

25th Annual Obstetrics, Gynecology & Women's Health
Resident and Fellow Research Day



University of Hawai'i
John A. Burns School of Medicine
Department of Obstetrics, Gynecology & Women's
Health

Thursday, May 7, 2020



The University of Hawai'i Department of Obstetrics, Gynecology
& Women's Health would like to extend deepest thanks to all
who made this 2020 Research Day possible.

Research Day Committee:

Resident Research Co-Directors:

Reni Soon, MD, MPH
Shandhini Raidoo, MD, MPH

Mark Hiraoka, MD, MS
Bliss Kaneshiro, MD, MPH
Dena Towner, MD
Steven Ward, PhD
Christopher Eisenlauer
Darlene Hubbard
Ginny Kamikawa
Krysten Kawamata
Lisa Kellett

And all the mentors, assistants, and everyone else, who made
these projects possible



May 7, 2020

Welina mai!

Welcome to the 25th Annual University of Hawai'i John A Burns School of Medicine Department of Obstetrics, Gynecology and Women's Health Research Day symposium. As we find ourselves in unprecedented times, we thank everyone who has taken the time out of busy work and distance learning schedules to participate in this adapted version of our research day event. We appreciate that even in the midst of this global pandemic, we can come together as a community to discover, learn, and inspire each other in our common goal of advancing women's health in Hawai'i and beyond.

This year we dedicate our Department Research Day to all of Hawai'i's obstetrician-gynecologists who are on the COVID-19 frontlines of this pandemic, providing essential health care in our hospitals, offices, and community clinics. Your commitment, sacrifice, and service to the families and communities of Hawai'i is an example for us all.

We extend a special thanks to the entire Research Day Symposium Planning committee and to all of our research mentors, without whom this day would not be possible. We hope that you will find this research symposium informative and inspiring. Please share your thoughts about our department's research day with us and any suggestions for next year's program.



Reni Soon, MD, MPH

Associate Professor
Co-Director of Resident Research
Department of Obstetrics, Gynecology &
Women's Health
John A. Burns School of Medicine
University of Hawai'i



Shandhini Raidoo, MD, MPH

Assistant Professor
Co-Director of Resident Research
Department of Obstetrics, Gynecology &
Women's Health
John A. Burns School of Medicine
University of Hawai'i



Ivica Zalud, MD, PhD

Professor and Chair
Kosasa Endowed Chair
Department of Obstetrics, Gynecology
& Women's Health
John A. Burns School of Medicine
University of Hawai'i

Dedication

This research day is dedicated to all of Hawai'i's obstetrician-gynecologists who are on COVID-19 frontlines, providing essential health care in our hospitals, offices, and community clinics

2020 Judging Panel:



Elizabeth Kiefer, MD
Assistant Clinical Professor
Internal Medicine Department
John A. Burns School of Medicine
Clint Spencer Center
University of Hawai'i



Yanyan Wu, PhD
Associate Professor
Epidemiology
Office of Public Health Studies
University of Hawai'i



Ann Chang, MD, MPH
Associate Professor
Department of Obstetrics, Gynecology & Women's Health
John A. Burns School of Medicine
University of Hawai'i

University of Hawai'i
Department of Obstetrics, Gynecology & Women's Health
Research Day Schedule

Thursday, May 7, 2020
Via Zoom

- 8:00 am **Ivica Zalud, MD, PhD**, Professor and Kosasa Endowed Chair – Welcome
- 8:10 am **Jerris Hedges, MD**, Dean - Greetings
- 8:15am **Shandhini Raidoo, MD, MPH** – Resident Research Director – Welcome & Introduction of Judges
- 8:25 am UH Third Year Res Presentations - Five 10 min talks, 5-min Q/A to follow
Introduced by research mentors noted below
[8:25 am Men-Jean Lee, MD – Introducer]:
- 8:30 am **Jasmin Reyes Moncada, MD**
“Racial disparities in Preeclampsia with severe features among women in Hawaii”
[8:45 am Scott Harvey, MD - Introducer]:
- 8:50 am **Pamela Estrada, MD**
“Racial and Ethnic Disparities in Intensive Care Admissions in a Pregnant and Postpartum Population”
[9:05 am Bliss Kaneshiro, MD, MPH - Introducer]:
- 9:10 am **Kacie Fox, MD**
“Patient Barriers to Discontinuing Long Acting Reversible Contraception”
[9:25 am Reni Soon, MD, MPH - Introducer]:
- 9:30 am **Christina Buchanan, MD**
“Neonatal Hypoxic Ischemic Encephalopathy and Planned Home Birth”
[9:45 am Shandhini Raidoo, MD, MPH - Introducer]:
- 9:50 am **Deena Elwan, MD**
“Reproductive Autonomy and Choice of Contraceptive Method”
[10:05 am Reni Soon, MD, MPH - Introducer]:
- 10:10 am **Sharareh Firouzbakht, MD**
“Abortion Knowledge Affecting Abortion Provision after Obstetrics and Gynecology Residency”
[10:30 am Men-Jean Lee, MD - introducer]:
- 10:35 am Maternal-Fetal Medicine Fellow Abstract Presentation (15 min presentation, 5 min Q/A):
Corrie Beth Miller, DO
“Diet Quality predicts Hypertensive Disorders of Pregnancy in Hawaii Cohort”
[10:55 am Reni Soon, MD, MPH - introducer]:
- 11:00 am Family Planning Fellow Abstract Presentation (15 min presentation, 5 min Q/A):
Paris Stowers, MD
“Abortion Patients’ Perspectives on Research Decision-making, Recruitment, and Participation”
- 11:45 am Awards



Jasmin Reyes Moncada, MD

Medical School: University of California. Los Angeles David Geffen School of Medicine

Medical School Honors/Awards:

- University of California San Francisco Visiting Elective Scholarship Program (2016): Competitive award/interests in academia and diversity
- John M Gibbons Medical Student Award (2016): Competitive travel award to attend ACOG Annual Clinical and Scientific Meeting. Essay published in ACOG District IX News
- Gold Humanism Honor Society (2014): National society for exemplars of humanistic patient care
- Dear Abby Scholarship (2014): One recipient selected among all female UCLA medical students annually for academic excellence despite overcoming obstacles

Graduate Education: UCLA Luskin School of Public Affairs, Los Angeles, CA, MPP, Public Policy

Graduate Education: San Francisco State University, San Francisco, CA, MS, Cell & Molecular Biology

Undergraduate Education: University of California, Berkeley, Berkeley, CA, BA, Integrative Biology

Research Experience:

- Medical Student Researcher in Global Health, David Geffen School of Medicine, Los Angeles, CA, United States, Understanding Family Planning Utilization in Rural Haiti
- Medical Student Researcher in Global Health, David Geffen School of Medicine, Short term training project in Lima, Peru, a longitudinal panel cohort study of cardiovascular and chronic obstructive pulmonary disease risk factors in a peri-urban shantytown
- Student Researcher, St. Mary's Medical Center, Long Beach, CA, United States, Patient Satisfaction in the Inpatient Medicine Teaching Service
- Graduate Student Researcher, San Francisco State University, San Francisco, CA, United States, Transcriptional Regulation of Nutrient Deprivation in *Bacillus Subtilis*

Publications:

- Reyes, J. (2016). The ACOG Gibbons Award: 2016 Winning Essay: What Does It Mean to You to be a Women's Health Care Provider? District IX News. 29 April 2016.
- Mendez R, Gutierrez A, Reyes J, Marquez-Magana L. The extracytoplasmic function sigma factor SigY is important for efficient maintenance of the SpBeta prophage that encodes sublancin in *Bacillus subtilis*. DNA Cell Biology. 2012, Jun; 31(6): 946-55. Cited in PubMed; PMID: 22400495.
- **Reyes J.** Deciphering *sigY* Regulation and Physiological Function in *Bacillus subtilis*. Oral thesis defense: San Francisco State University; December 2009; San Francisco, CA

Presentations:

- Reyes JD, Tukiainen ES, Partovi S, Sridhar A. (2016). Factors Influencing Contraception Use in Rural Haiti Women: A Mixed-methods Pilot Study Poster presented at: Next Generation of Health Care: 2016 ACOG Districts VIII & IX Annual Meeting; Waikoloa, HI.
- **Reyes J**, Cabrera L, Konda K, Bernabe A, Checkley W, Miranda J. Understanding barriers to chronic disease management among the peri-urban poor: a case report of the CRONICAS study in Lima, Peru. Poster session presented at: DGSOM Josiah Brown Poster Fair; August 2013; Los Angeles, CA
- Criley J, Brown E, Yang A, **Reyes J**, Pham J, Wang L, Burg A, Fair P, Villaruz A. Do You Know Your Doctor – Assessing the Level of Patients' Knowledge of Who is Their Physician on In-Patient Teaching Service. Poster presented at: AAMC Western Regional Conference; April 2011
- **Reyes J.** Deciphering *sigY* Regulation and Physiological Function in *Bacillus subtilis*. Oral thesis defense: San Francisco State University; December 2009; San Francisco, CA

Title: Racial disparities in Preeclampsia with severe features among women in Hawaii

Authors: Jasmin Reyes-Moncada MD, Men-Jean Lee MD

Objective: Investigate the relationship between race and the development of preeclampsia with severe features. We hypothesized that differences in rates of preeclampsia with severe features exist in unique racial subgroups of pregnant women living in the state of Hawaii.

Design: This is a retrospective analysis of a dataset derived from a pregnancy cohort using Epic electronic health records from births that occurred between 2006 and 2013 at Kapiolani Medical Center (KMC).

Methods: A total of 9250 mother-baby pairs were recruited at the time of childbirth at KMC to participate in the Hawaii Reproductive Biospecimen Repository (HRBR). Women self-identified their primary race. Those who did not report race were excluded (n=276). A data sample of 8974 mother-baby pairs were identified. We first used chi-square analysis and ANOVA to screen for potential factors that affect the development of preeclampsia with severe features and to also report the association between race and preeclampsia with severe features. We then performed a binary logistic regression analysis with a stepwise backward method to investigate the predictive power of chronic hypertension, BMI, primary language, gestational diabetes, pregestational diabetes, multifetal gestation, parity, smoking, methamphetamine use, IUGR, and nonreassuring fetal heart tracing. A post-hoc analysis using binary logistic regression was performed on each race to confirm the predictive models of preeclampsia with severe features.

