



**Charles R. Drew University of
Medicine and Science
CDU/ UCLA Medical Education Program**

**The Medical Student Research
Thesis Program (MSRTP)**

Class of 2015

Medical Student Research Colloquium

Current Research in Health Disparities

Wednesday, March 25, 2015

8:30 a. m. to 4:30 p. m.

Keck Auditorium

Charles R. Drew University of Medicine and Science

1731 East 120th Street

Los Angeles, CA 90059

AGENDA

MORNING SESSION

7:30 – 8:30 a. m. *Continental Breakfast in the Keck Building Courtyard*

8:30 a. m. *Call to Order*

Shahrzad Bazargan-Hejazi, PhD

Chair, CDU/UCLA Medical Student Research Thesis Program (MSRTP)

8:35 a. m. *University Welcome*

David Carlisle, MD, PhD

President, Charles R. Drew University of Medicine and Science

8:40 a. m. *The Provost's Welcome*

Carol Zajac, PhD

Interim Provost, Charles R. Drew University of Medicine and Science

8:45 a. m. *The Dean's Welcome*

Daphne Calmes, MD

Interim Dean, College of Medicine, Charles R. Drew University of Medicine and Science

MODERATOR OF STUDENT PRESENTATIONS

Stanley Hsia, MD

Associate Professor of Medicine, Charles R. Drew University of Medicine and Science

PANEL OF JUDGES

Ron Andersen, PhD

Wasserman Professor Emeritus in the UCLA Departments of Health Policy and Management, and Sociology

Michele A. Basso, PhD

Professor of Psychiatry & Biobehavioral Sciences and Neurobiology, UCLA

Peter V. Barrett, MD

Professor of Medicine in the Division of General Internal Medicine at Harbor-UCLA Medical Center

Lawrence "Hy" Doyle, EdD

Executive Director, UCLA PRIME

Sebastian Uijtdehaage, PhD

Director of Research and Evaluation, Center for Education Development and Research, David Geffen School of Medicine at UCLA

LuAnn Wilkerson, EdD

Senior Associate Dean for Medical Education, David Geffen School of Medicine at UCLA

Sharon Younkin, PhD

Director of Operations for Vice Dean of Education, David Geffen School of Medicine at UCLA

STUDENT PRESENTATIONS (MORNING SESSION)

8:50 a. m. **JEFFREY ARROYO** Primary Mentor: *Shahrzad Bazargan-Hejazi*
Are there gaps in self-reported and objectively measured physical activity in U.S. adult diabetic patients: A racial comparison

9:05 a. m. **ALEJANDRA BAUTISTA** Primary Mentor: *Shahrzad Bazargan-Hejazi*
Interventions for depression in medical students: A review of the literature

9:20 a. m. **NANCY CARBALLO** Primary Mentor: *Shahrzad Bazargan-Hejazi*
Effects of alcohol on U. S. adolescent sleep patterns: A systematic review

9:35 a. m. **RUTH GETACHEW** Primary Mentor: *Dotun Ogunyemi*
Active versus expectant management of intrahepatic cholestasis of pregnancy: A systematic review

9:50 a. m. **ERIK GONZALEZ** Primary Mentor: *Margarita Loeza*
Affordable care act and colorectal cancer screening at a federally qualified health center (fqhc) (PART 1)

10:05 a. m. **GUILLERMO PADILLA** Primary Mentor: *Margarita Loeza*
Affordable care act and colorectal cancer screening at a federally qualified health center (fqhc) (PART 2)

10:20 a. m. **CARLOS GUZMAN** Primary Mentor: *Jonathan Wisco*
Extending anatomical didactics for the medical student beyond the first year: Do long term career goals matter for the Drew cohort?

10:35 a. m. **WAJIDAH ABDUL-KHABIR** Primary Mentor: *Stanley Hsia*
Racial/ethnic disparities in statin usage (*Videotaped Presentation*)

MORNING BREAK (20 MINUTES)
Reconvene at 11:10 a. m.

STUDENT PRESENTATIONS

(Morning Session, Continued)

11:10 a. m. **GEOFFREY HENDERSON** Primary Mentor: *Magdalena Ptaszny*
Increasing health literacy in the geriatric population: A pilot program at Vintage Westwood Horizons, an independent senior living facility

11:25 a. m. **JOSHUA ISTRIN** Primary Mentor: *Emeran A. Mayer*
Sex differences in the neurobiology of resilience

11:40 a. m. **SAINT OGHENEWEMO MAGBEGOR** Primary Mentor: *Margaret Stuber*
Does the medical school curriculum prepare students to effectively cope with the clinical years of medical school?

11:55 a. m. **MICHAEL MANGUBAT** Primary Mentor: *Kenneth Lewis*
Role of acculturation in determining pre-operative anesthesia-related concerns

LUNCH BREAK

Reconvene at 1:20 p. m.

Please proceed to the Student Lounge of the adjacent Cobb Administration Building, located on East 118th Street



AFTERNOON SESSION

MODERATORS OF STUDENT PRESENTATIONS

Theodore Friedman, MD, PhD

Professor of Medicine

Charles R. Drew University of Medicine and Science

University of California at Los Angeles

David Hindman, PhD

Assistant Professor of Medicine

Charles R. Drew University of Medicine and Science

PANEL OF JUDGES

Michele A. Basso, PhD

Professor of Psychiatry & Biobehavioral Sciences and Neurobiology, UCLA

Lawrence “Hy” Doyle, EdD

Executive Director, UCLA PRIME

Rose Maly, MD

Associate Professor of Family Medicine in the Department of Medicine, David Geffen School of Medicine at UCLA

Gerardo Moreno, MD

Assistant Clinical Professor of Family Medicine in the Department of Medicine, David Geffen School of Medicine at UCLA

LuAnn Wilkerson, EdD

Senior Associate Dean for Medical Education, David Geffen School of Medicine at UCLA

Sharon Younkin, PhD

Director of Operations for Vice Dean of Education, David Geffen School of Medicine at UCLA

STUDENT PRESENTATIONS
(AFTERNOON SESSION)

1:20 p. m. **CYNTHIA MENDEZ-KOHLIEBER** Primary Mentor: *Gerardo Moreno*
A retrospective study of the impact of group visits with peer-to-peer support for patients with diabetes

1:35 p. m. **ARIEL MORADZADEH** Primary Mentor: *Nestor Gonzalez-Cadavid*
Critical review of recent papers related to Tadalafil daily use for the treatment of erectile dysfunction, with or without lower urogenital tract symptoms (luts)

1:50 p. m. **ALICIA MOREHEAD-GEE** Primary Mentor: *Cynthia Davis*
Factors contributing to depression among hiv-positive and hiv-negative Latinos and African-Americans residing in South Los Angeles

2:05 p. m. **TANESHA MOSS** Primary Mentor: *Tumaini Coker*
Low-income parents' views on a new model for well child care redesign

AFTERNOON BREAK (20 MINUTES)
Reconvene at 2:40 p. m.

