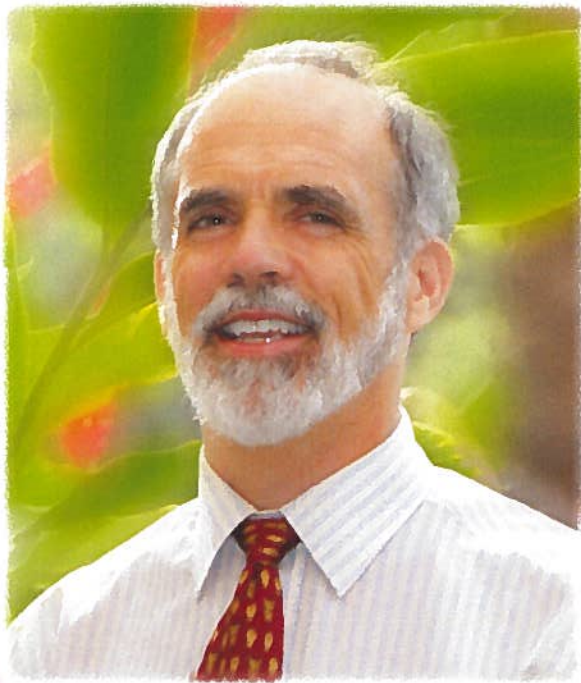


**22nd Annual
Obstetrics, Gynecology
& Women's Health
Resident and Fellow
Research Day**



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



*The University of Hawai`i Department of Obstetrics, Gynecology & Women's Health
would like to extend our deepest mahalo to all the people who made this 2017 Research Day possible.*

Research Day Committee:

*Karen Akiyama
Jennifer Elia, Dr.P.H., M.P.H.
Mark Hiraoka, M.D., M.S.
Ginny Kamikawa
Bliss Kaneshiro, M.D., M.P.H.
Lisa Kellett
Reni Soon, M.D., M.P.H.
Dena Towner, M.D.
Steven Ward, Ph.D.*

*Janica Dement
Darlene Hubbard
Krysten Kawamata*

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

*A Special Thanks to:
Thomas Kosasa, M.D. for sponsoring us at the Waiialae Country Club.*

May 18, 2017

E Komo Mai!

We welcome you to the 22nd Annual Department of Obstetrics, Gynecology and Women's Health, John A Burns School of Medicine, University of Hawai'i Research Day symposium. This event, created and organized through the combined efforts of our faculty, fellows and residents, aims to improve women's health and inspire discovery. Our Research Day provides a forum for residents and fellows to present their current research and recognizes recently published and presented research by our faculty. The research projects that are being discussed today give our residents and fellows experience conceiving, conducting and presenting original research and provide an opportunity to generate discussion around advancing women's health. The knowledge and skills our residents and fellows gain will assist them to critically analyze medical literature and determine optimum evidence based practice to benefit their patients. We hope this experience encourages them to continue to explore basic science, translational and clinical research opportunities in the future.

This year we would like to dedicate Research Day to Dr. Tod Aeby. As a residency program director more than two decades ago, he conceptualized and initiated Resident Research Day with his former department chair, Dr. Roy Nakayama. In the years since, he has remained a strong advocate for resident research. He has mentored many resident projects and inspired residents (and faculty) to ask research questions, to critically evaluate published articles and use evidence-based medicine in clinical practice.

A special thanks goes to the entire Research Day Symposium Planning committee and to our distinguished visiting professor Eve Espey, M.D., M.P.H. We hope that you will find this research symposium to be informative and inspiring. Please share your thoughts about our department's research day strengths with us and any suggestions for next year's program.

We dedicate this year's Departmental Research Day to Tod Aeby, M.D., M.Ed.:



Reni Soon, M.D., M.P.H.
Assistant Professor
Director of Resident Research
Department of Obstetrics, Gynecology
& Women's Health
University of Hawai'i
John A. Burns School of Medicine



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

GUEST SPEAKER & JUDGE

May 18, 2017



Eve Espey, M.D., M.P.H.

Professor & Chair, Department of Obstetrics and Gynecology
Division of Family Planning, and Family Planning Fellowship Director
University of New Mexico

She is President Elect of the Society of Family Planning and is the Medical Advisory Committee Chair for the National Campaign to Prevent Teen and Unplanned Pregnancy. She is the Chair of the American College of OB-GYN's work group for Long Acting Reversible Contraception. She has won a number of teaching awards and has been recognized nationally as a mentor for Medical Students for Choice. She has numerous publications in the area of family planning and medical education and has been involved in international family planning work. Dr. Espey is committed to the care of the underserved and to improving the health and lives of New Mexico women.

Recent Publications:

Nitrous oxide for pain management during in-office hysteroscopic sterilization: a randomized controlled trial Emily N. Schneider, Regan Riley, **Eve Espey**, Shiraz I. Mishra, Rameet H. Singh *Contraception* Published online: September 9, 2016.

Nitrous oxide for pain management of first-trimester surgical abortion: a randomized controlled trial Maria C. Montoya, **Eve Espey**, Lawrence Leeman, Rameet Singh *Contraception*, Vol. 93, Issue 5, p472-473 Published in issue: May 2016.

Lactation and contraception. Bhardwaj, Neha R.; **Espey, Eve**. *Current Opinion in Obstetrics & Gynecology*: December 2015 - Volume 27 - Issue 6 - p 496-503.

Prophylactic ibuprofen does not improve pain with IUD insertion: a randomized trial. Bednarek PH1, Creinin MD2, Reeves MF3, Cwiak C4, **Espey E**, Jensen JT; Post-Aspiration IUD Randomization (PAIR) Study Trial Group. *Contraception*. 2015 Mar;91(3):193-7. doi: 10.1016/j.contraception.2014.11.012. Epub 2014 Nov 25.

Wednesday, May 17, 2017 Kapi'olani Medical Center for Women & Children, The Nan Inc. Auditorium

7:30 a.m. - 8:30 a.m. Ob/Gyn Research Day Lecture: "*Teen Pregnancy Options Counseling and Some Contraception, Too!*"

Participants: Faculty, Private Attending Physicians, Residents and Medical Students

Thursday, May 18, 2017 Waialae Country Club

7:30 p.m. - 1:00 p.m. Ob/Gyn Research Day Program

Participants: Faculty, Private Attending Physicians, Residents and Medical Students

Friday, May 19, 2017

7:30 a.m. - 9:00 a.m. Morbidity & Mortality Conference - Kapi'olani Medical Center for Women & Children, The Nan Inc. Auditorium
Kapi'olani Medical Center for Women & Children, Room 815:

9:30 a.m. - 11:30 a.m. Review & Advise: Ongoing 2nd Year Resident's Research Projects in Progress

Participants: Residents and Research Advisors

11:30 a.m. -12:30 p.m. Family Planning Lecture

Participants: Family Planning Fellows

12:30 p.m. - 1:30 p.m. Fellow Lecture-"Mentorship and Career Development"

Participants: Family Planning and Maternal Fetal Medicine Fellows

RESEARCH DAY PROGRAM

Thursday, May 18, 2017

Wi-Fi Internet Access: 4997kahala

7:30 a.m. *Registration and Continental Breakfast*

8:00 a.m. *Welcome Remarks by Ivica Zalud, M.D., Ph.D., Professor & Chair, Kosasa Endowed Chair*

8:10 a.m. *Greetings by Jerris R. Hedges, M.D., M.S., M.M.M., Dean and Professor of Medicine, John A. Burns School of Medicine*

8:20 a.m. *Introduction of Judging Panel and Moderators by Reni Soon, M.D., M.P.H.*

8:30 a.m. *Introduction of Residents by Ghazaleh Moayedi, D.O. and Megumi Akiyama, M.D..*

TIME	PRESENTER	ABSTRACT
8:35 a.m.	<i>Ann B. Welsh, D.O.</i>	<i>Postpartum Shock Index as a Predictor of Postpartum Hemorrhage Morbidity</i>
8:50 a.m.	<i>Mark R. Villarín, M.D.</i>	<i>Pregnancy Outcomes with Smoking Cessation in Women with Other Substance Use Disorders</i>
9:05 a.m.	<i>Charlie K. Wang, M.D.</i>	<i>Utility of Routine Collection of Chlamydia and Gonorrhea in Antepartum Patients</i>
9:20 a.m.	<i>Ricardo A. Molero Bravo, M.D.</i>	<i>Discharge Analgesics After Vaginal or Cesarean Section Delivery</i>
9:35 a.m.	<i>Nicole B. Kurata, M.D.</i>	<i>Prolonged Interpregnancy Interval: Essential Nullipara Again?</i>
9:50 a.m.	<i>Jennifer B. Bear, M.D.</i>	<i>Abnormal Placental Cord Insertion and the Association with Fetal Growth Restriction</i>
10:05 a.m.	<i>"Audience Choice Award" Ballots will be collected before lunch by Ginny Kamikawa & Lisa Kellet - Reni Soon, M.D., M.P.H.</i>	
10:10 a.m.	<i>Introduction of Kelly Yamasato, M.D. by Dena Towner, M.D., Maternal Fetal Medicine Fellowship Program Director</i>	
10:15 a.m.	<i>Kelly Yamasato, M.D.</i>	<i>Human Relaxins (RLNH1, RLNH2), their Receptor (RXFP1), and Fetoplacental Growth</i>
10:35 a.m.	<i>Introduction of Shandhini Raidoo, M.D. by Bliss Kaneshiro, M.D., M.P.H., Family Planning Fellowship Program Director</i>	
10:40 a.m.	<i>Shandhini Raidoo, M.D.</i>	<i>Dual Use and Long-Acting Reversible Contraception among Adolescents and Young People</i>
11:00 a.m.	<i>" Abstract Poster Presentations" - Reni Soon, M.D., M.P.H.</i>	
11:05 a.m.	<i>Introduction of Somsook Santibenchakul, M.D., M.P.H. by Jennifer Elia, Dr.P.H., M.P.H.</i>	
11:10 a.m.	<i>Somsook Santibenchakul, M.D., M.P.H.</i>	<i>Comprehensive Contraceptive Counseling and Uptake Among Adolescents and Young Women in a Hospital-based Ob-Gyn Clinic</i>
11:25 a.m.	<i>Introduction of Mary Tschann, M.P.H., Ph.D. by Jennifer Elia, Dr.P.H., M.P.H.</i>	
11:30 a.m.	<i>Mary Tschann, M.P.H., Ph.D.</i>	<i>Patient-centered Non-pharmacologic Pain Management and Pain Scores During First Trimester Surgical Abortion: A Randomized Controlled Trial</i>
11:45 a.m.	<i>Buffet Lunch and Judges' Deliberations</i>	
12:50 p.m.	<i>Eve Espey, M.D., M.P.H. and Reni Soon, M.D., M.P.H.: Awards Presentations</i>	
1:00 p.m.	<i>Closing by Mark Hiraoka, M.D., M.S., Ob-Gyn Residency Program Director</i>	

2017 JUDGING PANEL:



*Eve Espey, M.D., M.P.H.
Professor & Chair
Department of Obstetrics & Gynecology,
Division of Family Planning &
Family Planning Fellowship Director
University of New Mexico School of Medicine
Albuquerque, New Mexico*



*Sheree Kuo, M.D.
Assistant Professor
Department of Pediatrics
Neonatal-Perinatal Medicine
John A. Burns School of Medicine
University of Hawai'i
Honolulu, Hawai'i*



*Men-Jean Lee, M.D.
Associate Professor & MFM Division Chief
Department of Obstetrics & Gynecology
Maternal Fetal Medicine
John A. Burns School of Medicine
University of Hawai'i
Honolulu, Hawai'i*

Ann Bernadette Welsh D.O.

Philadelphia College of Osteopathic Medicine, Philadelphia, Pennsylvania

Medical School Honors/Awards:

* *Philadelphia College of Osteopathic Medicine Board of Trustees Scholarship*

LaSalle University, Philadelphia, Pennsylvania

Postbaccalaureate Premedical Certificate Program

B.A. Psychology - Monmouth University, West Long Branch, New Jersey

Under graduate Honors/Awards:

* *2003-2006: Division I Field Hockey - Served as captain for 2006 season*

* *2003, 2004, 2005, 2006: National Field Hockey Coaches' Association (NFHCA)
Academic An American*

Language Fluency other than English: Spanish/Spanish Creola (Basic)

Hobbies & Interests: Fitness, reading, cooking, and traveling

Place of Birth: Abington, Pennsylvania

Medical Interests: Evidence-based practice, hypertensive disorders of pregnancy, maternal morbidity & mortality

Future Plans upon Graduation: Generalist Ob/Gyn

Research Experience: Research Coordinator at the University of Pennsylvania, Philadelphia, PA, under the direction of Barbara Riegel, PhD, RN, FAHA, FAAN, on NIH-funded study researching the Impact of excessive daytime sleepiness on self-care in heart failure patients. Visited patients in their home in order to guide them through several surveys, cognitive tests, and the use of electronic monitoring devices. June 2008-September 2009.

Research Assistant at the University of Pennsylvania, Philadelphia, PA, under the direction of Barbara Riegel, PhD, RN, FAHA, FAAN, on a NIH-funded study researching the impact of excessive daytime sleepiness on self-care in heart failure patients. Visited patients in their home in order to collect vital signs, guide them through several surveys and cognitive tests, as well as instruct them on use of the electronic monitoring devices. July 2007-July 2008.



Postpartum Shock Index as a Predictor of Postpartum Hemorrhage Morbidity

Ann B. Welsh, D.O.; Michael Savala, M.D.; Bridget Lai, R.N.; Chieko Kimata, Ph.D., M.P.H., M.B.A.; Reni Soon, M.D., M.P.H.

Introduction: Shock index (heart rate/systolic blood pressure) has been established as a marker for clinical severity, morbidity and mortality in trauma literature. More recently, shock index has been evaluated in obstetrics. This study sought to evaluate the relationship between immediate postpartum shock index and clinically relevant postpartum hemorrhage.

Methods: We conducted a retrospective cohort study using all deliveries occurring at Kapiolani Medical Center from January 1, 2013 to December 31, 2015. The primary independent variable was maximum shock index in the two hours immediately following delivery. The primary outcome was a composite of: a decrease in hemoglobin from hospital admission to postpartum of at least 3 g/dL, blood transfusion, or admission to the adult telemetry or intensive care unit. A multivariate regression model was developed to estimate the likelihood of clinically relevant postpartum hemorrhage adjusting for demographic and clinical variables.