Results: We studied a total of 8974 women who were self-reported as these racial subgroups: 26.8% Filipino, 15.5% White, 14.8% Other Pacific Islander, 12.8% Japanese, 9.2% Chinese, 8.9% Hawaiian 5.1% Other Asian. Mean age was 28.34 years (SD=6.3). Mean BMI was 25.85 (SD=6.41). We identified a statistically significant difference in preeclampsia with severe features among racial subgroups (Likelihood Ratio = 21.914, p=.0026; Pearson=20.894, p=0.0039; alpha=0.05.), with the highest proportion in Native Hawaiian (4.6%, n=802), Other (4.21%, n=618), and Filipino (3.28%, n=2407); the lowest proportions in Other Asian (1.31% n=459) and Chinese (1.71%, n=820). Binary logistic regression analysis of all combined races identified the following predictive factors of preeclampsia with severe features: age, BMI, chronic hypertension, and IUGR. Binary logistic analysis by individual race demonstrated that there were differences in predictive factors of preeclampsia with severe features. In racial subgroups with the highest proportions of preeclampsia with severe features the predictive factors for Native Hawaiians were BMI ($\beta=-0.34$, p=0.037), compared to Filipinos who were affected by age ($\beta1=-0.24$, p=0.013) and IUGR ($\beta2=1.92$, p=0.047).

Conclusion: Racial disparities exist in the women diagnosed with severe preeclampsia with the highest rates in Native Hawaiian, Other, Filipino, and the lowest in Chinese. The factors that contributed most to the diagnosis of preeclampsia in our cohort were consistent with known risk factors. However, while focusing on racial differences, Filipinos were found to be significantly influenced by IUGR and maternal age rather than factors such as BMI and chronic hypertension which had been suggested in previous publications. Surrogates for racial identity may also explain disparities associated with severe preeclampsia including racial bias and acculturation.

Support: None

Acknowledgements: Rylan Chong PhD, collaborating statistician at Chaminade University



Pamela Estrada, MD

Medical School: University of California, Irvine, School of Medicine

Medical School Honors/Awards:

- Medical Education Student Service Award, UC Irvine, School of Medicine
- Jane Hill Cancer Research Scholarship, UC Irvine School of Medicine - Selected based on recent cancer research
- Gold Humanism Honor Society, UC Irvine School of Medicine
- UC Irvine School of Medicine Admissions Scholarship

Undergraduate Education: University of California, San Diego La Jolla, California, BS, Human Biology;
BA, Psychology; Minor, Health Care & Social Issues

Research Experience:

- Research Elective, UC Irvine Health, Division of Gynecology Oncology, Orange, CA, Retrospective chart review on BRCA testing in ovarian cancer patients before/after PARP inhibitor availability
 - BRCA testing within one year of ovarian cancer diagnosis significantly increased after release of SGO Position Statement on Genetic Testing and FDA-approval of the first PARP inhibitor, Olaparib
- Research Fellow, Johns Hopkins University School of Medicine, Baltimore, MD, Cancer in the Under-Privileged, Indigent, or Disadvantaged (C.U.P.I.D.) is a laboratory-based summer fellowship for medical students interested in bringing the benefits of modern cancer research to underserved populations in the U.S.; Presented research project at the C.U.P.I.D. Program Research Symposium
- Apprentice Scientist, NIH Post-Baccalaureate Research Education Program, Irvine, CA, NIH PREP participants work as apprentice scientists in a preceptor's lab & participate in student development & education activities; assessed efficacy of Peregrine's phosphatidylserine-targeting antibodies against cells infected with mouse cytomegalovirus
- Research Assistant, UC San Diego School of Medicine, La Jolla, CA, United States, Projects:
 - A Comparative Analysis of Mexican and American Social Marketing Strategies/or Health Education: Implications/or Binational Health Initiatives Targeting Mexican Migrants
 - A Qualitative Study: Analysis of Full-Service Partnership (FSP) Programs - Mental Health Services Among Transitional Age Youth
 - Proyecto El Cuete - a study characterizing HIV risks among Mexican adults deported from the United States
 - Access to Care Among Medical Tourists

Publications:

- Ojeda VD, Hiller SP, and Estrada P. California-Mexico Collaborations on Social Marketing Campaigns Targeting Mexican Immigrants. *Social Marketing Quarterly*. 2009, Dec; 15(4); 83-97.

Presentations:

- Ojeda VD, Gilmer TP, Ponce N, Estrada P, and Amaro H. (2009). Access to Care Among Medical Tourists. Poster Presentation. Academy Health Meeting; Chicago, IL.
- Ojeda VD, Gilmer TP, Ponce N, Estrada P, and Amaro H. (2009). Access to Care Among Medical Tourists. Oral Presentation. UCLA-Robert Wood Johnson Network on Multicultural Health Annual Meeting; Los Angeles, CA.
- Sirajuddin, P., Estrada, P., Liu, H., Colis, L., Peltonen, K., and Laiho, M. (2014). Inhibition of RNA Pol I and Autophagy Blockade Synergizes Cell Death in Castration-Resistant Prostate Cancer Cells. Oral Presentation. C.U.P.I.D. Fellowship Research Symposium, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine; Baltimore, MD.
- Sirajuddin, P., Estrada, P., Liu, H., Colis, L., Peltonen, K., and Laiho, M. (2014). Inhibition of RNA Pol I and Autophagy Blockade Synergizes Cell Death in Castration-Resistant Prostate Cancer Cells. Poster Presentation. Johns Hopkins Department of Radiation Oncology and Molecular Radiation Sciences Retreat, Mt. Washington Convention Center; Baltimore, MD.
- Sirajuddin, P., Moubarek, M., Estrada, P., Yang, Z., Zhang, Q., Hicks, J., Liu, H., Marzo, A., Bieberich, C., and Laiho, M. (2014). The RNA Pol/ Inhibitor BMH-21 Regulates Androgen Receptor Signaling Non-competitively And Inhibits Tumor Growth in Treatment-Resistant Prostate Cancer. Poster Presentation. Patrick C. Walsh Prostate Cancer Research Day, Mt. Washington Convention Center; Baltimore, MD. Awarded Honorable Mention.
- Sirajuddin, P., Estrada, P., Liu, H., Colis, L., Peltonen, K., and Laiho, M. (2014). Inhibition of RNA Pol I and Autophagy Blockade Synergizes Cell Death in Castration-Resistant Prostate Cancer Cells. Oral Presentation. UC Irvine School of Medicine Summer Research Symposium; Irvine, CA. Awarded Jane Hill Cancer Research Scholarship.
- Patterson, JB., Penner, KR., Estrada, P., Randall, LM. (2017). BRCA testing in ovarian cancer significantly increased after SGO position statement and FDA-approval of first PARP inhibitor. Oral Presentation. UC Irvine Department of Obstetrics and Gynecology 35th Annual Residents Paper Day & 28th Annual Philip J. DiSaia Society Symposium, Irvine, CA.
- Estrada, P., Nilfroushan, N., Kim, Grace N. (2017). High Grade Glioma Arising in an Ovarian Immature Teratoma. Poster Presentation. American Society for Clinical Pathology Annual Meeting. Chicago, IL.
- Estrada, P., Yamasato, K. (2020). Global Associations Between Obesity, Access to Care, and Maternal Mortality. Poster Presentation. Society for Maternal Fetal Medicine 40th Annual Meeting. Grapevine, Texas.
- Chin, J., Molero-Bravo, R., Wright, T., Kiyowaka, M., Chen, E., Nakashima, E., Karasaki, K., Estrada, P., Ghatnekar, R., Bartholomew, ML. (2020). Urine Drug Screening on Labor and Delivery. Poster Presentation. JABSOM Global Health Symposium. Awarded Dr. Yoshihisa Asano Award for Humanism Week Best Poster.

Title: Racial and Ethnic Disparities in Intensive Care Admissions in a Pregnant and Postpartum Population

Authors: Pamela Estrada, MD and Scott A. Harvey, MD, MS

Objective

The primary objective was to examine racial and ethnic disparities in severe maternal morbidity during the pregnancy and the postpartum period in Hawai'i by using admission to an Intensive Care Unit (ICU) as a marker. The secondary objective was to evaluate for associations between patient characteristics, including obstetrical outcomes, and severe maternal morbidity.

Methods

This is a retrospective cohort study where we identified pregnant and postpartum (within six weeks of delivery) inpatient hospitalizations from 2012-2017 using the Hawai'i Health Information Corporation (HHIC) inpatient database. We used *All Patient Refined Diagnosis Related Groups* codes to identify hospitalizations and hospital revenue data identifiers for ICU admissions. Pregnant and postpartum women aged 12-52 who delivered in Hawai'i were included. Race/ethnicity was self-reported and categorized as: non-Hispanic White, Asian, Filipino, Native Hawaiian and other Pacific Islander (NHOPI), Hispanic or Latino, Black, and Other. Clinical characteristics and obstetrical outcomes were extracted using *International Classification of Diseases, 9th and 10th Revision* codes.

Associations between socio-demographic and clinical characteristics and race/ethnic group were evaluated by chi-square tests with statistical significance set to $p < 0.05$, followed by a post-hoc analysis with adjusted significance level set to $p < 0.0125$ based on Bonferroni correction. Non-Hispanic White was used as the reference group to assess for racial/ethnic disparities. Using multivariable logistic regression, we explored associations between race/ethnicity and ICU admission after we controlled for possible confounding characteristics. Adjusted odds ratios (aOR) and 95% confidence intervals (CI) were obtained with statistical significance set to $p < 0.05$.

Results

Of the 90,399 pregnant and postpartum hospitalizations, 1,304 met inclusion criteria. The mean incidence of ICU admission was 14 per 1,000 (range of 1.2-1.6%) pregnant/postpartum hospitalizations per year during 2012-2017. Compared to non-Hispanic White women, Asian, Filipino, NHOPI, and Black women had higher rates of severe maternal morbidity by ICU admission (all $p < 0.05$). After adjusting for possible confounding characteristics, including obesity, pre-existing chronic conditions, pregnancy-induced hypertension, chorioamnionitis, and placental abruption, there was a significantly higher ICU admission rate for Asian (aOR, 1.36; 95% CI, 1.09-1.70), Filipino (aOR, 1.54; 95% CI, 1.26-1.90), and NHOPI (aOR, 1.47; 95% CI, 1.22-1.78) women when compared to non-Hispanic white women (all $p < 0.05$).

ICU admission also differed significantly based on residential neighborhoods. Compared to residents in Central Honolulu, residents in West Honolulu (OR 1.38; 95% CI, 1.10, 1.73) and Waianae (OR 1.81; 95% CI, 1.41, 2.32) experienced higher ICU admission (all $p < 0.05$). However, after adjusting for possible confounders these associations were not significant.