MODERATORS

Stanley Hsia, MD



Dr. Hsia is an Associate Professor of Medicine at Charles R. Drew University of Medicine and Science and a Health Sciences Associate Clinical Professor with the David Geffen School of Medicine at UCLA. He has also served as a program director for residents and endocrinology fellows, and as a clerkship director for CDU/UCLA medical students. Dr. Hsia has been conducting clinical research over the past 15 years, including both industry and investigator-initiated trials, funded by grants from National Institutes of Health and the American Diabetes Association.

Theodore Friedman, MD, PhD



Dr. Friedman is the Chair of Medicine and Chief of the Division of Endocrinology, Molecular Medicine and Metabolism at Charles R. Drew University (CDU) and a professor of Medicine at both UCLA and CDU. He is board certified in Internal Medicine and Endocrinology, Diabetes and Metabolism. He is also the Director of the CDU Metabolic and Cardiovascular Diseases Research Cluster. He holds an Endowed Professorship in Cardio-Metabolic Medicine.

David Hindman, PhD



Dr. Hindman is an assistant professor in the Department of Family Medicine at Charles R. Drew University and Director of Behavior Health Services in the Department of Health Services at the Hubert H. Humphrey Comprehensive Care Center in Los Angeles. He is an officer of the California Psychological Association in the Division of Education and Training, and has been involved in residency and training programs since 2004.

JUDGES

Ron Andersen, PhD



Ronald Andersen, Ph.D., is the Wasserman Professor Emeritus in the UCLA Departments of Health Policy and Management, and Sociology. Dr. Andersen has studied access to medical care for his entire professional career of 45 years. He is a member of the Institute of Medicine and has been Chair of the Medical Sociology Section of the American Sociological Association. He is the recipient of numerous awards, has received an honorary doctorate from Purdue University, and is a member of the Royal Society of Sciences at Uppsala Sweden.



Michele A. Basso, PhD

Dr. Basso is the director of Fuster Laboratory of Cognitive Neuroscience at UCLA's Semel Institute for Neuroscience and Human Behavior. The laboratory conducts research focusing on basic questions of science that may have direct clinical impact on the treatment of certain diseases, including Parkinson's. One of her current research projects examines the role of the basal ganglia and the superior colliculus in saccadic (quick and simultaneous) eye movement decision-making.



Peter V. Barrett, MD

Dr. Barrett is Professor of Medicine at the David Geffen School of Medicine at UCLA. He currently heads the Division of General Internal Medicine at Harbor-UCLA Medical Center. Dr. Barrett is an Expert Medical Review for the Medical Board of California.



Lawrence “Hy” Doyle, EdD

Lawrence "Hy" Doyle is currently the Executive Director of the Program in Medical Education (PRIME) at the David Geffen School of Medicine at University of California, Los Angeles (UCLA). Dr. Doyle also provides guidance to disadvantaged students through UCLA's Summer Medical and Dental Program and the UCLA Hispanic Center of Excellence.



Rose Maly, MD

Dr. Maly is Associate Professor of Family Medicine at the David Geffen School of Medicine at UCLA, and a family physician and geriatrician. Her research interests include health care disparities and focus on patient-physician communication, quality of care, and improving quality-of-life among low income women with breast cancer.



Gerardo Moreno, MD

Dr. Moreno is Assistant Clinical Professor in Family Medicine at UCLA. He received his medical degree in 2004, and completed his post-doctoral clinical residency training in Family Medicine at the University of California San Francisco. He holds a Master of Science in Health Services from the UCLA School of Public Health, and completed a research fellowship in the Robert Wood Johnson (RWJ) Foundation Clinical Scholars Program at UCLA.



Martin F. Shapiro, MD, PhD

Dr. Shapiro is Professor of Medicine and Health Services and Management and Chief of the Division of General Internal Medicine and Health Services Research at UCLA. His scholarship has focused on assuring that medical care is applied equitably and appropriately to the population. His research interests include access to care, cost, quality and outcomes of care and disparities in health and health services. He is an elected member of the American Society for Clinical Investigation and the Association of American Physicians, and served as President of the Society of General Internal Medicine.



Sebastian Uijtdehaage, PhD

In his role as Director of Research and Co-Chair of the UCLA Medical Education Fellowship Program, Dr. Uijtdehaage promotes and supports educational scholarship of faculty members who teach in medical school and residency training programs. He is Professor of Medicine conducting research related to student admissions, well-being, and diversity.



LuAnn Wilkerson, EdD

Dr. Wilkerson is Senior Associate Dean for Medical Education at the Geffen School of Medicine at UCLA. She is on sabbatical this spring with UCLA Health system assisting in the evaluation and development of programs focused on improving patient/physician communication. She is active in the medical student Pathway for Clinical and Translational Research and serves as the PI of a Macy Foundation grant on inter professional education.



Sharon Younkin, PhD

Dr. Younkin received her Ph.D. in Counseling Psychology from The Ohio State University in 1992, and she currently serves as the Director of Operations for the Vice Dean for Education at the David Geffen School of Medicine at UCLA. Dr. Younkin's research interests are in medical education, medical student well-being, humanism in medicine, community health, health disparities, community based participatory research, and community-campus partnerships.

CLASS OF 2015

Students and Abstracts

MEDICAL STUDENT RESEARCH COLLOQUIUM

Charles R. Drew University of Medicine and Science

March 25, 2015



Wadjidah Abdul-Khabir

Stanley Hsia, MD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at the University of California, Los Angeles

Racial/ethnic disparities in statin usage

Background: Cardiovascular disease (CVD) is the number one cause of mortality in America. Hyperlipidemia is one of the risk factors contributing to CVD. Drug therapy has been the most effective method to control hyperlipidemia and of those HMG-CoA reductase inhibitors or statins are the most commonly used, since their approval in 1987. With the use of statins, relative risk of CVD has been reduced by 25-30% over a period of five years. Despite encouraging increases in the percentage of adults undergoing blood cholesterol screenings and increases in those using lipid-lowering medications, there still exists a low level of lipid control in the general population with major gender, racial and ethnic disparities. **Objectives:** To compare the extent of statin usage in U.S. Hispanics and African Americans with that of Caucasians using recent, population-based patient level cross-sectional data. **Method:** Data was collected using the National Health and Nutrition Examination Survey (NHANES) database. Males and female subjects aged 20-79, of White, African-American and Hispanic backgrounds were included from 2007-2010. **Results:** A total of 9,919 subjects were included. There were 73.2% Whites, 12.3% Blacks and 14.5% Hispanic subjects. Statin users made up 13.1% of the subjects. **Bivariate findings:** Variables that affected statin use significantly ($p < 0.05$) were age, gender, race, past medical history, socioeconomic status, insurance status, acculturation and cholesterol level. **Multivariate findings:** Compared to Caucasians, both African-Americans (OR 0.74) and Hispanics (OR 0.74) used statins less frequently even when confounding variables were controlled. **Conclusions:** Our analyses of these population-level data found that Hispanics and African-Americans were less likely to use statins when compared to Caucasians, independent of numerous confounding factors. The source of these disparities could be due to patient factors, physician factors or systemic factors but further research needs to be undertaken.