Results: Delivery records for 17,522 patients were included in the final analysis and 127 were excluded because vital sign data in the immediate postpartum period were not available. The mean maximum postpartum shock index for this group was 0.84 ± 0.18 . Clinically relevant hemorrhage (composite hemorrhage outcome) complicated 1,332 (7.6%) of these deliveries. Risk factors for hemorrhage included an immediate postpartum maximum shock index of 0.9 or greater, grandmultiparity, chorioamnionitis, receiving an epidural, and receiving oxytocin for more than 12 hours. There were 5,497 deliveries in which the maximum shock index was 0.9 or greater, and 12.97% of these were found to have the composite hemorrhage outcome. Of the 12,025 deliveries in which the maximum shock index was less than 0.9, 5.15% were found to have the composite hemorrhage outcome ($p < 0.0001$). After adjusting for chorioamnionitis, epidural, mode of delivery, grandmultiparity, and oxytocin greater than 12 hours, women who had a maximum shock index of 0.9 or greater were 2.5 times more likely (aOR = 2.5 [CI 2.32-2.84]) to experience either a hemoglobin decrease of 3 g/dL, blood transfusion, or admission to telemetry or the ICU.

Conclusions: Our results suggest that evaluation of shock index, particularly in the immediate postpartum period, may assist in identifying patients at greatest risk for developing adverse hemorrhage-related outcomes. Consideration may be given for early intervention in this group.

Support: None

Acknowledgements: Tod Aeby, M.D., M.Ed.; Shannel Adams, M.D.; Arys Nogueron; Kapi'olani Medical Center for Women & Children, Hawai'i Pacific Health

Mark Ramil Villarín, M.D.

University of Hawai'i John A. Burns School of Medicine, Honolulu, Hawai'i
Ob-Gyn Residency Program Honors/Awards:

* 2015: First Year Resident Excellence in Teaching Award of Medical Students

Loma Linda University School of Medicine, Loma Linda, CA
Medical School Honors/Awards:

* 2013: Society of Critical Care Medicine Annual Scientific Award for "Discovery of a Novel Outcome Prognosticator for Sepsis with Therapeutic Implications: Decreased Serum 1, 25-Dihydroxyvitamin D,"

* 2012-2014: MacKenzie Scholarship

* 2012: Honors, Obstetrics and Gynecology Third-Year Clerkship

* 2010-2013: Edwin T. and Leilani Kam Scholarship,



B.A. in Biology, University of Hawaii at Hilo Hilo, Hawaii

Honors/Awards:

* 2010: graduated Magna Cum Laude, Outstanding Senior Biology Major

* 2008: University of Hawaii Presidential Scholar

* 2006: University of Hawaii at Hilo Chancellor's Scholar

Hobbies & Interests: Surfing, Hawaii marine life, hiking, tennis

Place of Birth: Hilo, Hawaii

Medical Interests: My interest is in addiction and psychiatric disorders in pregnancy. Psychiatry was on my differential for residency training, however, I would not be able to give up delivering babies.

Future Plans upon graduation: Generalist

Research Experience: Research Fellowship at the Loma Linda University School of Medicine Loma Linda, CA, under the direction of H. Bryant Nguyen, M.D., M.S. A combination of laboratory bench and clinical research in the evaluation of volatile markers in patients with sepsis and the evaluation of vitamin D status in patients with sepsis. June 2011-June 2012.

Summer Undergraduate Research Fellow at the Mayo Clinic, Jacksonville, FL, under the direction of Peter Storz, Ph.D. Laboratory bench investigation of cell survival mechanisms in pancreatic cancer. June 2009-August 2009.

Laboratory Assistant University of Hawaii at Hilo Hilo, HI under the direction of Norbert Furumo, Ph.D. Laboratory bench investigation of biochemical mechanisms of lychee fruit browning. January 2009-May 2010.

Publications: Nguyen HB, Eshete B, Lau KHW, Sai A, Villarín M, Baylink D. Serum 1,25-Dihydroxyvitamin D: An Outcome Prognosticator in Human Sepsis. PLoS One.2013 May; 8(5): e64348. Cited in PubMed; PMID: 23741318.

Sai A, Eshete B, Villarín M, Lau W, Baylink D, Nguyen HB. Discovery of a Novel Outcome Prognosticator for Sepsis with Therapeutic Implications: Decreased Serum 1,25-Dihydroxyvitamin D. *Critical Care Medicine*.2012 Dec; 40(12): U23-U24.

Abstract Presentations: Klein W, Nguyen HB, Villarín M, Sai A, Delano F, Chow J, Schmid-Schonbein G. Evaluation of Volatile Markers in Patients with Severe Sepsis or Septic Shock and Healthy Volunteers. Poster presented at: American Thoracic Society International Conference; San Francisco, CA., May 18-23, 2012.

Villarín, M., Hanabaga, S., Furumo, N. The Role of HCl Treatment to Prevent Lychee Browning. Oral Presentation presented at: University of Hawaii at Hilo Keaholoa STEM (science, technology, engineering, mathematics) Presentations; Hilo, HI. 2010.

Villarín, M. The Role of Caspase-3-mediated Cleavage of PKD1 in Pancreatic Cancer. Oral Presentation presented at: Mayo Clinic Summer Undergraduate Research Fellow Presentations; Jacksonville, FL., 2009.

Pregnancy Outcomes with Smoking Cessation in Women with Other Substance Use Disorders

Mark R. Villarín, M.D.; Tricia E. Wright, M.D., M.S., FACOG, FASAM

Objective: To evaluate birth outcomes among residents of a residential rehabilitation program who obtained prenatal care prior to a SmokeFree policy compared to the outcomes of residents who obtained prenatal care after institution of the policy.

Design: A retrospective cohort study.

Materials and Methods: We reviewed prenatal and delivery records of pregnant residents of Women's Way, a residential rehabilitation program in Honolulu, HI from April 2007 to June 2016. The exposure was the implementation of a SmokeFree policy that did not permit residents to smoke cigarettes during treatment after November 1, 2011. Our primary outcome was neonatal birth weight. Our secondary outcomes were gestational age at delivery, neonatal head circumference, and neonatal length. At least thirty-six infants in each group were required to detect a 250-g birth weight difference using a power of 80% and two-tailed α of 0.05.

Results: Prior to the implementation of SmokeFree, 40/43 (93%) women smoked cigarettes during pregnancy and the mean number of cigarettes per day was 9. This decreased to 7 by the time of delivery. After implementation of the program, 40/43 (93%) of women had stopped smoking during treatment (3 left the program and relapsed to smoking). Of the women who relapsed to smoking, the number of cigarettes they were smoking at the time of delivery decreased from 11/day to 1/day. There was no significant difference in mean birth weight between the two groups, however there was a trend towards increased mean birth weight in the SmokeFree group (3403 g in the SmokeFree group vs. 3205 g in the group prior to SmokeFree, $p=0.1$). There was a significant increase in head circumference from 33.6 cm to 34.9 cm ($p=0.02$). We did not find a difference in other birth outcomes, although the study was not powered to find those differences. Six-month relapse rates to smoking after leaving the program were 52% in the SmokeFree group. In addition, the clinical director of the program tells of the increased health of the infants and children in the program. "Prior to the program, all but two of the kids were on nebulizers for asthma; after the program, only two kids have needed nebulizers."

Conclusions: Implementation of a SmokeFree program to a residential rehabilitation program for pregnant and parenting women is associated with larger neonatal head circumferences. In addition, 48% of women remained smoke free after graduation from the program, potentially improving long-term health outcomes for the women and their families.

Support: None

Acknowledgements: Jacqueline Tellei

Charlie Kiat Meng Wang, M.D.

University of Hawai'i John A. Burns School of Medicine, Honolulu, Hawai'i
Ob-Gyn Residency Program Honors/Awards

* 2016: *Second-Year Resident Excellence in Teaching Award of Residents*

University of California, Davis, School of Medicine, Davis, California
Medical School Honors/Awards:

* 2013: *Health Resources and Services Administration Scholarship*

B.S. in Biological Sciences at Stanford University Stanford, CA
Honors/Awards:

* 2008: *American Pain Society Young Investigator Travel Award*

Place of Birth: Long Beach, California

Hobbies & Interests: Basketball, singing, acting, performing, music, humanism, existentialism

Medical Interests: Forceps deliveries, residency education, simulation

Future Plans upon Graduation: Academic Generalist

Research Experience: Clinical Research Assistant, at Stanford Systems Neuroscience and Pain Lab Stanford, CA, under the direction of Sean Mackey, MD, Ph.D. Coordinated new clinical research study investigating neurotoxin-based therapies for painful scar neuromas. June 2008 - July 2010.

Undergraduate Research Assistant, at Stanford Systems Neuroscience and Pain Lab Stanford, CA, under the direction of Sean Mackey, MD, Ph.D. Enrolled orthopedic, thoracic, and breast surgery patients at Stanford Hospital and Clinics in a clinical research study evaluating risk factors behind prolonged pain duration and opioid usage. March 2007 - June 2008.

Publications: Wang, CK., Hah, JM, Carroll, I. Factors contributing to pain chronicity. *Current Pain and Headache Reports*. 2009 Feb; 13(1): 7-11. Cited in PubMed; PMID: 19126364. Pub Status: Published.

Wang CK, Gowda A, Mackey S, Barad M, Carroll I. Serratus muscle stimulation effectively treats notalgia paresthetica caused by long thoracic nerve dysfunction: a case series. *Journal of Brachia! Plexus and Peripheral Nerve Injury*. 2009 Sep; 4(17): 1-6. Cited in PubMed; PMID: 19772656. Pub Status: Published.

Carroll I, Barelka P, Wang CK, et al. "A pilot cohort study of the determinants of longitudinal opioid use after surgery." *Anesth Analg*. 2012 115:694-702. Pub Status: Published.

Carroll I, Hah J, Barelka P, Wang CK, et al. "Pain Duration and Resolution following Surgery: An Inception Cohort Study". *Pain Medicine*. 2015; 16:2386-2396. Pub Status: Published.

Abstract Presentations: Wang CK, Hah J, Mackey S, Carroll I. *Quantitative Sensory Abnormalities in Post-Surgical Cutaneous Nerve Injuries*. American Pain Society (APS) 29th Annual Meeting, Baltimore, MD, May 5-8, 2010.

Wang CK, Mull D, Gowda A, Mackey S, Carroll I. *Treatment of Notalgia Paresthetica with Direct Electrical Stimulation of Serratus Anterior Muscle*. American Pain Society (APS) 28th Annual Meeting, San Diego, CA, May 7-9, 2009.



Utility of Routine Collection of Chlamydia and Gonorrhea in Antepartum Patients

Charlie K. Wang, M.D.; Hyeong Jun Ahn, Ph.D.; Autumn Broady, M.D., M.P.H.; Bliss Kaneshiro, M.D., M.P.H.

Objective: To explore the rates Chlamydia trachomatis (CT) and Neisseria gonorrhea (GC) in women admitted for antepartum preterm contractions, preterm labor (PTL), or preterm premature rupture of membranes (PPROM), and the impact on maternal and fetal morbidity.

Design: Retrospective cohort study

Materials and Methods: We identified patients using ICD-9 codes admitted to Kapi'olani Medical Center for Women & Children (KMCWC) between April 2009 and April 2015 for preterm contractions, PTL, or PPRM. Patients were included if they were between 20 and 37 weeks gestation at time of delivery. We collected maternal demographic and clinical information. Frequency of positive gonorrhea or chlamydia test was calculated in patients with a prior negative screen and a prior positive screen. To explore risk factors for positive CT and GC testing, we included every patient with a positive test either on primary screen or on admission. To determine if certain groups of patients could forego re-screening at the time of admission, patients were stratified by risk factors and CT and GC positivity rates were calculated for each group. To determine the impact of CT and GC on maternal and fetal morbidity, we collected information on APGAR scores, admission to NICU, and length of stay in NICU.

Results: Of the 2,656 deliveries reviewed, 474 met the inclusion criteria. 354 patients (74.7%) had a negative CT screen prior to admission, 85 had a positive CT test (17.9%) and 35 (7.3%) had not been previously screened for CT. Five patients (1.1%) had a positive GC test prior to admission, 426 (90.0%) had a negative test and 43 (9.1%) had not been screened prior to admission. Of the 354 patients with a prior negative CT test, 6 (1.7%) had a positive admission result. Of the 426 patients with a prior negative GC screen, 1 patient (0.2%) had a positive admission result. Besides a prior positive CT test prior to admission, maternal age was most closely associated with CT positivity. Among those < 25 years with a previous negative CT screen, 2.9% (4/140) were positive for CT on admission. Among those > 25 years with a previous negative CT screen, 0.9 % (2/140) were positive for CT on admission. A positive CT or GC result either prior to admission or at the time of admission was not significantly associated with gestational age at time of delivery, presence of clinical chorioamnionitis at delivery, admission to NICU, or length of stay in NICU ($p > 0.05$). No chlamydial or gonorrheal infections were documented in neonates.

Conclusions: Testing for GC and CT at admission among women admitted for preterm contractions, PTL, or PPRM with a previous negative CT test is not warranted given the low prevalence of CT and GC.

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

Ricardo Antonio Molero Bravo, M.D.

University of Central Florida College of Medicine, Orlando, Florida

Medical School Honors/Awards:

** 2013: Florida Department of Health Chairman's Recognition Award and Hearing the Ovarian Whisper (HOW) Medical Student Rotation Summer Fellowship Award*

M.S. Medical Sciences, University of South Florida, Tampa, Florida

B.S. in Biomedical Sciences, University of South Florida, Tampa, Florida

Undergraduate Honors/Awards:

** 2006: Outstanding Poster Presentation University of South Florida Health Research Day*



Place of Birth: Barquisimeto, Venezuela

Language Fluency other than English: Spanish

Hobbies & Interests: Soccer, running, rugby, Brazilian Jiu Jitsu, tasting and trying new and different types of foods, Latin dancing

Medical Interests: Addiction Medicine

Future Plans upon Graduation: Work

Research Experience: Research Assistant-Under the direction of Robert Holloway, MD and the Gynecology Oncology team at Florida Hospital developing a retrospective project on the detection of sentinel lymph nodes with the use of /CG green dye and the Firefly camera on the daVinci robot. August 2011-May 2012.