Multiple clinical characteristics and obstetrical outcomes were associated with ICU admission, such as advanced maternal age, pre-existing chronic conditions, and pregnancy-induced hypertensive disorders, among others (all $p < 0.05$).

Conclusion

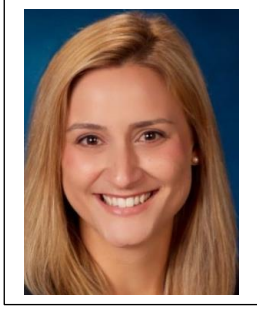
In Hawai'i, severe maternal morbidity represented by ICU admission is higher in Asians, Filipinos, and NHOPI women when compared to non-Hispanic White women. Disparities were noted with ICU admissions differing significantly across neighborhoods. Multiple clinical characteristics and obstetrical outcomes were predictive for ICU admission. Our data suggests that these populations remain an important focus of studies to effect policy change and improve maternal morbidity in Hawai'i.

Support

University of Hawaii Department of Obstetrics, Gynecology and Women's Health

Acknowledgments

Pilot Project, HHIC Legacy Database donated to JABSOM; JABSOM Privacy Board; Rory Ann Kaneshiro, JD, MBA; John Chen, University of Hawaii BioStats Core; Kaeo Tam, University of Hawaii IT; Reni Soon, MD; Shandhini Raidoo, MD; UH ObGyn Resident Research Committee; Kelly Yamasato, MD; Hyeong Jun Ahn, PhD



Kacie Fox, MD

Ob-Gyn Residency Honors/Awards:

- Best PGY 2 Resident Award, North American Society for Pediatric and Adolescent Gynecology (NASPAG), June 2019
- Best PGY 2 Teaching Resident Award, University of Hawaii, JABSOM, Department of Obstetrics, Gynecology & Women's Health, June 2019

Medical School: University of Hawaii, John A. Burns School of Medicine

Honors/Awards:

- Sakai Endowed Scholarship for Professional Excellence in Problem Based Learning
- Samuro and Florence Ichinose Endowment Scholarship, Award for Academic Excellence
- International Student Scholar, Award for Service to the Asian-Pacific Region

Undergraduate Education: Wheaton College, BA, Biochemistry

Research Experience:

- Summer Research Assistant, Joslin Diabetes Center, Boston, MA. United States, Participated in National Institute for Diabetes and Digestive and Kidney Diseases Medical Student Summer Research Program, analyzed the correlation between overweight and obese mothers and altered insulin signaling in HUVEC cells, suggesting altered glucose metabolism in offspring of overweight and diabetic mothers
- Co-Investigator, Kapiolani Medical Center for Women and Children, Honolulu, HI, United States, long-term quality improvement project to decrease rates of Retinopathy of Prematurity (ROP) in Kapiolani NICU, designed interventions and educational materials for NICU nursing staff regarding ROP and oxygen use guidelines, analyzed data showing improved compliance to oxygen use guidelines and better understanding of ROP among NICU nurses

Presentations:

- Fox, Kacie, Isganaitis, Elvira, MD. (2014). The Effects of Maternal Obesity During Pregnancy and Gestational Diabetes on Insulin Signaling in Human Umbilical Vein Endothelial Cells. Poster presented at: National Institute of Diabetes, Digestive and Kidney Health Medical Student Summer Research Program in Diabetes Annual Symposium, Nashville, TN.
- Iwamoto, Lynn, MD; Fox, Kacie; Ige, Kelsey R.; Harn, Jared; Kanemori, Michelle; Kida, Lauren (2016). Stop ROP and Roll. A case study of meaningful medical student participation in patient safety and quality improvement. Poster presented at: Biomedical Sciences and Health Disparities Symposium; Honolulu, HI.
- Iwamoto, Lynn, MD; Fox, Kacie; Ige, Kelsey R.; Hara, Jared; Kanemori, Michelle; Kida, Lauren (2016). Stop ROP and Roll. A case study of meaningful medical student participation in patient safety and quality improvement. Poster presented at Health Professions Education Conference; Honolulu, HI.

Title: Patient Barriers to Discontinuing Long Acting Reversible Contraception.

Authors: Kacie Fox, MD; Shandhini Raidoo, MD, MPH; Reni Soon, MD, MPH; Tiana Fontanilla MPH; Alyssa Kameoka; Bliss Kaneshiro, MD, MPH

Objective: The objective of this study was to determine whether patients face barriers to discontinuing long acting reversible contraception (LARC), and if so, to evaluate if certain patient demographic groups are disproportionately affected.

Design: Prospective online survey

Methods: We conducted an online survey of individuals ages 18-50 who used and discontinued (or attempted to discontinue) a contraceptive implant or intrauterine device. Estimating that about 20% would have experienced a barrier, we aimed to recruit 500 participants. Participants provided demographic information and answered questions related to their experiences discontinuing LARC, including any challenges they faced, such as, “my provider wouldn’t remove it until I started another form of contraception,” or “my provider stated there wasn’t enough time in that visit.” Flyers advertising our online survey were posted at various University of Hawaii faculty practice sites, in the University of Hawaii dormitories, and online via Instagram and Facebook. In addition, an international sample of participants was obtained using Amazon MTurk. Statistical analysis was performed using SPSS.

Results: Of the 133 individuals who completed our Hawaii-based survey, 59% had experience discontinuing LARC, and of those, 21.5% encountered a barrier to discontinuation. Half of those who identified with Hispanic ethnicity experienced a barrier to discontinuation, compared to 17.6% of non-Hispanics ($p=0.03$). Those with no insurance, or government funded insurance were also more likely to face a barrier compared to those with private insurance (100% and 36.8% respectively, versus 13.6%, $p=0.05$). A greater proportion of participants who were high school or college graduates experienced a barrier when compared to those with more than a college degree, though this was not statistically different. Age, other racial groups, or prior pregnancy was not associated with experiencing a barrier in discontinuation. Among participants who faced barriers to discontinuation, 75% had to wait 3 months or longer to discontinue their device, compared to 13.1% in women without barriers. ($p=0.001$)

In our international survey using MTurk ($n=448$), 29.2% of participants reported a barrier to discontinuation. Characteristics associated with facing barriers included having government-funded insurance ($p=0.005$), lower levels of education ($p=0.005$), younger age ($p<0.001$), and having previously been pregnant ($p<0.001$). In addition, Hispanics and those of African, Middle Eastern, Asian, American Indian or Alaska Native descent were statistically more likely to experience a barrier ($p<0.03$.)

Conclusions: Results of our study show that patients often face barriers to discontinuing LARC. Demographic characteristics associated with meeting a barrier to discontinuation were different in the Hawaii-based survey and the MTurk international survey, but our findings suggest that insurance-status, race, education, age, and parity could play a role. Providers should remain mindful of these barriers and work towards an unbiased practice where patients have easy access to using and discontinuing LARC.

Support: Lakshmi Devi and Devraj Sharma Endowment Fund

Acknowledgements: Special thanks to Jasmine Tyson and Emory Bowen



Christina Buchanan, MD

Ob-Gyn Residency Honors/Awards:

- PGY 2 Outstanding Resident for Excellence in Medical Student Teaching Award, June 2019

Medical School: Georgetown University School of Medicine

Medical School Honors/Awards:

- Dean's Summer Research Award (2014): Selected based on quality of research to receive a stipend for work studying the effects of obesity during pregnancy on offspring's cancer risk
- John M Gibbons Medical Student Award (2017): Selected by OB/GYN faculty to receive funding to attend national ACOG meeting

Undergraduate Education: University of Notre Dame Notre Dame, Indiana, BS, Science Pre-professional and Psychology

Research Experience:

- Sub-investigator, Pediatric and Adolescent Gyn, Children's National, Washington, DC, United States; Study identifying transgender adolescents' attitudes towards healthcare experiences and terminology used in their care in order to design a more transgender-inclusive medical environment.
- Sub-investigator, Dept. of OB/GYN, Washington Hospital Center, Washington, DC, United States; Under the supervision of Dr. Veronica Gomez-Lobo, designed a study to review methods of treatment for menorrhagia in chemotherapy-treated patients over the last 10 years to determine the most effective treatments.
- Research Assistant, Georgetown University Breast Cancer Research Lab. D.C. United States; studied the effects of maternal obesity in pregnancy on offspring's pancreatic cancer risk using a carcinogen-induced mouse model.

Presentations:

- Buchanan, C. (Presenter), Cruz, M., Hilakivi-Clarke, L., Jin, L., de Assis, S, (2015). Maternal obesity in pregnancy alters offspring's pancreatic miRNA profile and pancreatic cancer risk in a carcinogen-induced mouse model Poster presented at: Georgetown University School of Medicine Research Day 2015; Washington, DC.
- Buchanan, C., Cruz, M., Hilakivi-Clarke, L., Jin, L., de Assis, S. (Presenter). (2015). Maternal obesity in pregnancy alters offspring's pancreatic mi RNA profile and pancreatic cancer risk in a carcinogen-induced mouse model Poster presented at: American Institute for Cancer Research 2015 Meeting; Washington, DC.

Title: Neonatal Hypoxic Ischemic Encephalopathy and Planned Home Birth

Authors: Christina Buchanan, MD; Sheree Kuo, MD; Lea Minton, MSN, APRN, CNM, IBCLC; Men-Jean Lee, MD; So Yung Choi, MS; Reni Soon, MD, MPH

Objective: As planned home births increase, emerging evidence on the outcomes of hospital versus planned home births has been inconsistent, and a growing number of states have attempted to legislate out of hospital births. We sought to determine whether an association exists between neonatal hypoxic ischemic encephalopathy (HIE), a complication of ischemic birth injury, and planned location of birth.

Design: A case-control study design was used to compare data from electronic medical records of neonates with HIE to Hawaii state birth certificate data of normal controls.

Methods: For each neonate with HIE diagnosed at Kapiolani Medical Center for Women and Children from 2014-2018, we randomly selected from Hawaii state birth certificate data information on four neonates without HIE matched by gestational age and birth year. To ensure normal controls did not have a diagnosis of HIE, all birth certificates that indicated a neonate had been admitted to the neonatal intensive care unit were excluded. We considered an odds ratio of 4 to be clinically significant and calculated that we would need 143 cases and 572 controls in order to detect an odds ratio of 4 with 80% power and an α of 0.05. Bivariate association between maternal characteristics and presence of HIE was tested using Fisher's exact test for categorical variables and two-sample t-test for continuous variables. A penalized backward step-wise logistic regression was fitted for the presence of HIE adjusting for the variables with $p < 0.10$ from the bivariate analysis.

