino/a/e/x tend to experience higher rates of discrimination, micro insults, poorer health outcomes, and a lack of economic and political power (Hall, 2018). For the study, 120 participants will be recruited to ensure power remains at .08 (Frost, 2022). Participants who meet the inclusion criteria will be asked to complete a survey about their demographic information and their ideology of skin tone pigmentation and ethnicity. Participating individuals will need to agree to consent in order to move forward with the questionnaire. Our findings may help psychologists better understand how colorism operates and the extent to which preconceived biases about colorism exists in the Latino/a/e/x community. Furthermore, the results will help expand the existing literature on colorism towards the Latino/a/e/x and will combat such prejudice. Keywords: Colorism, Latino/a/e/x, racial categorization, skin tone

References Frost, J. (2022, May 5). How to calculate sample size needed for power. Statistics By Jim.

<https://statisticsbyjim.com/hypothesis-testing/sample-size-power-analysis/> Hall, R. E. (2018). Media Stereotypes and “Coconut” Colorism: Latino Denigration Vis-à-Vis Dark Skin

Poster #16

Acute Tonsillitis Due to Monkey Pox in an Immunocompromised Patient: A Unique Cause of a Common Disease

Y. Alsalihi, L. Aradhyula, D. Shakran, B. Teitelbaum, MD
California Health Science University

We present a case of a 71-year-old man who is HIV positive that presented to the emergency department for a sore throat that radiates to the ears bilaterally. Patient presentation was suspicious for a tonsillar abscess, but no abscess was seen on the physical exam. The patient received a full microbiology workup, bacterial, fungal, and viral, which all came back negative. CT of the neck showed bilateral palatine tonsils are enlarged with sub centimeter areas of hypoattenuation suggestive of small abscesses measuring up to 0.5 cm bilaterally. Consistent with bilateral acute tonsillitis with small abscesses. The abscess was too small to drain thus, a more conservative approach was suggested. After multiple consultations with infectious disease, the cause was determined to be an acute infection with monkeypox that manifested with tonsillitis and pharyngeal swelling. The patient received appropriate medical management. Discussion: MonkeyPox (mpox) is a virus of the Orthopoxvirus family, which belongs to the same family of viruses as smallpox. Mpox has led to a global outbreak across several non-endemic countries. Typically, human mpox presents with a prodrome of fever, chills, headache, myalgias, and back pain, followed by a maculopapular exanthem. This exanthem is often uniform and confined to the skin. There has been minimal reporting of mpox hitting the throat or larynx. This case report highlights a unique presentation of a very common problem. Astute clinicians should be keen not to rule out unusual representations of tonsillitis, especially in those who are immunocompromised.

Poster #17**Identifying Practices Among Diabetic Patients: Elevated A1C levels vs Controlled A1C Levels**

K. Hmayakyan, D. Ngo, T. Liu, M. Wu

United Health Center, Parlier

This study sought to identify patterns and factors that distinguish well-controlled to poorly controlled diabetic patients, specifically on the patient population at United Health Center Parlier. A standardized survey, adapted from the CDC Diabetes Questionnaire, was administered to the adult diabetic patient population from February to April 2023. Subsequently, a comprehensive data analysis was conducted to examine the relationship between various variables, such as physical activity, access to fresh fruits and vegetables, medication adherence, and self-monitoring of blood glucose, and HbA1c levels. Findings showed a statistically significant negative correlation between physical activity and HbA1c levels, indicating that regular exercise can play a pivotal role in managing diabetes. Similarly, access to fresh fruits and vegetables was found to be positively associated with improved HbA1c levels, reducing it by 0.42. While other results were consistent with the predicted negative relationship between health factors and HBA1C levels as seen nationally, the study's sample size (n=26) was not large enough to draw definitive conclusions. Overall, our study highlights the importance of physical activity and a healthy diet in diabetes management among low-income and ethnic minority populations. The results can serve as a critical foundation for future research and implementation efforts at United Health Center Parlier to cater towards their specific patient population. However, it is essential to acknowledge that our conclusions are limited by certain biases and limitations, including the need for further studies to identify standard covariates such as patients' sex, age, or race/ethnicity to provide a more comprehensive understanding of diabetes management.

Poster #18**Machine Learning and Statistical Matching: A Discussion of The Statistical Twin**

Y. Alsalihi

California Health Sciences University

Statistical matching is a unique method used to eliminate confounding variables by matching one set of statistical points to a set of controlled points. The method combines machine learning and traditional statistical analysis to reduce confounding variables. In this presentation, I will explain what statistical matching is, the problem it seeks to address and why it is a better alternative to normal variance measures.

Poster #19**Bacteroides Fragilis Bacteremia Induced Septic Shock Complicated by Pulmonary Embolism and Ischemic Colitis**

R. Khasgiwale, M.S., M. Bajwa, MD

California Health Sciences University, Kaiser Permanente Medical Center Fresno

This case presents a 65-year-old female with a past medical history of HTN, osteoarthritis, GERD, and umbilical hernia was brought in by EMS for evaluation of abdominal pain and syncope. She was hypotensive and admitted to the ICU for septic shock. She reported a bowel movement when she experienced abdominal pain and LOC. The patient had prior wounds from a hernia repair with mesh placement done 13 years ago with draining fistulas in the LLQ for which she had replaced the bandages over them for years. CT scan showed pockets of fluid collection and an abscess in the left lower abdomen subcutaneous tissue. Bacterial cultures were positive for bacteroides fragilis. In the ICU, the patient had increasing tachypnea with a V/Q scan and CT angiography showing significant pulmonary embolism. The next day, the patient reports multiple bright red stools with hemoglobin dropped from 12.9 to 8.3. Colonoscopy during a heparin window revealed severe colitis above the rectum, deep confluent ulceration, violaceous discoloration suggestive of ischemia and a likely source of bacteroides fragilis bacteremia. Patient was started on metronidazole, cefepime and ceftazidime, fidaxomicin. For the next 7 days, H&H and CBC stabilized, and continued on low-intensity IV heparin until the rectal bleed improved. At the time of discharge, the patient had no frank blood in her bowel movements for the past 3 days, denied abdominal pain, and tolerated PO diet with continued outpatient follow-up.

Poster #20**Benefits of 3D-Printed Cast for Non-Surgical Treatment of Achilles Tendon Rupture**

E. Yan, T. Nguyen

California Health Sciences University College of Osteopathic Medicine, Lyles College of Engineering, California State University, Fresno

Achilles tendon rupture is a common orthopedic injury presenting to the clinic and emergency room. Surgical repair is the most common method of treatment, but the injury can be treated conservatively with similar rates of success. Nonsurgical treatment consists of nonweightbearing cast immobilization at maximum passive plantar flexion for 6-8 weeks, followed by gradual weight bearing and restricted activities in a walking cast or boot with heel lifts. Rehabilitation may be prolonged with further complications, such as chronic pain, limited mobility, progression of post-traumatic osteoarthritis, and subsequent musculoskeletal imbalance. Patients with comorbidities such as diabetes mellitus, chronic venous insufficiency, cardiovascular disease, etc. are not ideal surgical candidates and therefore must be treated with conservative measures. However, these patients are more susceptible to complications including pressure sores, skin infections, and joint stiffness, which may be exacerbated with cast immobilization. Previous studies and trials have demonstrated the efficacy of using 3D-printed casts for non-surgical treatment of upper and lower extremity fractures. This study investigates the benefits of 3D-printed casts over traditional fiberglass casts for non-surgical management of Achilles tendon injuries. In addition, this study will introduce a proposal for a novel 3D-printed cast that maintains the maximum plantar flexion required and eliminates the need for constant cast changes in the initial stages of care. This device will act to improve stability and healing at the rupture site, whilst providing easy access for hygiene and wound care.

Poster #21**Efficacy of Home Blood Pressure Monitoring with Patient Compliance**

S. Savino, C. Velazco, S. Choi, T. Abdulnour, D. Amaya

Hypertension increases the risk of heart attack, stroke, kidney disease, and heart failure and is the leading preventable risk factor for the global cardiovascular (CV) disease burden worldwide. While hypertension is one of the highest prevalent diseases in the United States; control of blood pressure to an acceptable range is a shocking 45%. The Central Valley has an extremely high prevalence of chronic preventative diseases like hypertension and diabetes. Data from Fresno Community Health Improvement Partnership (FCHIP), reports 24.1% of Fresno residents had hypertension. This trend has led organizations like OMNI Family Health to adopt newer tactics to manage patient blood pressure, the integration of ambulatory blood pressure monitoring (ABPM). The Remote Patient Monitoring Blood Pressure Initiative at Omni Family Health includes at-home blood pressure monitoring, five health education classes, doctor's appointments every sixty days, and digital data tracking directly to the patient's doctor. By measuring adherence to the program at Omni, we hope to address some of the gaps provided by the assessment of only medication for hypertension management. With this combination of methods, adherence to this program is expected to have good outcomes in lowering the incidence of patients with essential hypertension at Omni Health. We hypothesized that patients with essential hypertension compliant with their medication regimen along with Point of Care Testing (POCT) blood pressure monitoring and participation in all health education interventions would reduce their blood pressure by 10%.

Poster #22**Barriers to Seeking Mental Health Resources Among Hispanic/Latino/a/x Populations, A Pilot Study**

A. Thomas, T. Singh, N. Desai, D. Patel, A. Martinez, S. Garcia, G. Perryment, PhD

California Health Sciences University College of Osteopathic Medicine

Members of Latino/a/x community face various barriers when seeking out mental health services. To determine the pertinent barriers and the gravity of their effects on patient willingness to seek mental health services, a longitudinal study will be conducted at the UHC Bullard of Fresno, where data, before and after providing an educational pamphlet, about utilization and knowledge of current resources by its Latino/a/x patient population will be collected and analyzed. A quasi-experimental research design will be utilized to explore a causal relationship between an educational pamphlet and patient resource utilization. This pilot study is the first phase of the study as it focused primarily on data collection. Non-probability sampling of the current 289 behavioral health patients at UHC Bullard under the provider Liliana Villalobos (LCSW) will be used. In the next phase, a pre-survey and post-survey will be formulated and given to patients to gather patients' baseline regarding their mental health and receptiveness to utilizing mental health sources before and after being given an educational pamphlet. It was seen that the majority of behavioral health patients were Hispanic/Latino (66%) and the majority of patients came in with government assisted insurance (66%). This suggests a possible relationship between demographics/insurance type and utilization of mental health resources at UHC Bullard. Further analysis will be conducted after collecting "Phase 2" data. For future considerations, patient data can be further examined to see if Hispanic patients or patients with government assistance insurance programs encounter different wait times for mental health appointments than other demographics.