Jeffrey Arroyo

Stanley Hsia, MD; Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at the University of California, Los Angeles

Are there gaps in self-reported and objectively measured physical activity in U. S. adults with diabetes: A racial comparison

Background: The American Diabetes Association recommends 150 min/wk of moderate to vigorous physical activity (MVPA) for adults with diabetes. Currently physicians monitor physical activity through gross estimations provided by patients. With advances in motion tracking as well as integration of this technology into ubiquitous devices such as wearable arm bands, watches, and cell phones more accurate tracking of physical activity is now possible. **Objectives:** 1) Identify difference between self-reported versus objectively measured physical activity between White, African American, and Hispanic U.S. adults diagnosed with diabetes. 2) Identify differences between the above racial groups in reaching goal of 150 minutes per week of moderate-vigorous physical activity. **Method:** Retrospective data was collected using the secondary public databases: the National Health and Nutrition Examination Survey (NHANES) 2003-06 data. Adults identifying as White, African American, or Hispanic, categorized as having diabetes, and having both self-reported as well as accelerometer data were included. Subjective data from self-reported estimates of physical activity was compared to measured physical activity collected from a wearable uni-directional accelerometer. Accelerometer data was converted to MVPA using previously established equations. Usual demographics and co-morbid chronic diseases were also included to identify confounding variables. **Results:** A total of 871 adults were included. We found that the difference in self-reported vs measured moderate-vigorous physical activity was largest for Whites (251.7min/wk), and similar for African Americans (133.2min/wk) and Hispanics (81.2min/wk). Bivariate analysis, verified with pairwise chi squared testing, showed that in the study population: 27.7% Hispanics met MVPA goals compared to 13.2% Whites and 9.5% African Americans ($p < 0.001$). Using multivariate logistic regression analysis controlling for age, gender, education, income, and BMI showed Hispanics had were more likely than Whites and African Americans to achieve MVPA goal (2.23 OR, 1.12-4.42 95% CI). However, adjusting for co-morbid chronic diseases took away this advantage (1.67 OR, 0.77-3.4 95% CI). **Conclusions:** Differences between self-reported and measured physical data were found in a population of U.S. adults with diabetes, with the highest gap found in Whites. African Americans and Hispanics had similar self-reported MVPA, however Hispanics were more likely to meet the 150min/wk MVPA goal. Although Hispanics had the highest rate of achieving the MVPA goal in this study, future research must be done to explore why Hispanics have higher prevalence of diabetes. Applying these preliminary findings in the primary care setting should be done with caution, however this study supports the use of accelerometers to monitor physical activity when there is doubt over self-reported activity. Finally, this study highlights the importance of considering physical activity in conjunction with diet/nutrition and co-morbid chronic diseases when managing diabetes.



Alejandra Bautista

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at the University of California, Los Angeles

Interventions for depression in medical students: A review of the literature

Background: Depression has multiple adverse effects on the lives of medical students ranging from poor academic performance, apathy for patient care, and even suicidal ideation. It is widely known that medical students are more prone to depression than their non-medical peers. There have been numerous reports that decry the negative consequences of depression and stress among medical students; however, there have been few that have looked at the type of interventions used to combat depression and fewer that have studied their effectiveness.

Objective: To present a portrait of the types of interventions used by medical schools for treatment/management of depression in their medical students; and report their effectiveness.

Methods: The data source included Medline and *PSYCHINFO*. Search terms included “depressive symptoms in medical students”, and “interventions, and depressive symptoms, medical students.” Study eligibility criteria consisted of English published articles in peer reviewed journals (1999-2014), which addressed intervention programs for depression in US medical students; and reported empirical data for effectiveness of the interventions; and had been conducted at a US allopathic medical school. Studies that were identified through database search were evaluated for eligibility by first reviewing their title, then the abstract. Full manuscripts for potentially all relevant studies were obtained and a summary report was developed.

Results: Search yielded over 145 studies on depression in medical students, but only 25 studies reported intervention programs, and of those only 5 provided empirical data evaluating the effectiveness for the intervention programs. Results revealed a portrait of the types of interventions that include (1) wellness programs; (2) educational self-care programs; (3) stress reduction programs; and (4) multi-pronged approach. Each intervention reported an improvement in depressive symptoms after the intervention compared to before the intervention.

Conclusion: Intervention programs that provide specific mental health support for medical students can decrease depressive symptoms among medical students. However, there should be more of an emphasis on preventative rather than reactive interventions and programs that do not solely rely on efforts strictly from medical students.



Nancy Carballo

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at the University of California, Los Angeles

Effects of alcohol on U. S. adolescent sleep patterns: A systematic review

Background: There is an increasing trend towards multiple substance use among adolescents. Our study can help primary care providers better incorporate screening for alcohol use and sleep hygiene to improve health outcomes among minority adolescent populations. **Methods:** This systematic review used various sources including *PubMed*, *PsycINFO*, *GoogleScholar*, *Cinahl*, and *Embase/Elsevier*. Study eligibility criteria consisted of English published articles in peer reviewed journals between 2009 - 2015 which addressed sleep and alcohol related issues pertaining to U.S. adolescents of all ethnicities with a normal health status. Our search strategy undertook a staged approach including initial search, full search, and search of reference lists (studies identified from reference list searches were assessed for relevance based on the study title), and hand search using the following search terms: "sleep AND alcohol AND adolescent" OR "sleep AND alcohol AND adolescence". The PRISMA guidelines and flow diagram generator as well as MS Excel were used to appraise and synthesize study methods. Once we identified studies during the database search, we assessed them for relevancy by reviewing their title, abstract, and descriptor/MeSH terms. We obtained full manuscripts for potentially all relevant studies. Subsequently, we retrieved a summary report for all studies that met the inclusion criteria (in the manuscript this will include a table). To assess the methodological quality of the included studies (i.e. internal validity), we developed a data extraction tool (i.e. checklist) and each member of the research team evaluated and scored each study accordingly. **Results:** Our study found 255 hits on *PubMed*, 32 hits on *PsycINFO*, 6 hits on *GoogleScholar*, 36 hits on *Cinahl*, and 60 hits on *Embase*. A total of 389 hits resulted, with a final total of 341 hits after duplicates were removed. Hits were then edited for inclusion/exclusion criteria. **Conclusions:** Alcohol use among adolescents can lead to inadequate sleep, lower school performance, and higher incidences of traffic accidents. Interventions can result in reduction of risky behavior, particularly among underserved communities that lack quality resources: money, nutrition, education, and health care access.