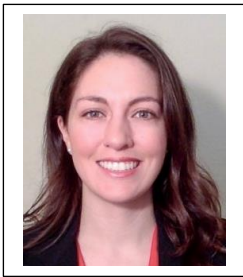
Results: We included 164 cases and 656 controls in the study. A home birth was planned in 20 births (2.4%) with 8 (4.9%) among the cases and 12 (1.8%) among the controls. The odds of having been a planned home birth were 2.77 times higher in neonates with HIE compared to controls [95% confidence interval (CI)=1.05-6.87]. After adjusting for insurance, mode of delivery, meconium fluid, maternal hypertension, and chorioamnionitis, infants with HIE were still more likely to have been a planned home birth compared to controls (odds ratio (OR)=11.56; 95% CI=1.37-118.77). Furthermore, compared to infants without HIE, infants with HIE were more likely to have been born to women with hypertension (OR=4.73, 95% CI=2.23-10.00), an operative vaginal delivery (OR=3.56, 95% CI=1.10-10.61), a cesarean delivery (OR=7.04, 95% CI=3.98-12.89), meconium-stained amniotic fluid (OR=11.13, 95% CI=6.14-20.68), and chorioamnionitis (OR=15.27, 95% CI=7.36-33.37). Compared to infants without HIE, infants with HIE were also less likely to have been insured by private/Tricare/military (OR=0.21, 95% CI=0.12-0.36) or self-pay/other (OR=0.01, 95% CI=0.00-0.05) insurance than by Medicaid.

Conclusions: Neonates with hypoxic ischemic encephalopathy were more likely to have been a planned home birth compared to infants without HIE.

Support: University of Hawaii, Department of Obstetrics, Gynecology, and Women's Health

Acknowledgements: Nichole Fukuda, Hawaii State Department of Health; Betty Wood, Hawaii State Department of Health; Megan Stevenson; Hyeong Jun Ahn, Ph.D.

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Deena Elwan, MD

Medical School: University of Arkansas for Medical Sciences College of Medicine

Medical School Honors/Awards:

- Tommy and Mamie Polk Scholarship
- King David Brown Scholarship

Undergraduate Education: University of California Berkeley, Berkeley, CA, BA, Psychology

Research Experience:

- NASPGHAN Foundation Medical Student Mentored Summer Research Program, NASPGHANI UCSF Department of Pediatrics, Huslia, AK, United States; conducted focus groups & interviews with research participants who lived in the local village.
- Staff Research Associate, University of Swaziland/UCSF, Mbabane, Swaziland, toured clinical sites including village clinics and Mbabane Hospital, interviewed staff and patients, surveyed shop owners in the city and schools, and took inventory of all items sold in both locations, performed data entry, data analysis, and manuscript composition
- Staff Research Associate, UCSF Department of Pediatrics, San Francisco, CA, United States, interviews with Spanish-speaking patients for developmental, nutritional and depression assessments. Coordinated two separate research studies related to childhood obesity in Latino children, one study focused on maternal depression as a risk/actor for obesity in Latino children the other investigated cord blood changes associated with various risk factors for childhood overweight and obesity. Both studies also investigated telomere length.
- Columbia University Artificial Organs Research Lab, New York, NY, United States, designing, carrying out and analyzing experiments and biological assays to test the efficiency of various prototypes of an ambulatory artificial kidney
- Research Assistant, UC Berkeley Sleep and Psychological Disorders Lab, Berkeley, CA, United States, assessment of the psychological effects of sleep deprivation on teenagers.
- Research Assistant, UC Berkeley Cognitive Psychology lab, Berkeley, CA, United States, voluntary and involuntary attention and how they vary as a function of impulsivity

Publications:

- Elwan, D., DeSchweinitz, P., MD, MSPH, & Wojcicki, J., PhD., MPH. Beverage Consumption in an Alaska Native village: A mixed-methods study of behavior, attitudes, and access. *International Journal of Circumpolar Health*. 2016, Feb; 75(0): Cited in PubMed; PMID: PMC4770868.
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Presentations:

- "Beverage Consumption in an Alaska Native village: A mixed-methods study of behaviour, attitudes, and access", North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Meeting and the University of Arkansas for Medical Sciences Medical Student Research Day

Title: Reproductive Autonomy and Choice of Contraceptive Method

Authors: Deena Elwan, MD; Shandhini Raidoo, MD, MPH

Objective: Reproductive autonomy, defined as having control over whether and when to use contraception, become pregnant, or continue a pregnancy, is important for young adults since parents and partners may have a significant influence in their decision to use contraception, which contraceptive method they choose to use, or their ability to use a method successfully. The primary objective of this study was to assess if reproductive autonomy correlates with young women's choice of contraceptive method. The secondary objective was to assess if reproductive autonomy is correlated with demographics such as age, race, education, and income.

Design: Cross-sectional survey

Methods: We electronically distributed a nation-wide survey to sexually active women ages 18-25 years via the Mechanical Turk (MTurk) crowdsourcing marketplace. The survey included questions from the *Reproductive Autonomy Scale*, a previously validated questionnaire by Advancing New Standards in Reproductive Health (ANSIRH), demographic questions, and questions about birth control use. The survey was only available in English. Descriptive statistics were performed and logistic regression models were constructed to determine if the reproductive autonomy subscales were associated with birth control use overall and long acting reversible contraception (LARC) use specifically.

Results: Of the 250 respondents that completed our survey, 48 were excluded from analysis because they were currently pregnant, attempting to conceive, or not sexually active within the past six months. The average age was 23.7 years old, 78% of participants were White, and 23% of participants were married. Ninety-one percent of participants reported completing at least some college or greater. Eighty-three percent of women reported using birth control. Among birth control users, oral contraceptive pills (49.7%) were the most commonly used contraceptive method followed by intrauterine devices (16%) and male condoms (13%). Twenty-six percent of participants reported using either an intrauterine device or contraceptive implant as their contraceptive method. Most participants scored high on the reproductive autonomy scales, with mean scores for decision-making, freedom from coercion and communication of 2.59 (range 0-3), 3.74 (range 0-4) and 3.61 (range 0-4) respectively. Current birth control users (n=167) scored significantly higher on the decision-making subscale than those not currently using birth control (n=35, 2.63 vs 2.44, p=.01). Among women who reported current contraceptive use, those using a LARC (n=44) scored significantly higher on the freedom from coercion (3.91 vs 3.71, p=.01), and communication (3.75 vs 3.57, p=.02) scales than those using less effective methods (n=123). A logistic regression model to predict birth control use revealed that, when controlling for age, race, marital status and education, women who scored higher on the freedom from coercion subscale were significantly more likely to use birth control (AOR 2.89, 95% CI 1.03-8.09, p=.04). A similar model predicting LARC use demonstrated that women who scored higher on the decision-making subscale were more likely to use a LARC method (AOR 4.35, 95% CI 1.10-17.30, p=.04).

Conclusion: Reproductive autonomy correlates with a young woman's choice to use birth control, and those with higher autonomy were more likely to choose the most effective methods. This information can be used to improve contraceptive counseling in the future.

Support: The Lakshmi Devi and Devraj Sharma Endowment Fund

Acknowledgements: Advancing New Standards in Reproductive Health (ANSIRH)



Sharareh Firouzbakht, MD

Medical School: University of California, Irvine, School of Medicine

Medical School Honors/Awards:

- UC Regents Grant Recipient

Undergraduate Education: University of California, Berkeley, CA, BS, Molecular Toxicology

Research Experience:

- Researcher, UC Irvine School of Medicine, Leon, Nicaragua, study of chronic kidney disease in sugarcane workers, including Mesa-American Chronic Kidney Disease
- Computational Toxicology Researcher, UC Berkeley, Berkeley, CA, United States, Studied the relationship between beta-Methylamino-L-alanine, a byproduct of cyanobacteria in algal blooms, and development of Amyotrophic Lateral Sclerosis. Used computational toxicology modeling techniques to construct a potential disease pathway mediated by glutamate receptor GR/KI; team's project was chosen by faculty in the Department of Nutritional Sciences and Toxicology to represent UC Berkeley's annual Computational Toxicology elective in the 2013 Society of Toxicology National Convention.

Publications:

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- Firouzbakht, S.L and Shafer, J.S and Bristow, R.E. Prevalence of sexually transmitted infections and precancerous cervical lesions in urban Haiti. International Journal of Women's Health. 2016, Sep; Pub Status: Submitted.

Presentations:

- Firouzbakht, Sharareh; Iizuka, Yuki. (2013). Role of beta-Methylamino-L-alanine in GR/KI-Mediated Amyotrophic Lateral Sclerosis Disease Pathway Poster presented at: Society of Toxicology; San Antonio, TX.

Title: Abortion Knowledge Affecting Abortion Provision after Obstetric and Gynecology Residency

Authors: Sharareh Firouzbakht, MD; So Yung Choi, MS; Reni Soon, MD, MPH

Objective: The aim of this survey was to determine if knowledge about abortion predicts the likelihood that obstetrics and gynecology (OBGYN) residents in the United States (US) are likely to provide this service after graduation. Prior studies have demonstrated the influence of non-modifiable factors on abortion provision. We explored if knowledge about abortion, which is modifiable, was associated with intention to provide abortions.

Design: This was a cross-sectional survey of current OBGYN resident physicians across the US.

Methods: This survey included physician and residency program characteristics, an abortion-related knowledge assessment, and an assessment of abortion attitudes. It was distributed to 212 ACGME-accredited OBGYN Programs between August 2019 and February 2020. It was distributed through email via residency program administrators and data was collected through REDCap. Knowledge was tested with seven multiple-choice questions about abortion statistics and risks with maximum score of 7. Attitudes were tested with a series of eight scenarios describing situations in which a patient desires an abortion; the “moral acceptability” of doing an abortion in that scenario was elicited with a Likert scale. Bivariate association between intention to provide abortion services after graduation and other characteristics was tested using two-sample t-test or Wilcoxon rank sum test for continuous variables, and chi-squared test or Fisher’s exact test for categorical variables. Multivariable logistic regression was used to model planned abortion provision after residency, adjusting for age, gender, religion, religiousness, marital status, children, year in residency, training types, abortion participation during residency, knowledge, and attitude score.