Poster #23**Moyamoya Disease in a 28-Year-Old Pregnant Female**

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Moyamoya disease (MMD) is a rare cerebrovascular disease in which the blood vessels, particularly in and around the Circle of Willis, progressively narrow and limit the flow of oxygenated blood to the brain. In Japanese, “Moyamoya” translates to “puff of smoke,” describing the wispy, tangled appearance of the compensatory collaterals that develop to help with providing blood flow to the brain. In this case report, we present a 28-year old female patient who presented with new onset headaches and blurry vision 18-weeks into her pregnancy. Upon evaluation, the patient was found to have unilateral right-sided moyamoya disease with occlusion of the right supraclinoid internal carotid artery and moyamoya vessels. Further imaging demonstrated decreased blood flow to the right hemisphere and diminished augmentation in the right middle cerebral artery. The patient was treated surgically with a right frontotemporal craniotomy with microscopic extracranial-to-intracranial revascularization anastomosis utilizing intraoperative ICG angiogram. This case will highlight an incredibly rare disease and how to best consider patient conditions, such as pregnancy, and how to do what is best for the patient.

Poster #24**Food Insecurity in Merced County and Stanislaus County**

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The Central Valley is a major agricultural center of California yet there are some of the highest rates of food insecurity with roughly 40% of the population facing food insecurity and Merced County’s child food insecurity rate is the 3rd highest in the nation. It has been shown that individuals who face food insecurity are more likely to have health outcomes of diabetes mellitus, hyperlipidemia, and hypertension. Very few physicians are trained in one of the most impactful social determinants—nutrition and food access. It has been reported that the average medical student receives less than the recommended 25 hours of nutritional education throughout the four-year program. Created SMART Aim to have clinical providers at Golden Valley Health Center who attended the medical student presentation on food insecurity specific to the Central Valley to demonstrate a 50% increase in knowledge from pre-survey to post-survey by May of 2023. Students of CHSU recruited physicians at Golden Valley Health Center and provided a 30 minute lecture on food insecurity and resources available to patients in Merced and Stanislaus County. Pre- and post-surveys were completed and conducted anonymously and data analysis indicated that there was a 45% increase in knowledge from the pre- and post-test. Further studies may provide additional presentations and collaborated community events to increase nutrition competencies amongst physicians and patients.

Poster #25

Advanced Lymphoma with Possible Gastric Metastasis: An Unusual Pathway of Disease Progression

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Introduction: Lymphoma is a broad term that describes many different forms of cancer, all of which begin within the lymph system. Though lymphoma masses tend to appear in several extranodal sites throughout the body, gastric masses are unusual, raising the possibility of a unique metastatic site. **Abstract:** We discuss a 43-year-old male who presented to the emergency department with diffuse abdominal pain, vomiting, and weight loss. Upon further questioning, the patient endorsed a 2-month history of unintended dyspepsia, decreased oral intake, and fatigue. The physical examination showed diffused lymphadenopathy. Initial lab workup was remarkable for hypophosphatemia, microcytic anemia, and hypocalcemia. A CT of the abdomen and pelvis revealed profound splenomegaly, greater than 30cm and a possible malignant mass in the stomach. A biopsy was taken from the patient's right axillary lymph node, and an esophagogastroduodenoscopy (EGD) was performed to gather samples from the gastric mass located in the gastric body. We are currently awaiting pathology results which will guide treatment. **Discussion:** The case highlights an unusual pathway of disease manifestation for several reasons. Most common forms of lymphoma present in either children/young adults or in the elderly. A severe lymphoma presenting in a middle-aged patient with minimal comorbidities is rare. Most lymphoma cases present with infiltrations in the bone marrow or in the lymph nodes with distant metastasis confined to the neck. Distant gastric metastasis is unexpected and presents a unique opportunity to further our knowledge of this disease to enhance disease identification and patient care further.

Poster #26

The Barriers to Obtaining Diabetic Retinopathy Exams in Both Clinic and Outsourcing at United Health Center - Bullard for Those Diagnosed with Diabetes Mellitus

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Background: Diabetic retinopathy screenings are often referred to outside clinics to be conducted by eye care professionals. The disjointed nature of this care process has identified potential factors that may contribute to lower screening rates, such as socioeconomic status, physician adherence, and various demographic variables. This retrospective chart review project aims to identify barriers to diabetic retinopathy exams among diabetic patients at the United Health Centers clinic on Bullard Ave in Fresno, CA. **Methods:** The study population will include patients over 18 years of age with Type I or II diabetes mellitus who are at risk of developing diabetic retinopathy and have had visits in the past 3 years. The project will extract the following variables from patient charts: age, height, weight, sex, race, ethnicity, insurance status, zip code, Charlson Comorbidity Index, progression to diabetes mellitus, and progression of diabetes-related ocular pathologies. Multivariate analysis will be used to assess the association with diabetic retinopathy screening rates and follow-up attendance with an eye care professional. The project will use R or Excel for quantitative analyses to determine specific barriers and conduct qualitative analyses to identify leading causes. To ensure patient privacy, protected health information will be de-identified. **Discussion:** The study is limited in that it excludes patients under the age of 18 and was impacted by the COVID-19 pandemic, which may affect follow-up rates. Limitations of the EMR system and manual search methods may also hinder analysis and introduce confounding variables. Future studies should consider partnering with data analyzers of the clinic and including all UHC clinics to account for biases and site variations.

Poster #27**HbA1c Point of Care Testing (POCT) and its Role in Management of Diabetes**

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The San Joaquin Valley has a high prevalence of pre-diabetes, especially in the Fresno valley. Patients who have diabetes are recommended to complete HbA1c blood tests at periodic intervals to determine their progress. Improved management can reduce diabetes related complications. United Health Centers (UHC) has implemented HbA1c point of care testing (POCT) at various locations, providing rapid and accurate HbA1c measurements onsite, which may assist and improve diabetes management. This project studied whether the HbA1c point of care test administered to the uncontrolled patient population (HbA1c over 9%) improved diabetes management. By comparing the diabetic control before and after implementation of the standardized HbA1c POCT, this longitudinal study (Sept 2021-2022) viewed the effectiveness of the rapid HbA1c machine in improving diabetic control. Quality control of the HbA1c POC testing was standardized across each UHC to ensure a set procedure. A paired two-tailed T-test with a confidence interval of 0.05 resulted in a p-value of 0.250; therefore, statistical significance was not established. Nonetheless, there was a notable 27% decrease in the number of patients with poorly controlled diabetes across the three sites. After the implementation of HbA1c machines, diabetic control was achieved by 13 out of 23 UHC sites. Data from January 2023 suggests that 18 out of 23 of the UHC sites are meeting control, with only five remaining sites unable to meet the sites' diabetic control criteria. UHC continues to implement the POCT in all centers. The next steps are to determine if similar sites are producing similar results or seeing more improvement in diabetic management

Poster #28**Barriers to a Healthy Diabetic Diet**

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Objective: Studies have shown the benefits of the Mediterranean diet for diabetes patients, but there is no established evaluation on patient adherence to this diet. The purpose of our study is to determine how social determinants of health in the Fresno area impact diabetes patients' ability to follow the Mediterranean diet. In response, we plan to provide patients with info on available local resources and measure changes in A1c levels. **Methods:** Our patient population focuses on prediabetic patients (A1c 5.7-6.4) and diabetic patients (A1c 6.5-8) at Kaiser Permanente (KP) Fresno. To understand the potential barriers patients may face when following the Mediterranean diet, we send out a survey analyzing dietary behavior and lifestyle habits, including questions on Mediterranean-like diet adherence and socioeconomic barriers that may impact their diet, such as food access and insecurity, use of food banks, and size of household. **Results:** Of the 48 patients surveyed, 2% scored 1, 6% scored 2, 12.5% scored 3, 12.5% scored 4, 40% scored 5, 15% scored 6, 12.5% scored 6 and zero patients scored 8 or 9 on the Mediterranean diet score. **Conclusion:** The study had three main limitations: delayed survey release, the targeted patient population was smaller than expected due to administrative errors (only A1c 6.4), and errors in the survey formatting. This led to the inability to identify survey responses to appropriate patient demographics and to allocate resources to patients who participated in our study. As we continue to work on this project, we hypothesize that once the socioeconomic barriers identified in our preliminary survey are addressed and resources are appropriately allocated, the A1c of the KP Fresno population will have a 1% A1c decrease in the second survey.

Poster #29

Identifying High-Risk COVID-19 Patients for Early Treatment: A Quality Improvement Project Using an Online Questionnaire

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Due to a physical limit of hospital resources, it may be of interest to identify those who may present with severe COVID-19 symptoms requiring hospitalization. Moreover, if patients can self-identify as those with higher risk of severe disease via a survey, we can allocate hospital resources more effectively. Previous studies that focus on patient education, such as those in stroke patients, improved their knowledge, and awareness on how to navigate their conditions.² Another study regarding the efficacy of educational material such as surveys for patients with Rheumatoid Arthritis found the implementation of educational materials in clinical settings resulted in improvements in disease knowledge and decisional conflict for six months after being presented with the material.¹ We applied these principals in making a survey for people to self-identify for hospitalization due to COVID-19. Our survey includes characteristics that are correlated with severe disease such as higher body mass index and low renal function.^{3,4} Though we have not yet begun data collection, we believe that allowing patients to self-determine if they are at risk for severe COVID-19 presentation, will improve patient outcomes and allow hospital resources to be used more effectively. Citations 1. Lopez-Olivo MA, Lin H, Rizvi T, Barbo Barthel A, Ingleswar A, des Bordes JKA, Jibaja-Weiss M, Volk RJ, Suarez-Almazor ME. Randomized Controlled Trial of Patient Education Tools for Patients With Rheumatoid Arthritis. *Arthritis Care Res (Hoboken)*. 2021 Oct;73(10):1470-1478. doi: 10.1002/acr.24362. Epub 2021 Aug 31. PMID: 32583971. 2. Sullivan KA, Katajamaki A. Stroke education: retention effects in those at low- and high-risk of stroke. *Patient Educ Couns*. 2009 Feb;74(2):205-12. doi: 10.1016/j.pec.2008.08

Poster #30

MindMapp: Revolutionizing Depression Diagnosis and Management through EEG and AI Chatbot Integration

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Artificial intelligence (AI) has revolutionized mental health, but consumer-level mental health apps lack the ability to provide neurofeedback This study is phase 1 of a 4 phase project. The purpose of phase 1 is to identify whether there is a need for a mental health application that allows EEG compatibility. This phase was completed by conducting a systematic review on the potential role of neurofeedback in diagnosing and treating depression. Based on published studies, the absolute power of the theta wave is an essential EEG finding integral for neurofeedback potential. The app MindMapp utilizes objective EEG and sensory data in addition to subjective emotional data from an AI chatbot to provide more accurate diagnoses and efficient coping methods tailored to each individual. MindMapp can enhance user understanding of the mental condition, enable early diagnosis, and provide individualized treatment methods. Future phases will focus on gauging interest, app development, publishing, and marketing of MindMapp. Further research is needed to overcome issues related to misuse of clinical data, the ethics, cost, and usability of mobile EEG technology, and potential collaboration with local professionals and existing companies.