Publication: Holloway RW, **Molero Bravo RA**, Rakowski JA, James JA, Jeppson CN, Ingersoll SB, Ahmad S. Detection of sentinel lymph nodes in patients with endometrial cancer undergoing robotic-assisted staging: A comparison of colorimetric and fluorescence imaging. *Gynecologic Oncology*.2012 Jul; 126(1): 25-29.

Abstract Presentations: **Molero Bravo RA**, Mclemore PG, Towner D. The Zika virus in Hawai'i. Poster presented at ACOG Districts VIII & IX Annual Meeting September 22 - 24, 2016, Waikoloa, HI.

Molero Bravo, R.A., Mishtal, J., McIntyre, M. Acculturation effects on the use of dual method contraception by Latina women in a college age population. Poster presented at: UCF College of Medicine Focused Individualized Research Project Conference; Orlando, FL. 2012.

McLean, M.P., **Bravo, R.**, Kuzmenok, O., Zhang, X., Merkler, K.A., Liu, Q. Prostaglandin F2alpha suppresses cholesterol uptake, transport, and processing via induction of Yin Yang 1 protein and recruitment of histone deacetylase in the corpus luteum. Poster presented at: 55th Annual Meeting SGI "Science in the Service of Women's Health"; San Diego, CA., 2008.

McLean, M.P., Kuzmenok, O., Zhang, X., **Bravo, R.**, Szekeres, C. Prostaglandin F2alpha via Yin Yang-1 suppresses steroidogenic acute regulatory protein intracellular cholesterol transport while maintaining scavenger receptor class B type I cell surface expression in luteal cells. Poster presented at: Society for the Study of Reproduction 41st Annual Meeting; Kailua-Kona, HI., May 27-30, 2008.

Molero Bravo, R., Moor, A.N., McLean, M.P. Positive co-regulation of the high density lipoprotein receptor by cAMP and estrogen in the Y1 mouse adrenal cell line. Poster presented at: Annual Biomedical Research Conference for Minority Students; Austin, TX., November 7-10, 2007.

Discharge Analgesics After Vaginal or Cesarean Section Delivery

Ricardo A. Molero Bravo, M.D.; Tricia Wright, M.D., M.S., FACOG, FASAM

Background: The first exposure to opioids for many women is after delivery. We seek to evaluate the rates of opioid prescriptions written at the time of discharge after delivery at Kap‘iolani Medical Center for Women & Children (KMCWC) for the year 2016, and how these rates changed after new opioid prescribing guidelines were distributed by the CDC in March 2016.

Design: Retrospective cohort study using Epic data

Methods: We conducted a review of all deliveries at KMCWC during the months of January and September for the year 2016. Deliveries in which the baby was admitted to the NICU were excluded. Both cesarean deliveries and vaginal deliveries were assessed and the quantity of prescribed opioids at the time of discharge. Continuous data was examined using student t test.

Results: There were a total of 907 deliveries that met inclusion criteria, 456 during the month of January and 451 during the month of September. There were 104 (22.8%) cesarean sections during the month of January and 352 (77.2%) vaginal deliveries. In September, there were 90 (20.0%) cesarean sections and 361 (80%) vaginal deliveries. Overall opioid prescribing fell from 45% to 37% ($p=0.0062$) from the month of January compared to September. The mean number of prescribed pills was significantly lower for both cesarean sections (30.5 vs. 28.6, $p=0.0049$) and vaginal deliveries (8.4 vs. 5.6, $p=0.0012$). The proportion of vaginal deliveries for which opioids were prescribed fell from 29% in January to 22% in September.

Conclusion: The numbers of opioids prescribed decreased from January compared to September 2016, showing that behavioral change can occur in the teaching hospital setting. Even though this data is reassuring, more work needs to be done to assure that we as providers help alleviate the opioid epidemic.

Support: None

Acknowledgements: Charles Schauburger, M.D. for study concept, Andrea Siu, M.P.H., R.A.C.

Nicole B. Kurata, M.D.

University of Hawai'i, John A. Burns School of Medicine, Honolulu, Hawai'i

B.S. in Chemistry, Pacific University Forest Grove, Oregon

Undergraduate Honors/Awards:

- * Graduated Summa Cum Laude, Dr. Hans and Clara Zimmerman Foundation Health Scholarship, George and Lucille Cushnie Scholarship, John M. Ross Foundation Scholarship
- * Cora Aguda Manayan Fund, Dean's Academic Achievement Award, Dean's List, Honors Scholarship, J. Herman and Jean Swartz Scholar in Chemistry, Boxer Experience Award, Marion Maccarre/I Scott Scholarship

Hobbies & Interest: Yoga, resistance training, stand-up paddle boarding

Place of Birth: Hilo, Hawai'i

Medical Interests: Postpartum hemorrhage, hypertensive disorders in pregnancy, contraception

Future Plans upon Graduation: Maternal Fetal Medicine fellowship

Research Experience: Research Assistant- University of Hawaii, John A. Burns School of Medicine, under the direction of Holly Bullock, M.D., M.P.H. and Jennifer Salcedo, M.D., M.P.H., M.P.A.A. The title of this research is "Pharmacy access to ulipristal in Hawaii: is a valid prescription enough?" I carried out data collection on the availability of ulipristal in pharmacies. 7/2013-

Principal Investigator-Pacific University Department of Chemistry Forest Grove, OR, under the direction of Dawn Bregel, Ph.D. This research project was my senior capstone project. I proposed the study, designed, and carried out the data collection and analysis. My project was "Incorporating Chemical Demonstrations into Collaborative Group Activities." This research focused on the development of chemical demonstrations based on the concept Le Chatelier's principle. This chemical demonstration was incorporated into in-class group activities and was tested in actual chemistry courses in order to evaluate the effectiveness of the demonstrations. August 2009-May 2010.

Research Assistant-University of California Davis Dept. of Chemistry Davis, CA, under the direction of Gang-yu Liu, Ph.D. This was a 10-week National Science Foundation Research Experience for Undergraduates (NSF REU) partnership between Stanford University, IBM Almaden Research Center, University of California Davis, and University of California Berkeley. My research "Production and Characterization of Self-Assembled Polymer Nanostructures." I utilized copolymers to fabricate metallic nanostructures using procedures outlined in literature articles, which were then deposited on glass and silicon substrates. These were characterized by atomic force microscopy and scanning electron microscopy. Patterning metallic nanostructures on semiconductor surfaces such as silicon is significant because of its applications in photovoltaics, microelectronics, and biosensing devices. June 2009-August 2009.

Publication: Bullock H, Steele S, Kurata N, Tschann M, Elia J, Kaneshiro B, Salcedo J. Pharmacy access to ulipristal acetate in Hawaii: is a prescription enough? *Contraception*. 2015 Dec 12. PMID: 26689477.

Abstract Presentations: Kurata N, Schlueter R, Ueno M, Burlingame J. Rotational Thromboelastometry Use in Obstetric Hemorrhage: A Current Review. Accepted for poster presentation at: ACOG Annual Clinical and Scientific Meeting; 2017 May. San Diego, CA.

Bullock H, Steele S, Kurata N, Tschann M, Elia J, Kaneshiro B, Salcedo J. Access to ulipristal acetate in Hawaii: is a prescription enough? Poster presented at: North American Forum on Family Planning; Nov. 14, 2015. Chicago, IL.

Bullock H, Steele S, Kurata N, Tschann M, Elia J, Kaneshiro B, Salcedo J. "I need to look that up. I've never filled it before": information from pharmacy staff regarding ulipristal acetate. Poster presented at: North American Forum on Family Planning; Nov. 15, 2015 Chicago, IL.

Mangiboyat N, Bregel D. Incorporating Chemical Demonstrations into Collaborative Group Activities. Poster presented at: American Chemical Society National Meeting; March 21-25, 2010 San Francisco, CA.

Mangiboyat N, Lin WF, Liu GY. Production and Characterization of Self-Assembled Polymer Nanostructures. Poster presented at: Center on Polymer Interfaces and Macromolecular Assemblies (CPIMA) Forum; 2009 Aug. San Jose, CA.

Mangiboyat, N., Bregel, D. Incorporating Chemical Demonstrations into Collaborative Group Activities. Poster presented at: American Chemical Society National Meeting; March 21-25, 2010, San Francisco, CA.



Mangiboyat, N., Lin, W., Liu, G. Production and Characterization of Self-Assembled Polymer Nanostructures. Poster presented at: Center on Polymer Interfaces and Macromolecular Assemblies (CPIMA) Forum; March 26, 2009 San Jose, CA.

Mangiboyat, N., Bregel, D.. (2010). Incorporating Chemical Demonstrations into Collaborative Group Activities. Oral Presentation presented at: Pacific University Senior Capstone Project; Forest Grove, OR.

Prolonged Interpregnancy Interval: Essential Nullipara Again?

Nicole B. Kurata, M.D.; Keith Ogasawara, M.D.; Kathryn Pedula, M.S.; William Goh, M.D., M.S.

Objective: To investigate whether a prolonged interpregnancy interval (IPI) is associated with a longer second stage of labor.

Design: Retrospective cohort study

Methods: Of the 3,027 deliveries that occurred between January 1, 2012 and December 31, 2013 at Kaiser Permanente in Honolulu, Hawai'i, 442 of them were among women with a prolonged IPI. A computerized program was used to randomly select 442 nulliparous women and 442 multiparous women with an IPI between 18 and 59 months who delivered during the same time period as comparison groups. We excluded 588 women due to lack of information on the previous pregnancy, preterm delivery or intrauterine fetal demise in the index pregnancy, history of preterm delivery without a prior term delivery, Cesarean delivery in the current or previous pregnancies, multiple gestations, malpresentation, precipitous delivery, and minors under 18 years of age. Perinatal outcomes were compared between three groups: nulliparous women, multiparous women whose IPI was between 18 and 59 months, and multiparous women whose IPI was 60 months or greater ("prolonged IPI"). The primary outcome was the duration of the second stage of labor. In a sub-analysis of the two multiparous groups, we tested for a dose-response relationship between the length of the IPI (both categorically and continuously) with duration of second stage of labor. Univariate analyses and multiple linear regression were used to compare duration of the second stage between the groups while adjusting for other demographic and pregnancy characteristics.

Results: Of the 738 women in the primary analysis, the median length of second stage of labor was 76 minutes for nulliparous women, 15 minutes for multiparous women, and 18 minutes for women with a prolonged IPI ($p < 0.0001$). Pairwise comparisons revealed that the duration of second stage in the nulliparous group was significantly different from both the multiparous and the prolonged IPI groups, but it did not differ between the multiparous and prolonged IPI groups. Duration of second stage of labor was significantly related to the length of the IPI interval (median time 30 minutes for IPI >120 months, compared to median time of 15 and 16 minutes for IPI 18-60 months and 60-119 months, respectively; $p=0.0003$). These relationships remained after adjusting for other covariates, except for epidural anesthesia. The IPI interval was not a significant predictor of the duration of second stage in women without an epidural; however, in women who had epidurals, the duration of second stage differed significantly between all three IPI interval groups, and all pairwise comparisons of the duration of second stage were significantly different.

Conclusions: There was no significant difference in the second stage of labor in women with a prolonged IPI compared to normal multiparous women, while nulliparous women had a longer second stage duration compared to normal multiparous women and women with a prolonged IPI. Women with an IPI of 120 months or more had a significantly longer second stage of labor compared to those with a shorter IPI.

Support: None

Acknowledgements: Kaiser Permanente Hawai'i Permanente Medical Group

Jennifer Marie S. I. Beair, M.D.

University of Hawai'i John A. Burns School of Medicine, Honolulu, Hawai'i

Ob-Gyn Residency Program Honors/Awards:

- * 2016: 2nd Year Resident Excellence in Teaching Medical Students and 2nd Year Resident Excellence in Teaching Award of Residents

University of Hawai'i John A. Burns School of Medicine, Honolulu, Hawai'i

Medical School Honors/Awards:

- * 2013: Gold Humanism Honor Society, awarded to top 15% of class, Honors for Ob-Gyn MS3 Clerkship
- * 2011: JABSOM Merit Achievement (Service) Scholarship; served as Learning Resource Center Monitor
- * 2010: John A. Burns Foundation Scholarship, awarded to top-ranked first-year students



BA in Biology, Scripps College Claremont, California

Under graduate Honors/Awards:

- * Graduated Scripps College Cum Laude with Biology Honors

Language Fluency other than English: Japanese

Hobbies & Interests: Beaded and wire jewelry, long walks with my dog

Place of Birth: Washington D.C.

Medical Interests: Ultrasound

Future Plans upon Graduation: Generalist in Honolulu

Research Experience: Summer Research Fellowship at the HI /DeA Network of Biomedical Research Excellence Honolulu, HI, under the direction of Peter Bryant-Greenwood, M.D., M.B.A. Investigated the relationship between c-kit expression and malignancy in acral lentiginous melanoma (ALM), and based on findings, proposed to treat ALM with Gleevec. May 2007-August 2007.

Undergraduate Molecular Biology Researcher at Joint Science Department of the Claremont Colleges Claremont, CA, under the direction of Jennifer Armstrong, Ph.D. Genetics "Investigations of CHD1 Function in Transcription and Development of *Drosophila melanogaster*" (McDaniel et al., 178: 583-587). Characterized novel mutations in the chromatin remodeling factor, CHD1, in the model organism *Drosophila*. Goal of senior thesis project was to determine expression of the gene, both transcriptionally and translationally, in mutated *chd1* lines using techniques such as immunofluorescence microscopy, PCR, RT-PCR, Western blot, and DNA sequencing November 2003-May 2007.

Publications: Aldan T J, Morie M, Lee J, Withy K. Medical School Hotline: Student Perspectives on International/Rural Experiences in Medical Education. *Hawaii Medical Journal*. 2013 Jan; 72(1): 23-26.

