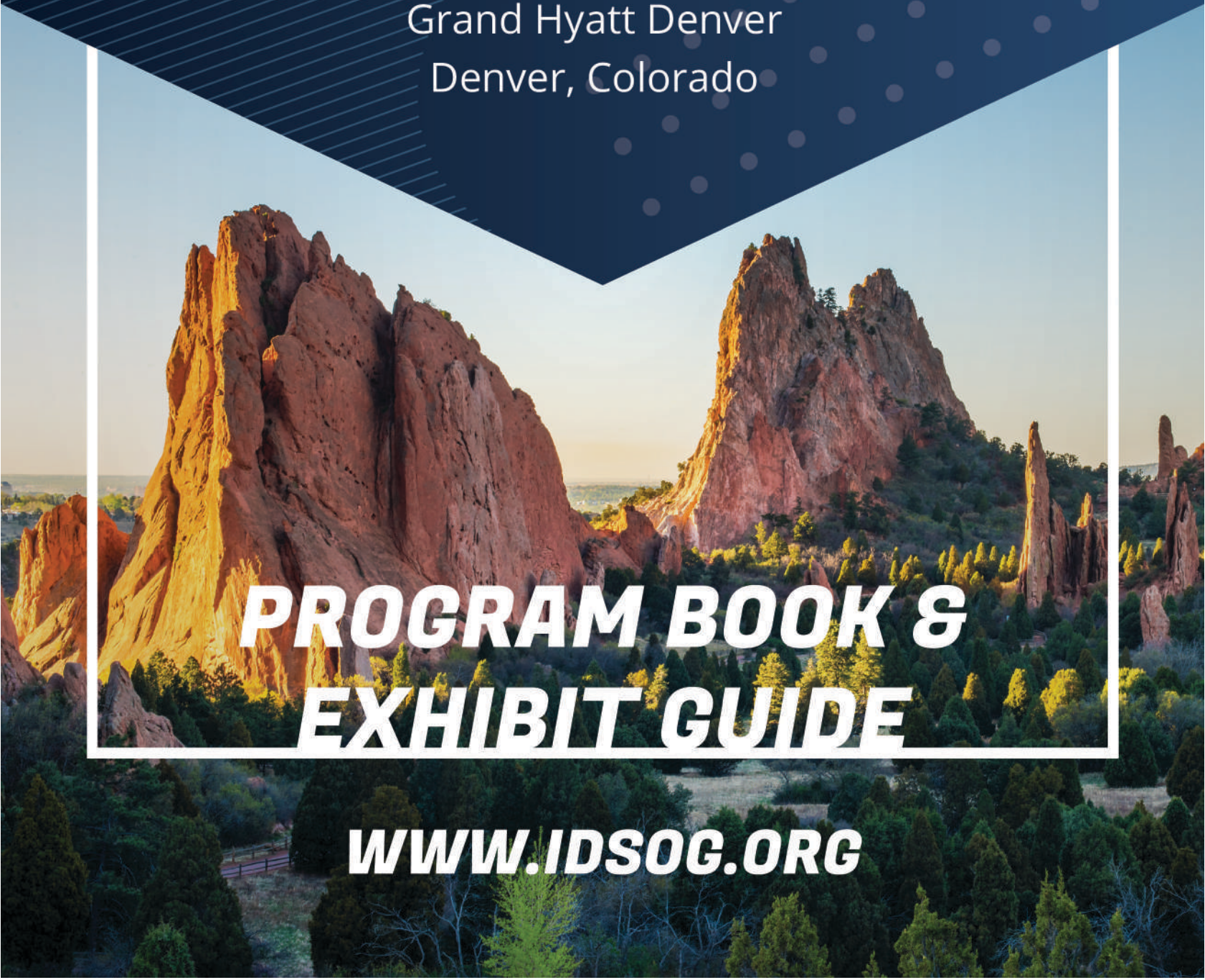
IDSOG
INFECTIOUS DISEASES SOCIETY FOR OBSTETRICS AND GYNECOLOGY

2023 JULY 27-29 | IDSOG ANNUAL MEETING

Grand Hyatt Denver
Denver, Colorado



PROGRAM BOOK & EXHIBIT GUIDE

WWW.IDSOG.ORG

HOLOGIC®

Women's HEALTH

Together we can push the boundaries of care for women around the world.

WOMEN'S HEALTH ASSAYS

- CT/NG
- *Mycoplasma genitalium*
- *Trichomonas vaginalis*
- Bacterial vaginosis
- Candida vaginitis/*Trichomonas vaginalis*
- HSV 1 & 2
- HPV
- HPV 16 18/45
- Zika Virus*
- GBS
- M. gen Macrolide Resistance†
- *Chlamydia trachomatis*† CE
- *Neisseria gonorrhoeae*† CE

Specimen collection made easy.

Solutions That Provide Peace of Mind

Early detection starts with innovative diagnostic testing solutions. By expanding access to timely and accurate results, we empower patients to protect their sexual and reproductive health.

—

Visit Booth 100/101

Aptima® + ThinPrep®

* The Aptima® Zika Virus, has not been FDA cleared or approved: This test had been authorized by FDA under an EUA for use by authorized laboratories; The Aptima Zika Virus assay has been authorized only for the detection of nucleic acid from Zika virus, not for any other viruses or pathogens; The Aptima Zika assay is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostic tests for detection of Zika virus and/or diagnosis of Zika virus infection under Section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.

† In development and not for sale.

TABLE OF CONTENTS

FOLLOW IDSOG ON SOCIAL MEDIA!

Infectious Diseases Society For Obstetrics and Gynecology

@idsog_org

WHY?

- Network with colleagues
- Increase IDSOG exposure within the United States and abroad
- Announce member accomplishments
- Stay up to date on events and discussions

WELCOME MESSAGE

On behalf of Dr. Geeta Swamy, President of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), and the entire IDSOG Executive Council, we are excited to welcome you to the 2023 IDSOG Annual Meeting in Denver, CO from July 27th to 29th.

The IDSOG Annual Meeting is a scientific and educational gathering for clinicians and investigators who care for and study the epidemiology, pathophysiology, prevention, management, and impact of infectious diseases in women. As we reflect on the 50-year history of IDSOG, one of the many contributions of the society has been individual career advancement and expansion of the scope of careers in reproductive health. Join us as we hear from a few of our members on the WHY and HOW IDSOG has contributed to their careers in clinical care, research, education, and public health. Our distinguished guest speakers will be discussing updates in guidance for safe infant feeding among people with HIV, septic abortion management, and anal cancer screening. We have several sponsored symposiums related to the evaluation and treatment of vaginitis, sexually transmitted infections, and hepatitis. As always, we look forward to time for renewing friendships, developing collaboration, networking, mentorship, and the Friday evening Awards Ceremony/ Dinner complete with DJ and dancing!

Thank you for joining us in Denver, CO.

Dr. Gweneth Bratton Lazenby, MD, MSCR
IDSOG Scientific Program Chair

SCIENTIFIC PROGRAM COMMITTEE

- Gweneth Bratton Lazenby, MD, MSCR (Chair)
- Alisa Kachikis, MD, MSc
- Andrea Atkinson, MBBS
- Andrés Ramírez Zamudio, MD, MPH, FACOG, AAHIVS
- Anna Powell, MD, MS
- Chelsea Elwood, MD
- Okeoma Mmeje, MD, MPH

IDSOG COUNCIL

OFFICERS

President
Geeta Swamy
MD

President-Elect
Patrick S. Ramsey
MD, MSPH

Secretary
Gweneth Bratton Lazenby
MD, MSCR

Treasurer
Jennifer Balkus
PhD, MPH

Immediate Past President
Caroline Mitchell
MD, MPH

COUNCIL MEMBERS

Catherine Chappell
MD, MSc

Olivia Van Gerwen
MD, MPH

Oluwatosin (Tosin) Goje
MD, MSCR, FACOG

Melissa Herbst-Kralovetz
PhD

Christina Muzny
MD

Lisa Noguchi
CNM, PhD

FEATURED SPEAKERS

David M. Aronoff, MD, FIDSA, FAAM

Thursday, July 27, 2023 (08:30 a.m.)

Clinical and Pathological Features of Septic Abortion

David Aronoff, MD, FIDSA, FAAM, is the John B. Hickam Professor of Medicine and Chair, Department of Medicine, at the Indiana University School of Medicine. He received his Bachelor of Science degree in Microbiology from Indiana University and his Medical Degree at Tufts University. He completed internship, residency, and chief residency in Internal Medicine at Vanderbilt University and stayed there for both a clinical fellowship in Infectious Diseases and a research fellowship in Clinical Pharmacology.

He then joined the faculty in Infectious Diseases at the University of Michigan where he also completed a research postdoctoral fellowship in Immunology. Dr. Aronoff returned to Vanderbilt in 2013 as Director of the Division of Infectious Diseases in the Department of Medicine with secondary faculty appointments in the Department of Pathology, Microbiology, & Immunology and the Department of Obstetrics & Gynecology. In Nashville he established the Vanderbilt Preventing Adverse Pregnancy Outcomes & Prematurity (Pre3) Initiative, a collaborative, transdisciplinary group of investigators working in maternal-child health.

From 2020 to 2022, as Director of the Division of Infectious Diseases, Dr. Aronoff's efforts largely focused on responding to the COVID-19 pandemic. Then, in 2022 Dr. Aronoff was recruited back to Indiana University to serve as Chair of the Department of Internal Medicine. Dr. Aronoff is an elected member of the American Society for Clinical Investigation and a Fellow in both the Infectious Diseases Society of America and the American Academy of Microbiology. His research lab continues to study reproductive immunology and infections that complicate pregnancy.

Dr. Aronoff has published 250 peer-reviewed manuscripts. He has held national leadership roles in the Infectious Diseases Society of America, the American Society for Microbiology, the Anaerobe Society of the Americas and is President-Elect of the American Society for Reproductive Immunology.

He is a past Chair of the Pregnancy and Neonatology study section of the NIH. Dr. Aronoff has received numerous governmental and non-governmental research grants, including support from the National Institutes of Health, the Environmental Protection Agency, The Doris Duke Charitable Foundation, The Burroughs Wellcome Fund, The March of Dimes and the Global Alliance to Prevent Prematurity & Stillbirth.

Lisa Rahangdale, MD, MPH

Friday, July 28, 2023 (08:15 a.m.)

Breastfeeding in People with HIV: Where Have We Been and Where are We Going?

Dr. Rahangdale is Professor of Obstetrics & Gynecology and Associate Dean for Admissions at the University of North Carolina School of Medicine. She attended UNC Chapel Hill for her BS and MD degrees, then the University of California-Berkeley for her Master of Public Health.

She completed her OBGYN residency at Northwestern University and fellowship in Reproductive Infectious Disease at the University of California-San Francisco.

Her work at UNC includes being Chair of the School of Medicine Admissions Committee, seeing patients as a general OBGYN, and doing research on infections such as HIV and HPV in women. Dr. Rahangdale is a member of the Panel on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission and consultant for the National Clinicians Consultation Center Perinatal HIV Hotline. She lives in Chapel Hill with her husband, 3 kids, and 2 dogs.

community violence, intimate partner violence, and child abuse and neglect and neighborhood characteristics that influence these patterns. She has received numerous awards for teaching, clinical care, and public health including the Massachusetts Public Health Association Paul Revere Award for outstanding impact on public health.

She received her AB from Princeton University, her MD from Yale School of Medicine, and ScD in Social Epidemiology from Harvard School of Public Health, and completed residency in Pediatrics at Johns Hopkins Hospital.

FEATURED SPEAKERS

Christine Conageski, MD, MSc

Saturday, July 29, 2023 (08:45 a.m.)

Anal Cancer Screening: What the OBGYN Needs to Know

Christine Conageski is an Associate Professor and Residency Program Director at the University of Colorado School of Medicine. She is originally from the Midwest where she attended medical school at the University of Cincinnati.

Upon graduation, she moved to Denver Colorado to complete her residency at the University of Colorado. She joined the faculty immediately upon graduation and now serves at the director of the Complex Dysplasia and Vulvar Clinics.

She is the current secretary of the ASCCP. In addition to her executive committee duties, she is an associate editor for the society's journal – the Journal of Lower Genital Tract Disease, chair of the Humanitarian committee and co-chair of the education committee.

Dr. Conageski's academic pursuits include improving cervical cancer screening rates and access to care, improving quality of care patients for lower tract dysplasias including vulvar, cervical, vaginal and anal dysplasia.

IDSOG TRAINEE TRAVEL SCHOLAR AWARDEES

The Infectious Disease Society for Obstetrics and Gynecology (IDSOG) awarded 17 individuals a grant for the purpose of trainee scholarships to sustain and expand the membership to include young clinicians and investigators (students, residents, fellows, and junior faculty). The 2023 Trainee Travel Scholar Awardees are:

- **Amanda Adams** — *Harvard School of Public Health*
- **Noor Al-Shibli** — *Duke University*
- **Tracy Caroline Bank** — *Ohio State University Wexner Medical Center*
- **Ofri Bar** — *Massachusetts General Hospital*
- **Emerald Bell** — *University of Arizona*
- **Sarah Boudova** — *Thomas Jefferson University*
- **Jennifer Cate** — *Duke University*
- **Phoebe Crossley** — *University of Arizona*
- **Mary Fang** — *Baylor College of Medicine*
- **Winnie Fu** — *University of British Columbia*
- **Nir Meller** — *Sheba Medical Center, Israel*
- **Kendall Moore** — *Icahn School of Medicine at Mount Sinai*
- **Ravyn Njagu** — *Duke University Hospital*
- **Theodora Peterkin** — *National Open University of Nigeria*
- **Jodian Pinkney** — *Massachusetts General Hospital*
- **Monica Sosa** — *University of Washington, Seattle*
- **Kristen Warncke** — *University of Texas Southwestern Medical Center*

IDSOG RULES OF CONDUCT

Members and guests attending the Infectious Diseases of Obstetrics and Gynecology (IDSOG) Annual Meeting are expected to use their best judgment and exhibit professional conduct at all times. While the meeting environment may be casual, a respectful demeanor is always appropriate. As such, while participating in IDSOG activities, individuals must agree to:

- Conduct themselves and their activities in a professional manner;
- Properly register and display appropriate credentials;
- Abide by the Bylaws, policies and practices of the IDSOG;
- Not distribute brochures, flyers, handouts, etc., or post displays of any kind without prior approval of the Director of Meetings or designee(s);
- Not use the IDSOG name other than in the conduct of IDSOG business as determined by the Council;
- Not use any IDSOG membership lists or any part thereof except in the conduct of IDSOG business as determined by the Bylaws and/or the Council;
- Restrict the use of IDSOG information or materials (work products, work in progress, and databases), in any media or form, to the purpose defined by the Bylaws and/or the Council;
- Refrain from engaging in any activity that would violate the proprietary rights of their employers, IDSOG or any other person or organization;
- Not make illegal copies of copyrighted and/or licensed software or use unauthorized copies on IDSOG computers; and
- Not engage in any exchange of information or other behavior that violates the antitrust laws of the United States.

Cepheid
A better way.

LESS
uncertainty

MORE
answers

MORE
than a test

Introducing Xpert® Xpress MVP

A multiplex vaginal panel designed to aid clinicians in diagnosing three distinct infections — Bacterial vaginosis, *Candida* species, and Trichomoniasis — in women with overlapping symptoms to help guide targeted treatment for increased efficiency, accuracy, and to reduce repeat revisits.

Speed, plus
Accuracy, plus
Flexibility

That's the **PCR***plus* advantage.
From Cepheid.

Visit www.**cepheid**.com

LEARN MORE

US-IVD. *In Vitro* Diagnostic Medical Device. Not available in all countries.

