EIGHTY-SEVENTH ANNIVERSARY PACIFIC COAST OBSTETRICAL AND GYNECOLOGICAL SOCIETY

Eighty-fifth Annual Meeting
September 26-30, 2018
The Coeur d’Alene
Coeur d’Alene, Idaho

Continuing Medical Education credit is provided through joint providership with The American College of Obstetricians and Gynecologists.
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C. Andrew Combs            John Williams, III

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SOCIETY ADMINISTRATOR
Linda G. Hinrichsen
ROSTER OF MEETINGS AND PRESIDENTS

November 19-20, 1931 – San Francisco
  Organization Meeting
  Albert Mathieu, Chairman

December 8-10, 1932 – Los Angeles
  Frank W. Lynch

October 19-21, 1933 – Portland
  Albert Mathieu

November 21-24, 1934 – Del Monte
  Lyle G. McNeile

November 6-9, 1935 – Los Angeles
  J. Morris Slemons

November 11-14, 1936 – Seattle
  Clarence A. DePuy

November 3-6, 1937 – San Francisco
  Ludwig A. Emge

November 30-December 3, 1938 – Los Angeles
  Raymond E. Watkins

November 1-4, 1939 – Portland
  Edmund M. Lazard

November 6-9, 1940 – San Francisco
  Alice F. Maxwell

November 5-8, 1941 – Pasadena
  John Vruwink

November 5-7, 1942 – Oakland
  T. Floyd Bell

November 3-5, 1943 – San Francisco
  C. Frederic Fluhmann

November 6-9, 1946 – San Francisco
  Goodrich C. Schauffler

October 1-4, 1947 – Seattle
  Henry N. Shaw

November 10-13, 1948 – Los Angeles
  Phillip H. Arnot

November 9-12, 1949 – San Francisco
  William Benbow Thompson

November 4-19, 1950 – Timberline Lodge
  Albert W. Holman

December 5-8, 1951 – Coronado
  Roy E. Fallas

October 15-18, 1952 – Del Monte
  Karl L. Schaupp

October 21-24, 1953 – Victoria, B.C.
  Theodore W. Adams

October 27-30, 1954 – Santa Barbara
  Emil J. Krahulik
October 6-9, 1955 – Sun Valley
  Henry A. Stephenson
October 31 – November 3, 1956 – San Francisco
  Donald G. Tollefson
October 30 – November 2, 1957 – Palm Springs
  Bernard J. Hanley
October 15-18, 1958 – Seattle
  Donald J. Thorp
October 21-24, 1959 – San Francisco
  Donald A. Dallas
September 28 – October 1, 1960 – Yosemite
  George E. Judd
  September 20-23, 1961 – Yosemite
  Donald W. de Carle
October 3-6, 1962 – Portland
  Daniel G. Morton
September 18-21, 1963 – Yosemite
  Howard C. Stearns
November 4-7, 1964 – Santa Barbara
  Charles T. Hayden
September 29 – October 2, 1965 – Vancouver, B.C.
  Alfred M. McCausland
November 29 – December 2, 1966 – Santa Barbara
  Robert K. Plant
November 29 – December 2, 1967 – Phoenix
  L. Grant Baldwin
  October 2-5, 1968 – Shalishan
    Keith P. Russell
  October 1-4, 1969 – Yosemite
    Robert D. Dunn
  November 9-14, 1970 – Kauai
    Ralph C. Benson
  October 5-10, 1971 – La Costa
    Ernest W. Page
October 3-7, 1972 – Harrison Hot Springs
  Purvis L. Martin
October 29 – November 4, 1973 – The Wigwam
  Charles F. McLennan
October 6-10, 1974 – Sun River
  Paul G. Peterson
October 6-11, 1975 – Del Monte
  Ralph H. Walker
November 7-13, 1976 – Kona
  Carl Goetsch
October 4-8, 1977 – Santa Barbara
  Melvin W. Breese
September 26-30, 1978 – Salishan
William J. Dignam

September 26-30, 1979 – Palm Springs
Leon J. Shulman

October 6-11, 1980 – Monterey
Leon P. Fox

September 27 – October 3, 1981 – Kauai
Colin C. McCorriston

September 26-30, 1982 – Pebble Beach
Ivan I. Langley

September 6-10, 1983 – Vancouver, B.C. Canada
George A. Macer

October 21-27, 1984 – Tucson
Jesse A. Rust, Jr.

September 29 – October 4, 1985 – Napa
Edward C. Hill

September 21-25, 1986 – Salishan
Charles D. Kimball

September 27 – October 2, 1987 – Pebble Beach
Charles F. Langmade

November 12-19, 1988 SS Independence
Eugene C. Sandberg

September 17-21, 1989 – Coronado
David C. Figge

September 9-14, 1990 – Sun Valley
James M. Maharry

September 9-12, 1991 – Ashland
Richard N. Bolton

October 11-16, 1992 – Ojai
Walter S. Keifer

September 7-12, 1993 – Bellingham
Gilbert A. Webb

October 24-29, 1994 – Scottsdale
David Pent

September 16-21, 1995 – Squaw Valley
E. Forrest Boyd, Jr.

October 2-6, 1996 – Sunriver
Theodore W. Loring

September 17-21, 1997 – Coeur d’Alene
James C. Caillouette

September 16-20, 1998 – Whistler
E. Paul Kirk

October 20-24, 1999 – Cancun
Michael R. Smith

November 14-19, 2000 – Hawaii
S. Gainer Pillsbury, Jr.
October 3-7, 2001 – Ashland
   W. Gordon Peacock
October 22-27, 2002 – Rancho Mirage
   Robert Israel
September 16-21, 2003 – Anchorage
   Emmet J. Lamb
October 19-24, 2004 – Phoenix
   Russell K. Laros, Jr.
September 28-October 2, 2005 – Kauai
   P. Ronald Millard
October 4-8, 2006—Sun Valley, Idaho
   Kenneth A. Burry
October 10-14, 2007—Henderson, Nevada
   Frank R. Gamberdella
October 15-19-2008—Victoria, B. C., Canada
   Jerry M. Shefren
September 30-October 4, 2009—La Jolla, California
   Lyman A. Rust
September 29-October 3, 2010—Kohala Coast, Hawaii
   J. T. (Bill) Parer
   September 14-18, 2011—Sunriver, Oregon
   Robert Prins
October 3-7, 2012—Newport Beach, California
   John A. Enbom
October 2-6, 2013—Walla Walla, Washington
   Marilyn K. Laughead
October 22-26, 2014 - Marana, Arizona
   Donald Barford
September 2-6, 2015 - Kahuku, Hawaii
   Phillip E. Patton
September 28-October 2, 2016, Sun Valley, Idaho
   Thomas W. Powers
November 1-5, 2017, Palm Desert, California
   Patricia A. Robertson
RECIPIENTS OF
PCOGS FRANK LECOCQ
LIFETIME ACHIEVEMENT AWARD

Frank LeCocq - November 18, 2000
Robert C. Goodlin - October 6, 2001
William Dignam - October 20, 2002
Robert (Bob) Israel - October 3, 2009
Jerry M. Shefren - September 29, 2010
Linda G. Hinrichsen - October 6, 2012
James C. Caillouette - October 23, 2014
John A. Enbom - September 29, 2016
<table>
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<th>Name</th>
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<td>Fassett</td>
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<td>Larsen</td>
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<td>Friedman</td>
<td>Laughead</td>
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<td>Johnson</td>
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<td>Katz, M.</td>
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<td>Simpson</td>
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<td>Eckert</td>
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<td>Esakoff</td>
<td>Kim, L.</td>
<td>Norrell</td>
<td>Thomas</td>
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</table>
ACTIVE FELLOWS continued

Tomlinson
Tomsen
Valenzuela
Vasilev
Veljovich
Walker
Welch
Wentross
Wesol
Wickman
Wiggins
Williams
Winch, G. Jr.
Winter, M.
Winter, W.
Wittenberg
Wohlmuth
Woods
Yee
Zheng

Total Fellows - 176
### RETIRED FELLOWS

<table>
<thead>
<tr>
<th>Allen</th>
<th>Graham</th>
<th>Roberts</th>
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<td>Rust</td>
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<td>Barbis</td>
<td>Hanson</td>
<td>Savage</td>
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<td>Berek</td>
<td>Hartman</td>
<td>Schrinsky</td>
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<td>Boyle</td>
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<td>Clayton</td>
<td>Hickok, D.</td>
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<td>Cole</td>
<td>Handle</td>
<td>Shy</td>
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<td>Collins</td>
<td>Hoag</td>
<td>Smith, D.</td>
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<td>Corwin</td>
<td>Katz, V.</td>
<td>Smith, M.</td>
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<td>Creasy</td>
<td>Kirk</td>
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<td>Davis</td>
<td>Lamb, E.</td>
<td>Soderstrom</td>
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<td>Deasy, K.</td>
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<td>Deasy, S.</td>
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<td>Der Yuen</td>
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<td>Novy</td>
<td>Wolter</td>
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<td>Gamerdella</td>
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<tr>
<td>Gaylord</td>
<td>Paul</td>
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<tr>
<td>Giudice</td>
<td>Peacock</td>
<td>Fellows – 85</td>
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<td>Goetsch</td>
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<td>Golditch</td>
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<td>Goodlin</td>
<td>Quilligan</td>
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<td>Reinsch, R.</td>
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<td>Resnick</td>
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### HONORARY FELLOWS

- Benirschke
- Jensen, H.
- Smith-Sehdev

### NON-RESIDENT FELLOWS

<table>
<thead>
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<th>Blanchette</th>
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<tbody>
<tr>
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<td>Kim</td>
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<td>Cain</td>
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<td>Felix</td>
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<td>Gabbe</td>
<td>Martin-Cadieux</td>
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<td>Garite</td>
<td>Towers</td>
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**Total Fellowship - 276**
A logo is a symbol of identity and, as such, should be filled with symbolism and, in fact, tell a story. With this in mind the Logo Committee, seeking symbols, re-searched the name of the Society-first the region, Pacific Coast; second our specialty, obstetrics and gynecology; and third our birth, a Society founded in 1931, three elements suggesting a Trinity or three-part logo.

The first effort was to derive symbols from Pacific Coast which would relate to our region and specialty: sun, energy, birth, life. The most common symbol in the Pacific is the sun. Pacific is, of course, from the Latin word Pacificus, meaning "more peaceful"-sunny and more peaceful. It was Magellan who named the Pacific Ocean in 1520 and appropriately so. Since the sun gives life and is symbolic of our region, it was chosen for the outer protective circle of our logo.
The middle circle contains essential information providing the initials for Pacific Coast Obstetrical and Gynecological Society and the founding date, 1931.

The third part, and the heart of the logo, required difficult decisions. Once again, symbols began to flow: feminine, dynamic, classic, historic, anatomic, scientific, timeless, cyclic, lunar. It seemed appropriate to draw from the work of one of the three great artists of all time, one who was also an anatomist, engineer, inventor—a true Renaissance man, a person to emulate—Leonardo de Vinci. The artist, Dorothy Koll, adapted Leonardo's work "Canon of Proportions" from his anatomy notebook "Quarderni di Anatomia," volume VI, folio 8r. This drawing was sketched at approximately the same time that Magellan was naming the Pacific Ocean. What a fitting coincidence for our logo. The central figure is appropriately female rather than Leonardo's male. The anatomy is clear. The figure illustrates structure and movement, depicting the dynamic, cyclic, and ever-changing life of the female.

James C. Caillouette  
Chairman, Logo Committee  
Kauai 1981  
50th Anniversary Meeting
IN

MEMORIAM

Kenneth A. Burry
1989-2018

Ezra C. Davidson, Jr.
1984-2018

Lester T. Hibbard
1961-2017
HISTORIAN’S CORNER

LEARN ABOUT PCOGS HISTORY!
Our historian has a section on our PCOGS website called “Historian’s Corner”. You are invited to visit it at www.pcogs.org. Look in the drop down section labeled Society Info and find Historian’s Corner where there are many postings. You’ll find accounts of the founding years, biographies of some important members, and many of the early presidential addresses. These will transport you back in time to earlier years of our profession. There is a selection of interesting scientific papers presented at meetings over the years. Interviews with members describe historic times in our field, offer fond recollections, and a few tall tales.
THE PACIFIC COAST OBSTETRICAL AND GYNECOLOGICAL SOCIETY
HISTORICAL OVERVIEW and the PROCESS OF ATTAINING MEMBERSHIP

The Pacific Coast OB/GYN Society (PCOGS) was founded in 1931 and has a long tradition of excellent annual scientific meetings that offer presentations from all areas of the specialty. The Society is composed of five regional caucuses representing the geographic organization of the PCOGS structure. Members (Fellows) reside in seven western states stretching from Arizona to Alaska, including Hawaii. Membership in the society has always been by invitation, and presentation of a scientific paper is the steppingstone to membership. It is hoped that new members will come to value the society, regularly attend meetings, and contribute with subsequent presentations, formal discussions, and/or in the informal discussions from the floor.

In order to evaluate the PCOGS and decide whether guests wish to pursue membership, interested physicians can come as a member’s personal guest to an annual meeting. The official process to join begins in the applicant’s geographic caucus, where a member sponsors a guest physician’s application. Caucus members then vote to invite applicants to be a guest of the Caucus at the following annual scientific meeting. This provides an official introduction to the group, allows more exposure to the process, and starts the timeline for presentation of a paper two years later. When invitees agree to come to the annual meeting as a Caucus Guest it is important to be sure they are available for the meeting dates.
Two years after coming as a Caucus Guest and following caucus and board approval, candidates will be invited as a Society Guest to present a scientific paper. Invited Society Guests are welcome to come to the interval annual meeting as a guest of the Board of Directors. There is no obligation to attend as a Guest of the Board. Meeting registration and expenses are the responsibility of invited guests for each meeting. Following each Annual Scientific Meeting, the PCOGS members vote on the Society Guests and the Board sends its confirmation of membership.