Results: The survey was completed by 501 OBGYN resident physicians, for a response rate of 10.5%. Average age of the survey participants was 29.3 years, and 87% were female. About half (56%) of survey respondents said they plan to offer abortion services after graduation. Bivariate analysis revealed that there was a difference ($p < 0.001$) in knowledge scores between residents who plan to provide abortion services after graduation (mean=3.8; SD=1.3) and those who do not or are unsure (mean=3.3; SD=1.4). After adjusting for the covariates listed above, the knowledge score was not a significant factor (OR=1.16, 95% CI=0.97-1.40) in intention to provide abortions. The multivariable logistic regression showed that older age (OR=1.15; 95% CI=1.03-1.31), participating in surgical abortions during residency program (OR=19.29, 95% CI=5.86-84.58), and higher abortion attitude score (OR=1.07, 95% CI=1.03-1.12) contributed higher odds of planned abortion provision. Considering religion moderately (OR=0.36, 95% CI=0.16-0.78) or extremely important (OR=0.24, 95% CI=0.07-0.74) compared to not important, and being married compared to single (OR=0.43, 95% CI=0.22-0.82) contributed lower odds of planned abortion provision.

Conclusion: Knowledge about abortion was not a significant predictor of OBGYN residents’ plan to provide abortion services when controlled for other confounding variables. Those who participated in abortions during their residency training were much more likely to plan to offer this service after their graduation, which may underline the importance of this experience during residency.

Support: Lakshmi Devi and Devraj Sharma Endowment Fund; University of Hawaii Department of Obstetrics, Gynecology, & Women’s Health

Acknowledgements: Shandhini Raidoo, MD, MPH; Ghazaleh Moayedi, DO, MPH



Corrie Miller, DO

Fellow, Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, John A. Burns School of Medicine (JABSOM), University of Hawai'i, Honolulu, HI

Ob-Gyn Residency: Danbury Hospital, Danbury, CT

Ob-Gyn Residency Awards:

- 2015: Patrice Gillotti Case Review Award for Displaying Excellence in the 6 Core ACGME Competencies of Resident Education

Medical School: Arizona College of Osteopathic Medicine, Glendale, AZ

Medical School Honors/Awards:

- 2014-2015: Teacher and Student Advocate Award, University of Vermont School of Medicine

Undergraduate Education: University of Arizona, Tucson, AZ, B.A. in International Studies

Medical Interests:

- Diminishing Diversion and Increasing Appropriate Disposal of Opioid Pain Killers after Cesarean Delivery
- Effects of Asian and Pacific Islander Diet Quality on Microbiota and Pregnancy Outcomes
- Placental invasion in IUGR after gene modulation of MTOR in the murine placenta

Publications:

- **Miller CB**, Wright T. (2018). Investigating Mechanisms of Stillbirth in the Setting of Prenatal Substance Use. *Academic Forensic Pathology*, 8(4): 865–873. 2.
- **Miller C**, Hoan K, Minig L, Chuang L, Shahabi S. (2017). A Review of Minimally Invasive Gynecologic Surgery in Developing Nations. *Journal of Gynecology and Women's Health*, 4(4): 555643. 3.
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Presentations

- Characterizing Congenital Heart Disease in Pregnancies with Single Umbilical Artery. Miller C, Towner D. 39th Annual Society of Maternal Fetal Medicine Pregnancy Meeting. Las Vegas NV. February 2019. [Poster Presentation]
- Fetal Trauma after High Speed Motor Vehicle Accident: case report and review of literature. Miller C, Adams K, Panarelli E, Gillotti P, Wong J. 32nd Annual Joseph L. Belsky Research Day, Danbury Hospital, May 2017. [Poster Presentation]
- HELLP!!!!.... I've Been Bit by a Tick! Brady B, Miller C, Denson M, Stratidis J, Wong J. 4th Annual State of CT Ob-Gyn Resident Research Day, Saint Francis Hospital, Hartford CT, September 2016. [Poster Presentation]
- The Spectrum of Minimally Invasive Gynecologic Surgery in Developing Nations: A Systematic Review of the Literature. Miller C, Haber K, Minig L, Chuang L, Shahabi S. Society of Gynecologic Oncology: Global Session. San Diego CA, March 2016. [Oral Presentation]
- Collaborative Resident Education at a Large Teaching Hospital at Kampala, Uganda. Miller C, Haber K, Panarelli E, Samuelson R. Annual Consortium of Universities for Global Health (CUGH) Meeting. Boston MA, April 2015. [Poster Presentation]

Diet Quality predicts Hypertensive Disorders of Pregnancy in Hawaii Cohort

Corrie Miller DO; Carol Boushey, PhD; Paula Benny PhD; Shani Ma; Men-Jean Lee, MD

Background:

Diet quality can predict adverse health outcomes such as cardiovascular disease or cancer. Yet data are mixed on whether diet quality in early gestation is associated with adverse pregnancy outcomes. This study aims to see if there is a correlation with diet quality and the development of hypertensive disorders of pregnancy (HDP) in Hawaii.

Methods:

In a longitudinal cohort study, diet quality was measured via the Multiethnic Cohort Food Frequency Questionnaire during the first and second trimester in 42 healthy women. Three diet quality indices were assigned – The Healthy Eating Index (HEI), The Alternate Mediterranean Diet score (aMED), and the Dietary approaches to Stop Hypertension (DASH) score. The mean aggregate scores of each index were compared among those who did and did not develop hypertensive disorders of pregnancy. Logistic Regression models were used to account for confounding demographic covariates (age, parity, BMI, ethnicity). Models were compared with likelihood ratio test to identify which model had the best fit to predict the primary outcome of HDP. Generalized Estimating equations were also used to see if a longitudinal change in diet quality was associated with HDP.

Results:

There was a very high incidence of HDP in this cohort, with 11 participants (26%) developing the condition. There was no change of diet quality scores over time from 1st to 2nd trimester.

All aggregate mean diet quality scores were higher in the unaffected group versus those who developed HDP (Table 1). Although not statistically significant, in general, participants identifying as Non-Hispanic White had higher diet quality scores than those of Filipino, Japanese, or Native Hawaiian descent. Logistic regression models showed that all three scores were significantly associated with development of HDP, with the DASH diet score having the greatest effect, and the best fit modeling. Age was also independently associated with this disorder. Every point higher of DASH diet score portended a 5% less chance of developing HDP.

Conclusions:

Diet quality can help predict risk of HDP and may be a modifiable risk factor to target. The DASH diet score may be most predictive of this condition. Further studies in a larger cohort may further identify which nutritional component contributes to this risk.

Support:

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Acknowledgements:

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Paris Stowers, MD

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Ob-Gyn Residency: SUNY Upstate Medical University, Syracuse, NY

Ob-Gyn Residency Honors/Awards:

- SUNY Upstate Department of Obstetrics and Gynecology Elizabeth Mrozlewicz Janik Third Year Resident Award
- SUNY Upstate Department of Obstetrics and Gynecology Third Year Resident Research Award
- ACOG District II Martin L. Stone MD Research Poster Session Award
- ACOG District II Junior Fellow Essay Contest Winner
- Ryan Program Resident Award for Excellence in Family Planning
- AAGL's Recognition of Excellence in Minimally Invasive Gynecology Award
- NASPAG Young Scholars Grant for Physicians-in-Training

Medical School: Baylor College of Medicine, Houston, TX

Medical School Honors/Awards:

- CPRIT(Cancer Prevention Research Institute of Texas) Pre-Doctoral Research Training Grant

Undergraduate Education: University of Georgia, Athens, GA, BS in Psychology

Medical & Research Interests:

- Adolescent gynecology
- Participant perception and experience of abortion-related research
- Portrayal of reproductive health narratives on social media

Publications:

- Stowers PN, Teelin KL. Documentation of Sexual and Menstrual Histories for Adolescent Patients in the Inpatient Setting. *Journal of Pediatric and Adolescent Gynecology*. 2019 Oct;32(5):520-524.
- Stowers P, Mestad R. Use of Levonorgestrel as Emergency Contraception in Overweight Women. *Obesity Research & Clinical Practice*. 2019 Mar; 13(2):180-183.
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- Barbieri E, De Preter K, Capasso M, Johansson P, Man T-K, Chen Z, Stowers P, Tonini G, Speleman F, Shohet JM. A p53 drug response signature identifies prognostic genes in high-risk neuroblastoma. *PloS One* 2013;8:e79843.
- Hsu DM, Agarwal S, Benham A, Coarfa C, Trahan DN, Chen Z, Stowers PN, Courtney AN, Lakoma A, Barbieri E, Metelitsa LS, Gunaratne P, Kim ES, Shohet JM. G-CSF receptor positive neuroblastoma subpopulations are enriched in chemotherapy-resistant or relapsed tumors and are highly tumorigenic. *Cancer Res* 2013;73:4134–46.

Presentations:

- Stowers P, Teelin K. Outcomes For Pediatric Patients Referred to Adolescent and Gynecology Services. *Journal of Pediatric and Adolescent Gynecology*. Poster presented at the 2018 Annual Clinic & Research Meeting of the North American Society for Pediatric & Adolescent Gynecology in West Palm Beach, FL on April 13, 2018.
- Stowers P, Kaufman L, Folk J. Using an On-demand Resource Board for Initial and Continued Education in Obstetrics and Gynecology. Poster presented by Paris Stowers at the 43rd Annual Regional Perinatal Symposium in Syracuse, NY on September 16, 2016.
- Stowers P, Zevidah V. Attitudes of Anesthesia Residents Toward Pregnancy Termination Procedures: A Pilot Study. Poster presented by Paris Stowers at the ACOG District II Conference in New York, NY on October 22, 2016

Title: Abortion Patients' Perspectives on Research Decision-making, Recruitment, and Participation

Paris Stowers, MD; Tiana Fontanilla, MPH; Jennifer Elia, DrPH; Jennifer Salcedo, MD MPH MPP; Bliss Kaneshiro, MD MPH; Mary Tschann, PhD; Reni Soon, MD MPH

Objective: The United States 45 Code of Federal Regulations Part 46 Subpart B requires extra protections for research involving pregnant participants, including pregnant participants seeking abortions. These regulations further restrict abortion-related research beyond the protections required for research involving women with continuing pregnancies. The application of these regulations may impede abortion-related research, limiting the research benefits for women undergoing abortion. This study aims to understand the perspectives of abortion patients regarding their participation in research.

Methods: We recruited adult women who reported at least one abortion in the previous six months to undergo a written survey and on-on-one interviews. We developed an interview guide that was used to conduct these semi-structured in-person interviews. All interviews were professionally transcribed. Using Atlas.TI software, three authors analyzed all interviews using qualitative content analysis until we achieved thematic saturation.