SPONSORS

GOLD SPONSORS

Cepheid® A better way.

HOLOGIC® The Science of Sure

SILVER SPONSORS

Abbott

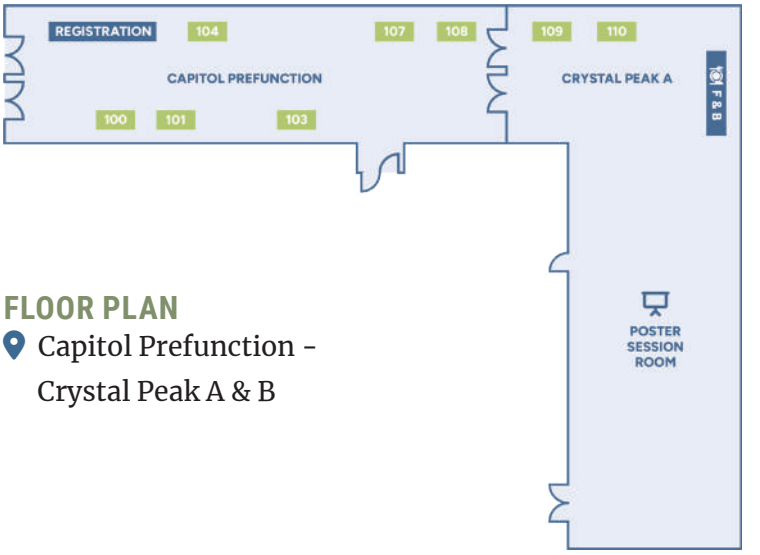
GILEAD Creating Possible

BRONZE SPONSORS

moderna®

TALIS Biomedical

- **Booth 100/101:** Hologic
- **Booth 103:** Gilead Sciences, Inc.
- **Booth 104:** Abbott
- **Booth 107/108:** Cepheid
- **Booth 109:** Moderna
- **Booth 110:** Talis Biomedical



FLOOR PLAN

Capitol Prefunction - Crystal Peak A & B

INDUSTRY SPONSORED SYMPOSIA

Thursday, July 27, 2023
07:00 a.m. – 08:00 a.m.
Supported by an educational grant of Gilead

Hepatitis C Virus in Women: Can We Improve Treatment Linkage?

Faculty:

Catherine A. Chappell, MD, MSc
Assistant Professor of Obstetrics, Gynecology & Reproductive Sciences, Magee-Womens Hospital of UPMC

Marcela Smid, MD, MA, MS
Board Certified Maternal Fetal Medicine and Addiction Medicine Physician and Associate Professor, University of Utah

David L. Wyles MD, FIDSA
Chief Division of Infectious Diseases, Denver Health Medical Center

Learning Objectives

– Describe the simplified treatment approach for hepatitis C virus direct-acting antivirals.

– Explore disparities in hepatitis C virus prevalence and treatment linkage among women.

– Summarize the existing data on hepatitis C virus treatment in pregnancy.

Thursday, July 27, 2023
12:45 p.m. – 01:45 p.m.

Cepheid
A better way.

Diagnostic Testing for Vaginitis: The Baby Boomer Approach vs. The Millennial+ Approach

Moderator:

Oluwatosin (Tosin) Goje, MD, MSCR, FACOG
Medical Director, The Cleveland Clinic Center for Infant and Maternal Health,
Associate Professor, Obstetrics, Gynecology and Reproductive Biology,
Lerner College of Medicine, Case Western Reserve University

Speakers:

Paul Nyirjesy, MD
Professor, Department of Obstetrics and Gynecology
Sidney Kimmel Medical College at Thomas Jefferson University
Co-Director, Jefferson Vulvovaginal Health Center
Interim Division Chief, Division of GYN Surgical Specialties

Anna Powell, MD, MS
Assistant Professor of Gynecology and Obstetrics
Johns Hopkins Medicine

Description:

Point-counter-point expert discussion comparing traditional/conventional methods and microbiome -based nucleic acid amplification test (NAATs) methods to aid diagnosis of bacterial vaginosis (BV), vulvovaginal candidiasis (VVC) and Trichomoniasis (TV) in symptomatic patients.

INDUSTRY SPONSORED SYMPOSIA

Friday, July 28, 2023
07:00 a.m. – 08:00 a.m.
Supported by an educational grant of Abbott

The Great Debate: Should We Be Testing for Mycoplasma Genitalium In Women With Vaginal Discharge?

Faculty:

William Geisler, MD, MPH
Professor of Medicine, Epidemiology, University of Alabama at Birmingham

Christina Muzny, MD, MSPH, FACP, FIDSA
Associate Professor of Medicine, Epidemiology and Obstetrics & Gynecology, University of Alabama at Birmingham

Learning Objectives

– Briefly review the epidemiology, diagnosis, and treatment of Mycoplasma genitalium, including antibiotic resistance.

– Review of available data, including knowledge gaps, regarding testing for Mycoplasma genitalium in women.

– Discuss whether we should be testing for Mycoplasma genitalium in women with vaginal symptoms in absence of cervicitis or pelvic inflammatory disease.

– Discuss current clinical practice recommendations for testing for Mycoplasma genitalium under certain circumstances among women with vaginal symptoms.

Friday, July 28, 2023
12:45 p.m. – 01:45 p.m.

HOLOGIC®
The Science of Sure

Coordinated Efforts at the National and Local Levels to Address the STI Epidemic

Faculty:

Kyle C. Bukowski, MD, FACOG

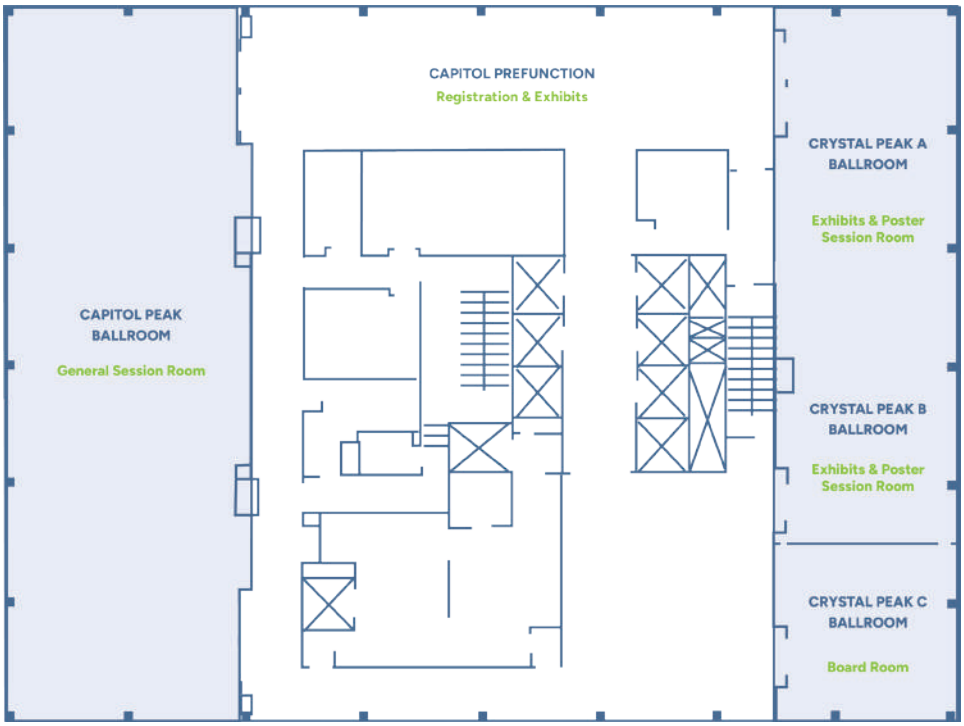
Karen A. Wendel, MD

Description:

Over the past decade, the United States has witnessed alarming increases in rates of sexually transmitted infections (STIs). Efforts at both the national and local level are needed to address the national STI epidemic. The first-ever STI Federal Implementation Plan for the United States was released on June 8, 2023 by Health and Human Services (HHS), outlining actions needed to reduce the STI burden in the U.S. Please join Dr. Kyle Bukowski and Dr. Karen Wendel in a presentation and discussion about the goals and progress indicators of the Federal plan, and recent national and local data from an ongoing U.S. STI epidemiological study.

FLOOR PLAN

Atrium Tower | Pinnacle Club - 38th Floor



PROGRAM

THURSDAY
JULY 27, 2023

07:00 a.m. – 08:00 a.m.

Industry Sponsored Session

08:15 a.m. – 08:30 a.m.

Opening Remarks, Presidential & Program Chair Welcome

08:30 a.m. – 09:30 a.m.

General Session 1

08:30 a.m. – 09:15 a.m.
Clinical and Pathological Features of Septic Abortion
David M. Aronoff, MD, FIDSA, FAAM (Indiana University School of Medicine)

09:15 a.m. – 09:30 a.m.
Q&A
David M. Aronoff, MD, FIDSA, FAAM (Indiana University School of Medicine)

09:30 a.m. – 10:15 a.m.

Oral Abstract Session 1

09:30 a.m. – 09:45 a.m.
Population Pharmacokinetics of Sofosbuvir/Velpatasvir in Pregnant Women with Hepatitis C Virus (#001)
Riley Randolph (University of Colorado Anschutz Medical Campus)

09:45 a.m. – 10:00 a.m.
The Effect of HCV on Methadone Dose During Pregnancy (#002)
Sarah Boudova (Thomas Jefferson University)

10:00 a.m. – 10:15 a.m.
Hepatitis C Virus Infection Across Multiple Pregnancies, Surveillance for Emerging Threats to Pregnant Persons and Infants Network – 2018-2021 (#003)
Suzanne Newton (Centers for Disease Control and Prevention)

10:15 a.m. – 10:30 a.m.
Capitol Peak Prefunction & Crystal Peak A & B

Break

10:30 a.m. – 11:30 a.m.

Oral Abstract Session 2

10:30 a.m. – 10:45 a.m.
Pregnancy Characteristics and Birth Outcomes in People with Mpox Infection During Pregnancy – Surveillance for Emerging Threats to Pregnant People and Infants Network (#004)
Varsha Neelam (Centers for Disease Control and Prevention)

10:45 a.m. – 11:00 a.m.
Geographic Distribution and Characteristics of Inadequate Maternal Syphilis Treatment (#005)
Kristen Warncke (University of Texas Southwestern Medical Center)

11:00 a.m. – 11:15 a.m.
Universal Prenatal Screening for Chagas Disease in an At-Risk Population (#006)
Barbara Neuhoff (University of Texas Health Science Center at San Antonio (UTHSCSA))

11:15 a.m. – 11:30 a.m.
Increased Uptake of Intermittent Preventive Treatment for Prevention of Malaria in Pregnancy and Scale-Up of Group Antenatal Care in Nasarawa State, Nigeria (#007)
Theodora Peterkin (Jhpiego Nigeria)

11:30 a.m. – 12:15 p.m.

Stump the Professors

Speaker: Sarah Boudova, MD, PhD
Professors: David M. Aronoff, MD, FIDSA, FAAM, Jennifer Balkus, PhD, MPH, Catherine Chappell, MD, MSc & Patrick Ramsey, MD, MSPH

12:15 p.m. – 12:45 p.m.
Capitol Peak Prefunction & Crystal Peak A & B

Break

12:45 p.m. – 01:45 p.m.

Industry Sponsored Session

01:45 p.m. – 02:45 p.m.
Crystal Peak A & B

Poster Session 1

Revealing Mechanisms of Female Sexual Dysfunction Through Multi-Omics Analysis of the Vaginal Microenvironment (#022)
Phoebe Crossley (University of Arizona)

Chlamydia Screening Practices and Positivity Rates in University versus Regional Medical Centers (#023)
Nicolina Mascia (Department of Obstetrics and Gynecology, Medical University of South Carolina)

Vaginal and Gastrointestinal Microbiome in Patients with Chronic Pelvic Pain (#024)
Emerald Bell (Basic Medical Sciences, College of Medicine-Phoenix, University of Arizona)

High Social Vulnerability Associated with Lower Likelihood of Chlamydia Screening among Pregnant Women: A Prospective Surveillance Study (#025)
Bethany Bruno (Medical University at South Carolina)

Uterotonic Management of Postpartum Hemorrhage in Pregnancies Affected by Intra-amniotic Infection (#026)
Michaela Y. Lee (UT Health San Antonio)

Outcomes in Adolescent Pregnant Patients Infected with Severe Acute Respiratory Syndrome Coronavirus 2 (#027)
Sebastian Nasrallah (Inova Fairfax Hospital)

Impact of COVID-19 on Vaccination Rates Among Pregnant Patients (#028)
Ravyn Njagu (Duke University)

Determinants of Bacteroides Stability in the Neonatal Gut Microbiome (#029)
Ofri Bar (Massachusetts General Hospital)

Association Of Bacterial Vaginosis With Chlamydia Trachomatis Infection Among Women In Mombasa, Kenya: A Nested Case-Control Study (#030)
Omolara Akingba (University of Washington)

HPV Vaccination: Broadening the Scope of Education and Administration (#031)
Jill Maples (University of Tennessee Graduate School of Medicine)

COVID-19 Maternal Antibody Concentrations in Small for Gestational Age Infants: Does Placental Insufficiency Impact Transplacental Antibody Transfer? (#032)
Alisa Kachikis (University of Washington Department of Obstetrics & Gynecology)

Neonatal Survival and Morbidity Following Expectant Management of Previable Premature Rupture of Membranes at a Single Center (#033)
Jennifer Cate (Duke University)

Comparison of Maternal and Infant Outcomes in SARS-COV-2 Affected Pregnancies and Contemporaneous Pregnancies from British Columbia, Canada (#034)
Winnie Fu (University of British Columbia)

Morbidity in Expectant Management of Pre-viable Preterm Prelabor Rupture of Membranes (#035)
Colleen Judge-Golden (Duke University Hospital)

Alinity m HR HPV Investigational Use Only (IUO) Assay: Designed to Meet US Guidelines for Managing Patients in Cervical Cancer Screening Programs (#036)
Josh Kostera (Abbott Laboratories)

Maternal Outcomes of Parvovirus B19 Infections in Pregnancy (#037)
Jennifer Okunbor (Duke University School of Medicine)

Estimating the Burden of Infant Group B Streptococcus Disease in Ontario, Canada: a Population-Based Cohort Study (#038)
Romina Fakhraei (University of Ottawa)

SARS CoV2 Viral Load and Outcomes in Pregnant and Non-pregnant Women Admitted with COVID-19 (#039)
Juliann Wang (University of Alabama at Birmingham, Marnix E. Heersink School of Medicine)

Maternal Cytomegalovirus Reinfection during Pregnancy among Women Living with HIV (#040)
Elisabeth McClymont (University of British Columbia)

Incidence and Symptom Profiling of Vaginitis Containing Aerobic and Anaerobic Pathogens (#041)
Pita Navarro (Evvy)

Characteristics Associated with Hepatitis C Virus Test Timing During Pregnancy among People with Opioid Use Disorder (#042)
Kathryn Miele (Centers for Disease Control and Prevention)

Feasibility of Mechanical Lysis of Fungal Pathogens for a Future Vulvovaginal Candidiasis Test on a Rapid Molecular Point-of-Care System* (#043)
Rena Dvoretzky (Talis Biomedical)

Maternal Perceptions of Tdap Vaccination and Dissonance between Vaccine Status and Perception (#044)
Jill Maples (University of Tennessee Graduate School of Medicine)

Gonococcal Endocarditis, a Life-Threatening Complication of a "Screenable" Infection
Denise Ornelas (University of California, Riverside, School of Medicine) & Diana Ornelas (University of California, Riverside, School of Medicine)

Peripartum Infection of the Pubic Symphysis by an Unusual Organism
Mary Fang (Department of Obstetrics and Gynecology, Baylor College of Medicine)

Don't Trust the Culture: A Surprising Diagnosis for maternal and neonatal illness
Nir Meller (Sheba Medical Center, Israel)

03:00 p.m. – 05:00 p.m.
Mt. Harvard Room

CDC Focus Group

**pre-registration required*

05:00 p.m. – 06:30 p.m.
Capitol Peak Prefunction & Crystal Peak A & B

Welcome Reception

DISCLAIMER AND UNLABELED USAGE STATEMENT

The information presented is that of the contributing faculty and presenters and does not necessarily represent the views of the Infectious Diseases of Obstetrics and Gynecology or any named company or organization providing financial support. Specific therapies discussed may not be approved and/or specified for use as indicated by the faculty or presenters.