McDaniel IE, Lee JM, Berger MS, Hanagami CK, Armstrong JA. Investigations of CHD1 Function in Transcription and Development of *Drosophila melanogaster*. *Genetics*. 2008 Jan; 178(1): 583-587.

Minaglia SM, Santiago TD, Lee JM, Kagihara J, Ruel M, Oyama IA. [Abstract] Combined spinal and general anesthesia reduces intra- and postoperative opioid requirements in patients undergoing robotic-assisted laparoscopic sacrocolpopexy. *Female Pelvic Medicine & Reconstructive Surgery*. 2012 Sep; 18(5S): S48-S206.

Minaglia SM, Santiago TD, Lee JM, Kagihara J, Ruel M, Oyama IA. [Abstract] Changes in robotic-assisted laparoscopic sacrocolpopexy operative time: an analysis of technical factors . *Female Pelvic Medicine & Reconstructive Surgery*. 2012 Sep; 18(5S): S48-S206.

Abstract Presentations: Minaglia SM, Santiago TD, Lee JM, Kagihara J, Ruel M, Oyama IA. Combined spinal and general anesthesia reduces intra- and postoperative opioid requirements in patients undergoing robotic-assisted laparoscopic sacrocolpopexy. Poster presented at: The 33rd Annual Scientific Meeting of the American Urogynecologic Society; Chicago, IL. October 3-6, 2012.

Minaglia SM, Santiago TD, Lee JM, Kagihara J, Ruel M, Oyama IA. Changes in robotic-assisted /aparoscopic sacrocolpopexy operative time: an analysis of technical factors. Poster presented at: The 33rd Annual Scientific Meeting of the American Urogynecologic Society; Chicago, IL. October 3-6, 2012.

Abnormal Placental Cord Insertion and the Association with Fetal Growth Restriction

Jennifer M. S. I. Beair, M.D.; Autumn Broady, M.D., M.P.H.; Dena Towner, M.D.

Objective: To determine whether ultrasound findings of an abnormal cord insertion, particularly velamentous and marginal insertions, are associated with an increased rate of small for gestational age (SGA) infants identified at delivery, and therefore warrant close follow up with serial antepartum ultrasounds.

Design: Retrospective cohort study

Methods: The study sample was comprised of singleton fetal anatomic surveys at 17 to 27 weeks performed at the Fetal Diagnostic Center from April 2010 to June 2015 identified in the AS-OBGYN image management system. Cases were those pregnancies with an abnormal placenta cord insertion and delivery at Kap‘iolani Medical Center for Women & Children (KMCWC) . Controls were identified as the closest ultrasound assessment at the same gestational age with a normal cord insertion and delivery at KMCWC. We evaluated the rates of SGA, as well as other maternal and fetal comorbidities. One hundred patients in each arm provide this study a 95% power (with $\alpha = 0.05$) to detect a 3-fold increase in SGA with an abnormal placental cord insertion.

Results: The SGA rate was 18 of 120 (15%) in cases of marginal cord insertion versus 14 of 120 (11.7%) in the controls ($p > 0.05$). For the velamentous cord insertions, there were no SGA infants in either group (NS but underpowered). There was no difference in preterm birth or NICU admissions ($p > 0.05$, for both marginal and velamentous). However, for marginal cord insertions, there was an increased rate of pregnancy-related hypertensive disease (both gestational hypertension and preeclampsia) ($p = 0.045$), as well as an increased rate of diabetes, including both pre-gestational and gestational ($p = 0.049$).

Conclusion: Abnormal cord insertions are not associated with an increased risk of SGA with marginal cord insertions, and therefore may not require serial antepartum ultrasounds for the purpose of identifying fetal growth restriction.

Support: None

Acknowledgements: N/A

Kelly Yamasato, M.D.

University of Hawai'i John A Burns School of Medicine, Honolulu, Hawai'i
Maternal-Fetal Medicine Fellowship Honor/Award:

* 2014: Medical Student Teaching Award for Fellows

University of Hawai'i John A Burns School of Medicine, Honolulu, Hawai'i
Ob-Gyn Residency Program Honors/Awards:

* 2009: Excellence in Medical Student Teaching Award and Alpha Omega Alpha Honor Medical Society

* 2008: Third Year Outstanding Resident for Excellence in Medical Student Teaching

* 2007: Bayer PGY2 OB/Gyn Teaching Resident Award

* 2006: First Year Outstanding Resident for Excellence in Medical Student Teaching



University of Hawai'i John A Burns School of Medicine, Honolulu, Hawai'i
Medical School Honor/Award:

* 2005: Colin C McCorriston Award

Magna Cum Laude, A.B. in Ecology and Evolutionary Biology, Princeton University, Princeton, New Jersey

Publications: Yamasato K, Yoshino K, Chang AL, Caughey AB, Tsai PJ. Cesarean delivery complications in women with morbid obesity. *J Matern Fetal Neonatal Med.* Accepted for publication 2/2016.

Yamasato, K, Bartholomew, M, Durbin, M, Kimata, C, Kaneshiro, B. Induction rates and delivery outcomes after a policy limiting elective inductions. *Matern Child Health J.* 2015. 19:1115-20.

Yamasato K, Kaneshiro B, Salcedo J. Neuraxial blockade for external cephalic version: a cost analysis. *J Obstet Gynaecol Res.* 2015. 41:1023-31.

Yamasato, K., Burlingame, J., Kaneshiro, B. Hemodynamic effects of nifedipine tocolysis. *J Obstet Gynaecol Res* 2015. 41:17-22.

Yamasato K, Burlingame J. Diverse presentations of a febrile illness secondary to Salmonella typhi in pregnancy: Two case reports. *J Reprod Med.* Accepted for publication 4/2015.

Yamasato, K., Kaneshiro, B., Oyama, IA. Intraabdominal Pressure with Pelvic Floor Dysfunction: Do Postoperative Restrictions Make Sense?. *J Reprod Med.* 2014. 59:409-13.

Yamasato, K., Casey, D., Kaneshiro, B., Hiraoka, M. The Impact of Robotic Surgery on Hysterectomy Trends: Implications for Resident Education. *J Minim Invasive Gynecol,* 2014. 21:399-405.

Yamasato, K., Kaneshiro, B., Oyama IA. A simulation comparing the cost effectiveness of adult incontinence products. *J Wound Ostomy Continence Nurs.* 2014. 41:467-72.

Mau M, Yamasato K, Yamamoto L. Normal Oxygen Saturation Values In Pediatric Patients. *Hawaii Medical Journal* 2005. 64:42.

Yamasato, K. "Necrotizing Enterocolitis." In: L. Yamamoto, A. Inaba et al., ed., Case Based Pediatrics for Residents and Medical Students. Bloomington: Authorhouse, 2003.

Abstract Presentations: Yamasato K, Kimata C, Huegel B, Durbin M, Ashton M, Burlingame JM. Episiotomy: Who does them and does it help? Poster presentation at SMFM 2015 and John A Burns School of Medicine Biomedical Sciences Symposium 2015.

Loichinger MH, Broady AJ, Yamasato K, Mills E, McLemore G, Towner D. Is inpatient admission necessary for gravid women on hemodialysis? Poster presentation at SMFM 2015 and John A Burns School of Medicine Biomedical Sciences Symposium 2015. Presented by MH Loichinger.

Yamasato K, Yoshino K, Chang A, Tsai PJ Stacy. Cesarean delivery complications in women with morbid obesity. Poster presentation at Pacific Coast Obstetric and Gynecologic Society Annual Meeting 2015.

Kuwahara M, Yamasato K, Tschann M, Kaneshiro B. Interpregnancy interval and subsequent pregnancy outcome after dilation and evacuation. Poster presentation at American Society for Reproductive Medicine Annual Meeting 2015. Presented by M. Kuwahara.

Lee M, **Yamasato K**, “Does Formal Training in Smoking Cessation Counseling Affect Resident Physician Practice Patterns Toward Tobacco Reduction?” Poster presentation at the Pediatric Academic Societies’ Annual Meeting, May 2003 and Poster presentation at the John A. Burns School of Medicine Biomedical Sciences Symposium, November 2002.

Lee M, **Yamasato K**, Chang J, Ngai J, Hishinuma E, Tam E. Can Smoking Cessation Counseling Training During Residency Result in Long-Term Changes in Physician Behavior Toward Tobacco Reduction? Oral presentation at the Pediatric Academic Societies’ Annual Meeting, May 2005. Presented by M. Lee, MD.

Yamasato, K., Casey, D., Hiraoka, M., Kaneshiro, B. The impact of surgery on gynecologic surgical trends in Hawaii. Poster presentation at 2013 CREOG and APGO annual meeting.

Human Relaxins (RLNH1, RLNH2), their Receptor (RXFP1), and Fetoplacental Growth

Kelly Yamasato, M.D.; Pai-Jong Stacy Tsai, M.D., M.P.H.; James Davis; Sandra Y. Yamamoto; Gillian D. Bryant-Greenwood, Ph.D.

Background: Relaxin, a systemic and placental hormone, has potential roles in fetoplacental growth. Human placenta expresses two RLN genes, RLNH1 and RLNH2. Maternal obesity is common and is associated with abnormal fetal growth.

Objective: To relate systemic and cord blood RLNH2, placental RLNs and their receptor (RXFP1) with fetoplacental growth in context of maternal body mass index, and associations with insulin-like growth factor 2 (IGF2) and vascular endothelial growth factor A (VEGFA) in the same placentas.

Methods: Systemic, cord blood and placental samples were collected prior to term labor, divided by prepregnancy body mass index: underweight/normal (N=25) and overweight/obese (N=44). Blood RLNH2 was measured by ELISA, placental RLNH2, RLNH1, RXFP1, IGF2 and VEGFA by quantitative immunohistochemistry and mRNAs by quantitative reverse transcription PCR.

Results: Birthweight increased with systemic RLNH2 only in underweight/normal women (P=0.036). Syncytiotrophoblast RLNH2 was increased in overweight/obese patients (P=0.017) and was associated with placental weight in all subjects (P=0.038). RLNH1 had no associations with birthweight or placental weight, but was associated with increased trophoblast and endothelial IGF2 and VEGFA, due to female fetal sex.

Conclusion: Systemic RLNH2 may be involved in birthweight regulation in underweight/normal women, while placental RLNH2 in all subjects may be involved in placental weight. Only RLNH1 was associated with placental IGF2 and VEGFA for female fetal sex. These results suggest that both systemic and placental RLNs may be associated with fetoplacental growth.

Support: This study was supported by the University of Hawai‘i, John A Burns School of Medicine, Department of Obstetrics, Gynecology, and Women’s Health and Partnerships for Cardiometabolic Disparities in Native and Pacific peoples – Research Core (MD000173-13). Statistical analyses were supported in part by grants from the National Institute on Minority Health and Health Disparities, United States (U54MD007584); and the National Institute of General Medical Sciences (1U54GM104944-01A1, P20GM103466).

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Shandhini Raidoo, M.D.

University Hospitals Case Medical Center, Cleveland, Ohio

Honors/Awards:

- * 2015: Cleveland Ob/Gyn Society Research Society, First Place Resident Presentation Departmental Resident Research Day, Second Place, Case Western Reserve University LGBT Symposium: Best Humanities Presentation
- * 2012: ACOG Junior Fellow Initiative Toolkit, First Place

M.D. University of Iowa Carver College of Medicine, Iowa City, Iowa

B.S. Chemistry and Zoology, University of Oklahoma, Norman, Oklahoma

Hobbies & Interests: Reading, running

Place of Birth: Durban, South Africa

Medical Interests: Family planning, adolescent reproductive health education, contraception and abortion access

Research Experience:

Dual Use and Long-Acting Reversible Contraception among Adolescents and Young People

Supervisor: Reni Soon, MD, MPH

University of Hawaii

Qualitative research study about the facilitators and barriers to dual use in adolescents and young people who use long-acting reversible contraceptive methods. July 2015-present.

Predicting Discharge Disposition Following Ovarian Cancer Surgery

Supervisor: Steven Waggoner, MD

Case Western Reserve University

A study of the preoperative characteristics of patients undergoing surgery for ovarian cancer and whether certain preoperative conditions or characteristics may be predictive of non-home discharge. June 2013-May 2015.

Publications: **Raidoo S**, Kaneshiro B. Providing Contraception to Adolescents. *Obstet Gynecol Clin North Am.* 2015 Dec;42(4):631-45.

Singh S, **Raidoo S**, Kuo K, Resnick K. Wandering Spleen. A Case of Spontaneous Hemoperitoneum in an HIV-positive Patient with Recurrent Tuboovarian Abscess. *J Reprod Med.* 2015 Jul-Aug;60(7-8):359-61.

Raidoo S, Singh S, Redline R, Debernardo R. Cyberknife radiotherapy and anastrozole for the treatment of advanced progressive low-grade papillary serous ovarian carcinoma: a case report. *Gynecol Oncol Case Rep.* 2013 Sep 21;6:42-4.

Kuo K, Zhu TY, **Raidoo S**, Zhao LX, Sammarco A, Ashby K. Partnering with public schools: a resident-driven reproductive health education initiative. *J Pediatr Adolesc Gynecol.* 2014 Feb;27(1):20-4.

Singh S, **Raidoo S**, Pettigrew G, Debernardo R. Management of early stage, high-risk endometrial carcinoma: preoperative and surgical considerations. *Obstet Gynecol Int.* 2013;2013:757249.



Dual Use and Long-Acting Reversible Contraception among Adolescents and Young People

Shandhini Raidoo, M.D.; Mary Tschann, M.P.H., Ph.D.; Jennifer Elia, Dr.P.H.; Reni Soon, M.D., M.P.H.

Background: Use of long-acting reversible contraceptive (LARC) methods is increasing among adolescents and young women. While LARC methods are effective at preventing pregnancy, they do not protect against sexually transmitted infections (STIs), which disproportionately affect adolescents and young women. Dual use, the use of condoms in addition to a non-barrier contraceptive method, provides protection against both pregnancy and STIs but is infrequently used among young people. The Theory of Planned Behavior provides a framework for understanding health behavior by exploring attitudes, subjective norms, and self-efficacy. An enhanced understanding of the factors that influence dual use is necessary to improve STI prevention efforts among adolescents and young people.