Poster #31**Exploring the Neural Basis of Auditory Verbal Hallucinations Across Mental Health Disorders**

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Auditory verbal hallucinations (AVHs) are a common symptom across multiple mental health disorders, and understanding the neural basis of AVH can help distinguish the relationships between AVH and various mental illnesses. This systematic review aims to synthesize and compare the current literature on the neural basis of AVH in schizophrenia, bipolar disorder (BD), major depressive disorder (MDD), post-traumatic stress disorder (PTSD), and borderline personality disorder (BPD). A comprehensive search of electronic databases for relevant articles published between 2000 and 2023 was conducted. Articles included in this review reported on the background of AVH, brain imaging findings, and interventions currently used for the treatment of AVH in each condition. Results demonstrated that, compared to healthy controls, individuals with schizophrenia, BD, MDD, PTSD, and BPD exhibited various prevalence of AVH symptoms along with distinct patterns of neural alterations associated with AVH including differences in gray matter volume, white matter integrity, and functional connectivity within specific brain regions. Additionally, different interventions have been found to be promising in reducing AVH in each disorder, and further research is needed to determine the potential for more effective treatment options. This review highlights the importance of understanding the unique neural basis of AVH in various mental health conditions to facilitate the development of tailored interventions.

Poster #32**Identifying Barriers to Diabetes Management Among Patients at UHC Fowler**

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Nearly half of all adults in California have some form of prediabetes or diabetes. In Fresno County, an even higher percentage is present in minority communities. Due to the lack of research on the culturally-specific and socioeconomic barriers to care for these patients, this study focused on furthering research at United Healthcare Center Fowler, a community healthcare center in Fowler, CA. We used a mixed-methods approach to identify barriers to care in Fowler, featuring surveys and interviews. The surveys were based on the Diabetes Self-Management Questionnaire-Revised (DSMQ-R) and self-reported barriers the patients were facing and were offered in both English and Spanish. Barriers listed included diet, knowledge regarding diabetes management, and issues related to doctor's appointments, among others. Interviews were conducted voluntarily and limited to those with HbA1c levels greater than 5.7%, the lower cutoff for prediabetes, and focused on three topics: a personal story related to their life with diabetes, their self-management of diabetes, and their biggest struggle in their self-management of diabetes. Our results showed that the most significant barriers to the management of diabetes in the Fowler community were lack of access to affordable, healthy dietary options and maintaining a healthy and culturally specific diet, which greater than 50% of patients reported as barriers. By identifying these barriers to nutritional choices as a critical barrier in managing diabetes in the Fowler community, we can anticipate future interventions that can be implemented to ease this burden on the community, CalFresh pamphlets regarding healthy local food options, as well as patient-specific nutritional counseling that which factor in the cultural aspects of their diet.

Poster #33**A Produce Prescription Program for Camarena Health**

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Background: In 2019, it was reported that 31% of children and teens aged 10-17 were either overweight or obese in California. In Madera County, more than 44% of children are obese or overweight. Current studies of Fruit and Vegetable Prescriptions programs have shown improvements in BMI, consumption of fruit and vegetables, and reduction in food insecurity in pediatric populations with obesity. Our research question asks, will receiving weekly produce boxes for six weeks affect the eating behavior, fruit and vegetable intake, and confidence in preparing food for families with overweight or obese children at Camarena Health. **Methods:** The target population are thirty primarily Latinx pediatric patients living in a rural county who are overweight or obese (BMI >85th percentile). A baseline survey will include demographic information, BMI, and food behavior questions. Patients will receive one produce box per week for six weeks with recipes included. A 6-week follow-up survey will be conducted, as well as a final survey 6 months after receiving their last produce box to measure the long-term impact of the program. Surveys will be collected electronically, and data will be analyzed. **Discussion:** Our biggest challenges are finalizing logistics of placement of recipes and flyers in each box, conducting initial surveys, and coordinating the delivery of boxes with farmers, dietetic interns, and patients. Each week, we will discuss appropriate seasonal recipes for the produce provided by a dietician. **Conclusions:** With completion of the project, we hope to establish the efficacy of implementing a produce prescription program in helping combat childhood obesity and increasing fruit and vegetable consumption in rural areas.

Poster #34**Perceptions of Police Through the Media**

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Alliant International University

This study seeks to understand the association, if any, of crime media consumption on viewers' perceptions of police officers, police reform, social services, crime, and police brutality. The research question of this study will explore whether the type of crime television consumed (i.e., true crime or drama crime) moderates perceptions of law enforcement in either a positive or negative way. This research is warranted, as YouGov survey data indicates 1 in 3 Americans reported watching crime television at least once a week (2022). Past research has found associations between CSI viewership and juror expectations (Huey, L., 2010). The underlying theories used in this research are the CSI effect (Gerbner and Gross, 1976) and the Mean World Index theory (Gerbner, 1976). Based on this literature, the current study proposes three distinct hypotheses: H1: consumption of drama crime shows will yield positive perceptions of law enforcement; H2: consumption of true crime shows will yield negative perceptions of law enforcement; H3: elevated consumption of crime television will result in increased feelings of unsafety. Additionally, the researchers hope to determine the relevancy of the Mean World Index and the CSI Effect theories in present day. To conduct this study, approximately 120 participants will be recruited, primarily through snowball recruitment to ascertain a power of .08 (Frost, 2022). The participants will be asked to complete a demographic questionnaire, a questionnaire regarding their opinions about police and crime in America, and the State-Trait Anxiety Inventory. The researchers' principle aim is to determine how media consumption impacts individuals' real-world ideologies and whether these are affected by individual characteristics and anxious tendencies.

Poster #35**An Interdisciplinary Approach to Assessing Diet Among Spanish-Speaking Patients**

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Background: Poor diet quality is associated with adverse cardiometabolic outcomes. The Central Valley of California suffers from the highest obesity rates in the state, and the burden disproportionately affects those of Hispanic origin. Medical students at CHSU-COM translated a diet assessment tool, the 9-item Diet Risk Score (DRS), into Spanish to intervene with Spanish-speaking patients to reduce the risk of cardiometabolic disease. Methods: We will evaluate the validity of the Spanish-Diet Risk Score (S-DRS) compared to the Healthy Eating Index (HEI-2015) from two 24-hour dietary recalls. Two bilingual medical students translated the DRS into Spanish. Two faculty members reviewed the translation: a Medical Spanish instructor and a Spanish-speaking Registered Dietitian Nutritionist (RDN). RDNs trained medical students to perform 24-hour dietary recalls. To assess validity, medical students administer two 24-hour recalls and the Spanish-Diet Risk Score (S-DRS) to a sample of Spanish-speaking adults in person or over the phone. Participants aged 35-75 have all been recruited from local federally qualified health centers. Results: Between October 2022 and February 2023, 31 participants completed the study; the final data analysis will take place in the coming months to evaluate the validity of the S-DRS. Conclusions: To intervene sooner with individuals at higher cardiometabolic risk, a dietary screener is needed to identify at-risk patients more rapidly than the available tools. In this study, medical students were trained in diet assessment, enhancing their ability to provide preventive care in the future. The S-DRS may be used by physicians and other non-nutrition specialists with Spanish-speaking patients to help reduce rates of preventable chronic disease.

Poster #36**Using Quantitative Analysis to Explain Qualitative Experience**

G. Santangelo

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The research proposes a new quantitative statistical method using multigroup analysis Structural Equation Modeling (SEM) to research personal prayer habits effectively. The neurotheological assumption of personal prayer identifies a Personal Relationship with God, and the belief prayer effects are measurable objectively. Current research combines religious orientations as a singular demographic representing the entire population. As a result, religious orientation remains an unidentified demographic in most research, given that prayer effects are assumed to be generalizable. The scientific research method treats religion as science. Religion is not a science but a philosophical thought, belief, or faith. Philosophy includes ethics and metaphysics, typically not considered measurable by scientific reasoning. Also, not all philosophical thinking is similar; therefore, we cannot assume all religious habits are the same. Religion cannot be researched like biology, chemistry, or pharmaceutical trials and expected to yield accurate results. A new proposed sociotheological structural equation model (SEM) utilizes cultural factors specific to Catholic teaching rather than emphasizing the general strength of belief. Providing culturally sensitive interpretations of transformative religious experiences, like personal prayer, can occur from a shift in the current religious research to asking why rather than defining the how. Explaining personal prayer as a religious experience is best defined by the process. Therefore, Qualitative research methods may help define personal prayer but cannot measure the intended effect. Quantitative methods have been attempted through double-blind studies; however, due to their unspecified nature, too many uncontrolled variables remain.