PROGRAM

FRIDAY

JULY 28, 2023

07:00 a.m. – 08:00 a.m.

Industry Sponsored Symposium

08:15 a.m. – 09:15 a.m.

General Session 2

08:15 a.m. – 09:00 a.m.
Breastfeeding in people with HIV: Where have we been and where are we going?
Lisa Rahangdale, MD, MPH (UNC School of Medicine)

09:00 a.m. – 09:15 a.m.
Q&A
Lisa Rahangdale, MD, MPH (UNC School of Medicine)

09:15 a.m. – 10:15 a.m.

Oral Abstract Session 3

09:15 a.m. – 09:30 a.m.
Determining the Pharmacokinetics of Azithromycin in Pregnant Subjects Undergoing Cesarean Delivery After Failed Labor (#008)
Miriam Estin (Duke University Hospital)

09:30 a.m. – 09:45 a.m.
Secreted Proteases from Vaginal Prevotella Species Target and Mimic Human MMPs and Modulate Endocervical Barrier Function (#009)
Karen Lithgow (University of Calgary)

09:45 a.m. – 10:00 a.m.
Impact of Chlorhexidine and Povidone-Iodine Antiseptic Solutions on the Vaginal Microbiome in Women Undergoing Gynecologic Surgeries: a Pilot Study (#010)
Pawel Laniewski (University of Arizona)

10:00 a.m. – 10:15 a.m.
Gardnerella Species Variations Show Pathogenic and Metabolic Differences (#011)
Pita Navarro (Evvy)

10:15 a.m. – 10:30 a.m.
Capitol Peak Prefunction & Crystal Peak A & B

Break

10:30 a.m. – 11:15 a.m.

Oral Abstract Session 4

10:30 a.m. – 10:45 a.m.
Vaginal Microbiota Linked to HIV Acquisition Risk Are Not Associated with Changes in Concentrations of Cervical Dendritic Cells and CD4+ T Cells (#012)
Michelle C. Sabo (University of Washington)

10:45 a.m. – 11:00 a.m.
Bacterial Cell Wall Reduces Herpesvirus Infection (#013)
Amanda Adams (Harvard School of Public Health)

11:00 a.m. – 11:15 a.m.
HIV Vertical Transmission and Adverse Pregnancy Outcomes among People Living with and without HIV with and without Syphilis-Co-infection in Southern Brazil, 2008-2018 (#014)
Lanbo Yang (Warren Alpert Medical School of Brown University)

11:15 a.m. – 12:15 p.m.

President's Forum

Panel: Richard Beigi, MD, MSc, Dana Meaney-Delman, MD, MPH, FACOG, Amy Murtha, MD & Laura Riley, MD
Moderator: Geeta Swamy, MD

12:15 p.m. – 12:45 p.m.
Capitol Peak Prefunction & Crystal Peak A & B

Break

12:45 p.m. – 01:45 p.m.

Industry Sponsored Symposium

01:45 p.m. – 02:45 p.m.
Crystal Peak A & B

Poster Session 2

Preferences for Pediatric and Perinatal HCV Screening and Treatment from Focus Group with Sex Workers. (#045)
Caleb Smith (Drexel University)

Characterizing the Preferences of Pregnant People for Preventives to Protect Their Infants Against Respiratory Syncytial Virus (#046)
Amy Law (Pfizer, Inc.)

Barriers to Infection Prevention and Control Practices in the Labor and Delivery Setting (#047)
Marisa R. Young (Department of Gynecology and Obstetrics, Emory University School of Medicine)

Human Immunodeficiency Virus Diagnosis During Pregnancy and Missed Opportunities for Pre-conception Diagnosis (#048)
Alyssa Kretz (Johns Hopkins School of Medicine)

Bacterial Vaginosis, Vaginal PH, and Sexually Transmitted Infections: Neisseria Gonorrhoeae, Chlamydia Trachomatis, Trichomonas Vaginalis (#049)
Stephanie McLaughlin (University of Washington)

Differences in Indications for Delivery Based on COVID-19 Infections Status Among an Underserved Pregnant Cohort: A Prospective Cohort Study (#050)
Mary Fang (Department of Obstetrics and Gynecology, Baylor College of Medicine)

Vaginitis Polymerase Chain Reaction (PCR) Testing and Occurrence of Mixed Infections: Results from a Large US Clinical Laboratory (#051)
Susan Hahn (Quest Diagnostics)

Postpartum Antibiotic and Probiotic Use and Infant Feeding Patterns in a Low-risk, Term Birth Cohort from British Columbia, Canada (#052)
Zahra Pakzad (Department of Microbiology and Immunology, University of British Columbia)

HIV Tests and Diagnoses During Pregnancy Among People with Opioid Use Disorder (#053)
Savannah Hammerton (University of Georgia)

Syphilis Screening During Pregnancy Among People with Opioid Use Disorder (#054)
Kathryn Miele (Centers for Disease Control and Prevention)

Comparisons of Perceptions About Novel Respiratory Virus Vaccines Among Pregnant and Non-Pregnant Healthcare Workers (#055)
Candace Haghighi (Wake Forest School of Medicine)

Practice, Policy and Evidence Facilitating Promotion of Vaccination in Pregnancy in Canada: a Scoping Review (#056)
Monica Surti (University of Calgary)

Breast Milk Feeding Initiation among Pregnant Persons with Hepatitis C Virus Infection – Surveillance for Emerging Threats to Pregnant People and Infants Network (#057)
Daniel Chang (Eagle Global Scientific)

Perception of a Group B Streptococcus Vaccine (GBS) Among Pregnant and Lactating Individuals following the COVID-19 Vaccine Experience (#058)
Monica Sosa (Department of Obstetrics and Gynecology, University of Washington, Seattle.)

Erythropoietin Levels in Pregnant Patients with Anemia and Pyelonephritis (#059)
Noor Al-Shibli (Duke University, Department of Obstetrics and Gynecology)

Feasibility of a 30-Minute Sample-to-Answer Chlamydia Trachomatis, Neisseria Gonorrhea, and Trichomonas Vaginalis Multiplex Test on a Rapid Molecular Point-of-Care System (#060)
Brittney Nguyen (Talis Biomedical)

Is Gravidity Associated with COVID-19 Vaccination among Pregnant Women in Jamaica? (#061)
Jodian Pinkney (Massachusetts General Hospital)

Provider Knowledge and Use of Processes Associated with Increasing HPV Vaccination (#062)
Jill Maples (University of Tennessee Graduate School of Medicine)

Antepartum Risk Factors for Neonatal Necrotizing Enterocolitis and Bowel Perforations (#063)
Walker Phillips (Frederick P. Whiddon College of Medicine)

Incident Bacterial Vaginosis in a Community-Based Cohort of Women (#064)
Christina Muzny (University of Alabama at Birmingham, Division of Infectious Diseases)

Clinical Utility and Evaluation of the Alinity m STI assay at a Large Academic Medical Center in the Southeastern United States (#066)
Josh Kostera (Abbott Laboratories)

COVID-19 Vaccine Hesitancy During Pregnancy: A Qualitative Study (#067)
Imaima Casubhoy (Johns Hopkins Bloomberg School of Public Health)

Maternal SARS-CoV2 infection: Associations between Placental Histopathological Lesions and Neonatal Birth Weight (#068)
Genevieve Quesnel (University of Calgary)

03:00 p.m. – 05:00 p.m.
Mt. Harvard Room

CDC Focus Group

**pre-registration required*

07:00 p.m. – 11:00 p.m.

Awards Ceremony/Dinner Dance

PROGRAM

SATURDAY
JULY 29, 2023

08:30 a.m. – 08:45 a.m.

Annual Business Meeting

08:45 a.m. – 09:45 a.m

General Session 3

08:45 a.m. – 09:30 a.m.
Anal Cancer Screening: What the OBGYN Needs to Know
Christine Conageski, MD, MSc (University of Colorado SOM)

09:30 a.m. – 09:45 a.m.
Q&A
Christine Conageski, MD, MSc (University of Colorado SOM)

09:45 a.m. – 10:45 a.m.

Oral Abstract Session 5

09:45 a.m. – 10:00 a.m.
Effectiveness of Maternal Influenza Vaccination During Pregnancy Against Influenza-Associated Emergency Department Visits and Hospitalizations in Infants <6 Months of Age (#015)
Samantha Olson (CDC)

10:00 a.m. – 10:15 a.m.
Analysis of Dried Blood Spot and Saliva PCR Screening for Detection of Congenital Cytomegalovirus Infection Informs Implementation of a Novel Universal Newborn Screening Program (#016)
Daniel Landers (University of Minnesota Medical School and M Health Fairview Health System)

10:15 a.m. – 10:30 a.m.
Association Between Glycemic Control and Group B Streptococcus Colonization Among Pregnant Individuals with Pregestational Diabetes (#017)
Tracy Caroline Bank (Ohio State University Wexner Medical Center)

10:30 a.m. – 10:45 a.m.
Neighborhood Socioeconomic Disadvantage and Group B Streptococcus Colonization in Pregnancy (#018)
Tracy Caroline Bank (Ohio State University Wexner Medical Center)

10:45 a.m. – 11:00 a.m.
Capitol Peak Prefunction & Crystal Peak A & B

Break

11:00 a.m. – 11:45 a.m.

Oral Abstract Session 6

11:00 a.m. – 11:15 a.m.
Changes in Vaginal Bacteria and Inflammatory Mediators from Periconception through Early-Postpartum in a Cohort of HIV-negative Kenyan Women (#019)
Michelle C. Sabo (University of Washington)

11:15 a.m. – 11:30 a.m.
Prospective Cohort Study Examining the Association between Vaginal Washing and Neisseria gonorrhoeae Infection in Women Who Engage in Sex Work in Mombasa, Kenya (#020)
Stephanie McLaughlin (University of Washington)

11:30 a.m. – 11:45 a.m.
SARS-CoV-2 Infection During Pregnancy and Gene Co-expression Network Analyses of the Placental Transcriptome (#021)
Kendall Moore (Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York, NY, USA)

11:45 a.m. – 12:00 p.m.

Wrap Up/Adjourn Meeting

ABSTRACTS ORAL PRESENTATIONS

#001 Population Pharmacokinetics of Sofosbuvir/Velpatasvir in Pregnant Women with Hepatitis C Virus

Randolph, R[1]; Ibrahim, M[2]; Roon, L[1]; Letterio, C[3]; Kwon, KM[3]; Hillier, S[4]; Chappell, C[4]

1 - University of Colorado Anschutz Medical Campus

2 - Certara

3 - Gilead Sciences

4 - University of Pittsburgh

Abstract Body:

Objective: Hepatitis C virus (HCV) treatment during pregnancy could cure maternal HCV during prenatal care engagement and prevent perinatal transmission. Sofosbuvir/velpatasvir (SOF/VEL) pharmacokinetics (PK) were determined in pregnant women in the HIP-2 trial (NCT04382404). VEL exposures and SOF maximum concentration (Cmax) were similar to non-pregnant controls, but SOF exposure was 38% higher and GS-331007 (inactive metabolite of SOF) exposure and Cmax were 38% and 43% lower, respectively. The goal of this analysis was to identify factors that influence SOF, GS-331007, and VEL PK variability in pregnancy. Study Design: Participants underwent intensive PK sampling 3 (PK1) and 9 (PK3) weeks after starting SOF/VEL. SOF, GS-331007, and VEL were quantified using validated UPLC-MS-MS methods. Non-linear mixed effects modeling (Phoenix v8.3) was used to determine SOF, GS-331007, and VEL PK. The effect of the following covariates on PK variability was assessed: gestational age, weight, creatinine clearance, and opioid agonist therapy (methadone or buprenorphine). Results: Ten women completed intensive sampling occurring at mean (SD) 26.8 (0.9) and 32.8 (1.4) weeks. Approximately 59% of SOF was converted to GS-331007. The median (min, max) conversion of SOF to GS-331007 decreased from 201 (131, 286) to 180 (115, 454) L/h from PK1 to PK3, respectively. No covariates were associated with VEL PK. Conclusion: The conversion of SOF to GS-331007 is slower with increasing gestational age, but SOF exposures remain in the therapeutic range. The PK findings support continued evaluation of the safety and efficacy of SOF/VEL in pregnant persons with HCV in the STORC trial (NCT05140941).

Disclosure:

Yes, this is sponsored by industry/sponsor: Gilead Sciences
Clarification: Industry funding only - investigator initiated and executed study
Any of the authors act as a consultant, employee or shareholder of an industry for: Gilead Sciences

#002 The Effect of HCV on Methadone Dose During Pregnancy

Boudova, S[1]; Iyer, NS[1]; Tholey, DM[1]; Fenkel, JM[1]; Boelig, R[1]

1 - Thomas Jefferson University

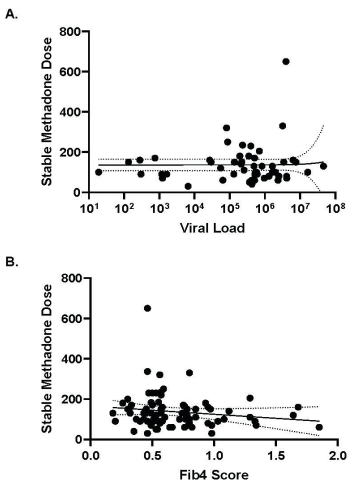
Abstract Body:

Objective: Pregnancy is a time of high patient motivation to initiate opioid agonist medication for opioid use disorder (mOUD). Hepatic drug metabolism can be altered by pregnancy and Hepatitis C virus (HCV) infection. We aimed to examine the impact of HCV during pregnancy on methadone dosing. Study Design: Retrospective chart review of all pregnant patients, age 18+, with OUD admitted for initiation of methadone from 1/2020 – 6/2022. Associations were examined using student's T-tests, chi-squared tests, fisher's exact tests, univariate and multivariate linear regression. Results: We identified 185 pregnancies with data on HCV status. 108 (58.38%) screened positive for HCV, and 69 (37.30%) had a detectable viral load. The median viral load was 498,500 IU/mL (range 19-46,000,000 IU/mL). Fib4 score, an estimate of liver fibrosis, was available for 97 pregnancies. The average Fib4 score was 0.36 (SD 0.69) and only five individuals had Fib4 scores >1.45. White race (p=0.001) and IV drug use (p<0.001) were significantly associated with having HCV viremia. We found no association between the presence of HCV and stable methadone dose (p = 0.105) in univariate analysis or in a multivariate linear regression model (p=0.503). There was no correlation between viral load or Fib4 score and stable methadone dose (Figure 1). Conclusions: Our data suggest that HCV-specific alteration are unnecessary for methadone dosing in pregnancy, and HCV should not be a barrier to methadone initiation. Patient engagement with mOUD and identification of HCV prior to fibrotic damage make this an ideal population to target for HCV treatment.