Society Guests always present their papers in an oral format for admission to the PCOGS. The scientific program also includes presentations by Fellows. Posters are a second presentation format and every year OBGYN residents and fellows from Pacific Coast medical centers are invited to exhibit posters at the Society as guests of the society. The best resident/fellow poster is awarded an honorarium. One resident/fellow also wins the chance to present his/her paper orally and receives an honorarium. So that they can be formally introduced and welcomed, poster presenters give an oral 5 minute summary of their poster from the podium.

A mentoring process for PCOGS Society Guests is in place to facilitate the best paper possible with the least distress for the candidate. The sponsoring caucus will match the candidate with a suitable mentor. This person will be able to help guests understand and manage the membership process. The assigned mentor will be someone who is knowledgeable in the candidate’s research area or will direct the candidate to another PCOGS fellow
who is knowledgeable. In some instances candidates may need assistance from several mentors to facilitate the planning process, IRB approval, and data analysis. As IRB approval takes time it is important to know whether IRB approval is needed before initiating a study or data collection. If the mentor arrangement doesn’t work, the candidate may ask the Caucus chair for assistance in making a change.

The PCOGS has always prided itself on the quality of the presented papers. Historically, presentations have been the culmination of a process of original data collection, analysis, drafting a manuscript suitable for publication, and oral presentation at the annual meeting. At that meeting the presentation is followed by a formal discussion presented by a Society member who has volunteered to critique the manuscript and ask several questions. After the formal discussion, audience members and their guests have the opportunity to ask further questions. After the formal discussion, and after each member’s informal questions, the paper’s presenter responds to the queries.

Historically, the various regional OBGYN societies in the country, such as the PCOGS, have had a relationship with the American Journal of OBGYN (AJOG) to have their best papers published in a later AJOG issue. PCOGS papers appear eight or nine months following the meeting in the July issue. Prior to 2006, manuscripts presented to PCOGS were peer reviewed anonymously by PCOGS members, and then sent to AJOG. Since 2006, manuscripts are sent directly to the journal for peer review, and they undergo the same editorial peer review process as non-society papers using the journal’s set of peer reviewers.
As the Society valued the previous internal review by PCOGS members prior to submission, there is a process for internal review, presently called “pre-review.” This creates a non-mandatory option of pre-submission review within PCOGS, so authors can get some input allowing improvement of their paper before AJOG submission.

PCOGS is a member run organization. Many members devote time to making the organization work. Linda Hinrichsen, PCOGS Society Administrator, has served the society for over 25 years and is available for assistance. Guests attending the meeting quickly realize that member volunteers manage all the arrangements, the registration, and the entire agenda. Attention to provided information and instructions, coupled with timely responses, will help the efforts and efficiency of the hard-working PCOGS fellows who make these meetings so successful.

The PCOGS blends those in community practice and those in academic practice, essentially academic clinicians and clinical academicians, and welcomes their families to the annual meetings. Members take pride in the social aspects of the society, which opens opportunities to develop lasting friendships with members geographically distant from their own communities. The addition of enthusiastic new members is vital to the continuation of the Society. We hope our guests will be interested in learning more and pursuing membership.

John A. Enbom
and
Martha Goetsch
New Insights Into Early Pregnancy Uteroplacental Blood Flow
2016 PRESENTATIONS
PUBLISHED
IN
AJOG
OR ALTERNATE JOURNALS

Length of the Second Stage: Factors of Influence
Carol Morcos - In Press, J Matern Fetal Neonatal Med, 2017
SOCIETY GUESTS

Joel Barkley (Leah Bomberger)                Phoenix, Arizona
(San Diego/AZ Caucus)
Sponsor - Dean V. Coonrod

Michelle Benoit (Kelvin Mar)              Seattle, Washington
(Seattle Caucus)
Sponsor - Jane Dimer

Izumi Cabrera (Alan)                    San Francisco, California
(San Francisco Caucus)
Sponsor - Kathy Gregory

Amy Card (Shane)                                    Corvallis, Oregon
(Portland Caucus)
Sponsor - Jodell Boyle

Abby Furukawa (John)                              Portland, Oregon
(Portland Caucus)
Sponsor - Megan Bird
Laura Korman (Christian Hill)                  Portland, Oregon
(Portland Caucus)
Sponsor - Laura Greenberg

Laura Mercer                                             Phoenix, Arizona
(San Diego/AZ Caucus)                                    Sponsor - Maria Manriquez

Linda R. Nelson                                        Phoenix, Arizona
(San Diego/AZ Caucus)                                    Sponsor - David Greenspan

Lishiana S. Shaffer (Brian)                        Portland, Oregon
(Portland Caucus)                                         Sponsor - Aaron Caughey

Laurence E. Shields                                          Santa Maria, California
(Los Angeles Caucus)                                          Sponsor - David C. Lagrew, Jr.
CAUCUS GUESTS

Margaret Bates (Scott Johnson)     Los Angeles, California
     (Los Angeles Caucus)
Sponsor - Robert Israel

Thinh Duong (Tamula Patterson)     Los Angeles, California
     (Los Angeles Caucus)
Sponsor - Rosetta Hassan

Kristina Eaton (Robb Kulin)     Anchorage, Alaska
     (Seattle Caucus)
Sponsor - Hedric Hanson

Aaron Epstein (Ritu Kumar)     Los Angeles, California
     (Los Angeles Caucus)
Sponsor - Robert Israel

D. Katie Fitzpatrick (Paul Anderson)     Portland, Oregon
     (Portland Caucus)
Sponsor - Gary Hoffman

Antonio Garcia     Bakersfield, California
     (Los Angeles Caucus)
Sponsor - John Schlaerth

Katherine Hsiao     San Francisco, California
     (San Francisco Caucus)
Sponsor - Patty Robertson
CAUCUS GUESTS

Jenny Jaque                                      Los Angeles, California
      (Los Angeles Caucus)                      Sponsor - Robert Israel
Dawn Kopp (John)                                Spokane, Washington
      (Seattle Caucus)                        Sponsor - Linda Partoll
Tamula Patterson (Thinh Duong)                  Los Angeles, California
      (Los Angeles Caucus)                    Sponsor - Rosetta Hassan
Kerry Price (Bryan)                             Laguna Hills, California
      (Los Angeles Caucus)                    Sponsor - Marc Winter
Veronique Tache                                 Sacramento, California
      (San Francisco Caucus)                  Sponsor - Patty Robertson
Eve Zaritsky                                    Oakland, California
      (San Francisco Caucus)                  Sponsor - Arzou Ahsan
PERSONAL GUESTS

Richard Benoit                                  Los Angeles, California
Sponsor - Kathleen Bradley

Emily Hamilton                                    Westmount, Quebec
Sponsor - Duncan Neilson

Anne & Hugh Jenings                                Port Ludlow, Washington
Sponsor - Bob Israel

Matthew L. Macer (Haatal)                          Marina Del Rey, California
Sponsor - James Macer

John Ozimek                                       Los Angeles, California
Sponsor - John Williams, III
PERSONAL GUESTS

Avita K. Pahwa                                Los Angeles, California
Sponsor - Robert Israel

Dennis Scribner (Elizabeth)                               Phoenix, Arizona
Sponsor - Marilyn Laughead

Jody Steinauer                                        San Francisco, California
Sponsor - Jill Foley

Jeroen Vanderhoeven (Kimberly Ma)        Seattle, Washington
Sponsor - Jane Dimer

Brandi Vasquez                                                   Portland, Oregon
Sponsor - Barbra Fisher
GUESTS OF THE
BOARD OF DIRECTORS

Stephanie L. Fegale                         Phoenix, Arizona
Ted Adams Scholarship Award

Dana Gossett (Jeffrey)                      Piedmont, California
Sponsor - Patty Robertson

Henry T. Greely, Atty                      Stanford, California
Combined luncheon lecture

Brittney A. Johnson                       Los Angeles, California
Ted Adams Scholarship Award

Ruben Lachica                             Los Angeles, California
Ted Adams Scholarship Award

Amie Leaverton                           Portland, Oregon
Ted Adams Scholarship Award
GUESTS OF THE BOARD OF DIRECTORS

Nicole Nakamaru  Los Angeles, California  
Ted Adams Scholarship Award

Michelle Nguyen  Los Angeles, California  
Ted Adams Scholarship Award

John Rinehart  Evanston, Illinois  
Presidential Choice Lecture

Harjinder Sandhu  Seattle, Washington  
Keynote Lecture

Martha Tesfalul  San Francisco, California  
Ted Adams Scholarship Award

Whitney Wellenstein  Oakland, California  
Frank Lynch Memorial Essayist
GENERAL INFORMATION

Registration for Activities Day participants will be Tuesday, September 25th 4-6pm in the Conference Center Bays - Registration.

Meeting registration starts at 2:00pm Wednesday, September 26, 2018

The registration fee includes:

Welcome Reception & dinner party (Wed.) - casual dress

Breakfast for attendees and spouses/companions, (Thurs., Fri, Sat.)

Combined Luncheon Lecture for attendees and spouses/companions (Thurs.)

Party at Hagadone Center with Boat ride to center (Fri.)
Attire - casual

Presidential Reception and Dinner/Dance – (Sat.)
Formal - Black Tie Optional

Farewell Buffet Breakfast- (Sun.) - casual dress

Hospitality Suite (Daily) for Attendees and spouses/companions

Coffee Breaks for scientific sessions (Thurs. Fri., Sat.)

PLEASE WEAR YOUR IDENTIFICATION BADGE TO ALL FUNCTIONS

Attire for scientific sessions - business casual
PRESENTATION GUIDELINES

Thirty (30) minute presentations - 15 minutes is for your presentation, 5 minutes for formal discussion and 10 minutes for discussion from the assembly.

Twenty (20) minute presentations - 10 minutes is allowed for your presentation with 10 minutes allowed for questions and discussion from the assembly.

Adherence to the time schedule is important and all are expected to cooperate.

FORMAL DISCUSSION/REVIEW GUIDELINES

FORMAL DISCUSSANT - assigned to 30 minute presentations - Formal discussants will present their discussion orally. Five (5) minutes is allowed for formal discussion.

FORMAL DISCUSSIONS are to be uploaded through the Society web site prior to the annual meeting. References, if any, should be formatted according to the "Information for Authors" in the AMERICAN JOURNAL of OBSTETRICS AND GYNECOLOGY. A revised discussion will be accepted by the Editor if received within 2-weeks of the last day of the Annual Meeting. Submit through the Society web site - www.pcogs.org

FORMAL REVIEWER - assigned to 20 minute presentations. Formal reviewers do not present orally. Review manuscript submitted through the Society’s web site, prepare 1-3 questions for the presenter to respond to during their presentation, submit the questions to the presenter 6 weeks prior to the annual meeting in the form of a PowerPoint slide.
ACCME Accreditation
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of The American College of Obstetricians and Gynecologists and Pacific Coast Obstetrical and Gynecological Society. The American College of Obstetricians and Gynecologists is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credit(s)™
The American College of Obstetricians and Gynecologists designates this live activity for a maximum of 15 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

College Cognate Credit(s)
The American College of Obstetricians and Gynecologists designates this live activity for a maximum of 15 Category 1 College Cognate Credits. The College has a reciprocity agreement with the AMA that allows AMA PRA Category 1 Credits™ to be equivalent to College Cognate Credits.

Disclosure of Faculty and Industry Relationships
In accordance with College policy, all faculty and planning committee members have signed a conflict of interest statement in which they have disclosed any financial interests or other relationships with industry relative to topics they will discuss at this program. At the beginning of the program, faculty members are required to disclose any such information to participants. Such disclosure allows you to evaluate better the objectivity of the information presented in lectures. Please report on your evaluation form any undisclosed conflict of interest you perceive. Thank you!
LEARNING OBJECTIVES

1) To learn about specific research projects and their application to clinical practice in obstetrics and gynecology, through oral presentations and poster sessions by different members of the Pacific Coast Obstetrical and Gynecological Society and their invited guests.
2) To review a controversial topic in the field of obstetrics and gynecology, by inviting a national expert to present and review data.
3) To network professionally with leaders in the field of obstetrics and gynecology as regards the future of the specialty, residencies, and medical students.