Results: Between February and November 2019, we interviewed 25 participants ages 18 to 41 years who had undergone medical (n=14) or surgical abortions (n=11). Interviews ranged from 32 to 77 minutes in duration. Six themes emerged through qualitative analysis. (1) Participants preferred to learn about abortion-related study opportunities early and through participant-driven recruitment methods. (2) While abortion-related stigma may influence research decision making for some studies, (3) women seeking abortion feel they are capable of making an informed decision about research participation. (4) Research on topics of a sensitive nature may benefit from additional precautions, but the applicability of this concept to abortion is unclear. (5) Research involving fetal tissue is acceptable and offers benefits to many women undergoing abortion. (6) Participants presented varied opinions concerning the ideal role of abortion providers in research.

Conclusions: Abortion patients want to be informed of research opportunities and feel capable of deciding about participation in research studies, including studies involving fetal tissue. Optimization of recruitment methods may allow researchers to improve the research experience for patients undergoing abortion.

Support: The Fellowship in Family Planning provided funding for this study.

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Resident & Fellow Research Day 2020
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5. Devin KM, **Stowers PN**, Wasickanin ME, Chescheir NC. Connect the Dots-January 2020. *Obstet Gynecol*. 2020 Jan;135(1):215-216. doi: 10.1097/AOG.0000000000003629. No abstract available. PMID: 31809446.
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9. **Kerestes C**, Sheets K, Stockdale CK, Hardy-Fairbanks AJ. Prevalence, attitudes and knowledge of misoprostol for self-induction of abortion in women presenting for abortion at Midwestern reproductive health clinics. *Sex Reprod Health Matters*. 2019 Dec;27(1):1571311. doi: 10.1080/09688080.2019.1571311. PMID: 31533561.
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2019 Roy M. Pitkin Award
Awarded by the Editors of Obstetrics & Gynecology
In recognition of excellence in research

Whitehouse K, Tschann M, **Soon R**, Davis J, Micks E, Salcedo J, **Savala M**, **Kaneshiro B**. Effects of Prophylactic Oxytocin on Bleeding Outcomes in Women Undergoing Dilation and Evacuation: A Randomized Controlled Trial. *Obstet Gynecol*. 2019 Mar;133(3):484-491. Erratum in: *Obstet Gynecol*. 2019 Jun;133(6):1287-1288. PMID: 30741801.

Department of OB/GYN Abstract Presentations
Faculty, Fellows, Former Fellows, Residents, and Medical Students
July 2019 – May 2020

1. Utilizing Exam Prep Questions to Improve Resident CREOG In-training Examination Scores [\[click here for poster\]](#)

Chern I, Bharucha J, Hiraoka, M

OBJECTIVE: Compare the examination scores before and after implementation of a study program utilizing a commercially available question bank.

STUDY DESIGN: A prospective cohort study comparing CREOG In-Training Examination (ITE) scores from academic year 2017-2018 and 2018-2019 of University of Hawaii obstetrics and gynecology residents was performed. The program purchased the question bank for all of the residents. Residents were assigned a baseline exam consisting of # questions. The program director then assigned periodic quizzes with set completion deadlines throughout the year and monitored residents for compliance. Residents were given access to the question bank and encouraged to utilize the question bank voluntarily on their own. The intervention was initiated in July 2018 through June 2019. The primary outcome was the difference among CREOG In-Training Examination scores before the study program and during the study program. Only scores of residents who sat for both exams were included. Eighteen residents were present during the duration of the study period and sat for both CREOG examinations. One resident was excluded due to noncompliance with the study program.

RESULTS: During the year of the educational activity, paired individual resident CREOG exams scores increased significantly from the 2018 CREOG administration (mean = 194.1) to the 2019 CREOG administration (mean = 203.5). These changes were statistically significant with a p-value = 0.03.

CONCLUSION: These findings demonstrate that a simple study program geared toward preparing for the CREOG ITE can successfully improve CREOG ITE performance.

Poster presentation, CREOG & APGO 2020 Annual Meeting, February 26-29, 2020, Orlando, FL.

2. Availability of Levonorgestrel Emergency Contraception in Pharmacies on Oahu

Chin J, Salcedo J, **Raidoo S**

OBJECTIVE: To assess the availability of levonorgestrel emergency contraception as an over-the-counter medication in pharmacies on Oahu.

STUDY DESIGN: We conducted an in person secret shopper study of all 122 retail pharmacies on Oahu compiled from Yellow Pages, retail pharmacy websites, and Epic pharmacy lists. Secret shoppers represented themselves as reproductive-aged people seeking levonorgestrel emergency contraception over the counter between February and March of 2018. Using a semi-structured script, secret shoppers inquired regarding availability of levonorgestrel emergency contraception if it was not immediately available over the counter.

RESULTS: Out of 109 chain pharmacies and 13 independent pharmacies, 11% of pharmacies required an employee to unlock the medication, 31% required the medication to be unlocked at the register, and 12% required secret shoppers to ask for the medication at the pharmacy counter. Packaging of the medication varied with 25% packaged as a box on a shelf, 3% as a blister pack, 3% as a locked plastic box, and 69% with no packaging. Plan B® was the most commonly available brand of levonorgestrel emergency contraception, available at 67% of pharmacies followed by Aftera® at 23% of pharmacies. The most expensive brand of levonorgestrel emergency contraception was Plan B® with a mean price of \$50.99 (SD 5.58). The least expensive option was Aftera® with a mean price of \$22.70 (SD 5.40). Almost all encounters (99%) required secret shoppers to talk to at least one staff person including checking out at the register. Most staff (78%) were female and most employees (72%) were rated as moderately, very, or extremely friendly. Obtaining levonorgestrel emergency contraception at most pharmacies (67%) was rated as easy or very easy, while the medication was unable to be obtained at 18% of the pharmacies. Secret shoppers were asked for the following additional information: age (three encounters), ID (two encounters), prescription (one encounter), and insurance card (nine encounters). At seven encounters, secret shoppers were told to seek the medication elsewhere either for availability or a better price. One secret shopper, when asking if the pharmacy could order levonorgestrel emergency contraception for her to pick up was told, "I'm just a pharmacy tech, so if I did order it and you had questions, there would be no pharmacist here to answer your questions."

CONCLUSIONS: Levonorgestrel emergency contraception is widely available as an over-the-counter medication in pharmacies on Oahu. However multiple access barriers remain. Interventions are needed to improve access to levonorgestrel emergency contraception.

Oral presentation, National Medical Association Resident Forum, July 2019, Honolulu, HI.

Oral presentation, Emergency Contraception Jamboree, September 2019, Washington, DC.

3. Buffered Lidocaine for Paracervical Blocks in First Trimester Outpatient Surgical Abortions

Chin J, Kaneshiro B, Elia J, Raidoo S, Savala M, Soon R

OBJECTIVE: To determine if buffered lidocaine decreases injection pain as compared to plain lidocaine for paracervical blocks during first trimester outpatient surgical abortions.

METHODS: In this double-blind, randomized controlled trial, patients who desired surgical termination of a first trimester pregnancy or management of an early pregnancy failure were randomized to receive a paracervical block with either 20 ml of 1% lidocaine or 18 ml 1% lidocaine plus 2 ml of 8.4% sodium bicarbonate. The primary outcome was pain from injection of the paracervical block measured on a 100-mm visual analog scale. Secondary outcomes included pain at cervical dilation, uterine aspiration, and overall satisfaction with pain control. Pain and satisfaction scores were compared using the Mann-Whitney U test. To detect a 15-mm difference in pain from injection of the paracervical block, at an α of 0.05 and 80% power with an estimated 10% dropout rate, we aimed to enroll 49 patients in each arm.

RESULTS: From May 2017 to October 2018, 48 women received plain lidocaine for their paracervical block and 50 women received buffered lidocaine. Groups were similar in demographics. The median pain score after paracervical block injection for the control group was 44.50 [interquartile range (IQR) 18.25-65.00] as compared to 30.00 [IQR 15.25-64.50] in the intervention group ($U=1123.0$; $p=0.323$). Secondary outcomes also were not statistically different between the control and intervention groups.

CONCLUSIONS: Using buffered lidocaine for paracervical blocks in first trimester outpatient surgical abortions does not decrease injection pain as compared to plain lidocaine.

Poster presentation, Society of Family Planning Annual Meeting, October 2019, Los Angeles, CA.

4. Urine Drug Screening on Labor and Delivery

Chin J, Molero Bravo R, Wright T, Kiyokawa M, Chen E, Nakashima E, Karasaki K, Estrada P, Ghatnekar R, Bartholomew ML

OBJECTIVE: To determine the number of urine drug screens (UDS) that return positive during labor and delivery evaluations, demographics of women who receive UDSs, number of positive neonatal drug screens, follow-up after a positive result, and the relationship of maternal UDS results to neonatal drug screen results.

METHODS: This is a retrospective chart review examining all women in 2017 who received a UDS on labor and delivery at Kapi'olani Medical Center for Women and Children (KMCWC).

RESULTS: Out of 297 UDSs that were ordered, 59% identified as Native Hawaiian or Pacific Islander and 83% had public insurance. No reason for ordering was documented

in 31% of UDSs ordered. The most common reason for ordering a UDS was history of substance use, with confirmatory testing positive in only 35% of such cases. Confirmatory testing was negative in 6% of all positive maternal UDSs. 36% of women had a positive result on preliminary testing, and 33% on confirmatory testing. The most common drug found was methamphetamine (47%). 90% of women received a social work consultation while in the hospital, and 70% were referred to child welfare services.

CONCLUSION: The majority of women evaluated in labor and delivery who received UDSs were nonwhite, had public insurance, and received a social work consultation. Maternal drug test results were not reliable for predicting neonatal drug test results and vice versa.

APPLICATION: With rising rates of substance use disorders in the pregnant and reproductive-aged population and the associated stigmas, it is important to treat patients in an evidence-based manner and identify potential intrinsic bias. This project is a first step to identify how UDSs are being used in the care of pregnant women in our community. Traditional indications for ordering UDSs may not predict substance use. Standardized unbiased UDS guidelines should be implemented using screening and reflex confirmatory tests.

Poster presentation, Humanism, Empathy, Social Justice and Global Health Symposium, February 2020, Honolulu, HI.

Poster presentation, American College of Academic Addiction Medicine Annual Meeting, April 2020, Denver, CO [cancelled].