Disclosure: No

Images:

Figure1: Association between HCV viral load and Fib4 score and stable methadone dose



A. Viral load is plotted against stable methadone dose. N=52. X-axis is log transformed. Linear regression of line of best fit with 95% CI. R-squared is <0.001. P value of line of best fit is 0.872. B. Fib4 score is plotted against stable methadone dose. N=78. Linear regression of line of best fit with 95% CI. R-squared is 0.024. P value of line of best fit is 0.178.

#003 Hepatitis C Virus Infection Across Multiple Pregnancies, Surveillance for Emerging Threats to Pregnant Persons and Infants Network – 2018-2021

Newton, S[1]; Carlson, J[1]; Reynolds, M[1]; Panagiotakopoulos, L[1]; Tong, V[1]; Meaney-Delman, D[1]

1 - Centers for Disease Control and Prevention

Abstract Body:

Objective Among pregnancies with hepatitis C virus (HCV) infection resulting in live births occurring 2018-2021, we describe characteristics of people with more than one pregnancy with HCV infection to identify missed opportunities for HCV treatment between pregnancies. Study Design The Surveillance for Emerging Threats to Pregnant Persons and Infants Network (SET-NET) conducts surveillance of pregnant people with hepatitis C. Pregnant persons with a positive test for HCV RNA during pregnancy or in the 12 months prior to pregnancy without subsequent negative testing or treatment are included. Results As of December 2022, 99/3,666 persons (3%) had multiple pregnancies with HCV infection. Most (85%) had public health insurance and lived in an urban area (84%). Twenty-five percent breastfed their infants during birth hospitalization. Median time between pregnancies was 7.1 months (IQR: 4.0-14.2). There were at least three months between pregnancies for 85% of persons, and at least eight months for 47%, which could allow for completion of DAA treatment after breastfeeding. Conclusion Pregnant persons with HCV infection occurring in more than one pregnancy represent a missed opportunity for maternal treatment between pregnancies. Pregnancy represents a unique connection to care for people who might not otherwise have access. Screening and referral to care during pregnancy or during birth hospitalization could facilitate prompt treatment beginning as early as the immediate postpartum period, improve maternal morbidity, and prevent vertical transmission in future pregnancies.

Disclosure: No

#004 Pregnancy Characteristics and Birth Outcomes in People with Mpox Infection During Pregnancy – Surveillance for Emerging Threats to Pregnant People and Infants Network

Neelam, V[1]; Olsen, E[1]; Roth, N[1]; Newton, S[1]; Galang, R[1]; Hufstetler, K[1]; Zilversmit Pao, L[1]; Peterson, B[1]; Bachmann, L[1]; Tong, V[1]; Meaney-Delman, D[1]; Ellington, S[1]

1 - Centers for Disease Control and Prevention

Abstract Body:

Objectives: We describe pregnancy characteristics among pregnant or recently pregnant people with laboratory confirmed or probable mpox infection during pregnancy and whose data were reported to CDC as of February 28, 2023. Infant characteristics are also reported among pregnancies resulting in a live birth. Study design: Confirmed cases are those where mpox was confirmed by PCR testing, sequencing, or viral culture. Probable cases had a positive orthopoxvirus test with clinical features of mpox. Data were obtained from case investigation forms, clinical consultations, birth hospitalization records, or vital statistics. Results: Eleven jurisdictions reported 27 cases (14 confirmed, 13 probable) of mpox among pregnant or recently pregnant people. Of fourteen people with reported mpox exposure history, all reported intimate contact as route of exposure. All individuals reported a rash, 22.2% reported genital or breast lesions. Eleven pregnant people received tecovirimat: two in the first trimester, five in the second, and four in the third. As of February 28, 18 pregnancies were ongoing or have

no reported pregnancy outcome. Of those with reported outcomes (N=9), 3 were a pregnancy loss (<20 weeks gestation) and 6 were live births. No adverse treatment effects were noted. Two of six liveborn infants had a rash within ten days of birth and tested positive for mpox. Conclusion: Intimate contact was the most frequently reported route of exposure. Based on these preliminary data, pregnancy and infant outcomes from the current mpox outbreak appear less severe than the 80% adverse outcomes prevalence reported in the literature from previous outbreaks.

Disclosure: No

#005 Geographic Distribution and Characteristics of Inadequate Maternal Syphilis Treatment

Warncke, K[1]; Kleinmann, W[1]; Pruszynski, J[1]; Adhikari, E[1]

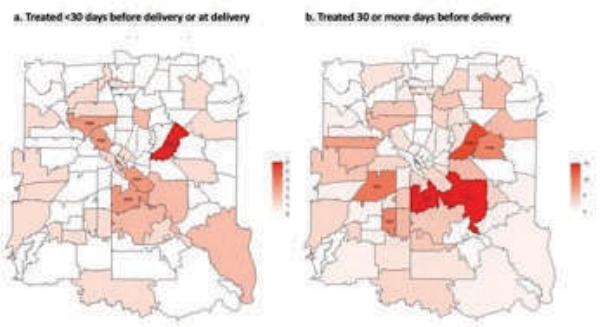
1 - University of Texas Southwestern Medical Center

Abstract Body:

Objective: We describe geographic distribution of active syphilis and characterize inadequate maternal treatment during pregnancy. Study Design: We prospectively identified pregnant patients diagnosed with syphilis in a large public healthcare system. Geographic zip code distribution was mapped based on treatment initiation timing. Descriptive and analytic statistics were used to characterize individuals with penicillin initiated within 30 days before delivery (LateTx) compared to 30 or more days prior to delivery (EarlyTx). Results: From January 1, 2021 through December 31, 2022, 289 pregnant patients were diagnosed with active syphilis, including 53 (18%) with late or no treatment before delivery and 236 (82%) with early treatment. Demographics and syphilis stage at diagnosis were similar. LateTx individuals were in distinct zip codes compared to EarlyTx individuals, and the latter were linked with high deprivation based on community needs assessment (Figure). LateTx individuals were more likely multiparous with late (32 vs 15 weeks) and limited (1-3 visits) or no prenatal care (p<0.001). Among those delivered at our institution, preterm birth was increased (20(39%)vs15[9%], p<0.001) and neonatal hospital stay (median [IQR]) was longer (11[11-14] vs 4[3-7] days, p<0.001) in LateTx individuals, with 91% of neonates receiving 10 days IV penicillin therapy. Conclusion: Factors that contribute to inadequate maternal syphilis treatment in pregnancy relate to high deprivation which may include childcare needs and barriers to establishing early prenatal care at a public healthcare system. Targeting these barriers may increase early diagnosis and treatment, and decrease neonatal morbidity related to congenital syphilis.

Disclosure: No

Images:



#006 Universal Prenatal Screening for Chagas Disease in an At-Risk Population

Neuhoff, B[1]; Perlman, J[2]; Heines, T[2]; Cantey, J[2]; Ramsey, P[2]

1 - University of Texas Health Science Center at San Antonio (UTHSCSA)

2 - UTHSCSA

Abstract Body:

An estimated 40,000 Latin American women of child-bearing years in the United States are infected with T.cruzi, the parasite that causes Chagas disease, and about 63 to 315 vertically-infected infants are born each year in the United States. Adult and congenital Chagas disease is treatable, and the CDC recommends screening for at-risk patients. Despite this, routine prenatal screening for Chagas disease in the United States is rare. This study describes the initiation of a university and community-based screening program in a high-risk region of the United States. Universal screening at initial prenatal visits was initiated at a Southern U.S. health system in August 2020. Demographic and clinical information was collected through retrospective review. Testing was performed through serological screening for T.cruzi IgG with confirmatory testing through the CDC. 5,273 patients were screened from August 2020 through January 2023. Population was approximately 38% Mexican/Mexican

American, 43% other Hispanic, 18% non-Hispanic. 32 patients had positive screening results, most of whom identified as Mexican (53%) or other Hispanic (44%). 26 patients received CDC confirmatory testing, with 3 confirmed positive results (0.06% prevalence). One patient was lost to follow-up. One had a first trimester miscarriage and one a term delivery. These patients were referred for postpartum treatment; the neonate was tested without evidence of congenital infection. These results highlight the success of a screening program in identifying previously undiagnosed patients and their at-risk neonates. Further analysis needs to be performed to determine if a universal versus a targeted screening program should be continued.

Disclosure: No

Images:

#007 Increased uptake of intermittent preventive treatment for prevention of malaria in pregnancy and scale-up of group antenatal care in Nasarawa State, Nigeria

Peterkin, T[1]; Eke, E[1]; Don-Aki, J[2]; Jaiyeola, O[3]; Suhowatsky, S[2]; Noguchi, L[4]

1 - Jhpiego Nigeria

2 - Jhpiego

3 - TA Connect

4 - Jhpiego/Johns Hopkins University

Abstract Body:

Objective: Malaria is estimated to complicate over half of pregnancies in Nigeria and causes poor pregnancy outcomes, including low birthweight and preterm birth. Coverage of intermittent preventive treatment of malaria in pregnancy (IPTp) using sulfamethoxazole pyrimethamine (SP) was 16.6% in Nigeria in 2018. Group antenatal care (GANC) was previously associated with increased retention in care and better IPTp coverage in a cluster randomized trial. We examined the association between GANC introduction and IPTp uptake in Nasarawa, Nigeria to assess if impact can be sustained outside a trial. Study Design: In this quasi-experimental study, GANC was introduced to 104 facilities across Nasarawa in 2021-2022. Providers were trained on GANC, including malaria in pregnancy prevention, directly observed SP therapy, and tracking IPTp uptake. Baseline and endline data on IPTp coverage were collected from facility records. Results: Project data reported 43,328 women enrolled in GANC, which is 70% of total ANC1 clients. The number of ANC clients who received at least one dose of IPTp increased 46% from 29,813 (baseline) to 43,601 (endline). Coverage of at least three doses of IPTp increased from 8,149 (baseline) to 26,792 (endline) (229%) ($p<0.001$). Conclusion: This study is the first to provide evidence that introduction of GANC may facilitate increased uptake of IPTp at scale outside a trial context. Given recognized global challenges in improving IPTp coverage and the known negative impact of malaria in pregnancy, implementation of GANC at scale should be considered as a feasible and effective strategy to improve maternal and child health outcomes.

Disclosure: No

#008 Determining the Pharmacokinetics of Azithromycin in Pregnant Subjects Undergoing Cesarean Delivery After Failed Labor

Estin, M[1]; Gu, K[2]; Swamy, G[1]; Hughes, B[1]

1 - Duke University Hospital

2 - NIAID/NIH - Division of Microbiology and Infectious Diseases (DMID)

Abstract Body:

This opportunistic population pharmacokinetic (popPK) study evaluated azithromycin concentrations in pregnant patients at the time of cesarean section following labor, to examine azithromycin pharmacokinetcs (PK) and determine if azithromycin concentrations differ by body mass index (BMI) among birthing people. 120 patients were recruited. After a single dose of 500 mg azithromycin by intravenous infusion at the time of cesarean, specimens of maternal plasma, adipose tissue, and myometrial tissue were collected at defined time points. Azithromycin concentrations were measured using tandem LC/MS. Azithromycin concentration-time data were analyzed by popPK modeling approach. Adjusted azithromycin concentrations were also compared between BMI groups using one way ANOVA. A three-compartment linear elimination model best described the plasma PK parameters for azithromycin observed in this study. The interindividual variability in clearance was small between BMI categories, and there were no differences in adjusted mean myometrial or plasma concentrations between BMI

groups. Azithromycin achieved high concentrations in both subcutaneous adipose tissue and myometrial tissue, and distribution from plasma into these tissues was estimated to be rapid. However, mean adipose tissue concentration 30 minutes or more after infusion varied with BMI category: 1.934 ng/g in BMI<30 subjects, 1.759 ng/g in BMI 30-39 subjects, and 1.207 ng/g in BMI>40 subjects (p=0.029). (see Table) Azithromycin PK parameters at the time of cesarean section following labor were not altered by BMI category in plasma or myometrial tissue, but adipose tissue concentration was higher in subjects with BMI<30 at >30 minutes after infusion. Submitted on behalf of the POPs CANDO team

Disclosure: No

Images:

		Plasma concentration (ng/mL) Time course				Adipose tissue concentration (ng/g) Time course	
BMI Category	Statistic	0-<12 hours	12-<24 hours	24-<48 hours	48+ hours	0-<30 minutes	30+ minutes
> 40 kg/m2	N	17	9	10	4	26	34
	GM	0.331	0.099	0.068	0.041	1.636	1.207
	Standard Deviation	3.184	1.429	1.423	1.741	2.453	2.755
	CV	1.680	0.369	0.364	0.600	1.112	1.339
	Minimum	0.06	0.06	0.03	0.02	0.17	0.03
	Maximum	4.78	0.16	0.10	0.07	5.76	6.15
30 - 40 kg/m2	N	10	9	5	7	21	19
	GM	0.270	0.114	0.065	0.045	2.318	1.759
	Standard Deviation	2.762	1.257	1.453	1.854	2.106	1.998
	CV	1.344	0.232	0.387	0.681	0.861	0.784
	Minimum	0.04	0.08	0.04	0.02	0.41	0.22
	Maximum	1.25	0.16	0.11	0.10	6.17	4.02
< 30 kg/m2	N	24	17	16	11	48	42
	GM	0.460	0.114	0.085	0.044	2.072	1.934
	Standard Deviation	2.245	1.616	1.471	1.473	2.435	2.021
	CV	0.961	0.509	0.401	0.402	1.099	0.800
	Minimum	0.17	0.02	0.04	0.02	0.11	0.13
	Maximum	8.88	0.18	0.16	0.07	7.39	6.38
Comparison of BMI Groups	p-value	0.755	0.478	0.174	0.826	0.310	0.029

Notes: If more than one sample collected per time period, the mean plasma concentration by subject was summarized. The p-value is for a one-way ANOVA test comparing concentrations by obesity status and is only computed if >3 subjects have a concentration within the time period for at least two groups. Concentrations were calculated by liquid chromatography with tandem mass spectroscopy and adjusted for dose received at time sample taken.

Table: Plasma and adipose tissue concentrations of azithromycin over time, compared by BMI category.

#009 Secreted Proteases from Vaginal Prevotella Species Target and Mimic Human MMPs and Modulate Endocervical Barrier Function

Lithgow, K[1]; Dufour, A[1]; Sycuro, L[1]

1 - University of Calgary

Abstract Body:

Objective: Vaginal Prevotella species are frequently detected during bacterial vaginosis (BV) and increase the risk of sexually transmitted infection (STI). Elevated proteolysis during BV has been linked to HIV acquisition and attributed to human matrix metalloproteinases (MMPs), but we have yet to examine whether BV-associated bacterial proteases can initiate and exacerbate cervicovaginal proteolysis. We hypothesize that Prevotella species secrete cervical-modulating proteases that increase STI susceptibility by degrading cervical barrier proteins, activating MMPs and promoting Prevotella endocervical transmigration. Methods: Vaginal Prevotella species proteolytic activity was assessed using zymography or fluorescent assays with structural (collagen/elastin) and regulatory (MMPs) cervical protein substrates. Polarized endocervical cells were exposed to BV-associated bacteria and resistance measurements, protease assays, and spot plating evaluated barrier integrity, MMP activity and bacterial traversal. Results: Five out of eight vaginal Prevotella species secrete proteases that degrade cervical barrier proteins and target MMPs for activation and degradation. Prevotella metalloproteases also degrade a peptide substrate specifically designed to assess human MMP activity, suggesting that Prevotella proteases not only activate MMPs, but also mimic their activity. Human/bacterial secreted MMP activity was elevated in polarized endocervical samples exposed to proteolytic Prevotella species, but not beneficial vaginal bacteria or protease-deficient BV-associated bacteria. Intriguingly, three proteolytic Prevotella species traversed polarized endocervical barriers, including Prevotella bivia and Prevotella melaninogenica, which are epidemiologically linked to HIV risk. Conclusions: Our findings suggest a new mechanism whereby proteolytic Prevotella species directly degrade structural cervical barrier proteins, while amplifying their effects via MMP activation and mimicry to increase endocervical susceptibility to STIs.