MISSION STATEMENT

The Pacific Coast Obstetrical and Gynecological Society is composed of individuals dedicated to excellence in the health care of women, dedicated to promoting cooperative efforts and unity between private practice physicians and the academic sector, providing continuing medical education for its membership, and advancing knowledge in the specialty. The Society also deals with concerns in the specialty other than direct patient care, including social issues, health care delivery, and patient education. The Society is dedicated to the continuance of the physician's professional learning from medical school through residency/fellowship training and beyond.
### FRANK LYNCH MEMORIAL ESSAYISTS

**2000-2017**

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<th>Year</th>
<th>Name</th>
<th>Institution</th>
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<tr>
<td>2000</td>
<td>Afshin Bahador</td>
<td>USC</td>
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<tr>
<td>2001</td>
<td>Vance McCausland</td>
<td>USC</td>
</tr>
<tr>
<td>2002</td>
<td>Jennifer Dizon-Israel</td>
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<td>2003</td>
<td>Arus Zograbyan</td>
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<tr>
<td>2004</td>
<td>Iris Colon</td>
<td>Stanford</td>
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<td>2005</td>
<td>Chad Hamilton</td>
<td>Stanford</td>
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<tr>
<td>2006</td>
<td>Katherine Gabriel-Cox</td>
<td>UCSF</td>
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<tr>
<td>2007</td>
<td>Anjali Kaimal</td>
<td>UCSF</td>
</tr>
<tr>
<td>2008</td>
<td>Brian L. Shaffer</td>
<td>UCSF</td>
</tr>
<tr>
<td>2009</td>
<td>Tania F. Esakoff</td>
<td>UCSF</td>
</tr>
<tr>
<td>2010</td>
<td>Christine Hiebert</td>
<td>USC</td>
</tr>
<tr>
<td>2011</td>
<td>John K. Chan</td>
<td>UCSF</td>
</tr>
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<td>2012</td>
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<tr>
<td>2013</td>
<td>Jessica Atrio</td>
<td>USC</td>
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<tr>
<td>2014</td>
<td>Marc Gualtieri</td>
<td>USC</td>
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<tr>
<td>2015</td>
<td>Jonas J. Swartz</td>
<td>OHSU</td>
</tr>
<tr>
<td>2016</td>
<td>Alexandra Rzepka</td>
<td>Univ of AZ</td>
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<tr>
<td>2017</td>
<td>Nicole B. Kurata</td>
<td>Univ of HI</td>
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### CHARLES KIMBALL AWARD

**2007-2017**

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<tr>
<td>2007</td>
<td>Susan Tran</td>
<td>UCSF</td>
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<td>Tania Esakoff</td>
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<tr>
<td>2009</td>
<td>Tevy Tith</td>
<td>UCLA</td>
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<tr>
<td>2010</td>
<td>Clara Ward</td>
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<td>2011</td>
<td>Manijeh Torki</td>
<td>USC</td>
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<tr>
<td>2012</td>
<td>Uyen Huynh</td>
<td>Kaiser-Santa Clara</td>
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<td>2013</td>
<td>Melissa Rosenstein</td>
<td>UCSF</td>
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<tr>
<td>2014</td>
<td>Sigita Cahoon</td>
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<tr>
<td>2015</td>
<td>Kristl Tomlin</td>
<td>PIROG</td>
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<tr>
<td>2016</td>
<td>Neetu K. Sodhi</td>
<td>UCLA</td>
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<tr>
<td>2017</td>
<td>James A. Sargent</td>
<td>OHSU</td>
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ANTI HARASSMENT POLICIES

NON DISCRIMINATION POLICY
The Pacific Coast Obstetrical and Gynecological Society does not and shall not discriminate on the basis of race, color, religion (creed), gender, gender expression, age, national origin (ancestry), disability, marital status, sexual orientation, or military status, in any of its activities or operations. These activities include, but are not limited to, hiring and firing of staff, selection of members and vendors, and provision of services. We are committed to providing an inclusive and welcoming environment for all members of our staff, members, candidates, guest speakers, scholarship candidates and recipients. The Society’s nondiscrimination policy also extends to the industry supporters of the Society, whether by education grants or by exhibits.

The Pacific Coast Obstetrical and Gynecological Society is an equal opportunity employer. We will not discriminate and will take affirmative action measures to ensure against discrimination in employment, recruitment, advertisements for employment, compensation, termination, upgrading, promotions, and other conditions of employment against any employee or job applicant on the bases of race, color, gender, national origin, age, religion, creed, disability, veteran’s status, sexual orientation, gender identity or gender expression.

SEXUAL HARASSMENT POLICY
It is the policy of the Pacific Coast Obstetrical and Gynecological Society that the workplace, meetings, and society activities are conducted in an environment free from sexual harassment. This policy applies to all attendees at Society activities, including members, speakers, students, guests, staff, contractors, exhibitors, and volunteers. The Pacific Coast Obstetrical and Gynecological Society
strongly disapproves of offensive or inappropriate sexual behavior and participants must avoid any action or conduct which could be viewed as sexual harassment. Sexual harassment is defined by the Equal Employment Opportunity Commission (EEOC) as any unwelcome sexual advance, request for sexual favors, or other verbal or physical conduct of a sexual nature, when:

(1) submission to the harassment is made either explicitly or implicitly a term or condition of employment or membership; (2) submission to or rejection of the harassment is used as the basis for employment or membership decisions affecting the individual; or (3) the harassment has the purpose or effect of unreasonably interfering with an individual’s work performance or creating an intimidating, hostile, or offensive working environment.

Any employee or Society participant who has a complaint of sexual harassment by anyone, should first clearly inform the harasser that his/her behavior is offensive or unwelcome and request that the behavior stop. The Society strongly urges reporting of all incidents of harassment, regardless of the offender’s identity or position by contacting the Caucus Chair and/or a member of the Board of Directors, who can be reached at (contact members only site at www.pcogs.org). If deemed necessary by those experiencing harassment, the Board of Directors/Caucus chair will assist in contacting convention center/hotel/venue security or local law enforcement. He or she is not required or expected to discuss the concern with the alleged offender. All complaints will be treated seriously and be investigated promptly. Confidentiality will be honored to the extent permitted as long as the rights of others are not compromised.

If the Caucus Chair and/or Board Member knows of an incident of sexual harassment, they shall take appropriate remedial action immediately. If the alleged harassment involves any types of threats of physical harm to the victim, the alleged harasser may be immediately suspended or expelled from the Society. All complaints
will be investigated by the Pacific Coast Obstetrical and Gynecological Society Board of Directors. The Board of Directors will name an impartial investigator, usually a Society Officer or Caucus member. Any named investigator who believes they have a conflict of interest should not serve as an investigator. In most cases, the complainant will be interviewed first and the written complaint reviewed. If the complainant has not already filed a formal complaint, he or she should be asked to do so. The details of the complaint should be explained to the alleged offender by the investigator. The alleged offender should be given a reasonable chance to respond to the evidence of the complainant and to bring his or her own evidence. If the facts are in dispute, further investigatory steps may include interviewing those named as witnesses. If, for any reason, the investigator is in doubt about whether or how to continue, he or she will seek appropriate counsel. When the investigation is complete, the investigator should report the findings to the Board of Directors. If the investigation supports charges of sexual harassment by the Board of Directors, disciplinary action against the alleged harasser will take place and may include suspension, expulsion, or other disciplinary actions. If the investigation reveals that the charges were brought falsely and with malicious intent, the charging party may be subject to disciplinary action, including termination or expulsion by the Board of Directors.
PROGRAM SUMMARY
TUESDAY, SEPTEMBER 25, 2018
4:00-6:00pm  Early Registration for Activities Day -
              Conference Center Bays - “Registration”
LUNCH AND DINNER ON OWN
WEDNESDAY, SEPTEMBER 26, 2018
TBA            Birding - TBA
TBA            Golf - TBA
8:00am         Hiking - meet in Main Lobby of resort
8:45am         Biking - meet at front entrance of hotel
2:00-6:00pm    Arrival and Registration –
                Conference Center Bays - “Registration”
2:00-5:30pm    Hospitality Suite* - Hagadone Suite
2:00-3:00pm    Arrangements Committee Meeting
                North Cape Bay
3:00-4:00pm    Program Committee Meeting
                North Cape Bay
4:00-6:00pm    First Board of Directors Meeting
                North Cape Bay
6:30-7:00pm    Welcome Reception* - Lake View Terrace
7:00pm         Dinner* - Lake View Terrace
9:00pm         New Members Gathering - Club Coeur
                d’Alene—7th Floor next to Beverly’s Restaurant
                (elected within 5 years)
9:00pm-11:00pm Hospitality Suite - Hagadone Suite
THURSDAY, SEPTEMBER 27, 2018
6:00-7:00am    Yoga - 5ABC
6:30-7:30am    Attendees - Breakfast Buffet*
                Members & Guests – East **CC Lobby/ Casco/Kidd
                /N Cape
6:30-10:00am   Companions’ Breakfast Buffet*
                East **CC Lobby/ Casco/Kidd/N Cape
7:45-8:00am    Opening Remarks
                Bays 4 & 5
8:00-8:30am    Resident/Fellow Oral Synopses
                of Ted Adams Scholarship Award poster
                presentations
                Bays 4 & 5

**Conference Center
8:30-9:00am  Paper 1  
Bays 4 & 5

9:00-10:00am  Panel Discussion  
“Perinatal Collaborative Programs on the West Coast and Beyond”
Elliott Main, Moderator; Dale Reisner, Mark Tomlinson, Larry Shields
Bays 4 & 5

10:00-10:25am  Poster Presentations & Informal Discussion - **CC Lobby
Exhibits/Industry Representatives - Bay 3

10:25-10:55am  Paper 2  
Bays 4 & 5

10:55-11:25am  Lecture - Susan Reed  
“Menopause Care - Do You Know the Latest?”
Bays 4 & 5

11:25-11:50am  Paper 3  
Bays 4 & 5

12:00-1:00pm  Guest Lecture/Luncheon*  
Henry T. Greely, Atty., Stanford  
“The End of Sex and the Future of Human Reproduction”  
COMpanions INVITED
Bays 4 & 5

1:15pm  Pictures - Guests – TBA
1:15-1:45pm  First Business Meeting - Bays 4 & 5
1:50pm  Pictures - Fellows – TBA
2:00-3:30pm  Papers 4-6  
Bays 4 & 5

3:30-4:00pm  Poster Presentations & Informal Discussion - **CC Lobby
Exhibits/Industry Representatives - Bay 3

4:00-4:30pm  Paper 7  
Bays 4 & 5

4:30-5:00pm  Lecture – Sarah Snell  
“#Me Too - What Does It Mean to Us”
Bays 4 & 5

5:00-6:00pm  Hospitality Suite* - Hagadone Suite
6:00-10:00pm  Caucus Receptions/Dinners -
Los Angeles - Kidd Island Bay Portland - Casco Bay
San Diego/AZ - Boardroom 3-4
San Francisco - North Cape Bay Seattle - Bay 6
9:00pm-11:00pm Hospitality Suite * - Hagadone Suite
FRIDAY, SEPTEMBER 28, 2018
6:30-7:50am  Attendees -Breakfast Buffet*
           Members & Guests - East **CC Lobby
           Guests - Bay 6
7:00-7:50am  Caucus Meetings
           Los Angeles—Boardroom 5ABC Portland - Casco Bay
           San Diego/AZ - Kidd Island Bay
San Francisco - North Cape Bay Seattle - Boardroom 6
8:00-10:00am  Companions' Breakfast* Buffet - East **CC Lobby/
          Bay 6
8:30-9:30am  Paper 8 & 9
          Bays 4 & 5
9:30-10:00am  Lecture - Mary Norton
          “How Advanced Genetic Technology Can Impact
          Preconception and Prenatal Screening”
          Bays 4 & 5
10:00-10:30am  Poster Presentations &
          Informal Discussion - **CC Lobby
Exhibits/Industry Representatives - Bay 3
10:30-11:20am  Presidential Choice Lecture
          John Rinehart
          “Big Data/AI and Its Impact on OB/Gyn”
          Bays 4 & 5
11:20-12:10pm  Keynote Lecture
          Harjinder Sandhu, PhD
          “Artificial Intelligence in Medicine: The Present and the
          Potential for the Future”
          Bays 4 & 5
12:10-12:30pm  Q&A for Presidential Choice & Keynote
          Addresses led by Dean V. Coonrod
          AFTERNOON FREE
1:30pm  Birding - TBA
1:45pm  Biking - meet at front entrance of hotel
TBA  Golf - TBA
1:00-5:00pm Hospitality Suite* Hagadone Suite
5:15pm Boat BOARDS for Hagadone Center
*Boarding at the Boardwalk Marina Dock

at the East side of the Resort

6:00pm Boat DEPARTS for Hagadone Center
6:30pm Dinner—Hagadone Center
7:00pm Boat Boards for resort
9:30pm Boat RETURNS to resort

SATURDAY, SEPTEMBER 29, 2018
6:00-7:00 Yoga - 5ABC
6:30-7:50am Attendees Breakfast Buffet*
   Members & Guests
   East **CC Lobby/ Casco/Kidd/N Cape
7:00-7:50am Membership Track Breakfast*
   Open to Caucus & Personal guests
   East **CC Lobby/Bay 6
6:30-10:00am Companions’ Breakfast Buffet*
   East **CC Lobby/Casco/Kidd/N Cape
8:00-9:00am Papers 10-11
   Bays 4 & 5
9:00-9:30am Lecture - Chirag Shah
   “Next Generation Sequencing of Tumors in Gynecologic Oncology: The Next Frontier”
9:30-10:30am James C. & Joan Caillouette Lecture
   PANEL - Millie Behera, Moderator; Julie Lamb, Richard Paulson, Aaron Caughey
   “Elective Egg Freezing as Family Planning”
   Bays 4 & 5
10:30-10:50am Poster Presentations &
   Informal Discussion - **CC Lobby
   Exhibits/Industry Representatives - Bay 3
10:50-12:20pm Paper 12 - 14
   Bays 4 & 5
12:30-1:00pm Second Business Meeting - Bays 4 & 5
1:15-4:00pm Second Board of Directors Meeting - North Cape Bay

AFTERNOON FREE
1:30-4:30pm  Hospitality Suite* - Hagadone Suite
5:15-6:15pm  Presidential Address - Casco/Kidd/N Cape
6:15-7:00pm  Presidential Reception*
              **CC Lobby
7:00-11:00pm Presidential Dinner/Dance
              Bays 4-6
10:00pm-12:00am Hospitality Suite* - Hagadone Suite