Poster #37**Functional Magnetic Resonance Imaging Studies Investigating Prefrontal Cortex Function in Attention-Deficit Hyperactivity Disorder**

R. Shishodia, T. Pham, J. Terry, DO

California Health Sciences University, College of Osteopathic Medicine

Attention-deficit/hyperactivity disorder (ADHD) is a common neurodevelopmental disorder characterized by symptoms of inattention, hyperactivity, and impulsivity. The prefrontal cortex (PFC), which regulates attention, behavior, and emotion, is frequently dysfunctional in individuals with ADHD. Functional magnetic resonance imaging (fMRI) has been increasingly utilized in psychiatric research to assess differences in the brain systems that underlie ADHD. This systematic review analyzed 20 studies published between 2013 and 2023 that utilized various fMRI techniques, including resting-state, task-based, and connectivity-based fMRI, to examine alterations in PFC function in ADHD. Results indicate consistent alterations in PFC function in ADHD, including reduced activation in the right dorsolateral PFC during working memory tasks and increased connectivity between the PFC and the default mode network, as well as decreased connectivity between the PFC and the striatum. These findings have important implications for the development of targeted interventions and treatments for individuals with ADHD, but more research is needed to fully elucidate the role of PFC dysfunction in this disorder and to explore the potential of emerging fMRI techniques for investigating it. This systematic review underscores the value of fMRI as a tool for advancing our understanding of the neural basis of ADHD and for developing interventions to improve executive function in individuals with this disorder.

Poster #38**Grey Matter Depletion in Conduct Disorder Adolescents through Magnetic Resonance Imaging Studies**

T. Pham, R. Shishodia, J. Terry, DO

California Health Sciences University, College of Osteopathic Medicine

Conduct disorder (CD) refers to a collection of adolescent behavioral and emotional disorders of socially unacceptable mannerisms such as hostility, aggression, and violation of established rules. Total grey matter volume (GMV) is low in adolescents with CD, and abnormal changes in specific areas for socioemotional stimuli processing were found. Psychiatric diagnoses of various behavioral disorders have been increasingly supplemented with magnetic resonance imaging (MRI) to analyze and measure architectural changes within the brain; therefore, MRI has the potential to serve as a radiomarker for CD diagnosis. A literature search was conducted in electronic databases, including PubMed, ScienceDirect, and Google Scholar. Studies published between June 2011 and February 2023 that used MRI to investigate socioemotional-related grey matter depletion in CD were included. The search terms included "Conduct Disorder," "MRI," and "grey matter." A total of 20 studies met the inclusion criteria and were included in this review. A suggestive association between conduct disorder and consistent radiographic findings of reduced grey matter was observed in these studies, and we evaluated their findings. We found that the total GMV was reduced in the prefrontal cortex, anterior cingulate gyrus, insula, temporal gyrus, orbitofrontal cortex, cingulate cortex, supramarginal gyrus, and frontal gyrus. The effects on the amygdala and putamen, however, presented conflicting discoveries in size changes due to CD, and thus require additional investigation. These radiographic discoveries may present a more tangible method to identify CD while offering the potential for medical imaging to be used as a diagnostic criterion in psychiatric illnesses in the future.

Poster #39**Be Still My Fever: A Case Study of Adult Onset Stills' Disease**

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Sierra View Medical Center

Background- Adult Onset Stills' Disease (AOSD) is a rare, systemic auto-inflammatory disease and is perhaps one of the more difficult diseases to diagnose as it is essentially a diagnosis of exclusion. The hallmark symptoms of cyclic fevers, arthralgias evanescent rash, neutrophil- dominant leukocytosis and negative antibody titers, beget a wide differential, majority of which include malignancies, infections, vasculitides and other auto-inflammatory diseases. Several factors have been implicated in its pathogenesis, although they are only hypotheses. Ultimately, pathogenesis involves activation of IL-8, IL-1B and TNFa. This case discusses the presentation, progression, and diagnosis of this disease in a low-resource setting with multiple competing differentials. Case- Mr. S is a 25 year old man with a history of rheumatoid arthritis who presented with left hip pain and swelling. He was initially worked up for septic arthritis versus avascular necrosis. He underwent an incision and drainage, drain placement, and eventually required left hip replacement. Post-operatively, he developed cyclic febrile episodes with concomitant rash, and all cultures (blood, cyst, urine) were negative. Further workup showed leukocytosis with neutrophil dominance, CRP, ESR, LFT's and a significantly elevated ferritin. ANA and RF antibodies also obtained were negative. These tests, with the coexistent clinical picture, ultimately lead to the diagnosis of AOSD. Conclusion- This case exemplifies the necessity of investigation when faced with a broad differential. It also depicts a standard presentation of AOSD and its postponed diagnosis due to poor awareness and limited diagnostic criteria. As such, clinicians should heed AOSD as a diagnosis in patients with these hallmark symptoms.

Poster #40**Vaccine Education with Punjabi-Speaking Population**

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The research aims to investigate the effects of an educational vaccine video in Punjabi on patient knowledge. Current research shows a lot of positive results regarding the effects of vaccine education. Vaccine education's varying forms include text messages, surveys, face-to-face reminders, videos, and even pamphlets. Redfield and Wang had a three-step approach to increasing vaccination rates: provider education, office prompts, and patient education. Unfortunately, the plethora of information on vaccine education does not as easily extend to Punjabi-Speaking patients. Our research will expand the current research scope to a group of patients that often is not studied. The longitudinal research study aims to analyze the effects of vaccine educational material on a target population in Fresno County by utilizing a pre-and post-survey. The target population consists of parents of adolescents (age 10-17) and infants (<2 years of age). In this project, a video will be used to test a change in knowledge through the distribution of a pre/post-test directly related to a video on vaccine education. The educational materials consist of a five-minute video presented in Punjabi. The videos will follow the basic outline: introduction, basic definitions, science/misinformation around vaccines, and general benefits. The study's research revealed the effects of the video increased the overall scores of the patient population. The pre and post-quiz was given to a sample size of 41 individuals. The pre-test average was 3.74. The post-test average was 5.30. Our study shows that an educational video provided statistically significant improvement in expanding patient understanding of vaccinations. We aim to have our educational materials incorporated and adopted into Golden Valley.

Poster #41**RAMAN SPECTRUM OF DOPAMINE: Molecules in Disguise**

J. Varughese, N. Valley PhD

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Dopamine is a neurotransmitter that primarily acts in the brain with a variety of body functions such as concentration, motor control, reproductive behaviors, and learning. Abnormality of dopamine levels can cause a variety of health issues including ADHD, Parkinson's Disease, and Schizophrenia.¹ The methods that are in place for finding such compounds are not reliable due to the multitude of compounds that exist in the human body. Each compound has its unique molecular fingerprint, and technologies such as Raman Spectroscopy allow one to find this signature fingerprint. Raman Spectroscopy is a technology in which a light interacts with the compound causing Raman events in which the compound begins to vibrate in different vectors. This research was approached in a computational manner to simulate the Raman Spectroscopy with the neurotransmitter Dopamine to generate a Raman Spectrum. The generated Raman Spectrum of Dopamine (Figure #3) displays the calculated Raman data as peaks in which 3D models can be created to see Raman events. The peaks seen in Figure #3 are representative of the wavenumbers 772.88 cm⁻¹, 1124.55 cm⁻¹, 1287.87 cm⁻¹, and 1624.16 cm⁻¹ where different vibration patterns can be observed. This spectrum may possibly be helpful in identifying the compound in the human body by using noninvasive technologies.

Poster #42**Nutritional Education Knowledge Satisfaction for Patients with Type II Diabetes**

V. Gupta, A. Kaplan, D. Payton, P. Singhal, J. Varughese, J. Wu, L. Perry, FNPC, CNS

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With the prevalence of obesity, hypertension, and the convenience of unhealthy eating choices, Type II Diabetes is a growing disease that has affected millions of Americans. We explored the use of nutritional education as a means to improve healthier eating choices. Significant factors that correlated with higher rates of Diabetes among the Latino and Punjabi populations included lower relative health insurance rates, poverty, low socioeconomic status, low income, and, most importantly - lack of access to education. In order to improve diabetic outcomes through improved nutrition, we explored different means of education and promotion of healthy nutritional education, tying in behavioral public health theories and creating practical ways of assessing their impact subjectively and objectively. With this study, we believed that at least 50% of the patients receiving nutritional education at UHC Milburn will be more confident controlling their Diabetes after demonstrating a 50% increase in their health literacy and experience satisfaction by the end of March 2023. We found that 80% of the patients reported gaining knowledge after their session. 100% of the patients reported a satisfaction score of 2 or more (which displays that they are somewhat knowledgeable of the information and nutritional education provided). Our project had a positive impact on the patient population in both patient satisfaction, as well as knowledge of healthy eating. For future steps, it would be helpful to implement this study on a wider patient population to expand the data.

Poster #43

My rash is tormenting me: An interesting and rare case about Sjogren's Syndrome with systemic manifestations

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Adventist Tulare Family Medicine Residency Program

Introduction -Sjogren's syndrome is an autoimmune disorder caused by the infiltration of lymphocytes, monocytes, and plasma cells into the salivary and lacrimal glands. In approximately 40% of patients, it progresses beyond the exocrine glands and systemic features develop. Case Presentation -We present the case of young female who presented to our hospital with generalized petechial rash, mouth ulcers, dry eyes and mouth, shortness of breath, abdominal pain, reduced urination and fatigue. Labs positive for leukocytosis, thrombocytopenia, elevated liver enzymes, and creatinine. On examination, she had palpable purpura involving 80-90% skin, ulcers in mouth, and generalized lymphadenopathy. Autoimmune work up revealed positive SS-A, SS-B, and RNP. CT chest showed mediastinal, hilar, axillary, and supraclavicular lymphadenopathy. Skin biopsy showed no vasculitis or eosinophils. Lymph node biopsy consistent with reactive lymph nodes. During her course, she developed worsening shortness of breath. The patient was placed on oxygen and high dose. steroids with moderate improvement of symptoms. Rheumatology confirmed Sjogren's Syndrome and recommended oral Prednisone and Hydroxychloroquine at home. The patient's condition improved, symptoms resolved, rash disappeared, and she was discharged home on maintenance medications. Learning Points - Sjogren's syndrome is diagnosed and treated in the outpatient setting; however, the undiagnosed patients can develop systemic features severe enough to require hospitalization, including a severe rash. It is important for Physicians to investigate complicated outpatient illnesses manifesting as complex disease processes and reduce chances of missed or delayed diagnoses in all settings.