Disclosure: No

#010 Impact of Chlorhexidine and Povidone-Iodine Antiseptic Solutions on the Vaginal Microbiome in Women Undergoing Gynecologic Surgeries: a Pilot Study

Laniewski, P[1]; Smith, G[1]; Mahnert, N[1]; Farland, L[1]; Herbst-Kralovetz, M[1]

1 - University of Arizona

Abstract Body:

Objective: To reduce surgical site infections in gynecologic surgeries, the vagina is cleansed with chlorhexidine or povidone-iodine. Our objective was to investigate the impact of these antiseptic solutions on the vaginal

microbiome among patients undergoing laparoscopic hysterectomy for benign conditions. Study design: In this prospective observational study, we enrolled 21 premenopausal cis women. Vaginal surgical preparation was performed with either chlorhexidine gluconate (n=13) or povidone-iodine (n=8) based on physician preference. Vaginal swabs were collected prior to vaginal preparation and at post-operative visits (4-6 weeks post-surgery) for microbiome analysis. Self-reported vaginal/vulvar assessment scores were also collected. Results: Microbiome richness significantly (p=0.04) decreased post-surgery compared to pre-surgery only in the povidone-iodine group. Yet, chlorhexidine treatment resulted in significant (p<0.001) changes in microbial profiles. Prior to surgery, 75-77% patients in both groups exhibited Lactobacillus dominance. The povidone-iodine did not change the overall profiles, whereas chlorhexidine impacted Lactobacillus iners, which shifted to other lactobacilli or dysbiosis. Yet, L. iners is known to transition to other microbial communities. Lactobacillus crispatus, which is optimal to vaginal health, was not impacted by either exposure. Furthermore, chlorhexidine resulted in enrichment of Dialister micraerophilus and Streptococcus anginosus, whereas povidone-iodine increased abundance of Finegoldia magna. Vaginal pH did not significantly change after either exposure, although it correlated with the microbiome richness and diversity. Conclusion: Overall, our pilot study suggests that there is no increased postoperative dysbiosis with the use of chlorhexidine as a vaginal preparation compared to povidone-iodine. Yet, species-specific effects of chlorhexidine on vaginal lactobacilli require further investigation.

Disclosure:
Any of the authors act as a consultant, employee or shareholder of an industry for: Freya Biosciences

#011 Gardnerella Species Variations Show Pathogenic and Metabolic Differences

Olmschenk, G[1]; Thomas-White, K[1]; Weaver, F[1]; Navarro, P[1]
1 - Evvy

Abstract Body:
Objective: Gardnerella, a common member of the vaginal microbiome, is a biomarker, but not the proven cause, of bacterial vaginosis (BV). Until 2020, the Gardnerella genus had only one known species, G. vaginalis, then 3 additional species were named. Little remains known about the variations in pathogenic potential. Here we present the largest genome comparison of Gardnerella including 489 Gardnerella genomes representing all 12 distinct species. Study Design: A genome dataset was created from publicly available genomes (N=209) and metagenome assembled genomes (N=280). Species were identified using average nucleotide identity (ANI) of whole genomes with a 95% similarity cutoff. ResFinder and CARD were used to identify antibiotic resistance, KEGG analysis for metabolic pathways, and VFDB for virulence genes. Results: ANI clusters into 12 distinct species (Fig 1). G. vaginalis and G. piotii each contain 2 distinct sub-species variants. Initial analysis revealed that no specific taxa was associated with isolation location or BV symptoms. Resistance to antibiotics varied by species: rifamycin in 80% of all strains and lincomycin in 25-50%. No metronidazole resistance was identified. G. vaginalis is the only taxa to be able to degrade galactose. 75-100% of strains contain vaginolysin, while only G. leopoldii and G. swidsinskii have GAPDH. Conclusion Distinct genomics differences in pathogenicity and metabolism were found across the Gardnerella genus. This variation suggests certain species may be more pathogenic than others and may be associated with different treatment outcomes. Ongoing research includes analysis of metadata to identify associations to pathogenic species and genes.

Disclosure:
Yes, this is sponsored by industry/sponsor: Evvy
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Evvy

Images:

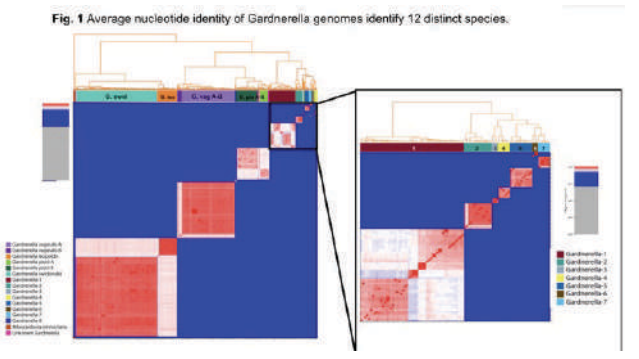


Fig. 1 Average nucleotide identity of Gardnerella genomes identify 12 distinct species.

#012 Vaginal Microbiota Linked to HIV Acquisition Risk Are Not Associated with Changes in Concentrations of Cervical Dendritic Cells and CD4+ T Cells

Sabo, MC[1]; Saha, A[1]; Mustafa, S[1]; Fiedler, TL[2]; Oyaro, B[1]; Fuchs, E[1]; Richardson, BA[1]; Mandaliya, K[3]; Mureithi, M[4]; Fredricks, DN[5]; Shah, JA[1]; McClelland, RS[1]

1 - University of Washington

2 - Fred Hutchinson Cancer Center

3 - Pathcare Laboratories

4 - KAVI-Institute of Clinical Research, University of Nairobi

5 - Fred Hutchison Cancer Center

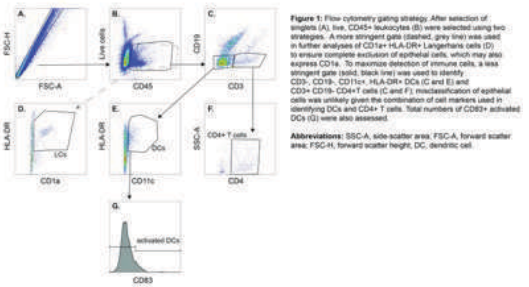
Abstract Body:

Objective: We hypothesized that the link between vaginal microbiota and HIV susceptibility may be mediated by recruitment of cervical dendritic cells (DCs), Langerhans cells (LCs, a DC subtype), and CD4+ T cells. Study Design: Fifty-five women (28 with and 27 without BV) underwent cervical biopsy. Cervical immune cells were quantified using flow cytometry (Figure 1). Vaginal bacterial taxa linked to HIV susceptibility (Megasphaera hutchinsoni, Eggerthella species [sp] Type 1, Gemella asaccharolytica, Sneathia spp., Mycoplasma hominis, Parvimonas sp. Type 1 and Parvimonas sp. Type 2) were measured using quantitative polymerase chain reaction. Results: Linear regression analyses adjusted for age, condomless sex, vaginal washing, and menstrual cycle phase demonstrated no significant differences in mean log2 cells/mg tissue between women with and without BV: DCs (6.4 versus [vs] 7.1; Beta=-0.33 95% confidence interval [CI] -1.30, 0.65; p=0.50); activated DCs (7.8 vs 8.4; Beta=-0.46, 95% CI -1.59, 0.62; p=0.39); LCs (6.2 vs 6.6; Beta=-0.20, 95% CI -1.07, 0.66; p=0.63); or, CD4+ T cells (8.1 vs 8.4; Beta=-0.17, 95% CI -0.88, 0.54; p=0.63). Additionally, immune cell numbers did not differ between samples with undetectable versus below median and above median concentrations of each bacterial taxon. This study had >80% power to detect differences of >1.9 log2 cells/mg tissue for all cell types in the presence vs absence of BV and each bacterial taxon. Conclusions: Bacterial vaginosis and vaginal bacteria linked to HIV risk were not associated with higher concentrations of cervical DCs, activated DCs, LCs or CD4+ T cells in tissue samples as hypothesized.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Gilead

Images:



#013 Changes in Vaginal Bacteria and Inflammatory Mediators from Periconception through Early-Postpartum in a Cohort of HIV-negative Kenyan Women

Sabo, MC[1]; Lokken, EM[1]; Kinuthia, J[2]; Srinivasan, S[3]; Richardson, BA[4]; Fiedler, TL[5]; Munch, M[5]; Proll, S[5]; Salano, C[2]; John-Stewart, G[1]; Jaoko, W[6]; Fredricks, DN[5]; McClelland, RS[1]

1 - University of Washington

2 - Kenyatta National Hospital and University of Nairobi

3 - Fred Hutchinson Cancer Center

4 - University of Washington and Fred Hutchison Cancer Center

5 - Fred Hutchison Cancer Center

6 - University of Nairobi

Abstract Body:

Objective: To determine how changes in vaginal microbiota and/or cervicovaginal cytokines may mediate women's increased risk of HIV acquisition during pregnancy and the postpartum period. Study Design: A cohort of HIV-1-seronegative Kenyan women contributed vaginal fluid samples at six reproductive time points: periconception, positive pregnancy test, first trimester, second trimester, third trimester and postpartum. Concentrations of vaginal bacteria previously associated with HIV risk and cytokines were measured using quantitative polymerase chain reaction and immunoassays, respectively. Associations between reproductive time point and vaginal bacterial taxa or cervicovaginal cytokines were separately assessed using Tobit regression. Relationships between vaginal microbiota and cytokines were assessed using principal component analysis (PCA). Results: Eighty women contributed 409 samples. Later pregnancy time points were associated with lower concentrations of Sneathia spp. (p=0.01), Eggerthella sp. Type 1 (p=0.002) and Parvimonas sp. Type 2 (p=0.02), and higher concentrations of IL-6 (p<0.001), TNF (p=0.004), CXCL10 (p<0.001),

CCL3 (p=0.009), CCL4 (p<0.001), CCL5 (p=0.002), IL-1-beta (p=0.02), and IL-8 (p=0.002). Most cervicovaginal cytokines and vaginal bacteria clustered separately in PCA, except for CXCL10, which did not group with either the cytokine or bacterial clusters. The shift toward a more Lactobacillus dominated microbiota during pregnancy appeared to mediate the relationship between pregnancy time point and CXCL10. Conclusions: Increases in proinflammatory cytokines, but not vaginal bacterial taxa previously associated with HIV risk, could provide an explanation for increased HIV susceptibility during pregnancy and postpartum.

Disclosure:
Any of the authors act as a consultant, employee or shareholder of an industry for: Gilead

#014 HIV Vertical Transmission and Adverse Pregnancy Outcomes among People Living with and without HIV with and without Syphilis-Co-infection in Southern Brazil, 2008-2018

Yang, L[1]; Sundar, K[2], Cambou, M[3]; Swayze, E[4]; Segura, E[5]; Gonçalves de Melo , M[6]; Santos, B[6]; Varella, I[6]; Nielsen-Saines, K[7]

1 - Warren Alpert Medical School of Brown University

2 - Cooper Medical School of Rowan University

3 - Division of Infectious Diseases, Department of Medicine, UCLA David Geffen School of Medicine

4 - Department of Obstetrics and Gynecology, University of Tennessee Health Science Center

5 - Facultad de Ciencias de la Salud, Universidad Científica del Sur

6 - Hospital Nossa Senhora da Conceição

7 - Division of Pediatric Infectious Diseases, UCLA David Geffen School of Medicine

Abstract Body:
Objective: Syphilis co-infection among pregnant people living with HIV (PLH) may increase HIV vertical transmission (VT) and worsen pregnancy outcomes. We evaluated the impact of syphilis co-infection on pregnancies in south Brazil. Study Design: Data was extracted from hospital records between 1/1/2008 -12/31/2018. HIV viral load (VL), VDRL titers, preterm birth (PTB), low birth weight (LBW < 2500g), stillbirth (SB) and HIV VT were compared between PLH with (PLH+S) and without syphilis (PLS) and pregnancies without HIV and syphilis (PWOH) and syphilis only (PWOH+S). Results: Among 49,300 deliveries where patients were tested for HIV and syphilis, 1,381 (2.8%) occurred in PLH; 169 (12.2%) were HIV/syphilis co-infected (PLH+S). Comparison of adverse pregnancy outcomes, HIV viral load at delivery, antiretroviral(ART) use, VDRL titers and congenital syphilis between PWOH, PWOH+S, PLS and PLH+S are shown in Table 1. 39.1% of PLH+S did not initiate ART until within 30 days before delivery versus 4.3% of PLH (p<0.001). In the multivariate model of PLH, VDRL > or = 1:16 was marginally associated with PTB (aRR: 2.00 95%CI: 1.05-3.81) and LBW (aRR: 1.66 95%CI: 1.02-2.69), but not with SB (aRR: 1.83 95%CI: 0.35-9.61). Unsuppressed viremia at delivery (> 1,000 copies/mL) was associated with risk of PTB (aRR: 1.57, 95% CI: 1.12-2.20) and SB (aRR: 2.47 95%CI: 1.04-5.86) but not LBW (aRR: 1.21 95%CI: 0.92-1.60). Conclusion: Syphilis co-infection worsens adverse pregnancy outcomes in all women and compounds negative effects of HIV infection during pregnancy. Effective syphilis treatment and HIV VL suppression are paramount for optimal obstetric care.

Disclosure: No

Images:

Table 1. Obstetric, HIV and syphilis characteristics of deliveries by people without HIV or syphilis, with HIV only, syphilis only and with HIV/syphilis co-infection (n=49,300).