SUNDAY, SEPTEMBER 30, 2018
6:30-10:00am  Farewell Breakfast* - Bay 5

COMPANIONS ACTIVITIES
THURSDAY, SEPTEMBER 27, 2018
12:00-1:00pm  Guest Lecture/Luncheon*
              Henry T. Greely, Atty., Stanford
              “The End of Sex and the Future of Human Reproduction”
              Bays 4 & 5
FRIDAY, SEPTEMBER 28, 2018
10:00AM  Book Club - Hagadone Suite
          “All the Light We Cannot See” by Anthony Doerr

*INCLUDED IN REGISTRATION FEE
## LOCATION OF FUNCTIONS

### Academic/Social

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<tr>
<th>Day</th>
<th>Location</th>
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<td>Activities Day Arrival</td>
<td>Tues. Conference Center Bays “Registration”</td>
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<td>Activities Day</td>
<td>Wed.</td>
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<tr>
<td>Birding</td>
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<td>Biking</td>
<td>meet at front entrance of hotel TBA</td>
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<td>TBA</td>
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<td>Hiking</td>
<td>meet in main lobby of resort</td>
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<td>Registration</td>
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<td>Board of Directors’ Meeting</td>
<td>Wed North Cape Bay</td>
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<td>Welcome Reception</td>
<td>Wed Lakeview Terrace</td>
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<td>Buffet Dinner</td>
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<td>New Members Gathering</td>
<td>Wed Club Coeur d’Alene*</td>
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<td>Yoga</td>
<td>Th/Sat Boardroom 5ABC</td>
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<td>Breakfast Buffet</td>
<td>Th Conference Center Lobby / Casco/Kidd/North Cape</td>
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<td>ALL ATTENDEES</td>
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<td>Combined Luncheon</td>
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<td>Buffet</td>
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<td>Lecture</td>
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*7th Floor - next to Beverly’s Restaurant*
## LOCATION OF FUNCTIONS

### Academic/Social

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<th>Event/Location</th>
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<tr>
<td>Scientific Sessions</td>
<td>Th,F,S</td>
<td>Bays 4 &amp; 5</td>
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<tr>
<td>Poster Presentations &amp; Informal Discussion</td>
<td>Th,F,S</td>
<td>Conference Center Lobby</td>
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<td>Exhibits/Industry Reps</td>
<td>Th,F,S</td>
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<tr>
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<td>W,Th,F,S</td>
<td>Hagadone Suite</td>
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<td>Seattle</td>
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## LOCATION OF FUNCTIONS

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<td>Biking</td>
<td>Fri. meet at front entrance of hotel</td>
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<td>Fri. Boardwalk - Marina Deck</td>
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CONTRIBUTORS TO THE MEMORIAL FUND

Frederick Ambrose
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Roy Steinke
Vera Stucky
Tina Tomsen
John Williams, III
THOSE HONORED BY CONTRIBUTORS

IN MEMORY OF

All Who Died
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IN HONOR OF

Donald Barford
Jack Enbom
Bob Israel
Fung Lam

PUBLIC DONATIONS IN MEMORY OF JAMES M. & RITA MAHARRY

Susan & Erik Magnuson
Mary Wainscott
ALPHABETICAL LISTING OF PRESENTERS/ PRESENTATIONS

Barkley, Joel - Society Guest
Development of an Intrauterine Ultrasound and Photoacoustic Imaging Probe for Evaluation of Intracavitary Lesions
Thursday, September 27; 8:30-9:00am - Pg. 64

Behera, Millie - Fellow
PANEL DISCUSSION - Elective Egg Freezing as Family Planning
JAMES C. & JOAN CAILLOUETTE LECTURE
Saturday, September 29; 9:30-10:30am - Pg. 96

Benoit, Michele - Society Guest
Concordance of Pelvic Mass Laterality: from Preoperative Imaging to Surgical Pathologic Findings--Who Owns The Consent?
Saturday, September 29; 8:00-8:30am - Pg. 91

Cabrera, Izumi - Society Guest
Pregnancy Outcomes of Emergency Cerclage Placement with Protruding Membranes
Saturday, September 29; 8:30-9:00am - Pg. 93

Card, Amy - Society Guest
Probiotics to Prevent Antibiotic-Associated Diarrhea and Clostridium Difficile Infection
Thursday, September 27; 10:25-10:55am - Pg. 66

Caughey, Aaron - Fellow
PANEL DISCUSSION - Elective Egg Freezing as Family Planning
JAMES C. & JOAN CAILLOUETTE LECTURE
Saturday, September 29; 9:30-10:30am - Pg. 96

Fegale, Stephanie - Guest of the Board of Directors
Birth Control Use in the Refugee Population of Phoenix AZ: A Retrospective Study
Thursday, September 27; 8:00-8:30am - Pg. 51

Furukawa, Abby - Society Guest
Cumulative Deceleration Area and Prediction of Fetal Metabolic Acidosis
Saturday, September 29; 11:20-11:50am - Pg. 99
Gonzalez-Velez, Juan - Fellow
Developing a Clinical Protocol for the Treatment of Alpha Thalassemia Major
Thursday, September 27; 2:00-2:30pm - Pg. 72

Greely, Atty Henry - Guest of the Board of Directors
The End of Sex and the Future of Human Reproduction
Thursday, September 27; 12:00-1:00pm - Pg. 71

Johnson, Brittney A. - Guest of the Board of Directors
Hyperemesis Gravidarum and Marijuana Use, and A Pilot Study Assessing Outcomes of Infants Exposed to Marijuana In-Utero
Thursday, September 27; 8:00-8:30am - Pg. 53

Korman, Laura - Society Guest
Acupuncture and Intra-uterine Device Insertion-related Pain and Anxiety - A Retrospective Chart Review
Thursday, September 27; 2:30-3:00pm - Pg. 74

Lachica, Ruben - Guest of the Board of Directors
The Reliability of Fundal Height Measurements in Obese Pregnant Women
Thursday, September 27; 8:00-8:30am - Pg. 55

Lamb, Julie - Fellow
PANEL DISCUSSION - Elective Egg Freezing as Family Planning
JAMES C. & JOAN CAILLOUETTE LECTURE
Saturday, September 29; 9:30-10:30am - Pg. 96

Leaverton, Amie - Guest of the Board of Directors
Provider Level Barriers to Immediate Postpartum Long Acting Reversible Contraception Provision in Care Settings Across Oregon
Thursday, September 27; 8:00-8:30am - Pg. 56

Main, Elliott - Fellow
PANEL DISCUSSION - Perinatal Collaborative Programs on the West Coast and Beyond
Thursday, September 27; 9:00-10:00am - Pg. 65

Mercer Laura - Society Guest
The Use of Standardized Patients to Increase Medical Student Awareness of and Confidence in Screening for Human Trafficking
Thursday, September 27; 3:00-3:30pm - Pg. 76
Nakamaru, Nicole - Guest of the Board of Directors
Prevalence and Perceived Harms of Marijuana Use in Pregnancy
Thursday, September 27; 8:00-8:30am - Pg. 58

Nelson, Anita - Fellow
Common Perceptions of Relative Risks of Oral Contraceptives versus Pregnancy
Thursday, September 27; 11:25-11:50am - Pg. 69

Nguyen, Michelle - Guest of the Board of Directors
Applying A Prediction Model for Vaginal Birth After Cesarean to A Predominantly Hispanic Inner-City Population
Thursday, September 27; 8:00-8:30am - Pg. 59

Norton, Mary - Fellow
How Advanced Genetic Technology Can Impact Preconception and Prenatal Screening
Friday, September 28; 9:30-10:00am - Pg. 89

Paek, Bettina - Fellow
Fetal Transfusion for Severe Anemia of Survivors of Co Twin/Triplet Demise in Monochorionic Multiples: Lessons Learned
Saturday, September 29; 10:50-11:20am - Pg. 97

Paulson, Richard - Fellow
PANEL DISCUSSION - Elective Egg Freezing as Family Planning
JAMES C. & JOAN CAILLOUETTE LECTURE
Saturday, September 29; 9:30-10:30am - Pg. 96

Reed, Susan - Fellow
Menopause Care - Do You Know the Latest?
Thursday, September 27; 10:55-11:25am - Pg. 68

Reisner, Dale - Fellow
PANEL DISCUSSION - Perinatal Collaborative Programs on the West Coast and Beyond
Thursday, September 27; 9:00-10:00am - Pg. 65

Rinehart, John - Guest of the Board of Directors
Big Data/AI and Its Impact on OB/Gyn
PRESIDENTIAL CHOICE LECTURE
Friday, September 28; 10:30-11:30am - Pg. 90
Sandhu, Harjinder - Guest of the Board of Directors
Artificial Intelligence in Medicine: the Present and the Potential for the Future
KEYNOTE LECTURE
Friday, September 28; 11:30am-12:30pm - Pg. 90

Shaffer, Lishiana - Society Guest
A New Era of Gender Sensitive Care: The Birth of a Comprehensive University Transgender Healthcare Program and A Gynecology Specialty Clinic
Thursday, September 27; 4:00-4:30pm - Pg. 78

Shah, Chirag - Fellow
Next Generation Sequencing of Tumors in Gynecologic Oncology: The Next Frontier
Saturday, September 29; 9:00-9:30 - Pg. 95

Shields, Laurence - Society Guest
PANEL DISCUSSION - Perinatal Collaborative Programs on the West Coast and Beyond
Thursday, September 27; 9:00-10:00am - Pg. 64

Snell, Sarah - Fellow
#Me Too: What Does It Mean to US?
Thursday, September 27; 4:30-5:00pm - Pg. 80

Tesfalul, Martha - Guest of the Board of Directors
When Less Is More: Decreasing the Amount of Opioids Prescribed After Cesarean Section
Thursday, September 27; 8:00-8:30am - Pg. 61

Tomlinson, Mark - Fellow
PANEL DISCUSSION - Perinatal Collaborative Programs on the West Coast and Beyond
Thursday, September 27; 9:00-10:00am - Pg. 65

Towner, Dena - Fellow
Utilization of Abdominal Circumference Measurement in Fetal Biometry in the Late Second and Early Third Trimesters in the Prediction of Small for Gestational Age Infants
Friday, September 28; 8:30-9:00am - Pg. 83

Wellenstein, Whitney - Guest of the Board of Directors
Characteristics and Health Care Needs of Gender Dysphoric Pediatric Patients
Friday, September 28; 8:00-8:30am - Pg. 81
Williams, III, John - Fellow
Transvaginal Versus Transabdominal Cervical Length Screening for Prediction of Preterm Delivery
Saturday, September 29; 11:50-12:20pm - Pg. 101

Wohlmuth, Cinna - Fellow
Depression Screening and Access to Mental Health Care in an Inner-City OBGYN Practice: Opportunities in Social Determinants of Health
Friday, September 28; 9:00-9:30am - Pg. 86
2018 PROGRAM
THURSDAY:  6:30-8:30am        SEPTEMBER 27, 2018
6:00-7:00am        Yoga - Boardroom 5ABC
6:30am          Breakfast Buffet
               Members & Guests - East Conference Center/
               Casco/Kidd Island/N Cape

FIRST SCIENTIFIC SESSION
7:45-8:00am  Opening Remarks
8:00am

ORAL SYNOPSIS OF
TED ADAMS SCHOLARSHIP AWARD
POSTER PRESENTATIONS

P-01.
BIRTH CONTROL USE IN THE REFUGEE
POPULATION OF PHOENIX AZ: A
RETROSPECTIVE STUDY
C. Johnson-Agbakwu , S. H. Gieszl

Stephanie Fegale, Phoenix, Arizona
(By Invitation)

PURPOSE: Family planning enables a woman to have the
utmost control over her sexual and reproductive health.
This is relevant in the US due to the increasing number of
refugees that are relocating and settling in the US. In Ari-
izona specifically, the refugee population has increased no-
ably. The purpose of this study is to evaluate the rate of
contraceptive use among refugee women in Phoenix AZ
which was hypothesized to be 40 +/- 5% by the research
team, the type of birth control used per refugee subgroup
and to evaluate if the length of time in the US affects the
birth control method (BCM) postpartum.

METHODS: This is a retrospective cross-sectional study
of refugee women (n=191) receiving care at the Refugee
Women’s Health Clinic (RWHC) at Maricopa Medical
Center in Phoenix, AZ from 2008-2014. A Health Insur-
ance Portability and Accountability Act (HIPAA)-
compliant data platform was developed using Survey Monkey©18 which created a 43-item patient-specific data collection form hyperlinked to a randomized unique identifier. Data was collected from the EPIC EMR system using both the outpatient and inpatient system specifically for the Refugee Women’s Health Clinic. Data was collected by research assistants and systematically entered into the data platform. The data was run through a SAS system and FREQ Procedure for evaluation and analysis. Inclusion criteria included being a refugee woman of reproductive age with established prenatal care at RWHC. The data included desired BCM antenatally and postpartum by refugee population as well as the length of time in the US and ethnic background of the women. Data retrieval included also included refugee status, education status, age, gravity, parity, and country of origin.

RESULTS: Our preliminary findings indicate the prevalence of postpartum birth control use in this population is 53.29%. The majority of this population using a known method of birth control postpartum was African, followed by Asian and Middle Eastern, with the combined oral contraceptives being the most common followed closely by the intrauterine device; which is a stark difference to the antenatal desired preference for the intrauterine device over combined oral contraceptives. The study also revealed that the length of time in the US was inversely proportional to the rate of birth control use in this refugee population.