Objectives:

1. Identify predominant ideas surrounding condom use among adolescents and young LARC users
2. Compare factors that influence dual use between LARC users and users of short-acting reversible contraception (SARC) to determine the factors that are specific to LARC use
3. Describe the approach of young men towards dual use in the context of female partner's contraceptive use

Methods: This was a qualitative study based on the Theory of Planned Behavior to assess the influences on dual use in young LARC users. Semi-structured interviews were conducted with LARC users aged 14-25, SARC users aged 14-25, and men aged 14-30. Interviews were conducted until thematic saturation was reached. Interview transcripts were analyzed through the iterative process of content analysis.

Results: Interviews were conducted with 20 LARC users, 26 SARC users, and 13 men. Most participants used condoms primarily for pregnancy prevention rather than STI prevention. Immediate availability of condoms was a determinant of condom use in all three groups, while knowledge, access, and negotiation of condom use were not. Relationship context played an important role in dual use among all three groups; participants were less likely to use condoms in a long-term or monogamous relationship. LARC users reported dual use primarily with new partners or because they were extremely concerned about pregnancy prevention. SARC users reported similar reasons for dual use. Male participants commonly relied on their female partner's contraceptive method for pregnancy prevention. Participants in all three groups were able to identify STI risks and protective factors. Most participants perceived themselves to be at low risk for STI acquisition, although even those who identified themselves to be at risk did not consistently use condoms, even with new partners.

Conclusions: Adolescents and young people practice dual use for pregnancy prevention more so than STI prevention. Relationship factors and a discordance between STI risk and behavior are important themes that affect dual use in this population.

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Somsook Santibenchakul, MD, MPH

PhD student, Epidemiology Program, Department of Public Health Sciences, University of Hawai'i at Manoa, Honolulu, Hawai'i - August 2016 until present

East-West Center Graduate Degree Fellowship - August 2016 until present

Place of Birth: Thailand

Medical interests: Family planning & contraception, HPV infection, Cervical cancer prevention



Future Plans upon Graduation: To work as an OB-GYN and lecturer at Family Planning & Reproductive Health Unit, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

*Publications: Lersbuasi P, Santibenchakul S, Jaisamrarn U. Knowledge, attitude and practice (KAP) regarding emergency contraceptive pills (ECPs) among health care providers at King Chulalongkorn Memorial Hospital. *Thai Journal of Obstetrics and Gynaecology*. 2015;18:34-43.*

*Panyawaranan P, Santibenchakul S, Jaisamrarn U. Compliance of Different Contraceptive Methods in Thai Women. *Thai Journal Obstetrics and Gynaecology*. 2015;23(4):130-38.*

*Santibenchakul S, Jaisamrarn U. Acceptability, tolerability and satisfaction of the contraceptive vaginal ring (NuvaRing®) in Southeast Asian women. *Asian Biomed*. 2016;10(3):235-41. DOI: 10.5372/1905-7415.1003.485.*

*Saelim J, Santibenchakul S, Jaisamrarn U. Knowledge, Attitudes, and Practices of contraception among Thai Muslim women living in Bangkok and the Southernmost provinces of Thailand. *Asian Biomed*. 2016;10(4):351-59 DOI: <https://doi.org/10.5372/1905-7415.1004.498>.*

*Thanativakul K, Santibenchakul S, Jaisamrarn U. Video clips can be used as an adjunct counseling method for sexually active, adolescent mothers in resource-limited setting. *Asian Biomed*. 2015. (Article in press)*

Chumworathayi B, Eamratsameekool W, Santibenchakul S, Linasmita V, Limpaphayom KK. A Guide to Essential Practice: Comprehensive Cervical Cancer Control (Thai version). Bangkok: Ministry of Public Health, Thailand; 2015.

Abstract Presentations: Santibenchakul S, Tschann M, Carlson AD, Hurwitz E, Salcedo J. Long Acting Reversible Contraception (LARC) Uptake Among Racially Diverse Populations in Hawai'i. Oral presentation at: East-West Center: International graduate student conference, Honolulu, HI, February 17, 2017.

Saelim J, Santibenchakul S, Jaisamrarn U. Knowledge, Attitudes, and Practices of contraception among Thai Muslim women living in Bangkok and the Southernmost provinces of Thailand. Oral presentation at: East-West Center: International graduate student conference, Honolulu, HI, February 12, 2016.

Santibenchakul S, Jaisamrarn U. Pre and post abortion depressive symptoms in Thai women who underwent medical abortion Oral presentation at: 23rd Asian & Oceanic Congress of Obstetrics & Gynecology, Bangkok, Thailand, October 21, 2013.

Comprehensive Contraceptive Counseling and Uptake Among Adolescents and Young Women in a Hospital-based Ob-Gyn Clinic

Somsook Santibenchakul, M.D.; Mary Tschann, M.P.H., Ph.D.; Alyssa Dee P. Carlson, M.P.H.; Eric Hurwitz, D.C., Ph.D.; Jennifer Salcedo, M.D., M.P.H., M.P.P.

Background: Increasing access to and uptake of highly effective contraception is one important public health intervention for addressing the high unintended pregnancy rate. The American Congress of Obstetricians and Gynecologists (ACOG) encourages healthcare providers to consider LARC methods, which are the best reversible methods for preventing unintended pregnancy, a first-line option for all women, including adolescent patients. The ACOG also recommends that reproductive-aged women should be made aware of the existence of emergency contraception and that advanced provision of ECPs should be routinely offered to increase immediate access to ECPs.

Objective: To assess adherence to professional guidelines regarding comprehensive contraceptive counseling and provision in a hospital-based outpatient ob-gyn clinic.

Method: A retrospective chart review was conducted of all 723 visits of non-pregnant women aged 14-25 seen at the resident Ob-Gyn Clinic in the Kapiolani Medical Center for Women & Children in Honolulu, Hawai'i, during 2014. Logistic regression was used to determine demographic factors associated with long-acting reversible contraception (LARC) counseling and uptake and advanced prescription of emergency contraceptive pills (ECPs).

Results: Among patients who were not current LARC users, counseling about LARC was noted in 54.4% of charts, and 16.58% of charts had documentation of LARC uptake at that visit. Being a teenager and using condoms as a single method of contraception were independently positively associated with LARC counseling (OR=1.90; 95% CI: 1.21-2.99; OR=2.88; 95% CI: 1.38-6.00) and uptake (OR=2.26; 95% CI: 1.06-4.83; OR=6.04; 95% CI: 1.88-19.37). Among non-LARC users, prescription of ECPs was documented in 21.9% of charts. Teenagers were 5 times more likely than women 20 and over to receive counseling and advanced prescription for ECPs (OR=5.21; 95% CI: 2.86-9.50). Patients who used condoms as a single method of contraception were 4 times more likely than those who used DMPA to receive an ECP counseling and advanced prescription (OR=4.30; 95% CI: 1.56-11.81).

Conclusion: Although LARC uptake is higher than the national average in this population, only slightly more than half of eligible patients received counseling about LARC, and less than one-quarter of non-LARC using patients received ECP counseling and advanced prescription at the time of their visit.

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Patient-centered Non-pharmacologic Pain Management and Pain Scores During First Trimester Surgical Abortion: A Randomized Controlled Trial

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Background: Pre-operative anxiety is known to be associated with higher surgical pain scores during abortion. Non-pharmacologic pain management techniques could be effective at reducing anxiety, thereby reducing pain, however most studies evaluating the effectiveness of non-pharmacologic pain management techniques have shown no benefit. Offering patients the opportunity to participate in developing a pain management strategy, rather than assigning them to a single non-pharmacologic intervention, could be more effective at reducing anxiety than previously studied techniques.

Objective: We aimed to determine if a patient-centered approach to non-pharmacologic pain management would lower pain scores during a first-trimester surgical abortion. We hypothesized that engaging patients in the development of a personalized adjunctive pain-management strategy would reduce the impact of known mediators of pain such as anxiety, depression, and isolation.

Methods: We randomized women seeking a first-trimester aspiration abortion at the University of Hawai'i to standard care or to standard care plus personalized non-pharmacologic pain management. The treatment group was offered a choice of non-pharmacologic techniques (ambient music, physical contact, guided breathing, etc) and encouraged to personalize their pain management strategy. Pain was measured on a 100mm VAS scale immediately post-procedure. The study was powered to detect a 20mm difference in pain scores.

Results: Seventy-four women participated in the trial. We found no difference in mean pain scores between those provided their choice of non-pharmacologic intervention [63.3 (SD28.5)] and the control group [60.6 (28.8)]. We noted no differences in procedure time, complications, provider-perceived case difficulty or patient satisfaction with pain management between groups. The most common intervention selected by treatment group patients was ambient music (59%). Forty-one percent (15/37) of participants chose to have multiple interventions during the procedure.

Conclusions: Allowing patients to create a tailored non-pharmacologic pain management strategy did not decrease the pain experienced with first trimester surgical abortion. Procedure time or difficulty was also not affected by adding non-pharmacologic interventions. Providing women with these options could be a low-cost, low-risk mechanism for providing more personalized care.

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45. **Yamasato, K.**, Tsai, P. S., **Bartholomew, M.**, Durbin, M., Kimata, C., & **Kaneshiro, B.** 2016b. **Discrepancy Between Identification of Early-Term Elective Deliveries by Manual Chart Review and Data Vendor.** *Hawaii J Med Public Health*, 75(12): 367-372.
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Presentations, January 2016-May 2017

1. **Bartholomew, M.** Management of PPRM: Standard Guidelines. Panel: Elective Delivery at 34 weeks for PPRM. Presentation at: American Academy of Pediatrics District VIII Section on Neonatal-Perinatal Medicine 40th Annual Conference (Honolulu, HI). July 10, 2016.
2. Carlson, AD, **Tschann, M.**, Santibenchakul, S., Hurwitz, E., **Salcedo, J.** Frequency of recommendations for sexually transmitted infection testing among females aged 14-25 in a hospital-based outpatient OB/GYN clinic. Poster Presentation at: Society of Family Planning (Research, Education, and Leadership) North American Forum on Family Planning (Denver, CO). November 5-7, 2016.
3. Chinn K., **Huang TTF.** Morphokinetics of Blastocysts in the Mouse is similar to Human Embryos: An Embryoscope Study. Poster Presentation at: 64th Pacific Coast Reproductive Medicine Society Meeting (Palm Springs, CA). March 9-13, 2016.
4. **Fong, W.** Teaching and Evaluating Professionalism. Oral Presentation at: 1st Annual Health Professions Education Conference (JABSOM-Honolulu, HI). February, 27, 2016.
5. **Elia J., Soon R.**, McKenzie P., Hanashiro S., Kanana L., Huang, K., Hayashi, C. Evaluating Reproductive Health Services in Primary Care Settings at Waianae Coast Comprehensive Health Center: A Needs Assessment. Poster Presentation at: He Huliau-The International Conference of Indigenous Health (Honolulu, HI). October 13-14, 2016.
6. **Harris, S., Saito-Tom, L.**, Ahn HJ, **Kaneshiro, B.** Levonorgestral Intrauterine Device Expulsion in Patients with Abnormal Uterine Bleeding. Poster Presentation at: Society of Family Planning (Research, Education, and Leadership) North American Forum on Family Planning (Denver, CO). November 5-7, 2016.
7. **Harvey S.**, Takanishi D, Minami C, Cohen E, Inouye D, Praeger J and Yu M. Blood Volume Analysis Guided Management in Early Shock Resuscitation. Oral Snapshot Theatre Abstract Presentation at the Society of Critical Care Medicine Clinical Congress Meeting, Honolulu, HI. 22 January 2017.
8. **Hirai, C., Kumura, N., Salcedo, J., Hiraoka, M.** Perceptions regarding Pediatric and Adolescent Gynecology Training in Obstetrics & Gynecology Residency Programs. Poster Presentation at: CREOG & APGO Annual Meeting (New Orleans, LA). March 2-5, 2016.
9. **Huang, T., Kosasa, T., Kessel, B.**, Ahn, H. "Can Blastocyst Expansion Morphokinetics be Useful in Selecting a Single Embryo?" (A Retrospective Study of Double Blastocyst Transfers in Donor Egg Blastocyst Recipients). Poster Presentation at: The 72nd American Society for Reproductive Medicine (ASRM) Scientific Congress & Expo (Salt Lake City, UT). October 15-19, 2016.
10. **Huang, TTF.** The Kitazato "Closed" Cryotop SC Vitrification Systems Performs Comparably to its Original "Open" System. A Study Using Unfertilized Human Eggs, Mouse Eggs, and Mouse Embryos. Poster Presentation at: Pacific Coast Reproductive Society at: Rancho Las Palmas Hotel, Rancho Mirage, California, March 9-13, 2016.
11. **Johns, J.**, Ahn, H., **Kim, R.**, Killeen, J. Factors Predictive of Myoinvasion in Cases of Complex Atypical Hyperplasia Diagnosed on Endometrial Biopsy or Curettage. Oral Presentation at: 2016 Districts VIII & IX Annual Meeting (Waikaloa, HI). September 22-24, 2016.
12. **McLemore, P.G., Towner, D.** Intrapartum Management of a Severe Case of Megacolon Leading to a Successful Vaginal Delivery. Poster Presentation at: 2016 Districts VIII & IX Annual Meeting (Waikaloa, HI). September 22-24, 2016.
13. **Molero Bravo, R., McLemore, P.G., Towner, D.** The Zika Virus in Hawai'i. Poster Presentation at: 2016 Districts VIII & IX Annual Meeting (Waikaloa, HI). September 22-24, 2016.