	- HIV, - Syphilis (n=46,436)	+HIV only (n=1,212)	+ Syphilis only (n=1,483)	+ HIV, + Syphilis (n=169)	p-value
	n (%)	n (%)	n (%)	n (%)	
Age (n=49, 296)					
<18	4,165 (9.0)	43 (3.6)	119 (8.0)	5 (3.0)	**<0.001**
18-34	36,169 (77.9)	961 (79.3)	1,223 (82.5)	148 (87.6)	
>35	6,098 (13.1)	208 (17.2)	141 (9.5)	16 (9.5)	
Gravida					
Primigravid	17,284 (37.2)	221 (18.2)	447 (30.1)	22 (13.0)	**<0.001**
Multigravid	29,152 (62.8)	991 (81.8)	1,036 (69.8)	147 (86.98)	
Adverse pregnancy outcomes					
Preterm birth	6,141 (13.2)	220 (18.2)	273 (18.4)	38 (22.5)	**<0.001**
Low birthweight (n=48,955)	6,056 (13.1)	286 (23.8)	294 (20.1)	45 (27.1)	**<0.001**
Stillbirth (n=48,733)	450 (1.0)	42 (3.5)	82 (5.6)	12 (7.2)	**<0.001**
HIV parameters					
HIV vertical transmission (n=1,119)		20 (2.0)		5 (3.8)	**<0.001**
Viral load at/near delivery (copies/mL)					**<0.001**
<50 (Undetectable)		657 (54.2)		63 (37.3)	
50-999		206 (17.0)		31 (18.3)	
>1,000		273 (22.5)		62 (36.7)	
Unknown		76 (6.3)		13 (7.7)	
Antiretroviral use during pregnancy (n=1,337)		1,001 (82.6)		105 (62.1)	**<0.001**
Syphilis parameters					
VDRL titers					
≤1:8			1,071 (72.2)	95 (56.2)	
≥1:16			356 (24.0)	69 (40.0)	
Unknown			56 (3.8)	5 (3.0)	
Congential syphilis (n=1,601)			999 (67.4)	132 (78.1)	**0.009**

#015 Effectiveness of Maternal Influenza Vaccination During Pregnancy Against Influenza-Associated Emergency Department Visits and Hospitalizations in Infants <6 Months of Age

Olson, S[1]; Sahni, L[2]; Halasa, N[3]; Stewart, L[3]; Michaels, M[4]; Williams, J[4]; Englund, J[5]; Klein, E[5]; Staat, M[6]; Schlaudecker, E[6]; Selvarangan, R[7]; Schuster, J[7]; Weinberg, G[8]; Szilagyi, P[9]; Boom, J[2]; Patel, M[1]; Munoz, F[2]

1 - CDC

2 - Baylor College of Medicine, Texas Children's Hospital

3 - Vanderbilt University Medical Center

4 - UPMC Children's Hospital of Pittsburgh, University of Pittsburgh School of Medicine

5 - Seattle Children's Research Institute

6 - Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine

7 - University of Missouri—Kansas City School of Medicine, Children's Mercy Kansas City

8 - University of Rochester School of Medicine and Dentistry

9 - UCLA Mattel Children's Hospital

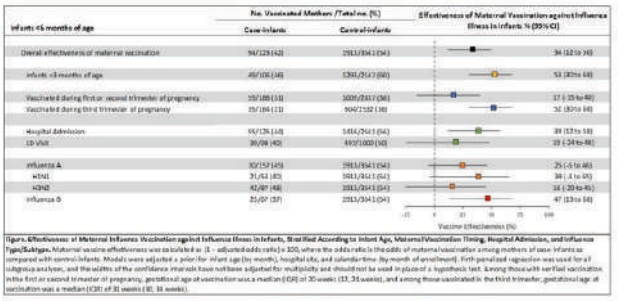
Abstract Body:

Using a test-negative design, we assessed the effectiveness (VE) of influenza vaccination during pregnancy against laboratory-confirmed influenza-associated ED visits or hospitalizations in infants <6 months enrolled from 7 sites in the 2016-2017 through 2019-2020 influenza seasons. We assessed maternal influenza vaccination and timing of vaccine receipt during pregnancy using documentation from state immunization information systems, providers, or self-report. We estimated VE by comparing the odds of maternal influenza vaccination ≥14 days prior to delivery in influenza-positive case-infants versus influenza-negative control-infants (stratified by infant age, trimester of vaccination, and severity of infant disease). Of 3,764 infants included (223 case-infants and 3,541 control-infants), 53% (n=2,007) were born to mothers vaccinated during pregnancy. Among case-infants,14% required supplemental oxygen, 5% required ICU admission, and median length of hospital stay was 1 day (IQR: 1, 2). Overall VE in infants was 34% (95% CI: 12%, 50%); VE was 19% (95% CI: -24%, 48%) against ED visits and 39% (95% CI: 12%, 58%) against hospitalization. VE was 52% (95% CI: 30%, 68%) when mothers were vaccinated during their third trimester of pregnancy and 17% (95% CI: -15%, 40%) when vaccinated during their first or second trimesters. Among infants <3 months of age, VE was 53% (95% CI: 30%, 68%). Influenza vaccine uptake during pregnancy was consistent with national averages but could be improved. Maternal vaccination was associated with reduced odds of influenza illness in infants <6 months. VE was greatest among the youngest infants, those born to mothers vaccinated later in pregnancy, and against influenza-associated hospitalizations.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Astra Zeneca, Meissa Vaccines, Pfizer, Moderna, Sanofi Pasteur, GSK, Dynavax, Merck, Novavax, Quidel

Images:



#016 Analysis of Dried Blood Spot and Saliva PCR Screening for Detection of Congenital Cytomegalovirus Infection Informs Implementation of a Novel Universal Newborn Screening Program

Landers, D[1]; Osterholm, E[2]; Herd, H[3]; Huang, T[4]; Hernandez-Alvarado, N[5]; Kruc, R[6]; Graupmann, E[7]; Schleiss, M[8]

1 - University of Minnesota Medical School and M Health Fairview Health System, Division of Maternal Fetal Medicine

2 - Division of Neonatology, Department of Pediatrics, University of Minnesota MedicalSchool

3 - University of Minnesota Masonic Children's Hospital

4 - Department of Otolaryngology, University of Minnesota Medical School

5 - Division of Pediatric Infectious Diseases and Immunology, Dept of Pediatrics, University of Minnesota Medical School

6 - University of Minnesota Medical School

7 - Department of Pediatrics, University of Minnesota Medical School

8 - Division of Pediatric Infectious Diseases and Immunology, Dept. of Pediatrics, and Center for Infectious Diseases and Microbiology Translational Research, University of Minnesota Medial School

Abstract Body:

Objective: To define the prevalence and optimal diagnostic approach for identification of congenital CMV (cCMV) infection in a newborn screening study in Minnesota, the first state to mandate universal cCMV newborn screening in early 2023. Study Design: We consented and screened newborns from 6 Minnesota nurseries for cCMV by PCR testing using saliva obtained 1-2 days after birth, and dried blood spots (DBS) obtained for routine newborn screening. Positive screens were confirmed by urine PCR test within 3 weeks. of birth and complete diagnostic evaluation performed. Using international consensus criteria, cCMV cases were separated into four categories including moderate to severely symptomatic, mildly symptomatic, asymptomatic with isolated sensorineural hearing loss

(SNHL) or strictly asymptomatic. Results: In a study from February 2016 to December 2022, 23,644 infants were screened for cCMV. To date we have identified 87 (3.7 per 1,000) confirmed cCMV cases. Analytical sensitivity of saliva swab testing was 93.4% and DBS PCR testing 72.4%. We classified 60 newborns as asymptomatic; 5 infants were moderately or severely symptomatic (including 2 with SNHL); 8 infants were mildly symptomatic; and 3 infants were asymptomatic, but had isolated SNHL. Delayed-onset SNHL has been noted in 4 infants (2 asymptomatic and 2 symptomatic). Conclusions: The clinical sensitivity of DBS to identify cCMV suggests their utility for universal screening, though follow-up data are needed. Continued evaluation of CMV DBS testing methods for reproducibility, efficiency and high throughput capability in state public health laboratories will be important for the consideration of implementation of universal cCMV screening.

Disclosure: No

#017 Association Between Glycemic Control and Group B Streptococcus Colonization Among Pregnant Individuals with Pregestational Diabetes

Field, C[1]; Bank, TC[1]; Germann, K[1]; Grobman, W[1]; Landon, M[1]; Gabbe, S[1]; Costantine, M[1]; Venkatesh, K[1]

1 - The Ohio State University

Abstract Body:

Objective: We examined the association between glycemic control and GBS colonization among pregnant individuals with pregestational diabetes. Study Design: A retrospective cohort of pregnant individuals with pregestational diabetes at a tertiary care center. The exposure was glycemic control measured as A1c in late pregnancy (>20 weeks), assessed categorically at thresholds of <6.5% and <6.0%, and as a continuous percentage. The outcome was maternal GBS colonization, in the anogenital tract (98%) or bacteriuria (2%). Multivariable logistic regression was used and adjusted for maternal covariates at delivery, including age, parity, race and ethnicity as a social determinant of health, body mass index, diabetes type, and gestational age at A1c assessment. Results: Among 311 individuals (33% type 1, 67% type 2), A1c was assessed at a mean gestational age of 31 weeks, and 45.0% were colonized with GBS. Individuals with an A1c <6.5% were half as likely to be colonized with GBS (39% vs. 54%; AOR: 0.50; 95% CI: 0.30 to 0.83) (Table 1). Similarly, individuals with an A1c <6.0% were less likely to be colonized with GBS (36% vs. 49%; AOR: 0.56; 95% CI: 0.34 to 0.90). When assessed as a continuous measure, individuals with a higher mean A1c were more likely to be colonized with GBS (A1c: 6.8% vs. 6.2%; AOR: 1.61; 95% CI: 1.29 to 2.02). Conclusions: Pregnant individuals with pregestational diabetes with worse glycemic control were at an increased risk of GBS colonization. Whether improved glycemic control in pregnancy decreases the risk of GBS colonization remains to be studied.

Disclosure: No

Images:

Table 1. Association between glycemic control and group B streptococcus colonization among pregnant individuals with pregestational diabetes

	Frequency GBS colonization below A1c cutoff (%)	Frequency GBS colonization above A1c cutoff (%)	Unadjusted odds ratio, OR (95% CI)	Adjusted odds ratio, aOR (95% CI)[1,2]
A1c <6.5%	38.8	53.9	0.54 (0.34 to 0.86)	0.50 (0.30 to 0.83)
A1c <6.0%	35.7	48.5	0.58 (0.37 to 0.93)	0.56 (0.34 to 0.90)
	Mean HbA1c in those with GBS colonization	**Mean HbA1c in those without GBS colonization**	**Unadjusted odds ratio, OR (95% CI)**	**Adjusted odds ratio, aOR (95% CI)[1,2]**
A1c, continuous percentage	6.8	6.2	1.53 (1.24 to 1.88)	1.61 (1.29 to 2.02)

[1]Multivariable logistic regression was used.
[2]Model adjusted for maternal age, parity, self-reported race and ethnicity, body mass index, type of diabetes, and gestational age at HbA1c assessment.

#018 Neighborhood Socioeconomic Disadvantage and Group B Streptococcus Colonization in Pregnancy

Bank, TC[1]; Field, C[1]; Yee, L[2]; Johnson, J[3]; Mcneil, R[4]; Chung, J[5]; Mercer, B[6]; Simhan, H[7]; Reddy, U[8]; Silver, R[9]; Parry, S[10]; Saade, G[11]; Lynch, C[1]; Grobman, W[1]; Venkatesh, K[1]

1 - Ohio State University Wexner Medical Center

2 - Northwestern University Feinberg School of Medicine

3 - Indiana University School of Medicine

4 - Research Triangle Institute International

5 - University of California Irvine

6 - MetroHealth

7 - University of Pittsburgh Medical Center

8 - Columbia University Irving Medical Center

9 - University of Utah Health Sciences Center

10 - Penn Medicine

11 - Eastern Virginia Medical School

Abstract Body:

Objective: We sought to determine if there is an association between neighborhood socioeconomic disadvantage and group B streptococcus (GBS) colonization in pregnancy. Study Design: This was a secondary analysis from the prospective cohort Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-To-Be study. Recruitment to this

study occurred between 2010 and 2013. Home addresses during pregnancy were geocoded at the census tract level and linked to the 2015 Area Deprivation Index (ADI), which incorporates income, education, employment, and housing quality into a composite ranking of neighborhood socioeconomic disadvantage. ADI was categorized in quartiles from least (Q1) to most disadvantaged (Q4). The outcome was maternal GBS colonization. Poisson regression with robust error variance was used to estimate an adjusted relative risk (aRR), incorporating individual-level covariates such as age, Medicaid status, self-reported race and ethnicity, pre-pregnancy body mass index, and pregestational diabetes. Results: Of 8,120 enrolled individuals with available GBS status and ADI data, 22.7% (n=1,846) were colonized with GBS. Maternal GBS colonization increased with neighborhood deprivation, from 20.1% in Q1 (least disadvantaged) to 29.4% in Q4 (most disadvantaged) (p< 0.001), with individuals living in Q4 having a 25% increased risk of GBS compared to those in Q1 after adjustment for confounding [adjusted risk ratio, aRR: 1.25; 95% CI: (1.10 to 1.42)]. Those in intermediate quartiles of neighborhood disadvantage (Q2 and Q3) were not more likely than those in Q1 to be colonized with GBS; 19.5% and 22.3%. Conclusions: Nulliparous gravidas living in the most disadvantaged neighborhoods were at increased risk of maternal GBS colonization.

Disclosure: No

Images:

Table. Association between Area Deprivation Index (ADI) and maternal GBS colonization

	Risk ratio (RR); 95% CI[1]	Adjusted risk ratio (ARR); 95% CI[1,2]
SGA (outcome) vs. AGA (reference)		
Area Deprivation Index		
Quartile 1 (least disadvantaged)	1.00	1.00
Quartile 2	0.97 (0.86 to 1.09)	0.93 (0.82 to 1.05)
Quartile 3	1.11 (0.98 to 1.25)	1.04 (0.91 to 1.17)
Quartile 4 (most disadvantaged)	1.46 (1.31 to 1.63)	1.25 (1.10 to 1.42)

[1]Poisson regression with robust error variance was used to estimate an adjusted relative risk (aRR).
[2]Adjusted model included individual-level covariates: age, Medicaid status, self-reported race and ethnicity as a social determinant of health, pre-pregnancy body mass index, and pregestational diabetes.

#019 Bacterial Cell Wall Reduces Herpesvirus Infection

Adams, A[1]; Glick, G[1]; Gopinath, S[1]

1 - Harvard School of Public Health

Abstract Body:

Objective: Identify novel components of the vaginal bacterial cell that could be used to reduce herpesvirus infectivity. Study design: Human vaginal Lactobacilli were screened for antiviral activity against Herpes Simplex Virus 2 (HSV-2) by co-incubating virus with dead, supernatant-free bacteria and quantifying infectious virus on Vero cells. To identify components of the bacterial cell that reduce viral infection, peptidoglycan (PG) was co-incubated with HSV-1 or HSV-2 and infectious virus quantified on Veros or human foreskin fibroblasts. The impact of PG on HSV-2 infection in vivo was evaluated via intravaginal infection of conventional mice. The mechanisms by which PG reduce viral infection were further examined by cleaving peptidoglycan with glycosyl hydrolases and endopeptidases. Viral attachment assays were done on Veros to determine the mode of action of PG on HSV-2 infection. Results: All evaluated vaginal Lactobacilli reduced HSV-2 infection on Veros, with Lactobacillus crispatus reducing infectivity the most. PG from multiple bacterial strains reduced infection in Veros, HFFs, and in intravaginal infection, with some PGs preventing any sign of disease in mice. Cleavage of peptidoglycan chains restored virus infectivity in vitro and in vivo suggesting that antiviral effects are dependent on longer peptidoglycan chains. PG did not impact viral attachment to cells, suggesting that bacterial inhibition of viral infection is independent of viral attachment. Conclusions: We identify that vaginal Lactobacilli and bacterial cell wall inhibit HSV infection, providing a new therapeutic candidate for herpes. Ongoing efforts seek to further define the mechanisms by which bacterial cell wall reduces herpes infectivity.

Disclosure: No

#020 Prospective Cohort Study Examining the Association between Vaginal Washing and Neisseria gonorrhoeae Infection in Women Who Engage in Sex Work in Mombasa, Kenya

McLaughlin, S[1]; Tapia, K[1]; Adala, L[2]; Kabare, E[2]; Shafi, J[2]; Mandaliya, K[2]; McClelland, RS[1]

1 - University of Washington

2 - Pwani Research Centre

Abstract Body:

Objective: This study explored the relationship between vaginal washing and the risk of cervical Neisseria gonorrhoeae (NG) acquisition in HIV-1-seronegative

women who engage in sex work. Study Design: This prospective cohort analysis included data from 11/1/2004-9/1/2022. Testing for NG was performed with culture, nucleic acid amplification testing, or both. Generalized estimating equation Poisson analysis was used to determine the risk of incident NG infection associated with vaginal washing at the preceding visit. Results: 1542 women contributed 24,220 visits. The median interval between visits was 34 days (interquartile range 28-55). There were 226 incident NG infections. Participants reported no vaginal washing at 13.8% of visits, while vaginal washing with water alone was reported at 53.9%, soap/water at 29.9%, and other substances (primarily detergent or antiseptic) at 2.4% of visits. In bivariate analyses, vaginal washing with water (RR=1.6, 95% confidence interval [CI] 1.0-2.6), soap/water (RR=1.5, 95% CI 0.9-2.5), and other substances (RR=4.5, 95% CI 2.2-9.9) was associated with increased risk of NG infection. In a multivariable model adjusted for age, frequency of sex, number of sex partners in the last week, workplace, and contraceptive use, the association between vaginal washing with water (aRR=1.5, 95% CI 0.9-2.4) and soap/water (aRR=1.3, 95% CI 0.8-2.3) were attenuated. A strong association between vaginal washing with other substances and NG infection remained (aRR=3.3, 95% CI 1.5-7.0). Conclusions: Vaginal washing is a common practice with no known health benefits. Performing vaginal washing with some substances, particularly detergents or antiseptics, may increase women's risk for NG infection.