CONCLUSION: Our findings indicate that contraceptive use in this population is greater than initially thought and is mostly used by African refugees. In addition, between the antenatal state and postpartum state there is a shift in the desire for birth control and type used which may be related to the length of stay in the US. This information is valuable in understanding the preferences of our patients and will enable us to direct our focus for future studies in family planning education to these specific groups. Data collection is ongoing as we hope to conduct more analyses on the 1,400 patients in the RWHC.
P-02.
HYPEREMESIS GRAVIDARUM AND MARIJUANA USE, AND A PILOT STUDY ASSESSING OUTCOMES OF INFANTS EXPOSED TO MARIJUANA IN-UTERO
M. Fezjo, E. Sasso, B. Nguyen, V. Cortessis, P. M. Mullin

Brittney A. Johnson, Los Angeles, California (By Invitation)

BACKGROUND: Approximately 90% of all pregnancies are complicated by nausea and vomiting of pregnancy (NVP) with 3% experiencing the most severe form, hyperemesis gravidarum (HG). Early recognition and treatment of HG is important, as it is the most common indication for hospital admission during early pregnancy. Generally, as the disease progresses it becomes more difficult to control, causing many women to seek alternative therapies, including marijuana. Research is currently underway to examine the potential use of the drug as treatment for HG. However, there remains significant concerns regarding use of marijuana during pregnancy and the possible association with poor pregnancy outcomes.

OBJECTIVE: This study sought to evaluate the frequency of marijuana use as an alternative therapy for HG, the perceived effectiveness of marijuana compared to traditional and non-traditional therapies for HG, and frequency of preterm labor or low birthweight among women that use marijuana for HG compared to those without use. The study also compared neurodevelopmental outcomes of infants exposed and unexposed to marijuana in-utero.

DESIGN: A nationwide online survey was implemented via the Hyperemesis Research (HER) Foundation website, hyperemesis.org. Participants diagnosed with HG completed an online survey with multiple questions regarding maternal/family background, therapies used, effectiveness of each therapy on a 3-point Likert scale, and outcomes for
each pregnancy. These women also recruited another non-related acquaintance without HG, who had at least two pregnancies that went past 27 weeks, to also complete the survey. Each pregnancy was then categorized as HG versus normal NVP, as well as any marijuana use versus no marijuana use. Univariate analysis was used to assess frequency of responses as simple proportions and medians, according to type of pregnancy.

RESULTS: The 1233 participants who completed the survey reported a total of 3,198 pregnancies, and 2,486 live births. Of the 1233 participants, 46 women reported marijuana use during pregnancy, with 93% of those women reporting a history of HG. Among HG therapies marijuana appeared to be considered more effective than all other therapies during the first trimester and remained effective throughout all three trimesters. Women with HG had a higher rate of preterm labor regardless of marijuana use (~7-8% versus 3%). A higher rate of pregnancy loss (<20 weeks) was seen with any type of marijuana use. There were 76 live births with marijuana exposure, with no reported increase in frequency of neurodevelopmental disorders among infants exposed to marijuana in-utero when compared to unexposed infants.

CONCLUSION: Based on societal trends towards organic remedies, changing laws regarding marijuana consumption, and the commonly held public opinion that marijuana is a natural herb associated with relatively low health risk, the question is not whether pregnant women are using marijuana for NVP, but actually how many have been self-medicating. While our results indicate marijuana is effective in treating symptoms of HG and is associated with a higher miscarriage rate, prospective data is needed to further elucidate the effects marijuana has on pregnancy and neonatal outcomes.
OBJECTIVE: Fundal height measurements are used in prenatal care as a method to screen for appropriate fetal growth and to estimate gestational age (GA). The utility of fundal height measurement depends on the ability of a practitioner to obtain an objective measurement however, several studies have shown that these measurements can have poor reproducibility and are easily biased. Obesity likely impacts the performance of the measurement due to the presence of excessive abdominal fat. Here, we assess the reliability and accuracy of the fundal height measurement in a population of obese women with normal-sized fetuses.

DESIGN: Between October 2016 and January 2018, obese women (body mass index [BMI] >30 kg/m²) with optimal dating and a normal estimated fetal weight by ultrasound received a “blinded” and “unblinded” fundal height measurement at a single prenatal visit with a GA between 20-37 weeks. Blinded measurements were performed using an unmarked tape measure by a provider who did not know the patient’s GA. A measurement was classified as “accurate” if it was within ±3cm of the GA. McNemar tests and Cohen’s Kappa statistics were used to assess agreement between paired unblinded and blinded measurements. Multivariate logistic regression analysis was used to determine the effect of BMI and GA on obtaining an accurate fundal height measurement.

RESULTS: For the 70 study patients, 35 (50.0%) of the blinded and 58 (82.9%) of the unblinded fundal height measurements were accurate. Only 41 (58.6%) of these paired measurements were concordant (p<0.0001), with
Kappa = 0.171 (-0.003 to + 0.345). Concordance was highly dependent on both GA and obesity class. For the blinded measurements, women with class I/II obesity were > 6 times more likely than women with class III obesity to have an accurate measurement (OR 6.33, 95%CI 2.49-27.03, p=0.0126), when controlling for GA ≥ 30 weeks (OR 4.08, 95%CI 1.42-11.76, p = 0.0092). For the unblinded measurements, women with class I/II obesity were > 8 times more likely than women with class III obesity to have an accurate measurement (OR 8.77, 95%CI 2.23-34.48, p = 0.0019); GA was non-contributory.

**CONCLUSIONS:** Fundal height measurements in obese women with normal sized fetuses were neither reliable nor accurate, and were subject to potential measurement bias by the provider being knowledgeable of the GA. Measurement accuracy was substantially affected by the patient’s obesity class and GA. Alternate modalities of assessing fetal growth and GA such as ultrasound should be utilized in this population, however further studies are needed to determine optimal protocols for performing these assessments.

**P-04. PROVIDER LEVEL BARRIERS TO IMMEDIATE POSTPARTUM LONG ACTING REVERSIBLE CONTRACEPTION PROVISION IN CARE SETTINGS ACROSS OREGON**

S. Williams, M. I. Rodriguez

*Amie Leaverton, Portland, Oregon (By Invitation)*

**OBJECTIVES:** Oregon implemented policy allowing Medicaid reimbursement for immediate postpartum long acting reversible contraception (IPP LARC). Obstetric providers play a key role in ensuring access to IPP LARC in Oregon, but little is known about their intent to provide IPP LARC. We sought to identify interest, knowledge, and perceived barriers in providing IPP LARC in Oregon, and assess whether length in practice was associated with provision of IPP LARC.
**DESIGN:** We conducted a cross-sectional survey of obstetric providers from Oregon. We used the email list for attendees at a women’s health conference to obtain a convenience sample of obstetric providers. The survey was administered 9 months after the policy change occurred. We analyzed responses to assess IPP LARC knowledge, intent to provide, and perception of barriers to provision. We utilized descriptive characteristics to evaluate our population and assess response by length of practice (<10 years vs ≥10 years). A logistic regression model was used to examine the association between years in practice, training type, and experience providing IPP LARC.

**RESULTS:** 84 providers responded and met inclusion criteria (23% response rate). The majority of providers were female and had spent <10 years in practice. Approximately half were OBGyn providers. A small percentage of respondents (12%) identified as working at a rural hospital, and none of these providers had experience placing IPP LARC. The majority (55%) of respondents had not placed IPP LARC. The vast majority (79%) of providers were interested in providing IPP LARC and agreed (82%) it was an acceptable form of contraception. Providers with less than 10 years’ experience (OR 8.05, 95% CI 1.4, 46.2) or OBGyn training (OR 23.3, 95% CI 2.57,210.6) were significantly more likely to have provided IPP LARC. Providers identified reliable follow up at the 6 week visit, increased expulsion rate compared to interval placement and lack of systemic support at their hospital as the top three barriers to provision.

**CONCLUSION:** Providers are interested in IPP LARC provision but identify hospital systems, increased expulsion and the fact that their patients reliably follow up at the 6 week visit as barriers. Providers with more than 10 years experience and family medicine or midwifery training are less likely to have experience providing IPP LARC. Statewide implementation may require targeted outreach to these populations.
OBJECTIVE: As of 2018, twenty-nine states have enacted state laws protecting comprehensive medical marijuana programs. Of those, nine states, including California, protect the right to possess 1 ounce of marijuana for recreational purposes. Not surprisingly, marijuana is the most commonly used "illicit" drug during pregnancy, with reported use varying from 3-34% depending on the population. Early studies have shown modest, yet significant, increases in the risk of stillbirth and adverse neurocognitive function associated with in utero exposure to cannabinoids. The Centers for Disease Control and Prevention and the American Congress of Obstetricians and Gynecologists recommend that pregnant women abstain from marijuana. Despite this, marijuana use does not decrease as significantly as other substances throughout pregnancy for unclear reasons. This study aims to assess the prevalence of marijuana use amongst women receiving care at Los Angeles County Hospital and to understands patients’ attitudes and beliefs surrounding its use.

DESIGN: This is a survey based, cross sectional study. An anonymous survey was distributed to pregnant and non-pregnant women age 14 years or older receiving inpatient and ambulatory care at Los Angeles County Hospital. The survey collected general demographic information, including disclosure of marijuana use during pregnancy. Likert scales were utilized to assess level of agreement with several perception statements. Results of the survey have been analyzed and reported descriptively.

RESULTS: A total of 250 patients completed the survey, 123 patients were pregnant. Age ranged from 14 to 72 years old. In the total population surveyed, 20.8% reported
marijuana use outside of pregnancy (defined as “less than monthly” or more), 9.3% reported marijuana use during any prior pregnancy. The rate of tobacco and alcohol use during any prior pregnancy was 2.8% and 4%, respectively. 7.3% of pregnant patients reported use in their current pregnancy. Median scores of perceived harm of marijuana was lower compared to tobacco and alcohol, across all substance user statuses. Currently pregnant marijuana users believed that marijuana can help for nausea/vomiting (64.3%), sleep (46.4%), anxiety (50%), and socializing/fun (10.7%).

**CONCLUSIONS:** The prevalence of marijuana use in the pregnant population at Los Angeles County Hospital is similar or higher than many large demographic studies. One plausible reason for persistent marijuana use is that the substance is not viewed as harmful, unlike tobacco and alcohol. Additionally, pregnant patients may use marijuana for medical benefits or symptom relief rather than pure recreation. Counseling efforts may be best focused on addressing these symptoms with safe and effective alternatives and educating patients of known risks.

**P-06.**
**APPLYING A PREDICTION MODEL FOR VAGINAL BIRTH AFTER CESAREAN TO A PREDOMINANTLY HISPANIC INNER-CITY POPULATION**
T. M. Hayes-Bautista, P. Hsu, C. Bragg, I. Chopin, K. Shaw

**Michelle Nguyen,** Los Angeles, California
*By Invitation*

**OBJECTIVE:** To compare predicted outcomes of trial of labor after cesarean (TOLAC) according to the Maternal-Fetal Medicine Units (MFMU) Network prediction model with actual outcomes in a predominantly Hispanic inner-city population.
BACKGROUND: In the 2017 National Center for Health Statistics (NCHS) report, *Health, United States, 2016*, Hispanic women had far better birth outcomes (low birth weight, infant mortality, etc.) than either Non-Hispanic white or African American. Hispanic ethnicity may have unexpectedly positive effects on other aspects of the birthing process, including Trial of Labor After Cesarean (TOLAC.) Grobman et al. (2007/2009) developed a model that predicts the chance of successful vaginal birth after cesarean (VBAC) from a Maternal-Fetal Medicine Units Network (MFMU) sample that included 20% Hispanics. Maykin et al. (2017) validated Grobman’s model on a sample that was 40% Hispanic, but did not stratify TOLAC predictions by race/ethnicity.

DESIGN: We performed a retrospective study of 612 women who underwent TOLAC between January 1, 2013 and December 31, 2016 at a community teaching hospital in inner-city Los Angeles with an overall patient population of 95.1% Hispanics (and 90.5% of Mexican ancestry). For each patient, the predicted TOLAC success was calculated using the MFMU VBAC calculator. Following the Maykin et al. study (2017), our sample was then stratified into three groups based on predicted probability of success (low <35%, moderate 35-65%, and high >65%), and the predicted versus actual outcomes for each group were then compared.

RESULTS: The VBAC success rate of patients in our sample was higher than reported in each of Maykin’s three success groups. Nearly two-third (63%) of patients categorized as “low success, (<35%)” by the MFMU calculator had a successful TOLAC.

CONCLUSION: This descriptive study is the first step in understanding the management of TOLAC in a Hispanic population. The TOLAC success rate in our study
was accurately predicted in the groups with a calculated probability of >65%, but underestimated in the groups with a calculated low and moderate probability of success. Attempting TOLAC despite a low predicted probability may still be a reasonable decision for patients who have been appropriately counseled and are highly motivated to achieve VBAC. The surprisingly positive results in this Hispanic population warrant more rigorous research in the near future.

P-07.
WHEN LESS IS MORE: DECREASING THE AMOUNT OF OPIOIDS PRESCRIBED AFTER CESAREAN SECTION

Martha Tesfalul, San Francisco, California
(By Invitation)

OBJECTIVE: Recent studies on opioid use after cesarean sections for postoperative pain have revealed that patients are often prescribed significantly more medication than they require or would elect to receive with support of decision aids. The objective of our resident quality improvement incentive project was to decrease the percentage of discharge prescriptions of greater than 150 morphine milligram equivalents (MME) given to patients who underwent a cesarean section at a single public institution from a baseline of 23% to 15% or lower.