Poster #44

Adapting ACLM's Culinary Medicine Curriculum to a Remote Learning Platform

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Keck School of Medicine of USC

Over 80% of chronic disease is caused by lifestyle practices, including an unhealthy diet. Despite this, most medical students in the United States graduate having received minimal nutrition education, guidance towards improving their nutrition, or skills needed to coach patients to adopt a healthier diet. This study aimed to educate fourth-year medical students in evidence-based knowledge regarding a delicious, whole-food plant-based diet while introducing practical culinary skills and patient coaching skills. We adapted an open-source culinary medicine curriculum designed for in-person teaching of pre-clinical medical students to provide a novel 1-month online elective to fourth-year medical students. We used a 26-item pre/post questionnaire to assess change in evidence-based knowledge regarding nutrition, culinary skills, patient coaching skills, and attitudes toward a whole-food plant-based diet. In addition, we reviewed narrative comments by the student participants, course directors, and medical-school administrators. Scores in all 4 domains were tested, and for all individual questions, they showed statistically significant improvement following the course. Most narrative responses were positive, and areas for improvement were also identified. We successfully adapted an open-source whole-food plant-based culinary medicine curriculum for advanced medical students into a 1-month elective taught on a virtual platform. This course filled a need for training in nutrition and counseling for these students as they start their professional careers.

Poster #45**Screening for Loneliness in Older Adults: A Way to Better Address Mental Health in Primary Care since the COVID-19 Pandemic**

M. Helle

California Health Sciences University, College of Osteopathic Medicine

Background: Mental health in the older adult population has been an ongoing problem since before the COVID-19 pandemic, with an estimated 20% of older adults experiencing mental and neurological disorders. Yet depression is commonly underdiagnosed in the older adult population. While the PHQ-9 continues to be an effective screening tool for depression, studies show patients may answer “no” to these questions when they know they are being asked about their mental health because of the stigma around the topic. This scholarly essay explores how COVID-19 has affected mental health in the older adult population, and how assessing for loneliness in older adults may be a more effective way to screen for mental health in the post-pandemic world. Methods: The PubMed database was used, and search terms included: (Loneliness) AND (Older Adults); ((Loneliness) AND (older adults)) AND (COVID-19); (UCLA Loneliness Scale). Results: The literature shows that there is an increase in reported loneliness and depression in older adults since the COVID-19 pandemic, with one study in San Francisco showing a 54% increase. In another study, loneliness had a stronger correlation with mental health status compared to other factors like socioeconomic status and religiousness. A single question “Are you feeling lonely?” was reported to be a quick and effective screening tool for physicians to recognize older adults who may be having mental health struggles. Conclusion: With increased loneliness in the older adult population after the COVID-19 pandemic combined with the effectiveness of using a loneliness screening questionnaire, incorporating a loneliness screening tool in one’s primary care practice may help physicians better recognize mental health in the older adult population.

Poster #46**Compliance of Participants in a 4-Month at Home Blood Pressure Monitoring Trial**

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California Health Sciences University, College of Osteopathic Medicine

Hypertension is currently the leading cause of global cardiovascular mortality and morbidity despite its relatively easy and inexpensive methods of diagnosing. Omni Health Clinics located in Fresno, CA seek to encourage patients to become more mindful of their blood pressure by offering enrollment into the clinic-wide Blood Pressure Monitoring Program for patients with hypertension. This program uses Smart Meter iBloodPressure Bluetooth-enabled blood pressure monitoring devices for patients to take at-home blood pressure readings on an assigned schedule, and these results are submitted to Omni Health’s online database. This study observes the compliance of patients who are enrolled in the Omni Health at-home blood pressure monitoring program in California’s Central Valley and its potential implications for data collection as well as for other studies that use similar measurements and compliance expectations.

Poster #47**Exploring the Role of Mindfulness-Based Interventions for Bipolar Disorder**

I. Miglani, R. Shishodia, J. Terry, DO

California Health Sciences University, College of Osteopathic Medicine

Bipolar Disorder (BD) is a unique psychiatric condition that is characterized by abnormal shifts in opposing mood states of mania and depression. BD neuropathology incorporates interactions between genetic, environmental, and neurochemical factors. BD is associated with a correlation between the reduction of neurotrophic factors (NTFs), such as brain-derived neurotrophic factor (BDNF), and the stage of the illness. Though it is certain there is a change in brain matter, the specific neuropathology of BD is still unknown. Currently, BD is treated with a combination of both pharmacological and psychosocial treatment. Pharmacological interventions aim to stabilize mood, prevent manic and depressive episodes, and improve the overall quality of life. Additionally, psychosocial interventions focus on providing individuals with the skills and strategies needed to manage their symptoms, cope with stressors, and enhance their social and interpersonal functioning, while also helping to prevent relapse and reduce the need for hospitalization and medication. Mindfulness-based interventions (MBIs) are newer psychosocial treatments that incorporate a range of different practices that promote mindfulness by shifting one's awareness to the present moment. Pilot studies have discovered success in the use of MBIs in patients at all different stages of BD. These findings reveal a decrease in BD symptoms along with an increase in mindfulness. This review paper will examine BD neuropathology and explore the growing interest in mindfulness-based interventions as a way to enhance current methods of managing BD symptoms.

Poster #48**A Survey to Identify the Components of a Diabetes Education Course at UHC Blackstone**

A. Helle, E. Mallick, R. Grewal, S. Jones, A. Kim, D. Holm, T. Singh, R. Demeter, A. Nijjer-Sidhu, PhD, RD

California Health Sciences University, College of Osteopathic Medicine

Diabetes prevention and treatment depend on managing a patient's diet, lifestyle choices, ability to overcome barriers, medication adherence, and more. Diabetes education courses focusing on nutrition and lifestyle changes can help patients learn to manage their diabetes better. However, few studies have been done on the population in Fresno County. This quality improvement study intends to address this gap. The SMART Aim of this study is that by 05/01/2023, thirty patients at the United Healthcare Center (UHC) Blackstone clinic diagnosed with diabetes will have completed a survey to identify their general knowledge of diabetes management and preferences for education classes. Patients at UHC Blackstone were surveyed about their diabetes knowledge, their interest in taking a diabetes education course, and their preferences regarding how the course should be delivered. The survey was given at the end of the patient visit by medical assistants at UHC Blackstone to the target population, 18-85 years of age, diagnosed with diabetes or pre-diabetes. Fifty-five self-reported surveys were recorded and analyzed on an Excel sheet following appropriate protocols. The survey responses showed that patients with diabetes at UHC Blackstone are interested in a free diabetes education course, despite many patients stating they understand how to manage their diabetes. Most patients prefer the course to be in person, delivered in Spanish, with brochures as the primary educational material. The data gathered suggests that UHC Blackstone patients with diabetes are interested in learning more about diabetes and that the patient's health may be positively impacted through a free education class.

Poster #49**A Systematic Review of Bullying in Schools: Effects on Mental Health and Prevention Strategies**

S. Duran, Y. Duran

Alliant International University, California School of Professional Psychology

This research aims to provide a comprehensive systematic review of the widespread problem of bullying in schools, its severe and long-lasting negative effects on mental health, and potential strategies to prevent its occurrence. Victims of bullying are at an increased risk of developing mental health disorders, including depression, anxiety, and other related issues. Additionally, bullying is associated with reduced academic performance, low self-esteem, and even suicidal ideation. Preventing bullying in schools requires creating an inclusive environment that involves teachers, parents, and students. Strategies include identifying and intervening in bullying behaviors promptly, implementing anti-bullying policies, and providing social-emotional learning programs that prioritize empathy and kindness. A strong support network for victims, including counseling services, peer groups, and encouraging bystander intervention, can also help prevent bullying. Bystander intervention empowers students to speak up and intervene in support of the victim when witnessing bullying. This systematic review underscores the pervasive problem of bullying in schools and its severe impact on the mental health of victims. The study highlights the need for a collaborative approach among teachers, parents, and students to create safe and inclusive school environments. Effective prevention strategies include implementing anti-bullying policies, promoting empathy and kindness through social-emotional learning programs, fostering a strong support network for victims, and encouraging bystander intervention. These evidence-based solutions offer important insights for schools and communities to address the significant public health issue of bullying.

Poster #50**Impact of COVID-19 on mental health-related emergency department visits in the Central Valley**

K. Fethat, C. Preciado, A. Huntington, Dr. F. Ibarra

California Health Sciences University College of Osteopathic Medicine, Community Regional Medical Center

Background: The economic recession resulting from COVID-19 negatively impacted many Americans' mental health and created new barriers for people with pre-existing mental health and substance use disorders. Lower household incomes are associated with higher rates of mental health disorders and suicide attempts. California's Central Valley ranks among the highest in mental illness and poverty rates in the state. Despite this finding the Central Valley falls below the national average in the availability of licensed psychiatrists, social workers, counselors, and psychologists. Our study aimed to quantify how COVID-19 affected rates of mental health disorders in the Central Valley. Methods: This was a retrospective study at two institutions within the Community Health System that determined the incidence of patients presenting to the ED with a primary diagnosis or chief complaint of (1) anxiety, (2) depression, (3) substance abuse, or (4) stress reactions across three time periods: Pre-COVID-19 (12/21/2018 - 03/18/2020), COVID-19 (03/19/2020 - 06/15/2021), and Post-COVID-19 (06/16/2021 - 09/12/2022). Results: Our study found that the number of ED visits due to anxiety, substance abuse, and depression increased during the post-COVID-19 period. Of the mental health disorders evaluated, depression showed the largest increase (44.3%) between the Pre- and Post-COVID-19 time followed by anxiety (4.1%). Conclusions: Our findings highlight the need to increase the number of providers and resources available to those with mental health disorders in the Central Valley.