Ruth Getachew

Michelle Strong, MSIV^{1,2}, Erika Davenport MD², Dotun Ogunyemi, MD³

Charles R. Drew University of Medicine and Science¹; David Geffen School of Medicine at the University of California, Los Angeles²; Beaumont School of Medicine at Oakland University³

Active versus expectant management of intrahepatic cholestasis of pregnancy: A systematic review

Background: ICP is a hepatic disorder that occurs during pregnancy. In Los Angeles, Latina women have been observed to have ICP rates as high as 6%. Although the maternal morbidity is lower, it is associated with significant fetal morbidity and mortality (preterm delivery, meconium staining, asphyxia and stillbirth). Active management by induction of labor at 37weeks gestation may prevent stillbirth, but may also place the infant at risk of respiratory distress. Conversely, expectant management, waiting for spontaneous delivery at >37weeks, reduces fetal respiratory distress, but is associated with increased rates of stillbirth. **Objective:** To review current evidence for active versus expectant management of Intrahepatic Cholestasis of Pregnancy (ICP). **Method:** MEDLINE and bibliographies of prior studies were used to evaluate outcomes for active and expectant management of ICP. Randomized control trials, prospective and retrospective studies published in peer reviewed English Journals between 1995 and 2015, were included. Non-English studies and/or studies published prior to the year 2000 were excluded. The following MESH terms were used: ICP, active management, expectant management, and stillbirth. CASP appraisal worksheets were used to assess the quality of each study. Management of ICP with actively or expectantly was evaluated based on three fetal outcomes: rates of meconium passage, stillbirth and preterm delivery. **Results:** In the initial search 30 articles were identified using MESH terms, 10 met the eligibility criteria and 7 qualified for this study after critical appraisal using CAPS. Meconium passage was consistently associated with sever ICP in patients managed expectantly. In one of these studies meconium passage had a significant correlation with the severity of ICP ($p < 0.004$). There was only one case of stillbirth in the active management studies. There were 14 cases of stillbirth in the expectant management studies. Only one of these studies showed a significant association between stillbirth and expectant management of ICP ($p < 0.01$). Preterm delivery rates ranged form 5.1%- 84% with active management and 14% -25% with expectant management. **Conclusion:** Risk of fetal complications are elevated in patients with sever ICP. Meconium passage is a significant associated with sever of ICP. Studies with active management had higher percentage of preterm deliveries and less cases of stillbirth. Based on our findings we recommend active management of ICP in patients with severe ICP.



Erik Gonzalez

Guillermo Padilla^{1,2}, Margarita Loeza MD², Shahrzad Bazargan-Hejazi^{1,2}

Charles R. Drew University of Medicine and Science¹; David Geffen School of Medicine at the University of California, Los Angeles²

The affordable care act and colorectal cancer screening at a federally qualified health center

Background: A fecal immunohistochemical test (FIT) is a cost-effective, sensitive, yet noninvasive assay for colorectal cancer screening. With the implementation of the Affordable Care Act (ACA) many previously underinsured and uninsured individuals now qualify for coverage that may facilitate access to colonoscopy after receiving a positive FIT. While the ACA has improved coverage, gaps may exist in ensuring proper diagnostic colonoscopy follow-up after positive FIT. **Objectives:** The aim of this study is to determine whether the ACA 's public insurance expansion has had a significant impact on the proportion of referrals after a positive FIT, proportion of colonoscopy after a positive FIT, percentage of cancer discovered after colonoscopy, and on the median time in days, from referral to colonoscopy and from positive FIT to colonoscopy. **Methods:** This is a retrospective cohort chart review study of individuals 50-75 years of age who screened positive for colorectal cancer via Fecal Immunochemical Test from April 8, 2012 to December 31, 2014. An electronic chart review was conducted in January of 2015 to gather referral and colonoscopy status as well as colonoscopy results. **Results:** There were a total of 322 positive FITs between 2012-2014 out of a total of 4669 screening FITs performed. In the pre-ACA 2012-2013 cohort there were 184 positive FIT out of 3,101 versus 138 out of 1,568 done in the 2014 post-ACA cohort. The proportion of positive FIT with GI referral pre versus post ACA was 165 (90.21%) versus 112(81.6%), p-value 0.029. The proportion of positive FIT receiving colonoscopy pre versus post ACA was 111(60%) versus 26(18.8%), p-value <0.001. Of those who received a colonoscopy, the cancer diagnosed pre versus post ACA was 3(2.70%) versus 0(0%), p-value <0.001. The median time in days from positive FIT to colonoscopy pre versus post ACA was 109 versus 128.5, p-value 0.564. The median time in days from referral to colonoscopy pre versus post ACA was 85 versus 90, p-value 0.568. **Conclusions:** Pre-ACA proportion referral to GI after positive FIT was significantly higher then post-ACA proportion. There were significantly higher proportions of colonoscopies performed after positive FIT pre-ACA versus post-ACA. There were no significant differences in median time from FIT or referral to colonoscopy before or after implementation of the ACA. Despite the implementation of the ACA there has not been significant effects in the diagnostic colonoscopy process after positive FIT. We believe that improvements in process, structure, and patient education within the FQHC itself are necessary in order to optimize screening and detection of CRC.



Carlos Guzman

Jonathan Wisco, PhD

Brigham Young University

Extending anatomical didactics for the medical student beyond the first year: Do long term career goals matter for the Drew cohort?

Background: Anatomy is one of the most important and relevant parts of early medical education. The current curriculum at UCLA includes a combined prosection/dissection approach. While there are benefits and drawbacks to both approaches, it is important to understand how students perceive the value of either, specifically in order to maximize the task of learning the myriad structures, and more generally how the experience benefited their medical careers. **Objectives:** The primary objectives of this study are to describe the student beliefs held by the Charles Drew Student cohorts from the year 2010-12 regarding their learning experiences during the summer dissection program at UCLA and throughout the year, and how the current didactic methods influenced their careers, as well as discuss possible changes in the curriculum to better help the students achieve specific career goals. **Methods:** Students in the DGSOM UCLA class were provided with a Likert survey, which included questions regarding their assessment of the anatomical didactic approach and their involvement with supplemental related activities. End points included the effect of the curriculum on career choices as well as the effect of predetermined goals on the attitudes towards the curriculum. **Results:** A total of 265 students attending DGSOM UCLA during the years 2010-2012 responded to a Likert survey. As compared to students who were interested in anatomically intensive career paths, such as radiology, students from the Charles Drew university cohort partook in fewer voluntary dissection hours in the anatomy lab during the summer vacation time. **Conclusion:** A decreased amount of time was spent by CDU students as compared to students who were interested in anatomical areas of medicine such as radiology and surgery (attendants 0% vs. 68% respectively). Drew students also reported a slightly diminished impact of the anatomy curriculum as compared to students interested in anatomically demanding fields (avg. 3.2 vs. 3.9 on a Likert scale). Further studies must be performed to determine what specific areas of studies were undertaken instead and whether those were more beneficial for the career paths chosen.



Geoffrey Henderson

Magdalena Ptaszny, MD

David Geffen School of Medicine at the University of California, Los Angeles

Increasing health literacy in the geriatric population: A program at Vintage Westwood Horizons, an independent senior living facility

Background: The geriatric population, which consists of individuals 65 years of age and older, has been identified as having low levels of health literacy based on certain population studies. Decreased health literacy has been linked to poor health outcomes in patients, increased hospitalizations, and rising healthcare costs. Of the four pillars of health literacy (disease and self-care knowledge; health risk behavior; preventive care and physician visits; compliance with medication), this study has been designed to impact disease and self-care knowledge and, consequently, improve self-care in the geriatric population.