5. Aortic Aneurysm in Pregnancy

Chin J, Bartholomew ML

BACKGROUND: Aortic aneurysms in reproductive-aged women are rare. When they do occur in this young age group, there is usually an underlying connective tissue disease or aortopathy. Genetic evaluation is also indicated. Aortic aneurysms in pregnancy pose a threat to both the mother and fetus. Due to physiologic changes of pregnancy, the risk of aortic dissection greatly increases.

OBJECTIVE: To review the management of aortic aneurysms in pregnancy.

METHODS: This is a case report of a patient who was cared for by the Maternal Fetal Medicine service.

CASE DESCRIPTION: A 24-year-old Gravida 1 at 34 weeks of gestation with one prior prenatal visit presented to an emergency department in Hilo due to sudden onset chest pain radiating to her back. She had severe range blood pressures and CXR revealed a widened mediastinum. Computed tomography angiogram (CTA) revealed a 6 cm ascending thoracic aortic aneurysm and could not exclude dissection. She was airlifted to a tertiary hospital on Oahu. Severe pre-eclampsia was diagnosed, and a repeat CTA excluded dissection. She underwent a Cesarean delivery and two weeks later was transferred to the mainland for possible valve sparing cardiac surgery. En route, she

experienced respiratory distress due to a pulmonary embolus and was intubated. Emergent surgery revealed an aortic dissection, and she underwent an aortic root replacement with a mechanical valve and was diagnosed with pulmonary hypertension. Once stabilized, she was transferred back to Oahu for anticoagulation and pulmonary hypertension management and was discharged to Hilo with close follow up for cardiology, primary care, obstetrics and gynecology, and pulmonology.

CONCLUSION: Guidelines on managing aortic aneurysms for the general population exist; however, there are no standardized guidelines for pregnancy. Pregnancy raises the risk of aortic dissection in women with aortic aneurysms. Standard of care with surgical treatment should not be altered due to pregnancy.

Poster Presentation, Biomedical Sciences and Health Disparities Symposium, April 2020, Honolulu, HI [cancelled].

6. A Qualitative Study Examining Obstetricians' Perspectives on Labor and Delivery Care for Women from Micronesia

Delafield R, Elia J, **Chang A**, **Kaneshiro B**, Sentell T, Pirkle CM

BACKGROUND: The availability of cesarean delivery is critical to quality obstetric care, but it can increase a woman's risk of mortality, morbidity and complications in subsequent deliveries. Micronesians are a growing racial/ethnic minority in Hawai'i with a higher frequency of cesarean delivery compared to other racial/ethnic groups in the state. The objective of this study was to better understand factors contributing to higher cesarean delivery among Micronesian women from the perspective of obstetricians-gynecologists (OB-GYNs) providing their care.

METHODS: Semi-structured interviews were conducted with OB-GYNs. A brief survey was administered to collect demographic and practice data. A priori and emergent coding strategies were used and the Framework Method guided the analysis.

RESULTS: 13 OB-GYNs from three Hawaiian Islands were interviewed. Participants practiced an average of 10 years in Hawai'i. Major themes: 1) Communication, 2) Family involvement 3) Negative attitudes and stereotypes 4) Medical factors and prenatal care, and 5) OB-GYN perceptions of deliveries contradict data. Findings suggest that the difference in mode of delivery may be influenced by negative provider attitudes and/or communication challenges, leading to greater levels of uncertainty on the part of doctors that could impact decision-making.

CONCLUSIONS: This study provides a perspective from OB-GYNs about factors that may contribute to differences in care and patient outcomes that are unavailable in medical charts or clinical data. Results may inform interventions that improve patient-provider engagement and communication, ultimately improving obstetric care and reducing cesarean delivery among for Micronesian women, with lessons applicable to other racial/ethnic minorities in the United States.

APHA Abstract Submission.

7. Global Associations between Obesity, Access to Care, and Maternal Mortality

Estrada P, Yamasato K

OBJECTIVE: To evaluate global associations between maternal mortality ratios (MMR) and obesity and access to reproductive care

METHODS: MMR and female obesity rates were gathered for 2015 from the World Health Organization Global Health Observatory data repository. This repository was also used for data on antenatal care coverage for ≥ 4 visits and “family planning needs satisfied” (FP) among reproductive age women married or in-union. If 2015 was unavailable, the year or range of years closest to 2015 was used. Linear regression was used to evaluate associations between MMR and obesity, antenatal care coverage, and FP. Analyses were repeated after stratifying countries by 2015 World Bank income group. Associations between MMR and obesity were also evaluated after grouping countries into quartiles based on obesity rates. A $p \leq 0.05$ was statistically significant.

RESULTS: For all countries, MMR increased as obesity, antenatal care coverage, and FP decreased ($p < 0.001$ for all). However, these associations differed between countries. For obesity, there was a nonsignificant trend for MMR to increase as obesity increased in high income countries, a trend for MMR to decrease as obesity increased in upper and lower middle income countries, and no association in low income countries (Fig 1). After stratification into quartiles by obesity, MMR increased as obesity increased among countries in the lowest obesity quartile, but decreased as obesity increased in the lower middle quartile. There was no association in the upper middle and highest quartiles of obesity (Fig 2). MMR decreased as antenatal care coverage increased among countries in the upper and lower middle income groups only, and as FP increased in the lower middle and lower income groups (Fig 1).

CONCLUSION: On a global level, relationships between MMR and obesity and proxies for access to reproductive care are complex and may vary between countries. These findings support the need for individualized measures within countries to reduce maternal mortality.

Poster presentation, Society of Maternal Fetal Medicine 40th Annual Meeting, February 7, 2020, Grapevine, Texas.

8. A Case of a Prolapsed Fibroid in a 12-Year-Old Girl

Kumura NDS, Siarezi S

BACKGROUND: Uterine fibroids are a common cause of abnormal uterine bleeding in adult women, but are extremely rare in the adolescent years.

CASE: A 12-year-old nulliparous girl presented with abnormal uterine bleeding and was found to have a prolapsing submucosal fibroid. The fibroid and her symptoms were successfully removed using an Endosnare.

SUMMARY AND CONCLUSION: The most common cause of abnormal uterine bleeding in adolescent bleeding is due to anovulation. Though rare, fibroids should remain on the differential as the cause of abnormal uterine bleeding in the adolescent population, particularly if symptoms persist despite initial therapy. Fibroids can be managed successfully with minimally invasive techniques.

Poster presentation, NASPAG, April 2-3, 2020, Grapevine, TX [cancelled].

9. DNA Methylation and Gene Expression of Cord Blood and Placental Cytokines in Pregnancies Complicated by Maternal Obesity [[click here for poster](#)]

Kurata N, Benny P, Lesseur C, **Miller C**, **Maykin M**, Riel J, **Yamasato K**, **Towner D**, Marsit C, Chen J, **Lee MJ**

INTRODUCTION: Maternal obesity poses health risks to both mother and fetus during pregnancy. The purpose of this study was to investigate associations between maternal obesity and cord blood cytokines in a Native Hawaiian/Pacific Islander (NHPI) cohort. Associations between maternal obesity and placental DNA methylation and gene expression of inflammatory cytokines and their receptors in a mainland cohort were also investigated.

METHODS: The Luminex platform was used to measure 14 cytokines (IFN α 2, IL-10, IL-12(p40), IL-12(p70), IL-13, IL-1 β , IL-4, IL-6, IL-8, IFN γ , IL-5, MCP-1, TNF α , and VEGF-A) in umbilical cord blood of infants born from 33 obese and 45 non-obese NHPI women. Placental DNA methylation and gene expression of cytokine and cytokine receptor genes were measured using the Infinium MethylationEPIC array and RNAseq in samples from 42 obese and 149 non-obese women from the Rhode Island Child Health Study (RICHS). Cytokine data analysis was performed using xPONENT 3.1 data analysis software and student's t-tests used to compare cytokine levels between obese and non-obese women. The relation between maternal obesity and gene expression or DNA methylation was assessed with linear models and robust linear models, respectively, adjusted for birth weight, gestational age, and infant sex.

RESULTS: Among NHPI women, obese women had decreased fetal cord blood cytokine levels, including IFN α 2, compared to non-obese women (Figure 1). Placentas from obese gravidas from the RICHS cohort demonstrated reduced methylation of *IFNAR1* (cg00622702, $P < 0.01$) with a corresponding increase in its gene expression ($P < 0.01$; Figure 2).

CONCLUSION: The reduction of IFN α in cord blood of infants born to obese gravidas could result in a predisposition to obesity and metabolic dysregulation later in life. The increase in expression of its receptor in the placenta may represent a cellular response to low cytokine levels detected in the cord blood. Given the ethnic differences in both cohorts as well as the two different tissue types, further investigation to map the inflammatory signals from mother to placenta to fetus is warranted to elucidate the intergenerational effect of maternal obesity on the health trajectory of the offspring.

Poster Presentation, Society for Reproductive Investigation – 67th Annual Scientific Meeting, March 10-14, 2020, Vancouver, Canada.

10. Evaluation of Estimated Fetal Weight, Interval Growth, and Neonatal Birthweight as Prognostic Tools for Expectant Management in Early-Onset Preeclampsia

Kurata N, Towner D

OBJECTIVES: To compare estimated fetal weight and neonatal birth weight in pregnancies with early-onset preeclampsia and fetal growth restriction (FGR) compared to those without fetal growth restriction. To determine adequacy of interval fetal growth by sonographic biometry measurements in the subset of patients who were still pregnant for a subsequent growth ultrasound.

METHODS: A retrospective cohort study was conducted between May 2009 and December 2018 at Kapiolani Medical Center for Women and Children in Honolulu, Hawaii. All patients with a diagnosis of preeclampsia and fetal growth restriction based on EFW and/or AC \leq 10th percentile before 32 weeks were identified as cases. Estimated fetal weight, interval growth, neonatal birth weight, and other patient comorbidities were reviewed. The remaining patients with preeclampsia without fetal growth restriction during this same time frame served as the control group. Patients who delivered at an outside hospital were excluded. Interval growth was determined by looking at the difference in the estimated gestational age by sonographic biometry between the initial scan where growth restriction was first noted and the subsequent ultrasound and dividing it by the number of days between the two ultrasounds to determine the percent of interval growth, with adequate interval growth defined as >50 percent. Statistics included ANOVA, Chi Square, and logistic regression.