14. **Kurata N, Schlueter R**, Ueno M, **Burlingame J**. **Rotational Thromboelastometry Use in Obstetric Hemorrhage: A Current Review**. Accepted for poster presentation at the 2017 ACOG Annual Clinical and Scientific Meeting; May 6-7, 2017. San Diego, CA.
15. **Olson, H.**, DeZee, K., Buenconsejo-Lum, L. **ACGME Summation of Key Topics: CLER & Self Study Process; GME reform and transformation efforts; ACGME focus on resident well-being; RRC updates**. Oral Presentation at: TAMC and UH JABSOM GME Leadership/Faculty Development Seminar (Honolulu, HI). April 8, 2016.
16. **Olson, H.**, McCarthy J., Vincent, D. **“I meant to do it, but…” Helping Residents Overcome Chronic Procrastination**. Oral Presentation at: Innovations Workshop - Medical Education Conference (Los Angeles, CA). February 19, 2016.
17. **Olson, H.**, Nyquist, J. **Beyond the LIFE Curriculum: A curriculum for Education Leaders in Academic Health Centers**. Poster Presentation at: Innovations Workshop - Medical Education Conference (Los Angeles, CA). February 19, 2016.
18. **Salcedo, J.**, Caughey, A., Kuo, S. **Navigating the Evolving Landscape of Periviability**. Oral Presentation at: Annual District Meeting of the American Congress of Obstetricians and Gynecologists (Waikoloa, HI). September 22-24, 2016.
19. Santibenchakul, S., **Tschann, M.**, Carlson, A., Hurwitz, E. **Salcedo, J**. **Comprehensive contraceptive counseling and uptake among adolescents and young women in a hospital-based OB/GYN Clinic**. Poster Presentation at: Hawaii Pacific Health Conference (Honolulu, HI). October 12-14, 2016.
20. **Schlueter, R., Burlingame, J.**, Huang, C. **Successful quintuplet pregnancy consisting of monochorionic quadramniotic male quadruplets and single female after two-embryo transfer: case report and review of literature**. Oral Presentation at: Pacific Coast Obstetrical and Gynecological Society Annual Meeting 2016, (Sun Valley, ID). September 27, 2016-October 2, 2016.
21. **Schlueter, R., Burlingame, J.**, Nygueron, A., Kimata, C. **Identifying risk factors for maternal sepsis and associated outcomes**. Oral Presentation at: Pacific Coast Obstetrical and Gynecological Society Annual Meeting 2016, (Sun Valley, ID). September 27, 2016-October 2, 2016.
22. **Schlueter, R.**, Ahn, H, Choi S, **Burlingame, J**. **Correlation of maternal weight gain intervals and risk of stillbirth in term pregnancy**. Poster presentation at: 2017 Annual SMFM – The Pregnancy Meeting, Las Vegas, NV, January 23-28, 2017.
23. **Soon, R., Elia, J.**, McKenzie, P., Hanashiro, S., Kanana, L. **Evaluating Reproductive Health Services in Primary Care Settings at Waianae Coast Comprehensive Health Center: A Needs Assessment**. Oral Presentation at: The Clinical Transitional Research Infrastructure Network (CTR-IN) Annual Meeting (Las Vegas, NV). June 2016.
24. **Soon, R., Tschann, M., Salcedo, J., Kaneshiro, B.** **Paracervical Block to Decrease pain with Second Trimester Laminaria Insertion: A Randomized Controlled Trial**. Oral Presentation at: Society of Family Planning (Research, Education, and Leadership) North American Forum on Family Planning (Denver, CO). November 5-7, 2016.
25. **Terada, K.**, Wong, J., Vierkoetter K., Kagami, L., Shimizu, D. **Molecular Pathogenesis of Endometrial Intraepithelial Neoplasia: Precursor to Endometrial Carcinoma**. Poster Presentation at: The Annual Meeting of Society of Gynecologic Oncology (San Diego, CA). March 19-22, 2016.
26. **Terada, K., Lai, T.**, Shimizu, D., Vierkoetter, K., Ahn, H. **Ethnic Variations in ARID1a Expression in Clear Cell & Endometrioid Ovarian Carcinoma**. Poster Presentation at: The American Society of Clinical Oncology Annual Meeting (Chicago, IL). June 3-7, 2016.
27. **Wong, J**. **Tuberculosis Masquerading as Gynecologic Cancers**. Oral Presentation at: 33rd Women in Medicine 2016 presented by University of Vermont, Bloomingdale, IL, August 3-7, 2016.

Department of Ob-Gyn Poster Presentations Sampling



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FREQUENCY OF RECOMMENDATIONS FOR SEXUALLY TRANSMITTED INFECTION TESTING AMONG FEMALES AGED 14-25 IN A HOSPITAL-BASED OUTPATIENT OB/GYN CLINIC

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OBJECTIVES: (1) To quantify the percentage of patients with indications for gonorrhea and chlamydia (GC/CT) screening who were recommended for testing. (2) To quantify the percentage of patients with indications for human immunodeficiency virus (HIV) screening who were recommended for testing.

METHODS: A retrospective chart review of all visits by non-pregnant women aged 14-25 to the Kapiolani Women's Clinic in 2014 was conducted. Physician adherence to professional standards for GC/CT screening were quantified among patients with an indication for screening at the time of visit (no documentation of testing in prior 12 months or new risk factors since last screening). Adherence to professional standards for HIV screening among patients with an indication for screening (never having been tested or new risk since last testing) was also examined.

RESULTS: Of 723 eligible visits reviewed, 64.9% (469) of patients had an indication for GC/CT screening and 40.2% (291) had an indication for HIV screening. Among patients indicated for GC/CT screening, 45.4% (213) were recommend to receive screening, of which 86.0% (183) completed screening. Among patients with an indication for HIV screening 18.2% (53) received recommendations for testing, of which 38% (20) completed screening.

CONCLUSION: Less than half of patients who were indicated for GC/CT screening received a recommendation for testing, while just 18.2% of patients with an indication for HIV screening received a recommendation for testing from their physician, indicating poor adherence to national screening recommendations by physicians in this resident clinic setting.

Accepted as a Poster Presentation at: Society of Family Planning (Research, Education, and Leadership) North American Forum on Family Planning, November 5-7, 2016, Denver, CO.

MORPHOKINETICS OF BLASTOCYST EXPANSION IN THE MOUSE IS SIMILAR TO HUMAN EMBRYOS: AN EMBRYOSCOPE STUDY

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BACKGROUND: Identification of morphological features of embryos correlating with implantation is a current challenge. Time-lapse imaging offers a new tool for dynamic features of embryo development (1). Morphokinetic features of human blastocyst expansion (BE) have recently been described for embryos forming sustained pregnancies (2). An animal model would be useful to further understand BE to enable experimental manipulation.

OBJECTIVE: To morphokinetically describe blastocoel expansion (BE) in zona intact (ZI) and zona-free (ZF) mouse embryos using an Embryoscope and to compare it with human BE.

MATERIALS AND METHODS: Mouse embryos were cultured to the morula stage where the zona pellucida was removed in one group (ZF) before further culture. Sixteen (16) ZF embryos were monitored for up to 30 hours from the start of cavity formation. Thirty-two (32) zona-intact (ZI) embryos were monitored similarly. Hourly measurements of cross sectional area (CSA) were recorded in each embryo to measure BE. Hourly interval rates of change (IRC) were calculated to characterize rates of change during expansion.

RESULTS: BE was affected by the presence of the zona pellucida. In both ZI and ZF groups, BE accelerated over the first 15 hrs, with a greater rate in ZF (385.21 $\mu\text{m}^2/\text{hr}$) than ZI (271.17 $\mu\text{m}^2/\text{hr}$) embryos. At 15 hrs, ZF blastocysts were larger (8553.06 μm^2) than ZI embryos (7644.35 μm^2). IRC measurements revealed oscillations in both groups with an average periodicity of 2-3 hrs, identical to that seen in human embryos. Reversible cavity collapses were observed in embryos of both groups, also similar to human embryos. Average oscillatory amplitudes in ZF embryos were more constant and regular compared to ZI embryos, where amplitudes were variably dampened. By 30 hours, ZF embryos grew significantly larger than ZI ones (13026.00 μm^2 and 9108.50 μm^2 , respectively; $P=0.0003$). While embryos in both groups showed continued oscillations, embryos remaining zona-intact had more frequent and severe collapses and longer recovery times.

CONCLUSIONS: This is the first study both to characterize the effects of the zona pellucida on the morphokinetics BE and to compare mouse and human BE.

1. As in human embryos, BE involves oscillations with 2-3 hour periodicities and with spontaneous collapse/recovery events.
2. Oscillations with regular amplitudes are an inherent property of the trophoctoderm. The zona acts to variably dampen amplitudes in individual embryos.
3. The zona blunts the expansion rate and affects the frequency of cavity collapse.

SUPPORT: Department of Obstetrics and Gynecology, University of Hawaii John A. Burns School of Medicine, and the Pacific IVF Institute, Honolulu, Hawaii.

Accepted as a poster presentation at: 64TH Pacific Coast Reproductive Medicine Society Meeting, March 9-13, 2016, Palm Springs, CA.

EVALUATING REPRODUCTIVE HEALTH SERVICES IN PRIMARY CARE SETTINGS AT WAIANAEO COAST COMPREHENSIVE HEALTH CENTER: A NEEDS ASSESSMENT

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OBJECTIVES: Waianae Coast Comprehensive Health Center (WCCHC) serves a predominantly low-income, Native Hawaiian population disproportionately impacted by unintended pregnancy and sexually transmitted infections (STIs). Reproductive health case managers (RHCMs), non-clinicians trained in reproductive health topics, could expand access into primary care settings. This needs assessment aimed to: 1) assess the availability of reproductive health resources in Wai'anae; and 2) evaluate the utility and acceptability of the RHCM model among primary care providers (PCPs) and community members.

METHODS: We interviewed WCCHC PCPs about the RHCM model. We conducted focus groups (FGs) with Wai'anae teens (age 13-19) and adults (age 20+) about where teens get reproductive health information and services, and their thoughts about teens accessing reproductive health care in primary care settings. We used content analysis of transcripts to identify themes.

RESULTS: We interviewed 10 PCPs and held 2 teen FGs (n=11) and 3 adult FGs (n=12). PCPs support an RHCM model. It would overcome time constraints, and several feel uncomfortable providing reproductive health services themselves. Teens like confidential services and want to learn about reproductive health from trusted individuals. Adults feel that teens need more information about how to prevent pregnancy and STIs, and feel parents should primarily provide this. While adults acknowledge that confidentiality concerns can discourage teens from accessing services, they think parents would object if RHCMs saw teens without their knowledge.

CONCLUSION: Expanding reproductive health care information and services is recognized as a community need. We plan to develop and implement the RHCM model at WCCHC in collaboration with the community.

APPLICATION: Half of WCCHC's patient population is Native Hawaiian, who experience disparately high rates of unintended and teen pregnancy. Efforts to make reproductive health services more accessible and culturally relevant may help to alleviate these disparities and improve indigenous health, particularly among adolescents and young adults.

Accepted as poster presentation at the He Huliau-The International Conference of Indigenous Health, October 13-14, 2016, Honolulu, HI.

LEVONORGESTREL INTRAUTERINE DEVICE EXPLUSION IN PATIENTS WITH ABNORMAL UTERINE BLEEDING

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OBJECTIVES: This study aims to identify factors associated with levonorgestrel intrauterine device (LNG-IUD) expulsion in patients with abnormal uterine bleeding (AUB).

METHODS: Patients with LNG-IUD inserted for the management of AUB between January 2009 and December 2010 were identified. Demographic characteristics, timing of LNG-IUD insertion in relation to the menstrual cycle, uterine cavity length and presence of uterine pathology were evaluated.

The association between patient characteristics and the risk of expulsion were evaluated. A multivariable logistic regression model was created to estimate the likelihood of expulsion based on cavity length and timing of insertion.

RESULTS: Of the 179 patients, expulsion occurred in 39 patients (22%). Uterine cavity length (p=0.02), insertion during the first week of the menstrual cycle (p=0.01), and endometriosis (p=0.03) were associated with an increase in LNG-IUD expulsion. No expulsions occurred in the 17 patients who had IUDs placed in the operating room (p=0.01). Multivariable logistic regression revealed that for every one-centimeter increase in cavity length, there was a 57% increase in the odds of LNG-IUD expulsion [OR 1.57 (95% CI 1.08-2.30)]. LNG-IUD placement in the first week of the menstrual cycle had a 3.68 times higher odds of expulsion [OR 3.68 (95% CI 1.05-12.89)] compared to IUDs placed at other times of the menstrual cycle.

CONCLUSIONS: Rate of expulsion when the LNG-IUD was placed for AUB was higher than expected. Uterine and menstrual factors may play a role in the risk of expulsion following IUD placement for AUB and should be considered when counseling patients about this risk.

Accepted as a poster presentation at the North American Forum on Family Planning, November 5-7, 2016, Denver, CO.

CAN BLASTOCYST EXPANSION MORPHOKINETICS BE USEFUL IN SELECTING A SINGLE EMBRYO? A RETROSPECTIVE STUDY OF DOUBLE BLASTOCYST TRANSFERS IN DONOR EGG BLASTOCYST RECIPIENTS

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OBJECTIVE: The purpose of the study was to describe and to compare the morphokinetics of blastocyst expansion in double embryo transfers resulting in either sustained singleton or twin pregnancies.

DESIGN: A retrospective descriptive study designed to control for confounding factors of endometrial receptivity and/or embryo transfer difficulties.

MATERIALS AND METHODS: This study compared 64 blastocysts (32 patient pairs of blastocysts) having a 100% implantation rate (IR) with 52 blastocysts (26 patient pairs) having a 50% IR defined as having either two or one heartbeat at 7 weeks gestation. After ICSI, all embryos were cultured continuously in an Embryoscope until D5 transfer. Hourly cross sectional area (CSA) measurements were retrospectively measured over 12 hours beginning from the time of blastocysts formation (Tb). Embryo pairs were further stratified into "fast" or "slow" subgroups as follows: "100% IR fast", "100% IR slow", "50% IR fast", and "50% IR slow". Their expansion rates were compared at 4, 8, and 12 hours from Tb (Kenny et al., 2006).

RESULTS: Slope comparisons between the four groups over the 3 time intervals resulted in several patterns having potential clinical implications: 1) The rank order of slope values (from highest to lowest) was consistent at all 3 time intervals: "100% IR fast", "50% IR fast", "100% IR slow", and "50% IR slow". 2) Comparisons of the stratified "fast" and "slow" embryos within either the "100% IR" or the "50% IR" groups always showed significant expansion slope differences beginning at 6 hours ($P < 0.01$). 3) Comparisons between the "fast" and "slow" embryos from either the "100% IR" or the "50% IR" group showed a significant expansion slope difference between only the "100% IR fast" and "50% IR slow" ($P < 0.002$). 4) The expansion slope curve for the "50% IR slow" group was always outside of the range defined by the "100% fast" and "100% slow" groups; in contrast, that curve for the "50% IR fast" group was always inside of that range. These results were used to define a range of average expansion rates for implanting donor egg blastocysts from the 100% IR group (e.g. 822-1036 $\mu\text{m}^2/\text{hr}$ at 8 hours). The "fast" embryo expansion rates within the 50% IR group was always within this range (899 $\mu\text{m}^2/\text{hr}$) while the "slow" embryo rates in this 50% IR group were outside of that range (657 $\mu\text{m}^2/\text{hr}$).