Objectives: To assess the efficacy of a health literacy intervention in improving health knowledge of a sample of the geriatric population living in an independent living facility. **Methods:** The study involves two separate interventions for geriatric residents at an independent senior living facility, Vintage Westwood Horizons, in Los Angeles. The interventions consist of 30-minute lectures given by health care professionals on the topics of Alzheimer's disease and balance & fall prevention. Before and after each lecture, participants were assessed with pre and posttests, modified from validated instruments, consisting of 15 true/false questions. **Results:** Per the Alzheimer's disease intervention, a total of 10 participants were included. Mean scores were 8.0 vs. 9.1 on pre and posttests, respectively. Using the paired t-test, $p = 0.0660$. Per the balance intervention, a total of 20 participants were included. Mean scores were 10.95 vs. 11.9 on pre and posttests, respectively. Using the paired t-test, $p = 0.0535$. **Conclusion:** Analysis reveals improvement in the knowledge score from pre to posttest assessments for both interventions, but the improvement is not statistically significant. Further research is needed to help clarify if the lectures are efficacious in improving health knowledge, and if the improvement in health knowledge can be retained over time, and can affect health behavior and outcomes.



Joshua Istrin

Lisa A. Kilpatrick, PhD^{1,2}, Arpana Gupta, PhD^{1,2}, Bruce Naliboff, PhD¹⁻⁴, Kirsten Tillisch, MD¹⁻⁴, Jennifer S. Labus, PhD^{1,2}, Emeran A. Mayer, MD¹⁻⁵

Oppenheimer Family Center for Neurobiology of Stress¹; Departments of Medicine², Psychiatry³, Division of Digestive Diseases⁴, David Geffen School of Medicine, UCLA, Pain and Interoception Network (PAIN); Ahmanson-Lovelace Brain Mapping Center, UCLA⁵

Sex Differences in the Neurobiology of Resilience

Background: Increased resilience is associated with better health outcomes and reduced morbidity in response to injury and homeostatic perturbations. Only recently have neurobiological correlates of resilience been investigated and the potential impact of sex/gender has been largely ignored. **Objectives:** To identify possible sex-common and sex-specific correlations between trait resilience and connectivity of the salience network (SN) and the default mode network (DMN). **Methods:** Eighty two (n=82) healthy subjects (46 female; 36 male) completed a resting fMRI scan and NEO personality inventory. Independent components analysis was used to identify the SN and DMN. Partial Least Squares was performed to examine sex differences and commonalities in the relationship between intrinsic connectivity and a resilient NEO personality profile. **Results:** Stronger right anterior insula (aINS) connectivity within the SN was associated with increased resilience in both men and women. However, connectivity within DMN and between SN and DMN demonstrated mainly sex differences in relationship to resilience. **Conclusions:** While the integrity of the aINS with the SN is important for resilience in both men and women, the results suggest that increased functional integration of the anterior DMN preferentially benefits women while increased functional integration of the posterior DMN preferentially benefits men in terms of resilience. These findings may relate to previous literature demonstrating that men and women engage different behavioral strategies to achieve resilience and highlight the importance of considering sex and gender in resilience research.



Saint Oghenewemo Magbegor

Margaret Stuber, MD

David Geffen School of Medicine at the University of California, Los Angeles

Does the medical school curriculum prepare students to effectively cope with the clinical years of medical school?

Background The long-term psychosocial well-being of a physician is important given their higher rates of mental illness, suicide, and chemical dependence. Tools currently in place at David Geffen School of Medicine (DGSOM) to improve students' preparedness for clinical years include problem based learning (PBL), which interweaves the application of knowledge and patient care, as well as, short transitional courses, designed to teach students how to work in multidisciplinary settings. However, students still face similar difficulties to their counterparts, difficulty with adapting and utilizing clinical knowledge, insufficient time for studying and adjusting to the new cultural norms of third year rotations. Objective: To determine the most important system issues in the medical learning environment (MLE). To assess what medical schools can do to optimize the transition from pre-clinical to clinical years and determine issues associated with medical students' well-being. **Methods:** A qualitative study using grounded theory with structured in-depth individual interviews (n=12) with medical students that matriculate at DGSOM (Prime/MSTP/Riverside/CDU/Geffen) who have completed at least one clerkship rotation at an affiliated hospital. **Results:** Although there are numerous challenges medical students face during third year clerkships, our findings suggest a lack of clear expectations and clinical evaluation congruency in hindering a productive MLE. Additionally, although medical students perceive flaws within both the MLE and preparation for third year clerkships, there is an overall sense of complacency. **Conclusions:** Recommendations that may improve the MLE: 1) fostering camaraderie within the medical class, 2) providing time for medical students to take care of personal/health matters during the weekday, 3) increasing upperclassmen involvement with clinical foundations and other third year preparation activities, 4) provide a clear understanding on the various teams and interdisciplinary roles within a hospital setting, 5) having clinical evaluations be reflective of student work, 6) having clear expectations throughout clerkships.



Michael Mangubat

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Role of acculturation in determining pre-operative anesthesia-related concerns

Background: Many patients are concerned about the complications of anesthesia, but may not feel comfortable addressing those concerns with their anesthesiologist. This study aim to: 1) determine which general anesthesia complications, if any, pre-operative patients are most concerned about; 2) determine if there is an association between the general anesthesia complications that patients are concerned about and the level of acculturation. **Methods:** This was a cross-sectional survey study. Patients who meet the inclusion criteria were recruited at Martin Luther King Multi-service Ambulatory Care Center over the course of one year (January 2014-January 2015). Patients were Mexican American or of Mexican heritage, over age 18, and scheduled for a laparoscopic cholecystectomy. The questionnaire was self-administered, took 10-15 minutes, and composed of demographics, medical history, and the Acculturation Rating Scale for Mexican Americans II. Independent variable was level of acculturation. Dependent variables were complications of anesthesia. Data was analyzed based on univariate and bivariate tests. **Results:** Of the patient in the study, 64% had an acculturation level of I (very Mexican oriented), 26% level II, and 10% level III. There were no patients with an acculturation level of IV or V (very assimilated; anglicized). Nearly 42% of patients were concerned about altered mental status, 30% about nausea and vomiting, 22% about sore throat, 22% about damaged teeth and 9% about headache. Logistic regression to ascertain the effects of acculturation on patient's anesthesia related concerns were not statistically significant, $p < 0.05$ **Conclusions:** The majority of patients were considered Mexican oriented. The top 3 complications that patients were concerned about were AMS, nausea and vomiting and sore throat. Patients who were Mexican oriented tended to be concerned with sore throat and nausea and vomiting. Altered mental status was a concern across all levels of acculturation.