DESIGN: We developed this project collaboratively with Obstetrics and Gynecology (OB/GYN) physicians and pharmacists at Zuckerberg San Francisco General Hospital (ZSFG) Birth Center. We utilized a multimodal approach to clinician education through periodic written reminders to OB/GYN residents and attendings as well as signage near prescription pads with recommendations for discharge quantities of various opioid medications that equaled 150 MME. We planned to perform monthly audits of discharge
opioid prescriptions from 11/2017 to 6/2018. MME was calculated for each prescription. We performed statistical analysis using summary statistics, using Fisher’s exact tests for comparisons pre- and post-intervention. Modest financial incentive for meeting the project’s end-of-year target was offered by ZSFG to each OB/GYN resident.

RESULTS: A total of 117 patients were delivered by cesarean section from 11/2017 to 4/2018. Approximately 55% (n=64) received opioid prescriptions upon discharge with only 4% (n=5) receiving more than 150 MME and 45% (n=53) were not discharged on any opioids. When comparing the baseline data to the post-intervention data from 3/2017 to 8/2017, there was a statistically significant difference in the amount of MME given at discharge with less being prescribed in the post-intervention group (p<0.005).

CONCLUSION: Use of an evidence-based prescription target, multimodal educational approach and financial incentive achieved a significant reduction in the percentage of women discharged with more than 150 MME after cesarean sections. Reduction of amount of opioids prescribed on discharge is feasible through multidisciplinary quality improvement projects and may help to reduce overuse and misuse of opioids post-operatively. Future patient-centered work is underway evaluating patient satisfaction with pain control after discharge with 150 MME of opioids.
THURSDAY:  8:30-10:25am SEPTEMBER 27, 2018
O-01.
DEVELOPMENT OF AN INTRAUTERINE
ULTRASOUND AND PHOTOACOUSTIC
IMAGING PROBE FOR EVALUATION OF
INTRACAVITARY LESIONS
C. Miranda, B. S. Smith

Joel Barkley, Phoenix, Arizona
(By Invitation)

OBJECTIVE: The purpose of this study is to develop
a miniature probe to characterize intracavitary endome-
trial lesions using ultrasound and photoacoustic imag-
ing techniques.

DESIGN: A prototype was developed using a mini-
aturized ultrasound transducer, optical fiber, and reflect-
ning lens. The device was retrofitted into a typical endo-
metrial biopsy pipelle. Rotational and axial movement
are performed using a hollow shaft motor for 360-
dergree image acquisition along the axis of the probe. Image
reconstruction is done in real time using a desk-
top computer. Ultrasound imaging phantoms and pig
uteri were used as models during imaging development.
Following this proof of concept and development, fur-
ther efforts have been aimed at making a stand-alone
portable system for study of ex-vivo human uteri.

RESULTS: Peak ultrasound and photoacoustic signal
frequencies were used to calibrate imaging reconstruc-
tion using a reference ultrasound phantom. Additional
device testing and adjustments were made using ex-
vivo pig uteri. The instrument was able to reliably re-
construct topographical sections and identify injected
blood samples within the tissue. Initial testing is being
carried out using a 527 nm diode pumped Nd:YLF
(Quantum Light Instruments) nanosecond pulsed laser.
CONCLUSION: This study outlines the initial development of a new imaging device which has the potential to provide point of care diagnostics for women with endometrial pathology.

Formal Discussant: Malcolm Munro, Los Angeles, California

9:00-10:00am
PANEL DISCUSSION

PERINATAL COLLABORATIVE PROGRAMS ON THE WEST COAST AND BEYOND

Elliott Main, Moderator, San Francisco, California
Dale Reisner, Seattle Washington
Mark Tomlinson, Portland, Oregon
Larry Shields, Irvine, California

10:00-10:25am - Poster Presentations/Informal Discussion
Exhibits/Industry Reps
OBJECTIVE: To evaluate whether a new department practice of giving probiotics along with antibiotics to obstetric inpatients decreased the rate of antibiotic-associated diarrhea (AAD) and Clostridium difficile infection (CDI).

DESIGN: We conducted a natural experiment to examine the impact of a probiotic program in obstetric inpatients. We compared the 12 months before and after the February 22, 2016, probiotic program debut. To capture cases of AAD and CDI, all charts with an order for Clostridium difficile (C diff) testing, an order for contact isolation, a diagnosis of diarrhea, a diagnosis of C diff, or a readmission within 60 days were identified. These cases were cross referenced with the C diff testing records kept by our Infection Prevention Department. We compared rates using the chi-squared test and used a p-value of 0.05 to indicate statistical significance.

RESULTS: Of 3643 obstetric admissions prior to the change, there were 23 cases of diarrhea including 8 cases of AAD and three cases of CDI. Of 3922 admissions after the change, 15 women had diarrhea, 7 of those had AAD, and one had CDI. Though the overall rates of diarrhea were lower (6.31/1000 vs 2.16/1000), this difference was not statistically significant (p=0.13). Antibiotics were given to 41% of patients before and 40% of patients after the change. Uptake of
the program was high as probiotic orders accompanying antibiotic orders rose from <0.5% to 75% following implementation. Age, parity, race, rate of obesity, and delivery type were similar between the two groups, but drug use was less common after the change (9.9% vs 8.2%, p=0.01). And overall, nulliparous women were more likely to receive probiotics compared to parous women (41% vs 37%, p=0.037).

**CONCLUSION:** A substantial number of obstetric inpatients receive antibiotics, at least 40% in our study population. Though the decrease in diarrhea and CDI seen after implementation of a probiotic protocol in these patients did not reach statistical significance, this is an important area for further study as the rates of CDI continue to increase.

**Formal Discussant:** Susan Reed, Seattle, Washington
THURSDAY: 10:55-11:25am SEPTEMBER 27, 2018

SPECIAL LECTURE

MENOPAUSE CARE - DO YOU KNOW THE LATEST?

Susan Reed, Seattle, Washington
OBJECTIVE(S): Multiple surveys demonstrate that the most of American women are concerned about the safety of oral contraceptives, which may impact on their commitment to consistent use. Most clinicians are comfortable prescribing birth control pills to eligible candidates because “The pill is safer than pregnancy.” We were curious whether women were aware of this tradeoff.

STUDY DESIGN: In several recent surveys of men and women including studies that investigated women perceptions of contraceptive efficacy, as well as those that studied people’s awareness of the need for preconception care, reproductive life planning and health risks of pregnancy, we have asked participants “Which do you think is more hazardous to a woman’s health -- oral contraceptives or pregnancy?” We have consolidated those responses and evaluated the impacts that education, age, gender, pregnancy and language may have on their knowledge.

RESULTS: In total, 1,839 study participants were posed that question, 72 could not decide; 1,017 rated pills; 565 said pregnancy; 185 said both. In every survey, the majority rated oral contraceptives as being at least as hazardous to a woman’s health as pregnancy.

Among younger (< 30 years) vs older (≥ 30 years) people, the percent rating pills at least as hazardous was 67.6% vs 68.5%. Education was not helpful: the percentages for pill were 69.3% for those with no college vs 67.4% of those
with at least some college. Neither was gender enlightening; 67% of women and 81.6% of men chose pills. Language did not change their answers as 66.8% of English-speakers and 74.4% of Spanish-speakers answered that the pill was at least as hazardous as pregnancy. 

Even pregnant women and their partners rated pills more hazardous than pregnancy (75% and 81.6%).

**CONCLUSION:** The prevailing perception that pills are hazardous has significant implications for women, physicians and society. Women who are concerned about the safety of the pills turn to less effective methods. Women underestimate the health risks of pregnancy and do not seek preconception care. When complications arise in pregnancy, they are unexpected by the woman and may impact on professional liability. Mis-trust of pills that physicians prescribe may diminish a patient’s trust in her doctor.

**Formal Discussant: Brian Shaffer**, Portland, Oregon
THURSDAY: 12:00-1:50pm  SEPTEMBER 27, 2018

GUEST LECTURE

THE END OF SEX AND THE FUTURE OF HUMAN REPRODUCTION

Henry Greely, Atty, Stanford, California
(By Invitation)

BUFFET LUNCHEON—ALL INVITED

1:00-1:45pm  First Business Meeting

1:15pm  Photos - Guests - TBA

1:50pm  Photos - Fellows – TBA
OBJECTIVE: To design a clinical protocol aimed at improving outcomes including survival and long term neurocognitive development for fetuses affected with alpha thalassemia major (ATM).

STUDY DESIGN: We reviewed the literature on in utero management of ATM and the current clinical practices for intrauterine transfusions (IUTs). We determined that IUTs not only improved survival but also lead to favorable neurological outcomes. Encouraged by the results we developed a clinical protocol for administering IUTs to this subset of patients. In tandem we also submitted an Investigational New Drug Protocol to the Federal Drug Administration for an injection of stem cells during one of the scheduled IUTs. A final step of submitting a research protocol to the Institutional Review Board at the University of California San Francisco led to the approval for a clinical trial investigating the use of IUTs combined with maternal stem cell infusion as a potential treatment for ATM.

RESULTS: The steps outlined in the study design were successfully executed and resulted in the reversal of hydrops fetalis in our first case. At the time of each transfusion, we assessed the fetal opening and closing hematocrit, percentage of hemoglobin Barts, hematocrit of transfused blood, and total volume transfused. These variables will be used to continue to refine our protocol for this disease. We followed fetal well-being with ultrasound and echocardiogram every three weeks until delivery and monitored for any adverse reactions to the therapy.
CONCLUSIONS: Intrauterine transfusions increase the chance of survival in fetus affected by alpha thalassemia major and should be discussed as an option during prenatal counseling.

Formal Discussant: Christopher O'Reilly-Green, Modesto, California
OBJECTIVE: To compare women who added acupuncture prior to Intra-Uterine Device (IUD) insertion with no acupuncture and assess difference in pain, anxiety, and satisfaction.

DESIGN: We reviewed patient charts of women from a single community clinic who received IUD insertions. Women planning an IUD insertion were offered multiple options for procedural pain or anxiety relief. Options included: ibuprofen, alprazolam, hydrocodone-acetaminophen, misoprostol and acupuncture. If any medications were planned, these were to be taken a minimum of 30 – 60 minutes prior to the IUD insertion. Acupuncture was offered and provided onsite immediately prior to the IUD insertion appointment. Women were asked to complete a pain scale, 100-point Visual Analog Scale (VAS); Spielberger State-Trait Anxiety Inventory Y-6 (STAI-6); and two questions regarding satisfaction. The questionnaires were completed after the IUD procedure. One of two acupuncturists provided all acupuncture treatments, and the same physician performed all IUD insertions.

RESULTS: Forty charts from Jan to May 2018 were reviewed. Acupuncture was performed on 8 women (Acu) and 32 women did not receive acupuncture (No Acu). Women in the Acu group reported a modest reduction in pain with IUD insertion compared with the No Acu group (40.4 ± 15.2 vs 49.8 ± 22.7, p=0.18), but it was not statistically significant. There was no difference in total STAI-6...
scores between groups (p=0.72). In STAI-6 specific domains that trended toward significance: the Acu group reported feeling calmer (p=0.07), less tense (p=0.07), and less upset (p=0.06) compared with the No Acu group.

**CONCLUSIONS:** IUD insertion procedures and adjuvant acupuncture were well accepted and appreciated by the patients who chose to take advantage. Small numbers limit our interpretation, but the results signal acupuncture may provide benefit to patients undergoing an IUD insertion in an adequately powered and controlled study.

Acknowledgement: Support for this research was provided by the Portland Interhospital Physicians Association.

**Formal Discussant:** Jill Foley, San Francisco, California
OBJECTIVE: Human trafficking is a growing problem, but is often unrecognized. Victims are frequently kept in isolation with little freedom and autonomy, limiting their access to resources and recovery. Skilled health care providers can be the first to intervene on the victim’s behalf. A healthcare provider’s knowledge of the signs/symptoms of trafficking, the use of skillful communication techniques, and a familiarity of the patient’s rights and resources are vital. Minimal literature exists regarding the evaluation of effective interventions to increase the ability of health care providers to screen for trafficking.

DESIGN: Third year medical students were assigned a web-based independent learning module about human trafficking, its signs and symptoms, intervention strategies, and resources. Each student then participated in a simulation with a standardized patient (SP) who was a victim of trafficking, a detail the student needed to uncover with history taking. Finally, students completed reflective writing, received individual feedback from the SP, and participated in a group faculty/peer debrief session. To evaluate this curriculum, students were given pre- and post-intervention surveys. Their reflective writing assignments were qualitatively analyzed by a committee of three, with agreement by consensus until thematic saturation was reached.

RESULTS: Comparing pre-and post-intervention surveys
of medical students identified a significant rise in confidence both in their ability to identify and also support victims of sex trafficking. In reflective essays, dominant themes were that students most often feel sad, disappointed, or helpless during the SP encounter, but the themes of commitment to develop rapport, provide resources, and empower their patient emerged in later essay prompts.

**CONCLUSION:** These findings suggest that our curriculum shows promise in teaching medical students about sex trafficking.

**Formal Discussant:** Meg Autry, San Francisco, California

**3:30-4:00pm - Poster Presentations/Informal Discussion**
Exhibits/Industry Reps
OBJECTIVE: To describe the development of a specialty clinic dedicated to the care of transgender and gender non-conforming patients within the Department of Obstetrics and Gynecology at Oregon Health & Science University (OHSU) and to demonstrate the impact on patient satisfaction as well as clinical and surgical volume.

DESIGN: A descriptive report of the economic resources, both human and nonhuman, needed to develop a successful specialty clinic and the creation of a transgender specific gynecology clinic in a gender neutral space within a traditional binary hospital/clinic system. Clinical and surgical volume and patient satisfaction data (Press Ganey) is prospectively collected as part of routine clinical quality assurance practices at OHSU. This information was de-identified and analyzed using descriptive statistics. Additionally, clinical and surgical volume was compared before and after January 2015 when the state of Oregon approved Medicaid coverage for care related to gender dysphoria. Comparison was further made of clinical and surgical volume in 2015 vs 2017 before and after establishment of the Gynecology THP Specialty clinic in a gender neutral space.