CONCLUSIONS: These results first describe blastocyst expansion morphokinetics over the first 12 hours for egg donor blastocysts and compared rates in implantations that form one versus two sustained ongoing heartbeats. In pregnancies with a 50% implantation rate, embryos from the defined "slow" subgroup expanded at a rate slower than that of embryos from each of the other three groups. The results are consistent with using expansion rate and/or ranking within a cohort for single embryo selection in donor egg cases.

SUPPORT: UH Department of Obstetrics and Gynecology and an intramural grant U54MD007584 (to hjahn)

Accepted as a poster presentation at: 72nd Annual American Society for Reproductive Medicine (ASRM) Meeting, October 15-19, 2016, Salt Lake City, UT .

ROTATIONAL THROMBOELASTOMETRY USE IN OBSTETRIC HEMORRHAGE: A CURRENT REVIEW

Kurata N, Schlueter R, Ueno M, Burlingame J

INTRODUCTION: Obstetric hemorrhage is the leading cause of maternal mortality in all countries. Novel technology that accurately and rapidly predicts hematologic status has considerable value in patient care and safety. Rotational thromboelastometry, or ROTEM, is a point of care viscoelastic test which provides results within minutes, making this modality highly useful in acute obstetric care settings.

METHODS: We performed a database review of PubMed and Medline for all articles regarding the use of ROTEM in obstetric hemorrhage. The search words employed were "ROTEM", "rotational thromboelastometry", "obstetric", "hemorrhage", "pregnancy", "PPH" and "coagulation". A total of 9 articles were identified with the primary outcome. Case studies were excluded. A review of the remaining 5 articles is summarized in Table 1 as collective results with supported conclusions.

RESULTS: Rotational thromboelastometry has been used in critical care and trauma for many years. The articles report a considerable clinical utility of ROTEM in obstetric hemorrhage, but limited use in the United States. ROTEM is well correlated with conventional laboratory tests and is able to accurately and quickly assess coagulation disruption. The test is able to guide and modify transfusion choices in an acute obstetric setting. Because obstetric data is limited, further need for ROTEM protocols and procedure is necessary to guide physician practice.

CONCLUSIONS: ROTEM use is limited in pregnancy and education is needed among obstetric care providers. As a point of care test for rapid assessment of the coagulation profile, there is significant potential for more robust applications in obstetric hemorrhage.

Accepted as a poster presentation at: 2017 ACOG Annual Clinical and Scientific Meeting; May 6-7, 2017. San Diego, CA.

COMPREHENSIVE CONTRACEPTIVE COUNSELING AND UPTAKE AMONG ADOLESCENTS AND YOUNG WOMEN IN A HOSPITAL-BASED OB-GYN CLINIC

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PURPOSE: To assess adherence to professional guidelines regarding comprehensive contraceptive counseling and provision in a hospital-based outpatient ob-gyn clinic.

DESIGN: A retrospective chart review was conducted of all 726 visits of non-pregnant women aged 14-25 seen at the resident Ob-Gyn Clinic in the Kapiolani Medical Center for Women & Children in Honolulu, Hawai'i, during 2014. Logistic regression was used to determine demographic factors associated with long-acting reversible contraception (LARC) counseling and uptake and advanced prescription of emergency contraceptive pills (ECPs).

RESULTS: Among patients who were not current LARC users, counseling about LARC was noted in 54.4% of charts, and 16.58% of charts had documentation of LARC uptake at that visit. Being a teenager and using condoms as a single method of contraception were independently positively associated with LARC counseling (OR=1.90; 95% CI: 1.21-2.99; OR=2.88; 95% CI: 1.38-6.00) and uptake (OR=2.26; 95% CI: 1.06-4.83; OR=6.04; 95% CI: 1.88-19.37). Among non-LARC users, prescription of ECPs was documented in 21.9% of charts. Teenagers were 6 times more likely than women 20 and over to receive a prescription for ECPs (OR=6.90; 95% CI: 3.57-13.34). Patients who did not use contraception were 3 times more likely than those who used short-term hormonal contraception to receive an ECPs prescription (OR=3.03; 95% CI: 1.43-6.42). Although LARC uptake is higher than the national average in this population, only slightly more than half of eligible patients received counseling about LARC, and less than one-quarter of non-LARC using patients received an ECPs prescription at the time of their visit.

SIGNIFICANCE: There are very limited studies which address health care provider's adherence to the promotion of LARC as a first-line contraceptive among young and diverse population in Hawai'i and no studies that evaluate demographic factors associated with LARC counseling and uptake and advanced prescription of ECPs in this population.

Accepted as a poster presentation at: Hawaii Public Health Association Annual Meeting, October 12-14, 2016, Honolulu, HI.

Department of Ob-Gyn Oral Presentations Sampling

FACTORS PREDICTIVE OF MYOINVASION IN CASES OF COMPLEX ATYPICAL HYPERPLASIA DIAGNOSED ON ENDOMETRIAL BIOPSY OR CURETTAGE

Johns J, Ahn HJ, Kim R, Killeen J

INTRODUCTION: Complex Atypical Hyperplasia is a known precursor lesion for endometrial cancer. The objective of this study is to evaluate endometrial biopsy samples with the diagnosis of Complex Atypical Hyperplasia to determine if findings on these samples could help predict uterine cancer with myometrial invasion.

METHODS: The Hawaii Pacific Health pathology database was queried to identify all endometrial biopsies/curettage with the diagnosis of complex atypical hyperplasia from January 2007-January 2015. Patients who then underwent hysterectomy within 3 months of biopsy were included in the study. The biopsy samples were evaluated by a gynecologic pathologist and categorized based on the presence or absence of 4 variables: necrosis, marked atypia, co-existing non-atypia and Pax2 staining. Final hysterectomy pathology was reviewed for presence or absence of myometrial invasion. The control group included hysterectomy specimens with benign pathology or endometrial cancer without myoinvasion. Group comparisons between myoinvasion and control were made by Fisher's exact tests for categorical variables and two sample t test for continuous variables.

RESULTS: Of 137 hysterectomy specimens that met inclusion criteria, 69 (50.3%) had a final pathology diagnosis of endometrial cancer. Twenty-seven of the 69 (39.1%) specimens demonstrated myometrial invasion. For hysterectomies with myoinvasion, co-existing non-atypia was present on 18 (66.7%) biopsies compared to 104 (94.5%) in the control group. In our data set, the myoinvasion specimens were less likely to have co-existing non-atypia (P <.0001).

CONCLUSIONS: Our data is suggestive that evaluating biopsies for percentage of non-atypia could help predict endometrial cancer with myometrial invasion.

Accepted as an oral presentation at: ACOG District 8 Meeting, September 22-24, 2016, Waikoloa, HI.

SUCCESSFUL QUINTUPLET PREGNANCY CONSISTING OF MONOCHORIONIC QUADRAMNIOTIC MALE QUADRUPLETS AND SINGLE FEMALE AFTER TWO-EMBRYO TRANSFER: CASE REPORT AND REVIEW OF LITERATURE

Schlueter R, Burlingame J, Huang C

OBJECTIVE: The advent of assisted reproductive technology (ART) has transformed the platform of obstetric care amongst populations of women that have difficulty in natural conception. In recent years, however, there has been substantial debate about the risks and potential harms imposed with artificial reproduction. One important topic receiving more notable attention is monozygotic twinning (MZT). Because MZT is associated with poor pregnancy outcomes, specific attention has focused on ART protocol and procedures which could increase the risk. We present the first case of live born quintuplets consisting monochorionic male quadruplets and female sibling after two-embryo transfer and perform a literature review of monozygotic twinning in ART.

DESIGN AND CASE: We describe the case of 37 year old G1P1001 that presented to the fertility clinic where her previous child was conceived with ART. She underwent frozen embryo transfer cycle with assisted hatching of two day 5 blastocysts. She was diagnosed with quintuplets consisting of four males and one female; she declined selective reduction. The males were monochorionic and quadramniotic. She delivered 5 healthy infants at 28 weeks and 6 days. We performed a literature review in PubMed for monozygotic twinning and higher order multiple gestations with ART.

RESULTS: Currently there are no cases of successful ART quintuplets that consist of monochorionic identical quadruplets and co-sibling; it appears that this is the first case. The incidence of MZT in ART has been proposed by multiple studies to be possibly 2 to 12 times over that of spontaneous conception. MZT is associated with poor pregnancy outcomes like fetal growth restriction, unequal distribution of vascular supply, fetal anomalies, and preterm delivery. In addition, research has shown that day 5-6 blastocyst transfers confer a higher risk of MZT in comparison to day 2-3 transfers. Some studies have also shown that ICSI is associated with a lower rate of MZT while assisted hatching may increase risk. Younger maternal oocytes are thought to increase the risk of MZT. Interestingly enough, advanced maternal age has a positive impact on early mortality among quadruplets and quintuplets. We present the first apparent case in literature of successful ART quintuplets with monochorionic male quadruplets and female co-sibling where a number of risk factors appear for MZT.

CONCLUSION: Patients and physicians should be aware that specific elements of ART are positively associated with MZT. Several obstetric complications are associated with MZT and clinicians should be prepared to confront these challenging pregnancies.

Accepted as an oral presentation at: Pacific Coast Obstetrical and Gynecological Society Annual Meeting 2016, September 27, 2016-October 2, 2016, Sun Valley, ID.

IDENTIFYING RISK FACTORS FOR MATERNAL SEPSIS AND ASSOCIATED OUTCOMES

Schlueter R, Burlingame J, Nygueron A, Kimata C

OBJECTIVE: The aim of this study is to identify risk factors associated with maternal sepsis and to review demographic parameters as a means of quality improvement. Maternal sepsis continues to increase in developed nations reflecting a need for further investigation of causative risks.

STUDY DESIGN: The study is a retrospective cohort of patients with ICD-9 code linked for maternal sepsis from a university based women and children's hospital in an urban setting from January, 2010 to June, 2015. Comparative statistics were described against total deliveries. Demographic and clinical information were abstracted from both groups in order to derive statistical outcomes using SAS 9.3 System and odds ratio calculated at 95% confidence intervals.

RESULTS: A retrospective cohort study found 50 cases of maternal sepsis from January, 2010 to July, 2015 with 33,904 total deliveries with an incidence of 14.7 per 10,000 deliveries. Severe sepsis was identified in 12 women with an incidence of 3.5 per 10,000 while septic shock was found in 7 reflecting incidence of 2.0 per 10,000. Regarding sepsis the mean age of women with sepsis was 29.7 and without sepsis was 28.8 ($p=0.33$). In the sepsis population most women identified as Asian ($n=24$, 48%) with the second most common group being Native Hawaiian or Pacific Islander ($n=18$, 36%). Concerning maternal age there was no significant increase in odds ratio (OR) with increasing age (Table 1). Increasing gravity and parity were not associated with increased risk of sepsis. Maternal hypertensive disorder did not increase risk (OR=1.51, 95% CI 0.75-3.03). The OR was increased with statistical significance in black women (OR=7.52, 95% CI 1.25-45.16) and was also increased in maternal morbidities of anemia (OR=2.5, 95% CI 1.44-4.3) and diabetes (OR=8.86, 95%CI 4.14-18.95). OR was significant in cesarean mode of delivery (OR=3.73, 95%CI 2.13-6.53), with blood loss of 500-1000 cc (OR=3.5, 95%CI 1.85-6.98), blood loss >1000 cc (OR=22.88, 95%CI 8.39-62.4), increased admission to the ICU (OR=78.69, 95%CI 34.23-180.92) and length of stay >5 days (OR=21.63, 95%CI 12.38-37.80).

CONCLUSION: There are risk factors that are associated with increase in maternal sepsis such as diabetes, black race, and anemia. In addition, other potentially modifiable risks such as cesarean section and blood loss are important elements for physician intervention. Awareness of these morbidities may help to decrease the incidence of maternal sepsis.

Accepted as an oral presentation at: Pacific Coast Obstetrical and Gynecological Society Annual Meeting 2016, September 27, 2016-October 2, 2016, Sun Valley, ID.

PARACERVICAL BLOCK TO DECREASE PAIN WITH SECOND TRIMESTER LAMINARIA INSERTION: A RANDOMIZED CONTROLLED TRIAL

Soon R, Salcedo J, Tschann M, Kaneshiro B

OBJECTIVE: Many abortion providers administer a paracervical block prior to insertion of osmotic dilators. However, the effectiveness of a paracervical block in reducing pain with this procedure has not been evaluated.

METHODS: We randomized 41 women undergoing laminaria insertion prior to a second trimester abortion to receive a paracervical block with 18 ml 1% lidocaine and 2 ml sodium bicarbonate or a sham block. Women were between 14 and 23+6 weeks gestation. Women assessed their pain on a 100-mm visual analog scale (VAS) at baseline, after speculum insertion, after paracervical block or sham block, after laminaria insertion, and 15 minutes after the procedure. Women were also asked to rate their satisfaction with overall pain control and with the entire procedure on a 100-mm VAS. The primary outcome was pain immediately after insertion of laminaria.

RESULTS: Twenty women received a paracervical block and 21 received a sham block. Groups were similar in demographics, including parity, history of surgical abortion, and number of laminaria placed. The paracervical block significantly reduced pain after laminaria insertion (mean scores 23.7 vs 46.2, $p=0.013$). Women who received a paracervical block reported higher satisfaction with pain control over the entire procedure (82.5 vs 64.0, $p=0.058$), although the difference was not statistically significant. There was no difference between the groups in overall satisfaction with the procedure.

CONCLUSIONS: Paracervical block appears to be effective in reducing the pain associated with laminaria insertion prior to second trimester abortion, but may not impact satisfaction with the insertion procedure.