Cynthia Mendez-Kohlbecker

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A retrospective study of the impact of group visits with peer-to-peer support for patients with diabetes

Background: Hispanics have a high prevalence of diabetes mellitus (DM) and although medical management is critical for appropriate diabetes care, often more is needed to improve self-care and health outcomes. Diabetes interventions outside the clinical setting are promising for Hispanic populations. For example, Diabetes Group Visits (DGV) have been shown in multiple studies to have a positive impact on diabetes intermediate outcomes (hemoglobin A1C [A1C], LDL-cholesterol [LDL-c], and blood pressure [BP]). However, few studies report that peer-to-peer support (PPS) has a positive impact on diabetes outcomes and self-care behaviors. **Objective:** To determine whether PPS in addition to participating in DGV is superior in decreasing A1C, LDL-c, and BP compared to only DGV; and to estimate the association between PPS and patient reported outcomes. **Methods:** Retrospective study using clinical data collected at a county health center as part of regular clinical care. Inclusion criteria were: Spanish speaking, type 2 DM, A1C > 8%, 20-70 years; ability to sit for 2-hours; and no cognitive impairment. The DGV had interactive learning, focused on self-care goals with brief medical visit. The PPS group (n=26) had peer-to-peer support available and the non-PPS group (n=36) did not. The primary outcome was the difference in change between groups for A1C in 6 months. For the PPS group, we measured diabetes self-care activities (SDSCA), diabetes distress (DDS17), and social support. Analyses included bivariate and multivariate regression to adjust for confounders. **Results:** Among all participants (n=62), mean age was 56 years; 46% were female; 92% were on insulin, and 68% had Medicaid. Baseline A1C, LDL-c, and BP were not different between groups. The PPS group had a mean -0.6% decrease in A1C compared to -0.3% in the no-PPS group ($P= 0.06$). Group differences in BP (-6 vs -3 mmHg, $P=0.49$) and LDL-c (-4 vs -8 mg/dL, $P=0.50$) were not significant. The Peer-to-peer group had pre- post improvements in self-care from 5.4- 5.8 days/week compliant, DDS-17 scores from 2.6 to 2.3 (range 1-6), and social support from 3.5 to 4.0 (range 1-5). In adjusted linear regression, the difference in A1C change between groups was not significant (β -coef = -0.64, $P= 0.06$). **Conclusion:** The decrease in A1C was greater among participants who received PPS in addition to DGV, although this was not significantly different from the group that only received DGV. Study participants had moderate levels of diabetes distress and low levels of social support. Results suggest that among our study population, there could be some benefits to patient-reported outcomes with PPS as evidence by improved measures of social support, diabetes distress and quality of life.



Ariel Moradzadeh

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*Critical review of recent papers related to Tadalafil
daily use for the treatment of erectile dysfunction, with
or without lower urogenital tract symptoms (luts)*

Background: PDE-5 inhibitors have been traditionally used for symptomatic treatment of erectile dysfunction by eliciting and erection through a vasodilation process. Since 2009, the FDA approved the daily use of a long acting PDE-5 inhibitor, Tadalafil. The daily use has been promoted as a convenience for the patients because of spontaneity of the sexual act and good safety/efficacy balance. Animal studies have proposed that this continuous daily use may act by a mechanism different from the simple vasodilation and act as an anti-fibrotic, particularly prohibiting corporal veno-occlusive dysfunction (CVOD). **Objectives:** The purpose of this study is to review the clinical trials performed with the modality of Tadalafil administration, and correlate them with recent similar studies in animal models. **Method:** A screening of papers published from 2011 to current, using as key words in *PubMed*: Tadalafil daily use, Tadalafil daily use review. Papers were excluded when they only included daily use of Tadalafil in the setting of LUTS, without erectile dysfunction. We only examined papers that included Tadalafil for treatment of ED with or without LUTS. **Results:** The daily use of low-dose Tadalafil provides statistically significant improvement versus placebo, and is as efficacious as on-demand dosing for the treatment of erectile dysfunction in patients with or without LUTS/BPH. A majority of studies utilized the International Index of Erectile Function (IIEF) and International Prostate Symptom Score (IPSS) to objectively assess patient improvement. Animal models help demonstrate the benefits of daily low dose Tadalafil by decreasing penile cavernosal fibrotic tissue while enhancing erectile function. **Conclusions:** The daily use of low-dose Tadalafil is a safe, effective and well-tolerated treatment for erectile dysfunction. Animal studies demonstrate a cavernosal anti-fibrotic pathway. Patients with co-morbidities such as diabetes mellitus, hypertension and hyperlipidemia may benefit from daily low-dose

Tadalafil as oppose to on-demand dosing, for treatment of erectile dysfunction in patients with or without LUTS/BPH.



Alicia Morehead-Gee

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Factors contributing to depression among hiv-positive and hiv-negative Latinos and African-Americans residing in South Los Angeles

Background: The prevalence of depression among HIV-positive individuals is twice that of HIV-negative individuals. Few studies have investigated risk factors for depression among HIV-positive and HIV-negative Latinos and African-Americans. **Objective:** To compare depression prevalence among HIV-positive and HIV-negative Latinos and African-Americans in South Los Angeles and examine how alcohol abuse, childhood sexual abuse (CSA), and HIV/AIDS knowledge influence depression status. **Methods:** Cross-sectional data were collected over two years. Subjects were recruited at community outreach sites and HIV/AIDS Primary Care Clinics. Analysis of depression by demographics, HIV status, alcohol abuse, CSA, and HIV/AIDS knowledge was done using SPSS 22. **Results:** Of the 168 participants, 61% were Latino, 35% were African-American, 54% were male, 63% had an income under \$10,000/year, 53% were depressed, 69% had history of CSA, 55% screened positive for alcohol abuse, and 12% were HIV-positive. There was no significant difference in depression between HIV-positive (74%) and HIV-negative (51%) participants ($p>0.05$). Depression was significantly higher in males, Latinos, participants with income under \$10,000, those with history of CSA, and those who abused alcohol ($p<0.05$) compared to the other groups. Compared to HIV-positive participants, a significantly higher percentage of HIV-negative participants incorrectly stated that HIV is transmitted through saliva and that oil-based lubricants do not make condoms more likely to break ($p<0.05$). Logistic regression analysis showed that those with history of CSA (OR=8.4, 95% Confidence Interval [CI]=1.4-50.9) and alcohol abuse (OR=5.6, 95% CI=1.2-26.8) were more likely to be depressed relative to the other groups. **Conclusion:** No difference was found in depression prevalence between HIV-positive and HIV-negative participants. Depression was significantly associated with CSA and alcohol abuse, indicating the need for increased depression screening among individuals with these risk factors. There was decreased knowledge about HIV transmission among HIV-negative participants, showing that increased HIV-related education is needed in this population.