Disclosure: No

#021 SARS-CoV-2 Infection During Pregnancy and Gene Co-expression Network Analyses of the Placental Transcriptome

Moore, K[1]; Jessel, RH[2]; Dubois, B[2]; Mills, A[2]; Kaplowitz, E[3]; Ibroci, E[1]; Orhn, S[2]; Graziani, M[1]; Dekio, F[4]; Brody, RI[4]; Ma, Y[5]; Gigase, FA[1]; Lieb, W[6]; Janevic, T[7]; Perez-Rodriguez, MM[1]; Bergink, V[8]; De Witte , LD[1]; Rommel, A[1]; Chen, J[5]; Lesseur, C[5]

1 - Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York, NY, USA

2 - Department of Obstetrics, Gynecology and Reproductive Science, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

3 - Department of Population Health Science and Policy, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

4 - Department of Pathology, Molecular and Cell Based Medicine, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

5 - Department of Environmental Medicine and Public Health, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

6 - Department of Obstetrics, Gynecology and Reproductive Science, Icahn School of Medicine at Mount Sinai, New York City, NY, USA, Department of Population Health Science and Policy, Icahn School of Medicine at Mount Sinai, New York City, NY, USA, Blavatnik Family Women's Health Research Institute, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

7 - Department of Obstetrics, Gynecology and Reproductive Science, Icahn School of Medicine at Mount Sinai, New York City, NY, USA, Department of Population Health Science and Policy, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

8 - Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York, NY, USA, Department of Obstetrics, Gynecology and Reproductive Science, Icahn School of Medicine at Mount Sinai, New York City, NY, USA, Department of Population Health Science and Policy, Icahn School of Medicine at Mount Sinai, New York City, NY, USA, Blavatnik Family Women's Health Research Institute, Icahn School of Medicine at Mount Sinai, New York City, NY, USA

Abstract Body:

Objective: Investigate the impact of antenatal SARS-CoV-2 infection on the placental transcriptome using weighted gene co-expression network analysis (WGCNA). Study Design: We leveraged 156 placental villi samples collected prospectively from pregnant participants enrolled in Generation C, a prospective cohort study conducted from April 2020 to February 2022 in New York City. RNA-seq transcriptome-wide data was used in WGCNA to characterize the effects of gestational SARS-CoV-2 infection in gene network modules using linear regression modeling. We performed enrichment analyses with Hallmark gene sets to annotate network modules. Results: In total, 25 (16%) participants had SARS-CoV-2 infection during pregnancy and the median gestational age at delivery was 39 weeks (Interquartile Range 1.14). WGCNA identified 13 placenta gene co-expression network modules. The "magenta" module, which is enriched in genes involved in Mtorc1 signaling and apoptosis, was found to be significantly associated with SARS-CoV-2 infection during pregnancy (B=- 0.04, p=0.02), an association that persisted after adjusting for infant sex, maternal age, and gestational age. Conclusion: These results suggest that SARS-CoV-2 infection during pregnancy may disrupt placental gene networks and functions, since Mtorc1 signaling in the placenta is involved in growth and nutrient transport regulation. These results suggest novel insight into the impact of antenatal infection.

Disclosure: No

ABSTRACTS POSTER PRESENTATIONS

#022 Revealing Mechanisms of Female Sexual Dysfunction Through Multi-Omics Analysis of the Vaginal Microenvironment

Crossley, P[1]; Laniewski, P[1]; Jimenez, N[1]; Cui, H[1]; Roe, D[1]; Mourad, J[1]; Mahnert, N[1]; Chase, D[1]; Herbst-Kralovetz, M[1]

1 - University of Arizona

Abstract Body:

Objective Women with endometriosis, adenomyosis, and fibroids often suffer from burdensome vaginal symptoms, resulting in decreased sexual function. Our aim was to analyze the vaginal microbiota and immunometabolic profiles of these women to better understand underlying mechanisms related to sexual dysfunction. Study Design In this cross-sectional study, immunometabolic profiles of 79 women undergoing hysterectomy for benign gynecological conditions were determined using Bio-Plex and liquid chromatography-mass spectrometry. Vaginal and Vulvar Assessment Scale (VAS/VuAS) and PROMIS Sexual Function and Satisfaction Measures were collected. Patients were grouped by low and high VAS scores. Vaginal microbiota profiles were characterized using 16S rRNA gene sequencing and analyzed using ANCOM-BC. Data was analyzed using MetaboAnalyst, Spearman correlation, and integrated bioinformatic tools. Results There was no significant difference in age, BMI, menopausal status, vaginal pH, prevalence of benign condition, or antidepressant use between low and high VAS groups. Significant alteration of metabolites (n=59, P<0.05), primarily downregulation of glycerophospholipids, and significant dysregulation of lipid metabolism (P<0.01) was identified in women with high VAS scores. Numerous immune mediators, namely those involved in T-cell regulation (PD-1, LAG-3, IL-2), were significantly positively correlated with severe vaginal symptoms (0.0003<P<0.0479). Health-associated Lactobacillus crispatus was depleted in women experiencing vaginal soreness, and dysbiotic bacteria (Sneathia amnii, Megasphaera lornae, Group B Streptococcus) were enriched in women with severe vaginal symptoms. Conclusion Our study identifies potential key pathophysiologic mechanisms underlying vaginal symptoms, including a state of immune dysregulation and metabolic evidence of epithelial barrier disruption in women with benign gynecological conditions experiencing sexual dysfunction.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Freya Biosciences

#023 Chlamydia Screening Practices and Positivity Rates in University versus Regional Medical Centers

Mascia, N[1]; Lazenby, G[1]; Dutra, K[1]; Pittman, J[2]

1 - Department of Obstetrics and Gynecology, Medical University of South Carolina

2 - College of Medicine, Medical University of South Carolina

Abstract Body:

Objective: We evaluated chlamydia screening practices and positivity rates during pregnancy at our university hospital and statewide affiliated regional medical center clinics (RMCs). Study Design: This is an observational study of a cohort receiving any prenatal care (PNC) from January 1 to December 31, 2021. Using bivariate analyses, we compared the percentage of persons with chlamydia screening and the percentage with positive tests by hospital. Logistic regression was used to determine predictors of a positive chlamydia test. Results: 6,454 people receiving care at our university hospital and six RMCs were included in the cohort. Persons receiving PNC at RMCs were less likely to be screened for chlamydia compared to those at our university location (40% vs 24%, p-value < 0.0001). Chlamydia positivity rates were higher at RMCs (6% vs 4%, p-value 0.0003). Non-black persons were less likely to be screened during pregnancy (aOR, 0.67, 95% CI 0.58-0.76). Predictors of a positive chlamydia test during pregnancy were Black race (aOR, 2.38; 95% CI 1.6-3.53) and age ≤ 25 years (aOR, 3.9%; 95% CI 2.75–5.54). Conclusion: Persons receiving PNC at RMCs were less likely to be screened for chlamydia but more likely to test positive than those at a university hospital. Black race and young age were associated with chlamydia positivity during pregnancy at all locations. Our findings suggest that prenatal chlamydia screening in RMCs is not universal. Given a high prevalence of chlamydia positivity during pregnancy in our healthcare system, we recommend universal screening to reduce chlamydia related perinatal morbidity.

Disclosure: No

#024 Vaginal and Gastrointestinal Microbiome in Patients with Chronic Pelvic Pain

Bell, E[1]; Jimenez, N[2]; Norton, T[3]; Valenti, M[4]; Mahnert, N[5]; Farland, L[6]; Herbst-Kralovetz, M[7]

1 - Basic Medical Sciences, College of Medicine-Phoenix, University of Arizona; University of Arizona College of Nursing

2 - Department of Obstetrics and Gynecology, College of Medicine-Phoenix, University of Arizona

3 - Department of Obstetrics and Gynecology, Banner University Medical Center Phoenix

4 - Department of Obstetrics and Gynecology, University of Arizona, College of Medicine-Tucson

5 - Department of Obstetrics and Gynecology, College of Medicine-Phoenix, University of Arizona; UA Cancer Center, University of Arizona; Department of Obstetrics and Gynecology, Banner University Medical Center Phoenix

6 - Department of Epidemiology and Biostatistics, Mel and Enid Zuckerman College of Public Health, University of Arizona; Department of Obstetrics and Gynecology, University of Arizona, College of Medicine-Tucson

7 - Basic Medical Sciences, College of Medicine-Phoenix, University of Arizona; Department of Obstetrics and Gynecology, College of Medicine-Phoenix, University of Arizona; UA Cancer Center, University of Arizona

Abstract Body:

Chronic pelvic pain (CPP) is persistent pain (>six months) located at the anatomic pelvic organs, which is prevalent in up to a quarter of women and often co-occurs with endometriosis. Available evidence suggests that dysbiosis of the microbiome may play a key role in both disorders. Dysbiosis of the gut microbiome, may compromise immune, nervous, and endocrine pathways and contribute to the development of extra-intestinal disorders, including CPP and endometriosis. Likewise, dysbiosis of the vaginal microbiome may play a role in local and systemic inflammatory states. We hypothesized that women with CPP alone and CPP with endometriosis will exhibit altered microbial diversity/abundance in comparison to surgical controls. To address this hypothesis, a convenience sampling of 77 women undergoing surgical procedures from the Phoenix area was utilized. Race (p=0.001), ethnicity (p=0.004), and BMI (p=0.0002) were statistically significantly different between groups, but age was not (p=0.53). Vaginal and gut microbiomes from women with CPP (n=23), CPP with endometriosis (n=35), and surgical controls (n=19), were evaluated utilizing 16S rRNA sequencing. The groups were assessed via alpha-diversity, beta-diversity, heatmaps, and differential abundance. In this ongoing study, we found several statistically significant taxa differences between groups (p= 0.008504), in endometriosis implant location (p= 0.05), and in co-occurring gynecological conditions including abnormal uterine bleeding (p= 0.01). Results from this study support the association of gut and vaginal dysbiosis in individuals with CPP and CPP with endometriosis. The recruitment of a larger cohort of participants is needed to further elucidate this association.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Freya Biosciences

#025 High Social Vulnerability Associated with Lower Likelihood of Chlamydia Screening among Pregnant Women: A Prospective Surveillance Study

Bruno, B[1]; Dutra, K[2]; Korte, JE[2]; Lazenby, GB[2]

1 - Medical University at South Carolina

2 - Medical University of South Carolina

Abstract Body:

Objective: We evaluated the impact of social vulnerability on STI screening and positivity among pregnant persons at our university hospital and affiliated medical centers. Study Design: This prospective surveillance study includes all persons with a pregnancy episode in the electronic medical record between January 1st and December 31st, 2022. Social vulnerability was calculated using the Centers for Disease Control and Prevention Social Vulnerability Index (SVI). SVI values range from 0 to 1, with higher values indicating greater vulnerability. Chi-square and Fisher's exact tests assessed for associations between social vulnerability and STI screening/positivity. Logistic regression determined factors associated with high SVI. Results: Of 7027 persons, 14% met criteria for high social vulnerability (SVI >75th percentile). The median SVI was 0.2 (IQR 0.1-0.5). Those with high SVI did not test positive for chlamydia at higher rates (6% vs 4%, p=0.11). Pregnant persons with high SVI were more often <25 years old (44% vs 33%, p<0.0001), black (47% vs 35%, p<0.0001), and Medicaid/self-pay (63.5% vs 48.5%, p<0.0001). High SVI was associated with black race (aOR 1.2, 95% CI 1.05-1.5) and Medicaid/self-pay (aOR 1.3, 95% CI 1.1-1.6). High SVI was associated with lower odds of chlamydia screening (aOR 0.8, 95% CI 0.7-0.9) and receiving care at our university location (aOR 0.19, 95% CI 0.16-0.22). Conclusion: High social vulnerability was associated with lower odds of chlamydia screening. There was no difference in chlamydia positivity based on SVI. Our findings suggest possible under-reporting of chlamydia

positivity due to reduced screening among those with high SVI.

Disclosure: No

#026 Uterotonic Management of Postpartum Hemorrhage in Pregnancies Affected by Intra-amniotic Infection

Lee, MY[1]; Cheng, C[1]; Sundjaja, CD[1]; Neuhoff, BK[1]; Munter, BT[1]; Byrne, JJ[1]

1 - UT Health San Antonio

Abstract Body:

Objective: To examine how postpartum hemorrhage (PPH) management in the setting of intra-amniotic infection (IAI) differs in uterotonic administration and doses. Study Design: We performed a single-institution, retrospective cohort study on patients whose deliveries were complicated by PPH from 8/2020-8/2021. Inclusion criteria included quantitative blood loss >=1000ml within 24 hours of delivery. Patients were stratified into two groups: patients with and without a clinical diagnosis of IAI. Clinical diagnosis of IAI includes maternal intrapartum fever >=39°C and one of the following: maternal leukocytosis, purulent cervical drainage, fetal tachycardia. All patients received oxytocin per institutional protocol. The primary outcome was number of additional uterotonics and number of administered doses for PPH management. The secondary outcome was number of doses of tranexamic acid (TXA). Statistical analysis was performed for categorical variables as appropriate. Results: Of the 3103 patients who delivered at our institution in the 12-month period, 380 (12.2%) experienced PPH. Among them, 45 (11.8%) were additionally diagnosed with IAI. All other demographics were similar. The difference in number of additional uterotonics for non-IAI patients and those with IAI was not statistically significant, regardless of delivery type (Table 1). However, the median dose of uterotonics used for cesarean patients with IAI was significantly higher compared to non-IAI counterparts (1 [0, 2.25] vs 0 [0, 1]). Conclusion: Patients undergoing cesarean delivery with IAI required significantly more doses of uterotonics for PPH management. Otherwise, clinical diagnosis of IAI did not significantly affect the number of uterotonics or doses administered for management of PPH.

Disclosure: No

Images:

a. Administration of additional uterotonics and incidence of TXA use in patients with PPH and a clinical diagnosis of IAI vs PPH without IAI, stratified by type of delivery, SVD vs CD.

	SVD		P value	CD		P value
	IAI (n=20)	Non-IAI (n= 138)		IAI (n = 25)	Non-IAI (n= 197)	
1	7 (35)	53 (38.4)	0.77	11 (44)	117 (59.4)	0.14
2	4 (20)	38 (27.5)	0.59	9 (36)	47 (23.9)	0.19
3	4 (20)	27 (19.6)	>0.99	5 (20)	21 (10.7)	0.19
4	4 (20)	19 (13.8)	0.5	1 (4)	9 (4.6)	>0.99
TXA	10 (50)	75 (54.3)	0.72	10 (40)	73 (37.1)	0.77

b) Number of doses of uterotonics (excluding oxytocin) and distribution of uterotonic type in patients with PPH and a clinical diagnosis of IAI vs PPH without IAI, stratified by type of delivery, SVD vs CD.