RESULTS: The Gynecology OHSU Transgender Health Program (THP) specialty clinic was launched in September 2016. A combination of department, university and key provider support (OB/GYN, pediatric endocrinology, REI, urology, plastic surgery) was necessary to initiate and optimize clinical services including receipt of an intramural department grant of $50,000, donation of an OHSU RN clinical coordinator (10%), staff training, identification of
a gender neutral clinical space, and development of gender non-conforming patient intake forms and educational materials. Further involvement and dedication to the program is evidenced by participation in multi-disciplinary provider monthly case conference and quarterly OHSU THP Advisory Board conference. Clinical and surgical volume specific to the Gynecology THP program increased with clinical volume: 15 visits in 2015 versus 152 visits in 2017; surgical volume: 6 cases in 2015 versus 29 in 2017. High patient satisfaction has been demonstrated on patient satisfaction survey (Press Ganey) comments. Objectively quantified data on patient satisfaction surveys have a mixed reviews with top box (Very good or >) scores of 78.4 to 86.1 reflecting high care team satisfaction but major systems issues including phone, mail, and electronic health record interface.

CONCLUSION: A Transgender Healthcare Program specialty gynecology clinic is feasible, economically sustainable, and vital to providing patient centered care. Furthermore, establishing this dedicated gynecology specific transgender clinic in a gender neutral space significantly increased access, clinical, and surgical volume and resulted in high patient satisfaction.

Formal Discussant: Rebecca Dunsmoor-Su, Seattle, Washington
THURSDAY: 4:30-5:00pm     SEPTEMBER 27, 2018

SPECIAL LECTURE

#ME TOO: WHAT DOES IT MEAN TO US?

Sarah Snell, Phoenix, Arizona
SECOND SCIENTIFIC SESSION

8:00am

FRANK LYNCH MEMORIAL ESSAY

CHARACTERISTICS AND HEALTH CARE NEEDS OF GENDER DYSPHORIC PEDIATRIC PATIENTS
T. Handler, J. C. Hojilla, T. Hupfer, A. M. Vallerie,
L.B. Hartman, S. Watson, Eve Zaritsky

Whitney Wellenstein, Oakland, California
(By Invitation)

OBJECTIVE: The number of pediatric transgender patients presenting to healthcare settings has increased in the last decade, yet there is a scarcity of data on this population. To address this gap, we evaluated the baseline characteristics and transition-related needs of pediatric patients referred to a multi-specialty transgender clinic within a large, urban integrated health system.

DESIGN: This was an IRB approved retrospective case series of all patients <18 years of age in the Kaiser Permanente Northern California health system who were referred to the Multi-Specialty Transitions (MST) clinic between February 2015 and July 2017. Demographic data, comorbid psychiatric diagnoses, and surgical history were abstracted from medical charts. Data were analyzed using descriptive statistics.
RESULTS: Of the 228 pediatric patients referred to the clinic, 137 (60%) identified in the masculine spectrum, 60 (26%) identified as feminine, and approximately 13% identified as gender non-binary. Median age at time of referral was 15 years (range 3-17). Twenty-three referrals (10%) were for patients under the age of eight. Approximately 40% of all patients had documented comorbid psychiatric disorders, most commonly depression (20%) and anxiety disorders (18%). 46% of patients in the masculine spectrum had a BMI over 25 kg/m². The majority of referrals made to the clinic were for gender affirming surgery (32%) and initiation of cross-sex hormones or blockers (31%), although reasons for referral varied by age group. As patients became older, the predominance of referrals was for hormones and blockers and gender affirming surgery. In total, 34 surgeries were completed in patients less than 18 years; 85% of which were subcutaneous mastectomies. Median age at time of surgery was 16 years (range 14-17). Between 2015 and 2017, we observed a significant increase in the number of referrals to the clinic and the number of surgeries completed ($p<0.001$).

CONCLUSION: In this large sample of pediatric patients with gender dysphoria in Northern California, we found that patients seek care for a variety of reasons at a range of ages. The transition-related needs of patients varied across ages, highlighting the necessity for comprehensive services that address the unique needs of each age group. Culturally-sensitive interventions are also needed to address the high prevalence of psychiatric comorbidity and obesity in this population. The steady increase in referrals to the MST clinic supports the need for expanded services for this population.
OBJECTIVE: To investigate if the measurement of an abdominal circumference (AC) at or less than the 10th, 5th or 3rd percentiles between 22 and 28 weeks gestation is reliable in the identification of fetuses that are ultimately born small for gestational age (SGA).

DESIGN: Retrospective Cohort Study

MATERIALS AND METHOD: All obstetrical ultrasounds performed at Kapi‘olani Medical Center in the Fetal Diagnostic Center are stored in the AS-OBGYN system. Fetal biometry growth percentiles and estimated fetal weights are calculated utilizing the measurements obtained during an ultrasound with the Hadlock-2 formulas. We searched the AS-OBGYN database between 2012-2015 for cases defined as an abdominal circumference (AC) measured at or less than the 10th percentile. Controls selected were those with an AC between the 25-75th percentiles. Individual charts were evaluated for maternal age, BMI, race, gravidy-parity, GA at time of exam, dating of pregnancy, AC and EFW percentiles, GA at birth, singleton versus twin gestation, presence of comorbidities, mode of delivery, APGARs, NICU admission and labor complications. Only infants born within the Hawai‘i Pacific Health system and pregnancies with a gestational age between 22 and 28 weeks confirmed by or dated by a formal ultrasound less than 20 weeks were included. Exclusions included known intrauterine infections, genetic or chromosomal abnormalities, birth defects such as gastroschisis, and higher order multiple gestations (3 or more).
Birth weight percentiles to identify SGA infants were calculated using US Natality Datasets of infants born between 22 and 44 weeks. One hundred patients in each arm provides this study a 95% power (with $\mu = 0.05$) to detect a 3-fold increase in IUGR as determined by an AC measuring at or less than the 10th percentile between 22 and 28 weeks.

**RESULTS:** A total of 106 case patients were found to have fetuses with an AC measuring at the 10th percentile or less between 22 to 28 weeks while meeting inclusion criteria. A total of 118 control patients were found to have fetuses with an AC measuring between the 25-75th percentiles during the same gestational period while meeting inclusion criteria.

Of the fetuses with an AC at the 10th percentile or less, 66/106 (62%) were born small for gestational age, 52/106 (49%) were admitted to the NICU, 55/106 (52%) were born preterm, and 13/106 (12%) had a 5 minute APGAR less than 7. In comparison, of the fetuses measuring with an AC between 25-75th percentile, 12/118 (10%) were born small for gestational age, 21/118 (17%) were admitted to the NICU, 30/118 (25%) were born preterm, and 7/118 (6%) were born with a 5 minute APGAR less than 7. (Please see table Page 85)

**CONCLUSIONS:** Infants that have an AC measuring at or less than the 10th percentile between 22 to 28 weeks gestation are at an increased risk of being SGA, preterm and admitted to the NICU.

**Support:** None

**Acknowledgements:** Jennifer Pangelinan; Kelly Yamasato, MD

**Formal Discussant:** Kristina Roloff, Redlands, California
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<th>Controls (n=118)</th>
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<td>SGA</td>
<td>66 (62%)</td>
<td>12 (10%)</td>
<td>&lt;0.000001</td>
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<td>Preterm Birth</td>
<td>55 (52%)</td>
<td>30 (25%)</td>
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<td>NICU admission</td>
<td>52 (49%)</td>
<td>21 (17%)</td>
<td>&lt;0.000001</td>
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<td>Low 5 minute APGAR</td>
<td>13 (12%)</td>
<td>7 (6%)</td>
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OBJECTIVE: In 2010, Healthy People 2020 set “a new focus on Societal Determinants of Health” Healthy People 2020’s overarching goals include “achieve health equity, eliminate disparities...” and “promote healthy development and healthy behaviors across every stage of life”.

Epigenetic concepts of societal determinants of health are well described in multiple studies, including the Centers for Disease Control and Prevention—Kaiser Adverse Childhood Experiences (ACE) Study.

In temporal proximity to the ACE Study, other publications describe adverse intra-uterine events (AIUE) as contributory to lifetime health outcomes. Impacting maternal conditions reported include trauma, stress, depression, and anxiety. Furthermore, a woman’s mental health contributes to quality of newborn care, parenting in the home environment. Women are integral members of and contributors to the health of their communities.

Women’s mental health is essential to the Healthy People 2020 goal to “promote healthy development and healthy behaviors across every stage of life”.

Disparities in availability, access, and affordability to mental health screening and healthcare is apparent in underserved, under-resourced, and uninsured populations. For women and families in these communities, delayed, limited, or inaccessible mental healthcare exacerbates the underlying negative social determining condition.
Through a grant, depression screening and behavioral healthcare was integrated into an inner-city largely-Medicaid obstetrics and gynecology clinic, with the objective to address disparities in mental health care for women. Patient Health Questionnaire-9 (PHQ-9) scores were quantified outcome measures.

**DESIGN:** The White Memorial GYN OB Medical Group secured a culturally and linguistically sensitive Licensed Clinical Social Worker (LCSW) as part of the OBGYN healthcare team. She conducted mental healthcare provider education to the physicians and office staff and oversaw depression screening in patients presenting for annual well-women visit, new obstetrical intake, postpartum visit, cancer diagnosis/oncology visit, and any situation where the patient reveals a mental health care need, such as history of depression, domestic abuse, psychosocial stressors, trauma, and living with multi-comorbidities.

Patients whose PHQ-9 scores were “mild” (5-9) “moderate” (10-14) “moderate-severe” (15-19) or “severe” (20+) were referred, by warm hand-off when possible, to the on-site in-office LCSW. Patients whose PHQ-9 scores were normal (0) to “minimal” (1-4) were referred to the LCSW when other behavioral health issues were identified outside of the PHQ-9 numerical score screening tool.

Mental health interventions included various therapeutic modalities, including cognitive behavioral therapy, interpersonal therapy, psychodynamic therapy, art therapy, and group therapy.

**RESULTS:** In a 16-month period, 3475 women were offered a PHQ-9 screen: 57.3% (1990) scored minimal depression; 15.3% (530) scored mild depression; 6.0% (208) scored moderate depression, 2.8% (99) scored moderate-severe depression, 1.4% (50) scored severe depression, and 17.2% (598) declined PHQ-9 screening.
Patients with minimal to mild depression scores tended to be younger than the patients with moderate to severe depression scores. Mean age in years for minimal depression was 36.9+/−14.2, mild depression 36.2+/−14.2, moderate was 39.6+/−15.6, moderate to severe was 450.0+/−14.9, and severe was 40.9+/−14.1 (P-value 0.003).

Of the 2887 women whose score identified mild to severe depression (scores of 5-27), 591 (20.5%) patients had at least one follow-up visit with assessment of the PHQ-9 score. Decrease in PHQ-9 score was noted in all categories from mild (60%), moderate (68%), moderate-severe (72%), to severe (70%). (P-value <0.001)

Decrease in PHQ-9 score to less than 5, or “minimal”, was most notable in the patients with mild and moderate depression, 63% and 41% of patients, respectively, compared to 22% and 15% in moderate-severe and severe patients (P-value <0.001).

Obstetrical patients had a greater response to the treatment compared to non-obstetrical patients, with 65.8% of pregnant patients’ PHQ-9 scores reduced to less than 5 (minimal) compared to 29.8% of non-pregnant patients’ scores. (P-value <0.001)

**CONCLUSIONS:** Patients reporting of depression from their initial to follow-up visits showed improvement in PHQ-9 scores after intervention by the on-site LCSW.

- The implementation of an LCSW in the OBGYN clinic showed a positive impact at reducing PHQ-9 scores, predominantly in mild and moderately depressed women, as shown from initial to subsequent visits.
- Minimal and mild depression patients were younger than moderate to severe depression patients
- Obstetrical patients had better response to treatment compared to non-obstetrical patients.
- Access to mental health screening and timely provider intervention, including follow-up visits for continuity of care, may be needed to sustain the reduction in disparities in mental health care.

**Formal Discussant:** Maria Manriquez, Phoenix, Arizona
FRIDAY 9:30-10:30am  SEPTEMBER 28, 2018

SPECIAL LECTURE

HOW ADVANCED GENETIC TECHNOLOGY CAN IMPACT PRECONCEPTION AND PRENATAL SCREENING

Mary Norton, San Francisco, California

10:00-10:30am - Poster Presentations/Informal Discussion
Exhibits/Industry Reps
FRIDAY 10:30am-11:00pm  SEPTEMBER 28, 2018

10:30-11:25am

PRESIDENTIAL CHOICE LECTURE

BIG DATA/AI AND ITS IMPACT ON OB/GYN

John Rinehart, Evanston Illinois
(By Invitation)

11:30am-12:10pm

KEYNOTE LECTURE

ARTIFICIAL INTELLIGENCE IN MEDICINE: THE PRESENT AND THE POTENTIAL FOR THE FUTURE

Harjinder Sandhu, Seattle, Washington
(By Invitation)

12:10-12:30pm  Q&A for Presidential Choice & Keynote
Addresses led by Dean V. Coonrod - Phoenix, Arizona

AFTERNOON FREE

1:30pm  Birding - TBA
1:45pm  Biking - TBA
TBA  Golf—TBA
1:00-5:00pm  Hospitality Suite - Hagadone Suite
5:15pm  Boat BOARDS for Hagadone Center
Boarding at the Boardwalk Marina Dock at the East side of the Resort
6:00pm  Boat DEPARTS for Hagadone Center
7:00pm  Dinner - Hagadone Center
9:00pm  Boat BOARDS for return to resort
9:30pm  Boat RETURNS to resort
9:30-11:00pm  Hospitality Suite - Hagadone Suite
THIRD SCIENTIFIC SESSION

8:00am
O-10.
CONCORDANCE OF PELVIC MASS LATERALITY: FROM PREOPERATIVE IMAGING TO SURGICAL PATHOLOGIC FINDINGS--WHO OWNS THE CONSENT?