Poster #51

Utility of Intravenous Nicardipine in Adults with Reduced Ejection Fractions Experiencing a Hypertensive Crisis

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California Health Sciences University College of Osteopathic Medicine

Background: Nicardipine, a dihydropyridine calcium channel blocker (CCB), is commonly used in all hypertensive crises, except those involving cardiac contractility defects due to concerns of it reducing contractility and cardiac output as seen with non-dihydropyridine CCB (i.e. diltiazem). However, dihydropyridine CCB display greater selectivity for calcium channels in vascular smooth muscle cells and possess minimal myocardial depressant activity. The purpose of this study was to evaluate the utility of nicardipine in adults with reduced ejection fractions (EF) experiencing a hypertensive crisis. **Methods:** This was a retrospective, non-interventional study at a single academic institution. Patients were included if they were ≥ 18 years of age, received a continuous intravenous nicardipine infusion, and had an EF $\leq 40\%$ per echocardiogram. The primary safety endpoints included the number of patients who experienced hypotension (SBP ≤ 90 mmHg) and bradycardia (HR ≤ 60 bpm). The primary efficacy endpoint was the time to achieving the prescriber specified SBP goal. **Results:** A total of 38 patients were included. The median (IQR) EF and brain natriuretic peptide was 35 (25,40) % and 731 (418,3277) pg/nL, respectively. One (2.6%) patient experienced hypotension and bradycardia. This patient had an EF of 20% and received nicardipine in addition to esmolol for an aortic dissection without experiencing an adverse event until they were initiated on dexmedetomidine. The median (IQR) time to meeting the physician specified SBP goal was 18 (11,65) min. **Conclusion:** The use of nicardipine in the management of hypertensive crises in adult patients with reduced EF may be safe, effective, and should be further evaluated.

Poster #52

I'm Fragile – Please pay attention to my Bowel Movements!!

Shareefa Begum, MD Joseph Maddela, MD Muhammad N Khan MD, FFAFP Adnaan Edun MD
Adventist Health Tulare

Introduction Acute colonic pseudo-obstruction (ACPO or Ogilvie's syndrome) is a disorder characterized by acute dilatation of the colon in the absence of an anatomical blockage. Pseudo-obstruction is characterized by the immobility of the small or large bowel in the absence of a mechanical cause. **Case** We present the case of an elderly patient with Fragile X, Seizure disorder on medication, Type 2 Diabetes Mellitus (HbA1c-5.8%, on metformin), sigmoid volvulus status post colectomy completed about 6 months prior to admission, recurrent small bowel obstructions managed conservatively over last 6 months, who presented to ED with abdominal pain and distention. Vital signs and labs were unremarkable except for mild leukopenia. CT abdomen/pelvis showed diffuse distention of the colon representing Ogilvie's syndrome and mesenteric edema with cecal diameter of 8.2 cm. Surgical and GI teams recommended conservative management. Serial abdominal X-rays showed improvement, while return of bowel function was monitored and diet slowly advanced. Patient did not require neostigmine. He was discharged home in stable condition. **Conclusion** Management of Ogilvie's Syndrome begins with conservative treatment and may include pharmacological therapy, colonoscopic decompression and surgery. Timely resolution is important due to increased risk of bowel perforation and ischemia. Postoperative ileus is common in the days following colorectal surgery in up to 50% of patients. Acetylcholinesterase inhibitors (neostigmine and pyridostigmine) can help with increase in gut motility. By considering diagnosis of Ogilvie's Syndrome in the right patient group, family physicians and specialists can avoid putting those patients through unnecessary surgeries/procedures and deliver appropriate care.

Poster #53**Beware Of Goats – They can't Bite but They can Amputate!!**

S. Begum, MD, J Maddela, MD, M. Khan, MD, FAAF A. Edun MD
Adventist Health Tulare

Introduction Foot problems are an important cause of morbidity in patients with diabetes mellitus. A preventable event, such as trauma causing injury, can be identified. Foot amputations, which are preventable with early recognition and treatment. Case We present a case of an elderly patient, with a history of diabetes mellitus (with last A1c 12.3%), presenting to the ED with right toe pain, swelling and redness. Patient stubbed the right second toe against a wall recently and sustained a small cut. Patient was managing through home remedies. The next day, while tending to the goats on the farm with improper footwear, again sustained injury to the same toe by one of the goats. In the ED, patient was febrile, labs including blood/wound cultures showed infection. X-ray of the foot showed tissue swelling, no fracture. Initial management was IV antibiotics, pain control and insulin regimen. The patient's condition didn't improve, and amputation of the digit was performed. Patient recovered and was discharged home. Conclusion This is a classic case of diabetic foot gangrene leading to amputation. This increases healthcare burden due to potentially avoidable complications of diabetes. As family physicians, we should emphasize to our diabetic patients regarding footcare/footwear which can prevent complications. This is especially important in the Central Valley of California which is known to be the agricultural hub of the USA. Farmers are prone to injuring their feet while working on the fields or tending to their farm animals, the risk is more with comorbidities like diabetes mellitus.

Poster #54**The Relationship of Diabetes Status to Total and Regional Brain Volumes and Cognitive Function: the GeneSTAR Study**

R. Grewal BS, L. Yanek MPH, L. Becker MD, D. Vaidya MBBS, PhD, MPH, P. Nyquist MD, MPH, R. Kalyani MD, MHS
California Health Sciences University College of Osteopathic Medicine, Johns Hopkins University School of Medicine

No abstract submitted.

Poster #55**COVID-19 Sequelae and Comorbidities: A Comparative Analysis of Risk, Prevalence, and Incidence in the Central Valley Region**

J. Karron, A. Huntington, D. Bandak, C. Gazula, E. Merino, PhD
California Health Sciences University College of Osteopathic Medicine

The COVID-19 pandemic has had a profound impact on the healthcare field and society as a whole. Long-term sequelae associated with COVID-19 infection is associated with several chronic conditions. In this poster, we plan to quantify the relationship between comorbidities and long-term sequelae in the Central Valley region. Fresno, CA is the seat of the Central Valley. Initially, we conducted a literature review of established Odds Ratios, Prevalence, and Incidence associated with comorbidities, including Cardiovascular Disease, Diabetes, Obesity, Chronic Kidney Disease, and Chronic Obstructive Pulmonary Disease nationally. Our analysis found that patients with these comorbidities are at increased risk for COVID-19 infections and subsequent long-term sequelae due to the associated multisystem effects of the SARS-CoV-2 Virus. Our comparison of Odds Ratio was created for comparison to the risk ratio provided by the CDC. Additional graphs showing the incidence and prevalence in our studied groups were also prepared. Our findings have potential implications for healthcare providers and policymakers, as they suggest that comorbidities increase the risk of severe outcomes from COVID-19. Our next steps include a case analysis via chart review at a local hospital: Kaiser Permanente. Analysis of chart data to create a model of what occurs locally and if the data mimic the national trends. Then we can expand the study to all patients within the Kaiser umbrella to compare datasets."

Poster #56

Systematic Literature Review of Recent Approaches to CRPS Management

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California Health Sciences University College of Osteopathic Medicine

Purpose of the Study: Complex regional pain syndrome (CRPS) is a severely disabling chronic pain condition that typically manifests in the upper or lower extremities following an injury, surgery, or stroke. CRPS is poorly understood, accordingly, there is no consensus on mainstay treatment. We, therefore, surveyed the recent clinical evidence assessing the therapeutic intervention of CRPS. **Methods:** Studies were identified from the following databases: MEDLINE®, Embase, and the Cochrane Library using the terms "Complex Regional Pain Syndrome" OR "reflex sympathetic dystrophy" OR "causalgia" OR "algoneurodystrophy" OR "algodystrophy" OR "shoulder-hand syndrome" OR "Sudeck syndrome" AND from January 2017 – May 2022. Exclusion criteria included: animal studies, studies not available in English, preventative treatments, and studies involving minors. Randomized controlled trials only were included in the analysis. Following deduplication, title/ abstract screening, and relevancy assessment, 421 initial records were reduced to 15 records. **Summary of Results:** Treatment effectiveness was ranked based on success in mitigation of symptoms, starting with the most effective: 1) Internal (implanted) DRG stimulation (2 studies), 2) Bemer technology (2 studies), 3) Bisphosphonates (1 study), 4) Acupuncture (1 study), 5) Local anesthetic and SSRI (1 study), 6) Mycophenolate (1 study), 7) Thermofluid treatment (1 study), 8) External DRG stimulation (3 studies), 9) Visual-motor therapy (2 studies), 10) IVIG therapy (1 study). **Conclusions:** Our survey of recent clinical evidence derived from RCTs identifies a number of potentially useful strategies for mitigating CRPS. The most successful approaches were internal DRG stimulation and Bemer technology, both being suitable candidates.

Poster #57

Serendipitous Identification of a NOXO1 Inhibitor By Addition of a Polyethylene Glycol Chain

J. Garcia, L. Gutierrez-Rivera, M. Dragovic, N. Mokhtarpour, A. Sterling, P. Senevirathne, A. Luisa Kadekaro, E. Merino

California Health Sciences University, University of Cincinnati

Reactive oxygen species (ROS) are a heterogeneous group of highly reactive ions and molecules derived from molecular oxygen (O₂), which can cause DNA damage and lead to skin cancer. NADPH oxidase 1 (Nox1) is a major producer of ROS in the skin upon exposure to ultraviolet light. Functionally, Nox1 forms a holoenzyme complex that generates two superoxide molecules and reduces NADPH. The signaling activation occurs when the organizer subunit Noxo1 translocates to the plasma membrane bringing a cytochrome p450 through interaction with Cyba. We propose to design inhibitors that prevent Cyba-Noxo1 binding as a topical application to reduce UV-generated ROS in human skin cells. Design started from an apocynin backbone structure to generate a small molecule to serve as an anchor point, inhibitor 1, followed by adding a polyethylene glycol linked biotin in inhibitor 2. Both inhibitors were found to be non-toxic in human keratinocyte cells. Further in vitro experiments using isothermal calorimetric binding quantification showed that inhibitor 2 bound a Noxo1 peptide with a KD of 2nM. Both using isothermal calorimetric binding and MALDI (TOF) MS showed that the binding of a Cyba peptide to Noxo1 was blocked. In vivo experiments were performed using donated skin explants with topical application of the two inhibitors. Experiments show that with ultraviolet light exposure, inhibitor 2 reduced the amount of cyclobutene pyrimidine dimers in DNA, a molecule known to lead to carcinogenesis. Further synthesis showed that the polyethylene glycol but not the biotin was essential for inhibition.