Accepted as an oral presentation at: North American Forum on Family Planning, November 5-7, 2016, Denver, CO.

Awarded "Outstanding Researcher Award".

EVALUATING REPRODUCTIVE HEALTH SERVICES IN PRIMARY CARE SETTINGS AT WAI'ANAЕ COAST COMPREHENSIVE HEALTH CENTER: A NEEDS ASSESSMENT

Soon R¹, Elia J¹, McKenzie P², Hanashiro S², Kanana L²

¹University of Hawaii Department of Obstetrics, Gynecology, & Women's Health; ²Waianae Coast Comprehensive Health Center

OBJECTIVE: Unintended pregnancy and sexually transmitted infections disproportionately impact young, minority, and socioeconomically disadvantaged groups. Reproductive health case managers (RHCMS), non-clinicians trained in reproductive health topics, could expand reproductive health access into primary care settings. This needs assessment aimed to: 1) assess the availability of reproductive health resources in Wai'anae; and 2) evaluate the utility and acceptability of RHCM model among primary care providers (PCPs) and community members.

SETTING: Waianae Coast Comprehensive Health Center (WCCHC) is owned and operated by the community it serves, a population that is over half Native Hawaiian. Disproportionately affected by poor socioeconomic and health outcomes, Native Hawaiians also have the highest rates of unintended and teen pregnancy in Hawai'i.

METHODS: We interviewed WCCHC PCPs to elicit opinions on having an RHCM in their clinic. We also conducted two focus groups with teens (age 13-19) and three focus groups with adults (age 20 and older) living in the Wai'anae community to discuss where teens get reproductive health information and services, and access to these resources. We discussed the benefits and disadvantages of teens accessing reproductive health care in primary care settings. All interviews and focus groups were audio-recorded and transcribed. Content analysis was used to identify themes.

RESULTS: We interviewed 10 PCPs: 4 physicians (2 family medicine, 1 pediatrics, 1 adult medicine), 6 nurse practitioners (2 family medicine, 1 pediatrics, 1 adult medicine, 2 women's health). There were 11 teen and 12 adult focus group participants. PCPs were supportive of an RHCM model. It would overcome time constraints that deter them from providing reproductive health care, and several felt uncomfortable in providing these services themselves. Two themes emerged from the teen focus groups. Teens like confidential services, as many do not want their parents aware of their sexual activity. They want to learn about reproductive health from trusted individuals like doctors, teachers, or parents. From the adult focus groups, two themes emerged. First, they felt that teens need more direction in how to prevent pregnancy and STIs. Second, parents want to be the main source of sex education for their teens. While adults acknowledge that confidentiality concerns can discourage teens from accessing reproductive health services, they thought parents would object if their teen received reproductive health care without their knowledge.

INTERPRETATION: Expanding reproductive health care information and services is recognized as a community need. Next steps are to develop and implement the RHCM model to provide confidential reproductive health care services in primary care settings. A concern raised by adults will be addressed by adding a parent workshops component to this next phase.

Accepted as an oral presentation at: 3rd Annual CTR-IN (Clinical Translational Research – Infrastructure Network) Annual Meeting, June 6-8, 2016, Las Vegas, NV.

PAST RESEARCH DAY GUEST SPEAKERS

- 2016 **Hayward L. Brown, M.D., 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, M.D.**, Vice President for Health Policy, Advocacy Division at the American College of Obstetricians and Gynecologist (ACOG), "*Vaginal Hysterectomy: Removing the Engine thru the Tailpipe*"
- 2014 **Daniel M. Breitkopf, M.D.**, Associate Professor & Ob/Gyn Residency Program Director, Department of Obstetrics & Gynecology, Mayo Clinic, Rochester, Minnesota, "*Hysteroscopy and Abnormal Uterine Bleeding: What's New?*"
- 2013 **Aaron B. Caughey, M.D., M.P.A., M.P.H., Ph.D.**, Professor and Chair, Department of Obstetrics & Gynecology. Oregon Health & Science University, Portland, Oregon, "*The Cesarean Epidemic: Etiologies, Outcomes, & Potential Solutions*"
- 2012 **Deborah A. Wing, M.D.**, Professor of Clinical Obstetrics & Gynecology, Director, Division of Maternal-Fetal Medicine & Director, Maternal-Fetal Medicine Fellowship, University of California, Irvine, "*Updates in Cervical Ripening and Labor Induction*"
- 2011 **Andrew Berchuck, M.D.**, Director of Gynecologic Cancer Research, Professor of Gynecologic Oncology, Department of Obstetrics and Gynecology, and is Co-Director of the 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, M.D., 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 at Duke University Hospital Labor and Delivery, Durham, North Carolina, "*The Ideal Cesarean Section Rate*"
- 2009 **Ruth Word, M.D., FACOG**, Professor of Obstetrics and Gynecology & Director, Urogynecology Research and the Human Biologic Fluid and Tissue Acquisition Core Laboratory, University of Texas Southwestern Medical Center, Dallas, Texas, "*New Insights into the Pathophysiology of Pelvic Organ Prolapse*"
- 2008 **Charles W. Weems, Ph.D.** Professor of Animal Science, CTAHR Animal Reproduction Research Laboratory, College of Tropical Agriculture and Human Resources, Department of Human Nutrition, Food & Animal Science, University of Hawaii, "*Establishment of Pregnancy*"
- 2007 **Robert Taylor, M.D., Ph.D.** Professor, and Vice Chair for Research, Department of Gynecology and Obstetrics, and Professor, Department of Cell Biology, Emory University School of Medicine, "*Cellular and Molecular Pathophysiology of Preeclampsia*"
- 2006 **Professor Warwick Giles, MB. BS(NSW), FRACOG, Ph.D(Syd.) DDU.CMFM** Conjoint Professor, The University of Newcastle, Callaghan, NSW, Australia and Director, John Hunter Hospital, Newcastle NSW, Australia, "*Fibronectin and other Markers of Preterm Delivery*"
James M. Roberts, M.D. Senior Scientist and Director, Magee-Women's Research Institute, Professor and Vice Chair (Research), Obstetrics, Gynecology and Reproductive Sciences, University of Pittsburgh, "*Whither Toxaemia*"
- 2005 **Robert B. Jaffe, M.D., M.S.** Fred Gellert Endowed Chair in Reproductive Medicine & Biology, University of California, San Francisco, "*Angiogenesis and Ovarian Cancer*"
- 2004 **Diana W. Bianchi, M.D.** Chief of the Division of Genetics in the Department of Pediatrics at Tufts-New England Medical Center, Natalie V. Zucker Professor of Pediatrics and Obstetrics and Gynecology "*Circulating Fetal Nucleic Acids in Maternal Blood: Origin and Diagnostic Applications*"
- 2003 **Roy M. Pitkin, M.D.** Former Editor, *Obstetrics and Gynecology*, *Clinical Obstetrics and Gynecology*, Emeritus Professor and Chairman of Obstetrics and Gynecology, University of California, Los Angeles School of Medicine, "*Obstetric-Gynecologic Research, 1953 - 2002*"
- 2002 **James R. Scott, M.D.** Professor, University of Utah, Department of Obstetrics and Gynecology, Editor of *Obstetrics & Gynecology*, Co-Editor of *Clinical Obstetrics and Gynecology*, "*Pregnancy in Transplant Patients*"
- 2001 **William Droegemueller, M.D.** Clinical Professor and Chairman Emeritus, University of North Carolina, Department of Obstetrics and Gynecology, Associate Editor of *Obstetrics and Gynecology*, "*Don't Look Back...Someone is Gaining on You, A Discussion of Mentoring*"
- 2000 **Robert Israel, M.D.** Chief of Gynecology, University of Southern California, Department of Obstetrics and Gynecology, Associate Editor of *Obstetrics and Gynecology*, "*Endometriosis: A Continuing Conundrum*"
- 1999 **David A. Grimes, M.D.** Vice President of Biomedical Affairs Family Health International, Associate Editor, *Obstetrical and Gynecological Survey*, *Contraception*, Former Professor and Vice-Chairman, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, "*Evidence-based Medicine in Obstetrics and Gynecology: the Paradigm for the Next Century*"
- 1998 **Roy M. Pitkin, M.D.** Editor, *Obstetrics and Gynecology*, Editor, *Clinical Obstetrics and Gynecology*, Former Professor & Chairman of Obstetrics & Gynecology, University of California, Los Angeles School of Medicine, "*The Peer Review System in Medical Publishing*"
- 1997 **John T. Queenan, M.D.** Professor and Chairman of Obstetrics and Gynecology, Georgetown University School of Medicine & Chief of Georgetown University Hospital since 1980, Editor-in-Chief of *Contemporary Obstetrics and Gynecology*
- 1996 **Moon Kim, M.D.** Richard L. Neiling Chair, Professor & Vice-Chairman of Obstetrics and Gynecology, Ohio State University, University Medical Center, Associate Editor, *The American Journal of Obstetrics and Gynecology*, "*Fertility and Environment*"

PAST RESEARCH DAY AWARD RECIPIENTS

First Place Award

- 2016 Sara C. Harris, M.D. "Levonorgestrel Intrauterine Device Expulsion in Patients with Abnormal Uterine Bleeding"
2015 Melissa Kuwahara, M.D. "Interpregnancy Interval and Subsequent Pregnancy Outcomes After Dilatation and Evacuation"
2014 Michelle Tsai, M.D. "Oxidative Stress & Compensatory Anti-Inflammatory Mechanisms in the Placentas of Gravid Marijuana Smokers"

Audience Choice Award

- Sara C. Harris, M.D. "Levonorgestrel Intrauterine Device Expulsion in Patients with Abnormal Uterine Bleeding"
2016 P. Gordon McLemore, Jr., M.D. 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, M.D. "Access to Ulipristal Acetate in Hawaii: Is a Prescription Enough?"
2014 Michelle Tsai, M.D. "Oxidative Stress & Compensatory Anti-Inflammatory Mechanisms in the Placentas of Gravid Marijuana Smokers"

Most Outstanding Award

- 2013 Jaimie M. Johnson, M.D. "Men's Attitudes, Beliefs, & Roles in Pregnancy & Childbirth: An Ethnographic Study in Nepal"
Scott A. Harvey, M.D., M.S. "Choice of Effective Contraception Among Native Hawaiian Women"

Audience Choice Award

- 2013 Lynne Y. Saito-Tom, M.D., M.S. "Intrauterine Device Use in Overweight and Obese Women"

Best Overall Research Project Award

- 2012 Justin C. Bohrer, M.D. "Obstetrical Outcomes in Patients with Low-lying Placenta in the Second Trimester"
2011 Judy A. Honegger, D.O. "Rates of Elective Induction Between 34 0/7-38 6/7 Weeks Gestation at Kapiolani Medical Center for Women & Children"
2010 Pai-Jong Stacy Tsai, M.D., M.P.H. "Racial Differences in Perineal Body Length in First Stage of Labor"
2009 Shera L.C. Sugibayashi, M.D. "Effectiveness of Examining Amniotic Fluid Arborization in Diagnosing PPROM in Early Pregnancies"

Most Potential to Impact Clinical Practice Award

- 2012 Maxine Karimoto, M.D. "Improving HPV and Pap co-testing screening rates for women 30 years and older in the Kapi`olani Women's Obstetrics and Gynecology Outpatient Clinic"
2011 Kassondra S. Grzankowski, M.D. "Microsatellite Instability in Endometrial Cancer in Patients with HNPCC"
2010 Celeste S. Adrian, M.D. "Assessment of the Accuracy of Information Regarding Emergency Contraception on the Internet"
2009 Karen A. Soules, M.D. "Does Cell Phone-Bluetooth Technology for the Outpatient Management of Diabetes in Pregnancy Improve Patient Compliance and Satisfaction when Compared with Traditional Methods of Blood Sugar Reporting?"

Best Study Design Award

- 2011 Lauren Millet, M.D. "Rates of Bacteriuria in Laboring Women with Epidural Analgesia-Continuous vs. Intermittent Bladder Catheterization"
2010 Pai-Jong Stacy Tsai, M.D., M.P.H. "Racial Differences in Perineal Body Length in First Stage of Labor"
2009 Maria G. Barrett, M.D. "Knowledge and Misconceptions of Intrauterine Devices in Adolescent Patients"

First Place Award

- 2008 Chrystie K. Fujimoto, M.D. "The Effect of Methamphetamine Use on the Placenta"
2007 Aya Sultan, M.D., Ph.D. "Association of Ovarian Cancer and Atypical Endometriosis"
2006 Reina M. Ahern, M.D. "Knowledge and Attitudes of Emergency Contraception in Hawaii's Adolescents"
Renee L. Sato, M.D. "Antepartum Seafood Consumption and Mercury Levels in Newborn Cord Blood"
2005 Reni A. Y. Soon, M.D. "Comparison of Active Phase and Second Stage of Labor in Adolescents and Adults"
2004 Scott D. Eaton, M.D. "EKG Changes Occuring with Magnesium Administration for Preterm Labor"
2003 Sapna M. Janas, M.D. "Rate of Complication from Third Trimester Amniocentesis Performed at the Fetal Diagnostic Center"
2002 Ian A. Oyama, M.D. "Local Anesthetic for use in Cjjjloposcopic Biopsies"
Melissa J. Lawrence, M.D. "Impact of Fetal Fibronectin Testing at Kapi`olani Medical Center"
2001 Seema Sidhu, M.D. "Randomized, Double-Blind Trail of Rectal Misoprostol Versus Oxytocin in Management of the Third State of Labor"
2000 Deborah D. Geary, M.D. "TDx Surfactant/Albumin Ratio and Lamellar Body Count: Effect of Blood and Meconium Contaminants on Fetal Lung Maturity Assays"
1999 Steven M. Nishi, M.D. "Sample Adequacy of Endocervical Curettage (ECC) Compared with Endocervical Brush"
1998 Julie Ann Henriksen, M.D. "Nitric Oxide in the Human Placenta"
1997 Cheryl Leialoha, M.D. "Uriscreen, a Rapid Enzymatic Urine Screening Test for the Detection of Bacteriuria in Pregnancy"
1996 Christine Brody, M.D. "Vaginal Birth After Cesarean Section in Hawaii: Experience at Kapi`olani Medical Center for Women & Children"



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