Michelle F. Benoit, Seattle, Washington
(By Invitation)

OBJECTIVE: The objective was to confirm laterality concordance between preoperative imaging modalities and operative findings/final surgical pathology. Secondary outcomes included analysis of: mass size, patient age, histological diagnosis, and imaging modality on delineation of adnexal mass sidedness.

DESIGN: This was a retrospective chart review from a single sub-specialty provider. 705 patients were reviewed from January 2015 through October 2017. There were 280 patients included in the final review. All patients had some form of preoperative imaging consisting of either: CT, ultrasound, or MRI.

RESULTS: Concordance between imaging and surgical findings was poor at 35.9%. Concordance between imaging modalities themselves was 30.3% for CT and ultrasound and 50% for MRI and ultrasound. We found that
the larger the mass size, the lower the sensitivity for correctly assessing laterality, (47.62% for size < 7 cm vs 18.75% for size ≥ 20 cm, p = 0.0378). Age had some effect on mass size with those ≤ 30 years old having significantly larger masses p = 0.0167. For those with ovarian type cancers, there was a significant difference between mass size and age ≤ 30 compared to > 30 years old (p = 0.046). A benign versus cancer diagnosis did not increase the ability to discern sidedness (Fishers test p=0.3110).

The size discrepancy between preoperative imaging and final pathology ranged from 0-26 cm with an average of 2.45 cm. Of the 72 women with high grade serous tubo-ovarian cancer (HGSTOC), 34.7% were found to not have specific “adnexal” masses, but other pelvic mass findings were identified; 51% of this subset of patients did not have any mass laterality assigned.

**CONCLUSIONS:** Preoperative imaging does not confer significant concordance with laterality in any patient subset. This becomes an issue with consent forms and compliance with national and local administrative guidelines regarding wrong-side, wrong-site surgeries. Counseling for patients can be inclusive and stated as such on the consent forms. Hospitals and policy accreditation groups need to be aware of poor concordance between imaging and surgical findings for women with pelvic masses and allow a larger scope of informed consent for such surgeries. A high suspicion for HGSTOC should be held when a peri or postmenopausal patient presents with abdominal/pelvic symptoms and no adnexal mass specifically identified.

**Formal Discussant: Kathryn Macaulay,**
San Diego, California
Prophylatic, or history-indicated, cerclage has been well documented as a treatment option for cervical insufficiency. However, data is less clear regarding the utility of physical exam-indicated, or emergency cerclage placement for women with advanced cervical examination in the second trimester.

**OBJECTIVE:** We aimed to evaluate the outcome of the placement of emergency rescue cerclage in the setting of protruding membranes and to identify factors that may influence the success or failure in women with cervical insufficiency.

**DESIGN:** We conducted a retrospective cohort study of women with dilated cervix and protruding membranes who had emergent second trimester cerclage placement between 2014 and 2017 at a single medical institution. All cerclage placements were performed by the same provider, thus minimizing variation of procedural technique and differences in medical management. Women who did not consent to the procedure, and those who delivered at outside institution were excluded from analysis. Medical records were reviewed for clinical data abstraction, including maternal characteristics, gestational age at time of cerclage placement, gestational age at time of delivery, as well as maternal and neonatal outcomes.

**RESULT:** Thirty-seven women between 16 and 23 weeks
gestation were identified to have advanced cervical examination, including protruding membranes and cervical dilation who subsequently underwent rescue cerclage placement. There were seven women with dichorionic/diamniotic twin gestations. The mean gestational age at time of cerclage placement was 20.8 weeks (range 16.14 – 24.14 weeks). The mean cerclage-delivery interval was 83.58 days (range 5 – 159 days). The mean gestation at delivery was 32.42 weeks (range 22.14 – 39.86 weeks) and the mean neonatal birth weight was 2118.2 gms (range 360 – 3799 gms). The rate of pregnancy loss was 14%.

**CONCLUSION:** Emergency rescue cerclage in patients women with cervical insufficiency presenting with protruding membranes and advanced cervical incompetence dilation, examine-indicated cerclage placement can be effective in prolonging a pregnancy duration, though risk of pregnancy loss remains high.

**Formal Discussant:** Michael Nageotte, Long Beach, California
SATURDAY 9:00-9:30am      SEPTEMBER 29, 2018

SPECIAL LECTURE

NEXT GENERATION SEQUENCING OF TUMORS IN GYNECOLOGIC ONCOLOGY: THE NEXT FRONTIER

Chirag Shah, Seattle, Washington
SATURDAY 9:30-10:50am        SEPTEMBER 29, 2018

JAMES C. & JOAN CAILLOUETTE
PRESENTATION

ELECTIVE EGG FREEZING AS FAMILY
PLANNING

Millie Behera, Moderator, Scottsdale, Arizona
Julie Lamb, Seattle, Washington
Richard Paulson, Los Angeles, California
Aaron Caughey, Portland, Oregon

10:30-10:50am - Poster Presentations/Informal
Discussion
Exhibits/Industry Reps
FETAL TRANSFUSION FOR SEVERE ANEMIA OF SURVIVORS OF CO-TWIN/TRIPLET DEMISE IN MONOCHORIONIC MULTIPLES: LESSONS LEARNED

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BACKGROUND: Co-twin demise has been associated with a high risk of brain damage or demise of the initially surviving fetus. Acutely developing anemia can lead to watershed injury in the surviving fetus and ultimately double demise. If demise of one fetus of a monochorionic set is diagnosed soon after the event, fetal transfusion has the potential to mitigate the risks to the surviving fetus.

METHODS: We performed a retrospective review of cases with increasingly severe anemia after co-twin demise. After extensive counseling, fetal transfusion of the surviving fetus(es) was offered. We identified five cases of fetal transfusion in this setting; one in a monochorionic, monoamniotic twin pregnancy, three in monochorionic diamniotic twin pregnancies and one monochorionic triamniotic triplet pregnancy.

RESULTS: All pregnancies were diagnosed with demise of one fetus prior to viability. Increasingly elevated peak MCA velocities were documented in the surviving fetus or fetuses, prompting us to offer fetal transfusion. All transfusions were technically uncomplicated and resulted in normalizing peak MCA velocities. The first two cases resulted in fetal demise 11 days after transfusion (due to cord entanglement in our monoamniotic pregnancy) and 4 weeks after transfusion (unknown cause). The latter three cases resulted in the delivery of healthy survivors.

CONCLUSION: Fetal transfusion is a viable option if
increasingly severe anemia is detected soon after demise of one fetus in a monochorionic multiple pregnancy. Placental anastomoses allowed for distribution of transfused blood to both surviving fetuses in our monochorionic triplet pregnancy.

**Formal Discussant: Lena Kim, San Francisco, California**
OBJECTIVE: To compare cumulative deceleration area with other fetal heart rate parameters in term neonates with metabolic acidosis and in those with normal cord gases.

DESCRIPTION: This is a retrospective study including all births at Legacy Health Hospitals between February 1, 2015 and January 31, 2017 with singleton cephalic presentations at gestational age ≥37 weeks with cord gas data and EFM archives available for automated analysis. (n=2189). Case patients include all neonates with a cord base deficit >12 mmol/L (n=132). Control patients include those with normal cord gases (base deficit <8 mmol/L) and a 5 minute Apgar score of >6 (n=1498). Cumulative deceleration area, baseline and number of variable decelerations over the last four hours of tracing were measured in each group. ROC curves were constructed for each fetal heart rate parameter and the AUCs were compared to determine which was most discriminating of metabolic acidosis.

RESULTS: Cumulative deceleration area had the highest AUC (0.702, 95% CI 0.655-0.749,) and was a superior predictor of metabolic acidosis compared to baseline (AUC=0.588 95% CI 0.530 to 0.645) P=0.011). The number of variable decelerations was the second-best predictor (AUC = 0.687, 95% CI 0.637-0.736).

CONCLUSION: Cumulative deceleration area was the top single predictor of metabolic acidosis. Deceleration
area circumvents the need to determine deceleration type which is prone to high interobserver variation or giving all variable decelerations the same significance; however, it does require computerization.

SOURCES OF SUPPORT: Legacy Health Informatics and Institutional Review Board; PeriGen, Inc

**Formal Discussant:** Fred Coleman, Portland, Oregon
OBJECTIVE: Preterm birth (PTB) is a major cause of perinatal morbidity and mortality. There is a strong association between short cervix and risk of PTB. Transabdominal (TA) imaging is associated with less patient discomfort than transvaginal (TV) imaging. However, TV imaging is reported to be more accurate for cervical length (CL) measurement than TA imaging. The purpose of CL screening is not to measure CL accurately, but to predict PTB. The aim of the study is to determine whether TA CL measurement can reliably exclude a short cervix in women without history of prior spontaneous PTB undergoing a routine 18-22 week ultrasound and to determine whether TA CL measurement can identify women at risk for PTB at <37 weeks and < 34 weeks.

METHODS: This is a retrospective review of medical records of women with singleton gestations undergoing fetal anatomy scans between 18 and 22 weeks at the Cedars-Sinai Prenatal Diagnostic Center between January 1, 2015 and December 31, 2016. TV and TA cervical length measurements were routinely documented on these exams. In addition to CL, data collected included maternal age, gravidity, parity, race/ethnicity, BMI, and GA at delivery. The odds ratio (O.R.) for delivery <37 weeks and <34 weeks were calculated for women with CL <2.5 cm and <2.0 cm. The effect of obesity (BMI > 30 kg/m²) was assessed. Statistical analysis: Comparisons between TA and TV CL measurements were done.
using paired t-test and Pearson’s correlation coefficient. Adjusted O.R. and 95% CI for preterm delivery were calculated for CL <2.5 cm and <2.0 cm. The inability to measure TA CL between women with BMI >30 kg/m² and those with BMI <30 kg/m² was compared using chi-square or Fisher’s exact test. p-values < 0.05 were considered significant.

RESULTS: There were 3,284 women who had an anatomy scan at 18-22 weeks’ during the study period. Of these, 3237 (98.6%) had a CL >2.5 cm and 47 (1.4%) had a CL < 2.5 cm). Differences in maternal age, BMI and race/ethnicity between women with a CL <2.5 cm and those with a CL >2.5 cm were not statistically significant. However, women with a CL <2.5 cm were more likely to be multiparous (82%) than nulliparous (19%) [p=0.006]. There were 2,870 (87.4%) women who delivered at Cedars-Sinai and for whom pregnancy outcome data were available. The mean GA at delivery was 36.9 ± 4.5 weeks for women with CL < 2.5 cm and 38.9 ± 3.2 weeks for women with CL >2.5 cm [p <0.001]. A total of 134 women delivered <37 weeks GA. Of these, 80 had spontaneous PTB and 54 were delivered for clinical indications. Among the women with spontaneous PTB, there were 8 (16.4%) with CL <2.5 cm and 72 (2.6%) with CL >2.5 cm [p<0.001]. The adjusted O.R. for delivery < 37 weeks and < 34 weeks for women with a short cervix (< 2.5 cm and <2.0 cm) is shown in table 1. Of 2861 women with known BMI, there were 1151 with BMI > 30 kg/m² and 1710 with BMI < 30 kg/m². The cervix could not be visualized well enough for measurement in 230 (20%) women with BMI > 30 and 280 (17%) women with BMI < 30 kg/m² [p =0.01]. Among the women with TA CL > 3.0 cm, there were 9 (0.4%) who had TV CL < 2.5 cm and 3 (0.1%) who had TV CL < 2.0 cm.
CONCLUSIONS: These findings indicate that TV CL < 2.5 cm is associated with significantly increased risk for PTB prior to 37 weeks and prior to 34 weeks. TA CL < 2.5 cm was not associated with increased risk for PTB prior to either GA. However, both TA and TV CL < 2.0 cm were associated with increased risk for delivery prior to 37 weeks and prior to 34 weeks. The very low likelihood of TV CL <2.5 cm when the TA CL was > 3.0 cm, suggests that women whose CL can be measured with TA imaging and are long (> 3.0 cm) may not need transvaginal imaging of the cervix. Women whose CL are short (<2.5 cm or < 2.0 cm) or not measurable with TA imaging, should have TV imaging to measure CL for assessment of risk for PTB.

Formal Discussant: John Lenihan, Seattle, Washington

12:30-1:00pm    Second Business Meeting

AFTERNOON FREE

1:15-4:00pm    Second Board of Directors Meeting
    North Cape Bay

1:30-4:30pm    Hospitality Suite - Hagadone Suite

5:15-6:15pm    Presidential Address - Casco/Kidd/N Cape

6:15-7:00pm    Presidential Reception - CC Lobby

7:00-11:00pm   Presidential Dinner/Dance - Formal (Black Tie Optional)
    Bays 4-6

10:00-11:00pm   Hospitality Suite - Hagadone Suite
SUNDAY: 6:30-10:00am          SEPTEMBER 30, 2018

6:30-10:00am          Farewell Breakfast - Bay 5
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EDUCATIONAL GRANTS

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