Poster #58**Utilizing 3D Printing to Enhance Learning Experiences**

D. Tan, E. Merino PhD, H. Ibrahim MD

California Health Sciences University College of Osteopathic Medicine

Introduction: Academic fields of study that engage with artifacts, cellular and anatomical structures can benefit from 3D printing technologies. 3D models offer innovative ways to engage with content to foster retention and learners' engagement. Methods: We provided an example of an application exercise custom designed for a system-based first year course. This application exercise is based on Team Based Learning (TBL), the approach currently used in our Institution. We provide an example of the following TBL components: Learning objective, selected pre-work material, and a cell-biology focused application exercise demonstrating the use of a 3D model to give students new learning perspectives. Results: TBL application exercises provide a unique opportunity to incorporate 3D-printed models using real-life scenarios to create engaging hands-on learning experiences. Discussion: Integrating 3D-printed models in application exercises provides a unique opportunity for hands-on learning experiences that enhances the critical-thinking skills of students and foster their understanding of the cell structure and composition of its proteins. Additionally, it provides an opportunity to visualize the components of the cell which fosters students' retention.

Poster #59**A Case Report of A Spontaneous Hemopneumothorax in a 17-Year-Old Male**

L.Gutierrez-Rivera, R.Kumar

California Health Sciences University College of Osteopathic Medicine

A spontaneous hemopneumothorax (SHP) has been defined as the accumulation of at least 400 mL of blood in the pleural cavity in association with a spontaneous pneumothorax. The incidence of SHP has been reported to be around 1-12% of all spontaneous pneumothorax cases and is found most commonly in men of 20–60 years of age during the first episode of pneumothorax. The most frequent presenting symptoms are chest pain and sudden dyspnea. Although their initial clinical manifestations may be very similar, the potential development of hypovolemic shock leading to rapid clinical deterioration distinguishes SHP from spontaneous pneumothorax. This report presents a unique pediatric case of a 17-year-old male that presented to the emergency department with right sided chest pain and shortness of breath for 3 days. Radiographic imaging studies and computed tomography of the chest confirmed a right sided hemopneumothorax. The patient was treated with tube thoracostomy and video assisted thoracotomy. No pathological etiology for the SHP was discovered after extensive work up and patient was discharged.

Poster #60**Investigation of Surfactant Systems for Enhanced Antibacterial Efficacy of Curcumin**

R. Lamichhane-Khadka, G. Gulowski, B. Montgomery

California Health Sciences University, Saint Mary's College, Notre Dame, Indiana

Curcumin is an organic derivative of the turmeric plant *Curcuma longa* commonly used as a spice or food additive. Due to its antibacterial, anti-inflammatory and antioxidant properties, curcumin has gained interest as a potential therapeutic agent and an alternative to antibiotics. However, a limitation to the therapeutic efficacy of curcumin is its poor aqueous solubility and bioavailability. To find a surfactant system that improves the solubility of curcumin and enhances its antimicrobial efficacy, we examined the antibacterial effects of curcumin in various single, and double surfactant mixtures consisting of sodium dodecyl sulfate (SDS), and dodecyl trimethylammonium bromide (DTAB). Inhibition of growth of Gram-negative bacteria *Escherichia coli* ATCC 25922, *Salmonella enterica* serovar Typhimurium ATCC 14028, *Pseudomonas aeruginosa* ATCC 27853; and Gram-positive bacteria *Staphylococcus aureus* ATCC 25923, *Bacillus subtilis* ATCC 21332, *Streptococcus pyogenes* ATCC 19615 was assessed by population analysis profiling and gradient plate experiment in the single, and double surfactant-curcumin mixtures. The curcumin-SDS single surfactant system was the most effective in inhibiting growth of *Pseudomonas aeruginosa*, whereas the double surfactant system consisting of SDS and DTAB was the most effective in inhibiting *Salmonella Typhimurium*. Growth of the Gram-positive species tested was significantly inhibited in both surfactant systems. The observed difference in the inhibitory effects of the curcumin-surfactant mixtures could be due to differences in cellular chemical composition of the bacterial species and their interactions with the surfactant types. Our results indicate a potential for application of SDS and DTAB in developing targeted curcumin-surfactant-based therapy.

Poster #61**Contributing Factors to No Show Rate at UHC Bullard Clinic**

D. Ghaly, Fahad Molla, B. O'Brien, K. Phong, C. Pritchard, A. Nijjer-Sidhu, Ph, RD

California Health Sciences University College of Osteopathic Medicine

A literature review was performed to explore the current research on patient appointment nonadherence and best practices for addressing no-show rates. In the article, "Mothers' Perceived Barriers to and Recommendations for Health Care Appointment Keeping for Children Who Have Cerebral Palsy," a qualitative descriptive design was conducted to gain an understanding of mothers' perspectives on barriers to attending appointments. The four main barriers to appointment adherence fell under the categories of transportation and travel, competing priorities for the child or family, and health care services¹. The systematic review by Sun et al. also found that transportation was an important factor for diabetic patient appointment adherence, especially among elderly diabetic patients. ² Many similar qualitative studies have been made identifying barriers to appointment adherence, but this study additionally delved into facilitators to appointment adherence from a parent's perspective. Considering these barriers and recommendations to appointment adherence can help healthcare organizations provide more family-centered and accessible care to their patients. A 2008 study by DuMontier et al. and Fiorillo et al. in "Factors associated with patient no-show rates in an academic otolaryngology practice," both discussed the no-show rates at their clinics. Each study interviewed the no-show cohort to find the reasons for missing appointments which included lack of transportation, anxiety about their appointment, forgetfulness, etc. The DuMontier study began their intervention by educating the no-show cohort about the negative impact that no-showing had on the clinic and their own health. The clinic also started double booking and using an advanced access scheduling system.

Poster #62**SNAP Outreach and Health Outcomes**

E. Blough

California Health Sciences University College of Osteopathic Medicine, Central Pennsylvania Food Bank

Food insecurity is a social determinant of health which has direct impacts on patient health outcomes. In some capacity, the Supplemental Nutrition Assistance Program (SNAP) is able to combat food insecurity and provide people with reliable access to healthy food. Prior research has proven that SNAP benefits are directly linked with positive health outcomes. However, there are many shortfalls of SNAP enrollment both in California and in the United States as a whole; targeting these deficits will allow health systems and food banks to provide better care to patients and their families.

Poster #63**A Neural Network Model of Cancer Identifies Drugs Synergistic with Autophagy Inhibition**

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In cancer, autophagy has been shown to promote resistance to cancer drugs by inducing pro-survival mechanisms. This observation has led to basic and clinical studies combining chloroquine, an autophagy inhibitor, with standard cancer drugs. However, the range of particular cancer drugs likely to benefit from this combination remains unclear. Here we apply DrugCell, a deep learning model of the molecular pathways that govern cancer therapeutic response, to systematically prioritize drugs that promote cell survival through the activation of autophagy. Using this approach, we analyze the response of tumor cell lines to 684 drugs, identifying 21 for which resistance or sensitivity is modulated by genetic mutations in autophagy pathways. We systematically screen these prioritized drugs against a fluorescent readout of autophagic flux, confirming that 14 stimulate this pathway and 1 leads to pathway suppression, for a hit rate of 15/21 or 71%. In contrast, only 1 in 6 of a control set of drugs is found to affect autophagy activity. Finally, we test eight of the autophagy activators for synergy with chloroquine treatment, finding that four are highly synergistic, producing a BLISS score greater than 10. These results suggest that, for these drugs (JQ1, tosedostat, leptomycin B, vorinostat), chloroquine inhibition of autophagic flux increases cell death.

Poster #64**Bridging the Gap Between Normal Histology and Pathology Teaching in Medical School Curricula using TBL Application Exercises.**

E Martinez, DO; A Pinto, MD; H Ibrahim, MD

California Health Sciences University College of Osteopathic Medicine

Introduction: Adequate incorporation of normal histology with basic pathology remains a challenge in the System-Based Curriculum model due to the reduced contact hours between facilitators and learners and limited instruction methods that allow timely integration of both disciplines. The goal of this approach is to bridge the gap between teaching normal histology and basic pathology to improve learner outcomes. Methods: We provide an example of an application exercise custom designed for a system-based second year course. This application exercise is based on Team Based Learning (TBL), the approach currently used in our Institution. Results: TBL application exercises provide a unique opportunity to integrate normal histology with basic pathological concepts using real-life scenarios. We provide an example of the following TBL components: Learning objective, selected pre-work material, and an application exercise demonstrating the integration of foundational histological and pathological concepts using a real-life scenario. Discussion: Correlation of normal histological findings with the morphology of diseases is a critical learning outcome that enhances the critical-thinking skills of students. Additionally, it provides an opportunity to review normal histological concepts that may have been missed during the first year of medical education in a system-based curriculum. Furthermore, applying this approach may potentially increase the influx of students interested in pursuing a career in Pathology.

Poster #65**A Tale of Two Bacteria – *B. fragilis*, *E. coli*, and Colorectal Cancer**

C. Lichtenstern; R. Lamichhane Khadka

California Health Sciences University

Colorectal cancer (CRC) is a leading cause of cancer-related deaths globally. Incidence rates among individuals under 50 years are rising, which has led to the lowering of the recommended screening age from 50 to 45 years for those at an average risk. While numerous risk factors are associated with the development of CRC, the majority of cases contain microbial signatures representative of dysbiosis, indicating a role for the gut microbiome in disease pathogenesis. To date, most research has investigated microbiota independently of each other; however, it is widely accepted that microbiota interact with each other in the gut. More recently, two specific species of the microbiota have revealed a pro-carcinogenic synergism in vivo. Strains of both *Bacteroides fragilis* (*B. fragilis*) and *Escherichia coli* (*E. coli*) have been linked to CRC in clinical studies and been shown to induce carcinogenesis in mouse models through *B. fragilis* toxin (BFT) and colibactin, respectively. In this review, we discuss the roles of *B. fragilis* and *E. coli* in a healthy and diseased gut, current evidence associating each bacterium with CRC individually, and their synergistic contributions to the pathogenesis of CRC. Future investigation of CRC should focus on bacterial biofilms and additional potential pro-carcinogenic synergisms between other species of the gut microbiota to improve prevention and screening measures.

Poster #66**Intermenstrual Vaginal Bleeding and Asymmetric Uteri in Uterine Didelphys**

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This poster examines the congenital condition of uterine didelphys, a rare developmental abnormality in which an individual is born with two uteruses, using a case study in which a 33 year old female with this condition experienced continuous and painless intermenstrual bleeding of unknown origin without accompanying pertinent positives on review of systems and physical exam. This case study explores the potential causes of painless intermenstrual bleeding, including endometrial polyps, leiomyoma, endometrial hyperplasia, and ovulatory dysfunction, as well as their risk factors. This case study discusses the labs and imaging performed on this patient, and the evidence they provide towards the final diagnosis versus other differential diagnoses. Finally, this case study discusses the patient's treatment plan and its relevance to the final diagnosis. The key objective of this study is to explore the uncommon medical consequences of uterine didelphys, and the signs, symptoms, objective measures, and potential screenings associated while determining a differential diagnosis.