RESULTS: A total of 144 patients were noted to have a diagnosis of preeclampsia prior to 32 weeks, 56 with fetal growth restriction and 88 without. When the antenatal estimated fetal weight percentile was compared to the birth weight percentile, there was a statistically significant decrease for both cases and controls ($P < 0.0001$). Of the 24 patients who had a subsequent growth ultrasound (18% of those in the FGR group compared to 16% of controls), there was a trend toward more fetuses with inadequate interval growth in the group with fetal growth restriction (52.6%) compared to the control group without (75.8%; $P < 0.20$). Logistic regression identified both AC \leq 10th percentile ($P < 0.0001$) and length of latency in days ($P = 0.035$) being associated with small for gestational age neonates.

CONCLUSIONS: In patients diagnosed with early-onset preeclampsia before 32 weeks with fetal growth restriction, there may be limited utility and potential harm to expectant management in this population based on very suboptimal interval growth. Even in those without IUGR at initial diagnosis of early onset preeclampsia, half had suboptimal growth. Further study is needed to evaluate sonographic interval growth in a larger subset of patients and a randomized controlled trial may be warranted.

Abstract, Annual Integrative Ultrasound Meeting, March 20-25, 2020, New York, NY.

11. Menstrual Cup Use and Intrauterine Device Expulsion in a Copper Intrauterine Device Contraceptive Efficacy Trial

Long J, Schreiber C, Creinin MD, **Kaneshiro B**, Dart C, Nanda K, Blithe D

INTRODUCTION: Menstrual cup use for menstrual hygiene is increasingly popular. We evaluated relationship of menstrual cup use and intrauterine device (IUD) expulsion in a prospective trial of two copper IUDs.

METHODS: An ongoing 3-year contraceptive efficacy trial randomized women to one of two copper IUDs, with successful placement in 1092 women. Follow-up visits in the first year occurred at 6 weeks, and then 3, 6 and 12 months after insertion. At nine months after initiating enrollment, we modified the protocol to advise subjects against concurrent menstrual cup use with the IUD or to break the vacuum seal prior to removal if continuing use. We evaluated the relationship of menstrual cup use and expulsion risk over the first 24 months of study conduct.

RESULTS: Overall, 266 (24.4%) women reported menstrual cup use. At 24 months after initiating enrollment, 46 (17.3%) cup users and 43 (5.2%) non-users experienced expulsion (odds ratio 3.81 [95% CI 2.45-5.92]). Fourteen (30.4%) menstrual cup users with expulsion reported the event occurred during menstrual cup removal. In Year 1 of the study, expulsion rates among menstrual cup users and non-users were 14.3% and 4.7%, respectively ($P<.001$). By the end of Year 2, these rates were 23.2% and 6.5% ($P<.001$).

CONCLUSIONS/IMPLICATIONS: We found higher than expected IUD expulsion rates in menstrual cup users amongst participants in a prospective trial of two copper IUDs. Copper IUD users should be cautioned that concurrent menstrual cup use increases the risk of IUD expulsion and expulsion risk continues with ongoing menstrual cup use.

12. Intranasal Fentanyl for Pain Control During First-Trimester Uterine Aspiration: A Randomized Controlled Trial

Moayed G, Stevens K, Tschann M, Salcedo J, **Soon R**, **Kaneshiro B**

OBJECTIVES: To evaluate the effectiveness of intranasal fentanyl (INF) in reducing pain during a first trimester uterine aspiration.

METHODS: In this double-blind, randomized controlled trial, participants requesting surgical abortion at 14-weeks gestation or less received either 100 mcg of INF or placebo administered 15 minutes prior to uterine aspiration. All participants received oral ibuprofen and a standardized paracervical block. The primary objective was to compare pain reported on a 100 mm Visual Analog Scale (VAS) immediately after uterine aspiration. Secondary objectives included comparing reported post-procedural pain and satisfaction with procedural pain control between the groups. To find a difference in pain of 15 mm with an $\alpha = 0.05$ and power of 80%, we aimed to recruit 106 people.

RESULTS: Of 356 people assessed for eligibility from March 2017 through May 2018, 107 participants were recruited. Pain during aspiration was 58.4 mm +/- 28.0 in the INF group and 59.6 mm +/- 24.6 in the control group, $p=0.82$. Dilation pain (INF 54.3 mm (+/- 25.8), placebo 52.5 mm (+/- 23.7), $p=0.73$), post procedure pain (INF 19.1 mm (+/- 19.5),

placebo 18.1 mm (+/- 19.4), $p=0.80$), patient satisfaction (INF 65.8 mm (+/- 31.7), placebo 62.9 mm (+/- 28.8), $p=0.63$), and provider satisfaction (INF 76.3 mm (+/- 26.0), placebo 72.9 mm (+/- 23.9), $p=0.49$) did not differ between groups.

CONCLUSIONS: As an adjunct to NSAID and paracervical block, INF does not decrease pain with aspiration, dilation, or post-procedure, nor does it improve patient or provider satisfaction. Abortion patients are highly amenable to receiving medications intranasally.

(2019) Contraception, 100(4), 306 [abstract].

13. Obstetrics and Gynecology Rotation in American Samoa [[click here for poster](#)]

Ogez D, Khozaim K

Poster presentation, GlobalHealth Symposium, February 14, 2020, University of Hawai'i John A. Burns School of Medicine, Honolulu, HI.

PAST RESEARCH DAY GUEST SPEAKERS

- 2019 **Matthew Barber, MD, MHS**, Chair, Department of Obstetrics and Gynecology, Duke University, Durham, North Carolina, “Innovations in Surgery: Lessons from Urogynecology.”
- 2018 **Dev Maulik, MD, PhD**, Senior Associate Dean of Women’s Health, Professor & Chair, Department of Obstetrics and Gynecology, University of Kansas, Kansas City, Kansas, “*Fetal Growth Restriction: An Update.*”
- 2017 **Eve Espey, MD**, Professor and Chair, Department of Obstetrics and Gynecology, University of New Mexico, Albuquerque, New Mexico, “*Teen Pregnancy Options Counseling ... and Some Contraception Too!*”
- 2016 **Haywood L. Brown, MD, FACOG**, F. Bayward Charter Professor & Chair, Obstetrics and Gynecology Department/Division: Obstetrics/Gynecology/Maternal-Fetal Medicine, Duke University School of Medicine, Durham, North Carolina, “*The Obstetric Bundles.*”
- 2015 **Barbara S. Levy, MD**, Vice President for Health Policy, Advocacy Division at the American College of Obstetricians and Gynecologists (ACOG), Washington, DC, “*Vaginal Hysterectomy: Removing the Engine thru the Tailpipe.*”
- 2014 **Daniel M. Breitkopf, MD**, Associate Professor & Ob/Gyn Residency Program Director, Department of Obstetrics and Gynecology, Mayo Clinic, Rochester, Minnesota, “*Hysteroscopy and Abnormal Uterine Bleeding: What’s New?*”
- 2013 **Aaron B. Caughey, MD, MPA, MPH, PhD**, Professor and Chair, Department of Obstetrics and Gynecology, Oregon Health & Science University, Portland, Oregon, “*The Cesarean Epidemic: Etiologies, Outcomes, & Potential Solutions.*”
- 2012 **Deborah A. Wing, MD**, Professor of Clinical Obstetrics and Gynecology, Director, Division of Maternal-Fetal Medicine and Director, Maternal-Fetal Medicine Fellowship, University of California, Irvine, “*Updates in Cervical Ripening and Labor Induction.*”
- 2011 **Andrew Berchuck, MD**, Director of Gynecologic Cancer Research, Professor of Gynecologic Oncology, Department of Obstetrics and Gynecology, and Co-Director, Duke Comprehensive Cancer Center Breast/Ovarian Cancer Program, Duke University Medical Center, Durham, North Carolina, “*Prospects for individualized Treatment and Prevention of Ovarian Cancer.*”
- 2010 **Leo R. Brancazio, MD, FACOG**, Vice Chair for Patient Safety & Quality and Associate Professor, Duke University Department of Obstetrics and Gynecology, Duke University Medical Center, Durham, North Carolina, Medical Director, Duke University Hospital Labor and Delivery, Durham, North Carolina, “*The Ideal Cesarean Section Rate.*”

PAST RESEARCH DAY AWARD RECIPIENTS

Santosh S. Sharma, M.D. Resident Research Award [for submission for publication]

2019 **Sally Markee, MD**, "Tumor suppressor gene and mismatch repair protein expression in uterine sarcomas and carcinosarcomas"

Sally Zhen, MD, "Pregnant Women's Experiences and Expectations of the Routine Obstetric Screening Ultrasound".

2018 **Nikki Kurata, MD**, "Prolonged Interpregnancy Interval: Essential Nullipara Again?"

First Place Award

2019 **Jennifer Chin, MD**, "Buffered lidocaine for paracervical blocks in first trimester outpatient surgical abortions"

2018 **Meryl Ueno, MD**, "Association between Second Trimester Maternal Serum Analytes and Gestational Diabetes"

2017 **Charlie Wang, MD**, "Utility of Routine Collection of Chlamydia and Gonorrhea in Antepartum Patients"

Honorable Mention:

Nicole Kurata, MD, "Prolonged Interpregnancy Interval: Essential Nullipara Again?"

2016 **Sara C. Harris, MD**, "Levonorgestrel Intrauterine Device Expulsion in Patients with Abnormal Uterine Bleeding"

2015 **Melissa Kuwahara, MD**, "Interpregnancy Interval and Subsequent Pregnancy Outcomes after Dilation and Evaluation"

2014 **Michelle Tsai, MD**, "Oxidative Stress & Compensatory Anti-Inflammatory Mechanisms in the Placentas of Gravid Marijuana Smokers"

Audience Choice Award

2019 **Jennifer Chin, MD**, "Buffered lidocaine for paracervical blocks in first trimester outpatient surgical abortions"

2018 **Meryl Ueno, MD**, "Association between Second Trimester Maternal Serum Analytes and Gestational Diabetes"

2017 **Charlie Wang, MD**, "Utility of Routine Collection of Chlamydia and Gonorrhea in Antepartum Patients"

2016 **Sara C. Harris, MD**, "Levonorgestrel Intrauterine Device Expulsion in Patients with Abnormal Uterine Bleeding"

P. Gordon McLemore, Jr, MD, "Utilization of Abdominal Circumference (AC) Measurement in Fetal Biometry in the Late Second and Early Third Trimesters in the Prediction of Small for Gestational Age (SGA) Infants"

2015 **Holly Bullock, MD**, "Access to Ulipristal Acetate in Hawaii: Is a Prescription Enough?"

2014 **Michelle Tsai, MD**, "Oxidative Stress & Compensatory Anti-Inflammatory Mechanisms in the Placentas of Gravid Marijuana Smokers"



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