Tanesha Moss

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*Low-income parents' views on a new model for well child
care redesign*

Background: Studies have shown that with our current system of well-child care, parental concerns are not addressed during well-visits, and many children do not receive all recommended preventive health services. We developed a new model of well-child care to address these inadequacies for children of low-income African American and Latino families. **Objective:** To assess parental perspectives on the utility of a model that uses the aid of a parent coach, web-based parent pre visit tool (“Well visit Planner” [WVP]), and text messaging service to improve well-child care services. **Methods:** We interviewed 15 randomly selected parents in the intervention group (n=126) of a RCT of a new model of well-child care. The parent coach saw parents at all well-visits for children 2 months – 3 years of age, and provided psychosocial screening and community referrals, anticipatory guidance based on parent prioritization of topics, and developmental screening and surveillance. Participants were interviewed at approximately 12 months post-enrollment. These interviews were recorded, transcribed, and analyzed using the constant comparative method of qualitative analysis. **Results:** All participants were mothers ages 18-40, with Latino (10), Black (4), or multiracial (1) index children. Seven interviews were conducted in Spanish and 8 in English. Four major themes that emerged; 1) The addition of the Parent Coach created a more family-centered and comprehensive well-visit with the Parent Coach accessible during and between well-visits, 2) Wait time during visits was more efficiently used, 3), the WVP allowed for prepared and activated parents, though some parents would have preferred a paper version of the pre-visit tool as computer literacy was a problem, and 4) the text message service provided a helpful source of new information and reinforcement of information already learned during visits. **Conclusions:** Parents viewed this new model for WCC services as enhancing several factors, including accessibility, convenience, family-centeredness, and comprehensiveness of care.



Guillermo Padilla

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The affordable care act and colorectal cancer screening at a federally qualified health center

Background: A fecal immunohistochemical test (FIT) is a cost-effective, sensitive, yet noninvasive assay for colorectal cancer screening. With the implementation of the Affordable Care Act (ACA) many previously underinsured and uninsured individuals now qualify for coverage that may facilitate access to colonoscopy after receiving a positive FIT. While the ACA has improved coverage, gaps may exist in ensuring proper diagnostic colonoscopy follow-up after positive FIT. **Objectives:** The aim of this study is to determine whether the ACA 's public insurance expansion has had a significant impact on the proportion of referrals after a positive FIT, proportion of colonoscopy after a positive FIT, percentage of cancer discovered after colonoscopy, and on the median time in days, from referral to colonoscopy and from positive FIT to colonoscopy. **Methods:** This is a retrospective cohort chart review study of individuals 50-75 years of age who screened positive for colorectal cancer via Fecal Immunochemical Test from April 8, 2012 to December 31, 2014. An electronic chart review was conducted in January of 2015 to gather referral and colonoscopy status as well as colonoscopy results. **Results:** There were a total of 322 positive FITs between 2012-2014 out of a total of 4669 screening FIT performed. In the pre-ACA 2012-2013 cohort there were 184 positive FIT out of 3,101 versus 138 out of 1,568 done in the 2014 post-ACA cohort. The proportion of positive FIT with GI referral pre versus post ACA was 165 (90.21%) versus 112(81.6%), p-value 0.029. The proportion of positive FIT receiving colonoscopy pre versus post ACA was 111(60%) versus 26(18.8%), p-value <0.001. Of those who received a colonoscopy, the cancer diagnosed pre versus post ACA was 3(2.70%) versus 0(0%), p-value <0.001. The median time in days from positive FIT to colonoscopy pre versus post ACA was 109 versus 128.5, p-value 0.564. The median time in days from referral to colonoscopy pre versus post ACA was 85 versus 90, p-value 0.568. **Conclusions:** Pre-ACA proportion referral to GI after positive FIT was significantly higher then post-ACA proportion. There were significantly higher proportions of colonoscopies performed after positive FIT pre-ACA versus post-ACA. There were no significant differences in median time from FIT or referral to colonoscopy before or after implementation of the ACA. Despite the implementation of the ACA there has not been significant effects in the diagnostic colonoscopy process after positive FIT. We believe that improvements in process, structure, and patient education within the FQHC itself are necessary in order to optimize screening and detection of CRC.



Cara Quant

Noah Craft, MD, PhD

LA BioMed

Survey of medical students and medical professionals on the use of information technology in the practice of medicine

Background: The popularity of mobile digital devices (i.e. smartphones) amongst physicians and medical students in the clinical setting is well known. Medical applications (apps) can be used for quick medical information searches, to help with complex calculations, and to help with clinical decision-making. The objective of the study was: 1) to determine the usage, reliability, and popularity of mobile medical apps currently on the market and 2) how their use influences interactions amongst medical students, residents, and attendings in the general clinical setting and during patient encounters. **Methods:** An anonymous electronic survey was distributed via Survey Monkey to medical students, residents, and attendings via an email database and student interest groups to assess mobile medical app usage, popularity, and reliability and its influence in the clinical setting. The emails were sent to medical students in U.S accredited M.D or D.O programs, physician trainees (i.e. residents) in a US residency or fellowship program, and medical doctors who have completed residency training and practice in a clinic or hospital. Surveys were administered from December 2014 to January 2015. Data was collected and analyzed through Survey Monkey. **Results:** UpToDate (77%) and Epocrates (63%) are the medical apps with the greatest usage and popularity. UpToDate (98%) and Epocrates (94%) are also the apps found to be most reliable amongst participants. Comparing information from medical apps versus textbooks, participants believe medical apps are more reliable (23%) or have the same reliability (60%) as information from a textbook. In the general clinical setting, 53% of participants find mobile device use in front of colleagues makes one appear less engaged but find medical apps to save time, improve the care of their patients, and improve diagnostic accuracy. During patient encounters, the higher the level of training, the more comfort one feels with using medical apps in front of patients. **Conclusion:** UpToDate and Epocrates are the most widely used, popular, and reliable medical apps on the market. Medical apps can enhance the patient-physician relationship by saving time and improving diagnostic accuracy but does not seem to enhance relationships amongst colleagues.



Christine Russell

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*Exploring an interdisciplinary curriculum for inner city
teens: Evaluating the impact of athletics and music
education programs on health awareness*

Background: In Los Angeles County, public schools are eliminating sports and music programs in inner city schools. The Los Angeles Unified School District (LAUSD) outlined its strategic plan for achievement during the 2012-2015 academic years and did not prioritize the sports and music curriculum. **Objective:** To explore the role of students' participation in a sports and music education curriculum

(Healing Souls) in their health care utilization. **Method:** We chose a qualitative approach in collecting data for this study. It will be conducted in John C. Fremont High School between March 2015 and May 2015. Potential participants will be males and females 25 and older, representing students' parents, teachers, governing officials, and health care providers. The study principal investigator will recruit potential participants and invite them to take part in in-depth interviews. The data collection will be guided by the principles of convenient purposive sampling, a non-probability method that seeks specific participant characteristics that set them apart from others. We will also follow the data saturation method in which we continue with data collection until the addition of new data does not add to the already collected information. **Results:** Interviewees report the following consistencies: *Organization and Relationships:* Reporting systems are isolated and there is no standard for operations across high schools and wellness centers. There is also an unclear relationship between clinics and The LA Trust (funding entity). *Utilization:* There is an unclear perception of the Fremont Wellness Center and its role for the surrounding community. Students are actively involved with clinic sites, although utilization of clinic medical resources is perceived as "too low." Sports programs provide a direct connection to medical resources. *Measured Outcomes:* Motivation to change current programs is high, while perceived ability to impact programs is low. The nature of the population provides limitations on measures of success. Programmatic efforts for education and health across the Los Angeles Unified School District may encounter different measures for success, effectiveness and efficiency.