Poster #67**Sodium-Glucose Cotransporter 2 Inhibitors: Benefits Versus Risk**

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With the growing burden of metabolic disease, cardiovascular disease, and diabetes mellitus, there is an implication for new pharmacological intervention. Sodium-glucose cotransporter 2 inhibitors (SGLT2i) are a class of drugs that work on SGLT2 receptors in the kidneys to decrease glucose reabsorption. Lowering glucose levels mainly aids those with type 2 diabetes (T2DM), but they also have many other effects on the body. This article will investigate the impact of SGLT2i on six relevant organ systems; to establish current knowledge and potential benefits and risk for SGLT2i in clinical practice. The medications that inhibit SGLT2 suffix with flozins are known to help decrease hypertension, acute cardiac failure, and bradycardia in the cardiovascular system. Flozins were found to aid with acute pulmonary edema, asthma, bronchitis, and chronic obstructive pulmonary disease (COPD) in the pulmonary system. SGLT2 is also found in the blood- brain barrier (BBB), and as such, SGLT2i can also affect the central nervous system (CNS). They reduced reactive oxygen species (ROS), BBB leakage, microglia burden, and acetylcholinesterase (AChE) levels. In the liver, this class of drugs can also assist with non-alcoholic fatty liver disease (NAFLD), hepatotoxicity, and weight loss. In the pancreas, SGLT2i has been shown to help with primarily diabetes and hyperglycemia. Finally, SGLT2i's are known to aid in decreasing nephrotoxicity and stopping the progression of the glomerular filtration rate (GFR) decrease. New studies have shown that the flozin drugs have been helpful for those who were receiving kidney transplants. Despite the positive effects, there are some concerns about SGLT2i and its notable adverse effects. Flozin drugs are known to cause urinary tract infections (UTIs), dehydration, orthostatic hypotension, postural dizziness, syncope, hypotension, hyperkalemia-induced cardiac arrest, and pancreatitis. This literature review will discuss, in detail, the benefits and risks that SGLT2i have on different organ systems and implicate the role they may play in clinical practice.

Poster #68**Acute management of hypertriglyceridemia with a disease specific intravenous insulin infusion order set**

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Introduction: Hypertriglyceridemia associated acute pancreatitis is a disease lacking a standardized management approach. The objective of this study was to evaluate the safety and efficacy of a continuous intravenous insulin infusion order set specifically designed for managing hypertriglyceridemia.

Methods: This study compared the safety and efficacy of a standardized (post-intervention) approach to managing hypertriglyceridemia to a non-standardized (pre-intervention) approach. The primary efficacy outcome was the percentage of patients who achieved a triglyceride level less than 500 mg/dL. Additional outcomes included the time to achieving a triglyceride level less than 500 mg/dL and the percent reduction in triglyceride levels. The primary safety outcome was the number of patients who experienced hypoglycemia (glucose less than 70 mg/dL).

Results: Twenty patients were included in both the pre- and post-intervention groups. There was a significantly greater reduction in triglyceride levels observed in the post-intervention group. The number of patients who achieved a triglyceride level less than 500 mg/dL in the pre- and post-intervention groups were 10 (50%) and 17 (85%), respectively, $p = 0.018$. Within the post-intervention group, the time to achieving a triglyceride level less than 500 mg/dL in those with and without diabetes was 56.8 hours (38.2-64.0) vs 27.6 hours (19.7-45.0), respectively, $p = 0.028$.

Conclusion: Our findings demonstrate that insulin infusions are safe and effective when therapy is standardized and accounts for nursing to patient ratios. Our results provide the medical community with a standardized approach to acutely managing hypertriglyceridemia.

Poster #69**Usage of Boston Keratoprosthesis in private practice clinical setting in the California Central Valley: A case series**

A. Salahuddin, MD, A. Salahuddin, Sahba Saleh

In this case series, we aim to evaluate and discuss the benefits and complications of Boston Keratoprosthesis usage in a private practice setting. Based on our study, the results of Kpro usage have been promising, especially when factors such as patient selection and preoperative comorbidities are considered. This study evaluated 23 patients from Vision InSight who had previously failed corneal transplants. They were followed for an average of 31 months for vision and health outcomes after K-pro implant surgery. The most common postoperative complications included increased intraocular pressure, Endophthalmitis, poor compliance, and retrolenticular membrane. Based on our study, K-pro results are promising, and the majority of the patients in our study showed improved visual outcomes.

Poster #70**An Approach to Diagnosing Chronic Granulomatous Disease in a Patient with Lung Nodules**

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California Health Sciences University College of Osteopathic Medicine

This case study focuses on a woman in her late fifties with past medical history of recurrent childhood respiratory and skin infections presenting to the pulmonology clinic with dyspnea and wheezing only partially relieved with inhalers and nebulizer treatments. Subsequent CT scan showed numerous calcified lung nodules, granulomas in the lung and liver, and calcifications in the abdominal aorta. As such, the differential diagnoses for this patient's case included fungal infections, autoimmune diseases, and granulomatous conditions. Through genetic testing, the diagnosis was narrowed down to Chronic Granulomatous Disease (CGD).

Due to significant overlap between pathologies involving calcified pulmonary nodules, this case is used as a jumping off point to discuss development of an appropriate list of differential diagnoses and isolating a final diagnosis. It will also delve into the unique details of this patient's case that make her presentation atypical for CGD. By discussing these points, the following report will stress the importance of not only considering the most common culprits like fungal infections, but also evaluating for more unexpected and obscure - yet equally valid - diagnoses like CGD.

Poster #71**No title submitted**

N. Zapata-Perdew

This study details a male in his late forties with a history of polysubstance abuse presenting to the hospital in need of a cholecystectomy for his gallstones confirmed via ultrasound. Though cholecystectomies are a frequent sight in the operating room, this patient's recent usage of methamphetamines presented cardiovascular and hemodynamic complications for the anesthesiology team to consider prior to the procedure.

As substance abuse is an increasingly significant physiological risk factor in California's Central Valley as well as through many parts of the United States, this study uses the thought process behind creating our patient's treatment plan to provide insight into how illicit substances ranging from methamphetamines to opiates can impact the anesthesia care plan in the operating room.

Poster #72

Breathing Life Into Learning About Air Quality: Developing and Implementing Environmental Health Outreach With High School Students

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The San Joaquin Valley (SJV) is comprised of diverse populations that as a whole are medically underserved and experience significant air pollution. Two-hour interactive outreach sessions were provided at three local high schools in Fresno and Madera to students in health careers pathways. Librarians and student doctors from a local osteopathic medical school guided high school students in health professions pathways through activities to understand the causes of poor air quality in the SJV; describe the different parts of the respiratory system and how air pollutants impact it; identify steps they can take to monitor the air quality and adjust their activities to protect their health; how zip code is a fairly accurate predictor of health; and access National Library of Medicine resources for reliable health information. A comparison of pre and post surveys showed a large improvement in an understanding of what the air quality index (AQI) is, how air pollutants impact different body systems, and lifestyle modifications to reduce the health impacts of air pollution. Outreach sessions to high school students can be effective in increasing knowledge of environmental health issues.

Poster #73

“Doc, I Might be Sicker Than I Look” – My Abdomen is the Stomach. A Complex Medical Case Complicated by a Rare Sequela of Continuous Ambulatory Peritoneal Dialysis.

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INTRODUCTION. Although peritoneal dialysis–associated peritonitis is a commonly known finding in patients undergoing continuous ambulatory peritoneal dialysis (CAPD), a lesser known and rare sequela of CAPD is sclerosing encapsulating peritonitis (with several studies in various parts of the world citing an incidence rate of approximately 1 to 2%)¹⁻², which has a mortality rate approaching 51%³. SEP may present with non-specific symptoms⁴, and sometimes impressive findings on abdominal/pelvic computed tomography (CT)³⁻⁴. The International Society for Peritoneal Dialysis (ISPD) has published some guidelines and recommendations for treatment, however the care delivered to these patients varies widely in clinical practice. **CASE DESCRIPTION.** Here we discuss the case of a 78-year-old male who presented to the ED with weakness, fatigue, and lethargy. The patient was diagnosed with peritoneal catheter-related peritonitis and admitted for intraperitoneal antibiotics. An interdisciplinary team of the patient’s nephrologist, general surgeon, infectious disease, and the hospitalist service focused on treating the infection, switched to hemodialysis, and noted improvement. On the day discharge discussion was started, the patient developed significant nausea, mild epigastric pain, decreased appetite, and early satiety. Plain abdominal x-ray did not reveal an obstruction (see image 3). While undergoing stat CT abdomen/pelvis, patient had emesis and a likely aspiration event after which patient coded and was unable to be revived despite resuscitation. On review of the CT images (see images 1 and 2), massive gastrointestinal dilation was noted with the stomach occupying most of the abdomen, likely because of SEP. **DISCUSSION PRACTICE GUIDELINE.** Currently, the suggested treatment includes switching from peritoneal dialysis to hemodialysis, with adjunct supportive care by means of gastric decompression, antiemetics, intravenous fluid, parenteral nutrition, analgesia, enema, but with attention given to nutrition; moreover, Tamoxifen 10 mg three times a day for at least three months, and prednisone 40 mg a day for at least four months (followed by taper over six to eight weeks), and surgical intervention in cases with obstruction⁵. **CONCLUSION.** SEP, though a rare complication of CAPD¹⁻², should be considered in persons with CAPD as it can present with non-specific symptoms of nausea, vomiting, constipation, diarrhea, abdominal pain, or even occur asymptotically in patients⁴. Radiographic reports may show small bowel obstruction, bowel thickening, intestinal tethering, peritoneal calcification, and or dilation; a normal CT does not exclude early SEP³⁻⁴. A presumptive diagnosis is generally made based on clinical presentation with or without characteristic imaging. However, although some patients may receive the appropriate suggested therapies described above, the mortality rate remains high.

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