Barbara Strong

Dotun Ogunyemi, MD

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*Epidemiology and etiology of intrahepatic cholestasis
of pregnancy: Systematic review*

Background: ICP is a pregnancy-specific liver disorder affecting 0.02%-2.4% of all pregnancies. It is characterized by pruritus, elevated serum aminotransferases and bile acid levels presenting in the late second or third trimester of pregnancy with spontaneous relief of symptoms two to three weeks after delivery. **Objective:** A systematic review of review articles evaluating epidemiology and etiology of Intrahepatic Cholestasis of Pregnancy (ICP). To examine predisposing ethnic, genetic, and geographic risk factors for ICP. **Methods:** I examined literature reviews, critical clinical reviews, and review articles and bibliographies from Medline, PubMed and Google Scholar. Key words: intrahepatic cholestasis of pregnancy, obstetric cholestasis, etiology, epidemiology. English review articles between 2000-2015 were included. Articles prior to 2000 and non-English articles were excluded. Articles were assessed using the Preferred Reporting Items for Systemic Reviews and Meta-analyses (PRISMA) tool. **Results:** Significant geographic and ethnic differences have been observed with Chileans, 14%, and Scandinavians, 2%, having highest reported incidences. Specifically, the incidence of ICP in Araucania Chileans is as high as 27% while the rates of ICP in Western European and North American are less than 1%. Increased rates of advanced maternal age, multiple gestations, and women who have suffered cholestasis with oral contraception have also been found in women with ICP. Furthermore, familial associations have been observed with women with affected sisters having a 12-fold increase risk of disease. Increases in estrogen and progesterone in late pregnancy have been thought to cause impairment in hepatic bile homeostasis reducing the function of hepatic acid transporters. Additionally, increase rates of mutations in ABCB4 and ABCB11 genes have been identified in women with ICP. **Conclusion:** The etiology of ICP is believed to be multifactorial, a combination of genetic, hormonal, and environmental factors. However, the mechanism remains unclear. Geographic and ethnic variation in incidences of ICP has been well documented. An increased incidence, 5.6%, has recently been observed in Latinas in Los Angeles. Decreased rates of ICP are being observed in previous areas of higher incidence. Further prospective research is needed to illuminate the most important variables involved in development of ICP.



Dharma Sunjaya

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Factors affecting diabetes mellitus care in the United States

Background: Diabetes mellitus is a chronic disease requiring daily medications, nutritional restrictions, and routine outpatient follow-up for proper management and prevention of diabetic complications requiring hospitalization. The cost associated with the management of the disease is immense, approximated at \$245 billion in 2012, therefore it is essential to identify factors that will improve the quality of care and health outcome. **Objectives:** to identify independent factors that influence the quality of care in diabetic patients. **Method:** Retrospective data was collected using the secondary public databases: the National Health and Nutrition Examination Survey (NHANES). Patients age 21 or older with a diagnosis of diabetes mellitus between 1991 and 2012 were included. **Results:** A total of 4,953 patients were included. We found that patients with insurance were diagnosed with diabetes at an older age (41.3 vs. 36 years) with a greater proportion having a routine place for healthcare (98.4% vs. 82.8%) and lower utilization of the emergency room (1.5% vs 4.6%) compared to the uninsured. Insured diabetic patients had lower cholesterol (185.2 vs. 202.1 mg/dL), triglycerides (144.4 vs. 160.3 mg/dL), and glycohemoglobin (7.3 vs. 8.1) levels compared to the uninsured group. Using linear regression, we found that only insurance status and duration of diabetes predicts serum glycohemoglobin level and the presence of diabetic retinopathy. Using Kaplan-Meier curve and Cox regression, we found patients without health insurance were at a higher risk for developing retinopathy, and were also diagnosed at a younger age in comparison to their insured counterparts (58 vs. 69 years old). **Conclusions:** Insurance status and duration of diabetes are the only two independent factors associated with improved glycemic control and reduction in diabetes related complications in our study. This could reflect access to high quality medical care and prescription drug coverage associated with health insurance. Diabetic patients may benefit from the procurement of health insurance in the management of their conditions and the prevention of complications related to the disease.



Lujia Zhang

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*A systematic literature review of appointment
reminder systems*

Background: Nonattendance is a problem in many outpatient clinics, and can present significant tangible and intangible costs to both the clinic and the patient. Appointment reminders can substantially reduce “no-show” rates in outpatient clinics. While there is some literature regarding the effectiveness of individuals systems, these studies are limited in scope and their conclusions are often not generalizable. **Objective:** To identify the overall effectiveness of various appointment reminder systems in increasing clinic attendance and utilization, and describe patient and clinic factors which may affect their acceptability and/or effectiveness. **Methods:** This systematic literature review examined two types of studies in order to better understand their impact on patients and clinics: (1) studies that evaluated various types of appointment reminders to determine their effectiveness in improving clinic attendance, and (2) studies that assessed patient preferences toward different appointment reminder tools. Searches were performed on *PubMed*, the *Web of Science Core Collection*, and *CINAHL*. The articles were then screened by title and abstract. The resultant full-text, screened articles were evaluated for study quality using a modified TREND checklist. Data was collected from these articles using a data extraction form. **Results:** 87 studies were ultimately included in the review, of which 71 studied the implementation of one or more reminder systems, and 16 were surveys regarding preferences toward reminder systems. Across all 71 studies which implemented reminder systems, a statistically significant advantage in terms of either improvement in clinic attendance or other utilization of health care was observed in 56 studies (79%). Separated by reminder modality, a statistically significant advantage was observed in 16 of 23 studies assessing SMS reminders (70%), in 22 of 25 studies assessing telephone reminders (88%), and 14 of 15 studies assessing postal reminders (93%). In direct comparison studies between SMS vs. telephone reminders and SMS vs postal reminders, no statistically significant difference was observed in any of the 4 studies. Additional patterns were noted when studies were additionally separated based on patient and clinic factors. Review of the survey studies found several trends, including a close correlation between familiarity with a particular technology and patient acceptability of reminders which use that technology. **Conclusions:** SMS, telephone, and postal reminders have all demonstrated effectiveness, with varying consistency, and no clear advantage of any particular modality in direct comparison studies. Certain reminder modalities have demonstrated more or less effectiveness when used for a particular patient group or clinic setting, suggesting that reminder implementation must be tailored to the patients and clinics they serve.

The CDU/UCLA Medical Student Research Thesis Program (MSRTP)

Shahrzad Bazargan-Hejazi, PhD, *Chair*

Stacey Teruya, EdD, MS, *Education and Training Manager*

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