	SVD		P value	CD		P value
	IAI (n=20)	Non-IAI (n= 138)		IAI (n = 25)	Non-IAI (n= 197)	
Doses of uterotonics	2 [0, 3]	1 [0, 2]	0.36	1 [0, 2.25]	0 [0, 1]	**0.03**
Cytotec	0 [0, 1]	0 [0, 1]	0.07	0 [0, 0]	0 [0, 0]	0.7
Hemabate	0 [0, 2]	0 [0, 1]	0.42	0 [0, 2]	0 [0, 1]	0.11
Methergine	0 [0, 1]	0 [0, 1]	>0.99	1 [0, 1]	0 [0, 1]	**0.006**

Values presented as mean ± SD, median [P25, P75] or N (column %). $p < 0.05$ is significant.

#027 Outcomes in Adolescent Pregnant Patients Infected with Severe Acute Respiratory Syndrome Coronavirus 2

Nguyen, A[1]; Murrin, E[1]; Nasrallah, S[1]; Gomez, L[1]

1 - Inova Fairfax Hospital

Abstract Body:

Objective: Adolescents have fewer severe outcomes from SARS-CoV-2 than adults. Pregnancy puts adolescents at higher risk of both severe disease and perinatal complications. We aimed to investigate obstetric outcomes in adolescent pregnant patient infected with SARS-CoV-2 compared to adult infected pregnant patients, and to their non-infected adolescent pregnant counterparts. Study Design: Retrospective study across four Inova Health System Hospitals between March 2020-January 2021. Patients were grouped by age and SARS-CoV-2 status: adolescents (aged 14-19) SARS-CoV-2-positive, adolescents SARS-CoV-2-negative, and adults (age greater than 20) SARS-CoV-2-positive. Statistical pairwise and regression analyses evaluated differences in disease distribution, severity, rates of prematurity, and cesarean delivery (CD) among all three groups. Results: Compared to SARS-CoV-2-negative adolescents (n=394), SARS-CoV-2-positive adolescents (n=48) were more likely to be Hispanic (91.7% vs. 12.2%; adjusted-p<0.001), uninsured (50% vs. 7.9%; adjusted-p<0.001), require CD (25% vs 11.9%; adjusted-p=0.03) and deliver at greater gestational age (39-1 vs. 38-4 weeks; adjusted-p=0.002). Compared to

adult SARS-CoV-2-positive (n=695), adolescent SARS-CoV-2-positive were more likely to be Hispanic (91.7% vs. 74.5%; adjusted-p=0.006), asymptomatic (79.2% vs. 60.7%; adjusted-p=0.03), and to deliver at greater gestational age (39-1 vs. 37-6 weeks; adjusted-p=0.004). We found no significant difference in the rates of prematurity, fetal growth restriction, NICU admission, and stillbirth. Conclusion: SARS-CoV-2 unequally affects Hispanic and uninsured adolescent pregnant patients. Infected adolescents are at high risk for CD compared to their non-infected adolescent counterparts. Infected pregnant adolescents tend to present with fewer COVID-19 symptoms compared to infected pregnant adults. Other obstetric outcomes were comparable among groups.

Disclosure: No

#028 Impact of COVID-19 on Vaccination Rates Among Pregnant Patients

Njagu, R[1]; Brucker, A[2]; Feng, K[2]; Lunn, S[3]; Greene, M[3]; Swamy, G[4]; Dotters-Katz, S[4]

1 - Duke University

2 - Duke University School of Medicine Department of Biostatistics and Bioinformatics

3 - Duke University School of Medicine

4 - Duke University Department of Obstetrics & Gynecology

Abstract Body:

Objective: Influenza and tetanus toxoid reduced diphtheria toxoid, and acellular pertussis (Tdap) are two safe and effective vaccines that are recommended in pregnancy. Despite this, significant vaccine hesitancy exists in pregnancy. However, impact of the COVID pandemic on vaccine hesitancy is not well understood. Thus, we sought to compare impact of COVID-19 pandemic on influenza and Tdap vaccination rates in pregnant patients. Study Design: Retrospective cohort study of patients delivering at single academic center from 10/1/2017-8/31/2021. Patients with missing vaccine data, delivering before 28 weeks(Tdap range), or postpartum vaccination excluded. Demographic and vaccine data abstracted from EMR. Patients delivering pre-COVID(10/1/17-8/31/19) compared to those delivering mid-COVID(10/1/20-8/31/21). Primary outcomes were vaccine rates for TDaP and influenza. Secondary outcome was rate of dual vaccination(receiving both). Bivariate statistics used to analyze the data. Results: Of 8,646 unique patient-pregnancies, 5,921(68.5%) occurred pre-COVID. Median patient age(30yrs) and gestational age at delivery(38.0wks) not clinically different between groups, while patients in mid-COVID group had higher numbers of government-assisted insurance and Non-Hispanic Black compared to pre-COVID(data not shown). Rate of influenza vaccination decreased 8.2% from pre-COVID to mid-COVID(p<0.001, Table). TDaP vaccination rates also decreased, though less so(88.5% vs 85.1%,p<0.001). The rate of patients receiving both vaccines during pregnancy decreased from 66.0% to 58.4% (p<0.001, Table). Conclusion: Rates of influenza, TDaP, and dual vaccination in pregnancy dropped significantly during the COVID-19 pandemic. These data emphasize the importance of continued counseling and education vaccinations in pregnancy and raise importance questions regarding vaccine access and patient hesitancy during pandemic-mediated prenatal care.

Disclosure: No

Images:

Vaccination rates during the COVID pandemic and prior years				
	Total N=8,646(%)	Pre-COVID N=5,921(%)	Mid-COVID N=2,725(%)	p value
Influenza vaccine				<0.0001
Not Vaccinated	2,824 (32.7)	1,781 (30.1)	1,043 (38.3)	
Vaccinated	5,822 (67.3)	4,140 (69.9)	1,682 (61.7)	
Tdap vaccine				<0.0001
Not Vaccinated	1,089 (12.6)	683 (11.5)	406 (14.9)	
Vaccinated	7,557 (87.4)	5,238 (88.5)	2,319 (85.1)	
Both vaccines				<0.0001
Not Vaccinated	3,148 (36.4)	2,014 (34.0)	1,134 (41.6)	
Vaccinated	5,498 (63.6)	3,907 (66.0)	1,591 (58.4)	

#029 Determinants of Bacteroides Stability in the Neonatal Gut Microbiome

Bar, O[1]; Bergerat, A[1]; Moriel, N[2]; Mitchell, C[1]; Yassour, M[2]

1 - Massachusetts General Hospital

2 - Hebrew University of Jerusalem

Abstract Body:

Objective: Determine the contribution of absolute quantity of neonatal Bacteroides to establishing persistent vs. transient Bacteroides colonization. Background: Cesarean Delivered (CD) infants have a significantly lower prevalence of Bacteroides colonization in early life compared to vaginally delivered (VD) infants. Methods: This secondary analysis of a cohort of term delivered infants used DNA from stool collected during the first 2 weeks of life. Previously, Bacteroides colonization phenotype was assigned using detection of Bacteroides by

16S rRNA sequencing:early (week 1 only),persistent (week 1 & 2) or never. Here, we quantified total bacterial load (total 16S) and Bacteroides fragilis using qPCR. Kruskal Wallis test compared median values between delivery modes and Bacteroides groups. Results: Out of 65 infants (33 VD,18 pre-labor CD,14 post-labor CD),61 were assigned a Bacteroides colonization phenotype (39 early, 19 persistent, 2 never) Median bacterial load (16S copies/mcg DNA) in the first week of life did not differ significantly between delivery modes: 43 VD vs. 480 pre-labor CD vs. 249(p=0.25), nor between Bacteroides phenotypes (76 early vs. 47 persistent,p=0.94). Quantity of B. fragilis in the first week of life also did not differ between delivery modes (1.1 VD vs. 26 pre-labor CD vs.0.9 p=0.05) nor between Bacteroides phenotypes (2 early vs. 1.2 persistent,p=0.29). Across all delivery modes median bacterial load increased from week 1 (69) to week 2 (17507,p=0.0003). Conclusions: Differences in Bacteroides persistence between delivery modes do not seem to be due to differences in total bacterial abundance, nor quantity of B. fragilis in the first week of life.

Disclosure: No

#030 Association Of Bacterial Vaginosis With Chlamydia Trachomatis Infection Among Women In Mombasa, Kenya: A Nested Case-Control Study

Akingba, O[1]; Balkus, JE[1]; McClelland, RS[1]; Dabee, S[2]; Jaspan, HB[3]; Mandaliya, K[4]; Jaoko, W[5]; Shafi, J[5]; Kabare, E[5]

1 - University of Washington

2 - Seattle Children's Research Institute

3 - University of Washington; Seattle Children's Research Institute

4 - Pathcare

5 - University of Nairobi

Abstract Body:

Objective: Evidence is mixed regarding the relationship between bacterial vaginosis (BV) and Chlamydia trachomatis (CT) acquisition; therefore, we assessed the relationship between recent BV and subsequent CT infection. Study Design: A nested case-control study was conducted using data and samples from cisgender women who engage in sex work participating in the longitudinal Mombasa Cohort study in Kenya. BV was assessed monthly and categorized by Nugent score (0-6=Normal, 7-10=BV); CT testing was conducted quarterly by nucleic acid amplification testing. For each CT case, 2 controls were randomly selected using incidence density sampling (index visit). Conditional logistic regression was used to estimate the odds of being a case between participants with and without BV at the prior visit (index-1). Results: Between September 2010-November 2021, 89 cases and 178 controls were identified. The median interval between the index and index-1 visits was 61 days (35-134) for cases and 33 days (28-42) for controls. At the index-1 visit, 42.7% of cases and 23.6% of controls had BV. The unadjusted odds of being a case were 2.50 times higher among participants with BV at the index-1 visit compared to those without BV (95% confidence interval (CI): 1.44, 4.33). Results were slightly attenuated after adjusting for age, years of sex work, and contraception (adjusted OR=2.03; 95% CI 1.07, 3.88). Conclusion: In the population of individuals at increased risk for CT exposure, recent BV was associated with subsequent CT infection. Further research is needed to assess how BV-associated bacteria and communities may enhance susceptibility to CT infection.

Disclosure: No

#031 HPV Vaccination: Broadening the Scope of Education and Administration

Brechtel, L[1]; Kilgore, L[1]; Mastronardi, A[1]; Oyedeji, O[1]; Carlson, E[1]; Zite, N[1]; Gregory, S[1]; Boone, J[1]; Heidel, RE[1]; Maples, JM[1]

1 - University of Tennessee Graduate School of Medicine

Abstract Body:

Objective: There is increasing interest in engaging professionals in non-traditional vaccination settings to participate in HPV-related cancer prevention efforts. The purpose of this study was to assess the impact of a multi-disciplinary HPV educational session on dental healthcare professionals' perceived role, comfort level, and scope of practice in HPV-related cancer prevention efforts. Study Design: The educational session was provided by a multi-disciplinary panel of experts; the majority being Obstetrician Gynecologist physicians. Seventy-three dental health care professionals attended the session and completed a questionnaire at three-time points (pre-session, immediate post-session, 1-month follow-up). Data were analyzed using Friedman's repeated ANOVA, with Wilcoxon post-hoc analyses. Results: There was an increase in respondent's belief that it is the role of a dental

health professional to recommend the HPV vaccine from pre-session (3.0 IQR3.0-4.) to immediate post-session (4.5 IQR4.0-5.0), that was maintained 1 month after the session (4.0 IQR4.0-4.5; p<0.001)(Table 1). There was also an increase in respondent's belief they were up to date on the latest guidelines for HPV vaccination, which was maintained 1 month after the session (pre 2.0 IQR2.0-3.0, immediate post 4.0 IQR4.0-5.0, 1-month 4.0 IQR4.0-5.0; p<0.001). Conclusion: The multi-disciplinary HPV educational session was well-received by dental health professionals and data suggest the session had a lasting impact on their beliefs about their role, comfort level, and scope of practice relating to HPV cancer prevention. More research needs to be done to better understand how the OBGYN and dental health communities can support each other in promoting HPV vaccination.

Disclosure:
Any of the authors act as a consultant, employee or shareholder of an industry for: Dr. Carlson receives royalties for three books that he has written with the following publishers: Wiley Blackwell, Elsevier, and Quintessence.

Images:

Table 1: Perceived Role, Comfort Level, and Scope of Practice Regarding HPV Cancer Prevention

	Baseline (Median, IQR)	Immediate post-intervention (Median, IQR)	1-month post-intervention (Median, IQR)	p-value*
Established professional policies exist regarding recommending the HPV vaccine to patients by oral health professionals.	3.0 (2.0-4.0)	4.0 (3.0-5.0)	3.0 (2.0-4.0)	<0.001
Discussing the link between HPV and oropharyngeal cancer falls within the scope of an oral health professional.	4.0 (4.0-5.0)	5.0 (4.0-5.0)	5.0 (4.0-5.0)	<0.001
Administering the HPV vaccine in a dental office falls within the scope of an oral health professional.	2.00 (1.0-3.0)	4.0 (3.0-4.0)[a]	3.0 (2.0-4.0)[a,b]	<0.001
In my dental training I adequately learned about HPV.	3.0 (2.0-4.0)	4.0 (2.0 - 4.0)[a]	3.0 (2.0-4.0)	<0.037
In my dental training I adequately learned about the HPV vaccine.	2.0 (2.0-3.0)	3.0 (2.0-4.0)[a]	3.0 (2.0-4.0)[a]	0.001
I believe it is my role as an oral health professional to recommend the HPV vaccine to my patients.	3.0 (3.0-4.0)	4.5 (4.0-5.0)[a]	4.0 (4.0-5.0)[a]	<0.001
I have the training to effectively recommend the HPV vaccine to the correct patient populations.	2.0 (2.0-3.0)	4.0 (4.0-5.0)[a]	4.0 (4.0-4.0)[a,b]	<0.001
I trust the safety and efficacy of the HPV vaccine.	4.0 (3.0-4.0)	4.0 (4.0-5.0)[a]	4.0 (4.0-5.0)[a]	<0.001
I am up to date on the latest guidelines for HPV vaccination.	2.0 (2.0-3.0)	4.0 (4.0-5.0)[a]	4.0 (4.0-5.0)[a]	<0.001
My main concern with recommending the HPV vaccine is the time required to do so.	3.0 (2.0-3.0)	2.0 (2.0-4.0)	3.0 (2.0-4.0)	0.099
I am comfortable discussing my patient's sexual history with them.	3.0 (2.0-3.0)	3.0 (2.0-4.0)[a]	3.0 (2.0-3.5)[a]	0.002
Please rate your comfort level with performing an oral cancer screening.	4.0 (3.0-4.0)	4.0 (3.0-5.0)	4.0 (3.0-5.0)	0.119

* p-value for Friedman's ANOVA statistical test. [a] significant change from baseline (p<0.05, Wilcoxon post-hoc analysis), [b] significant change from immediate post-intervention to 1-month post-intervention (p<0.05, Wilcoxon post-hoc analysis). Data are presented as median (IQR) where IQR is Interquartile Range between 25th and 75th percentile.

#032 COVID-19 Maternal Antibody Concentrations in Small for Gestational Age Infants: Does Placental Insufficiency Impact Transplacental Antibody Transfer?

Kachikis, A[1]; Pike, M[2]; Eckert, LO[3]; Roberts, EA[4]; Baranoff, AL[5]; Kung, S[1]; Goecker, EA[6]; Greninger, AL[6]; Englund, JA[7]

1 - University of Washington Department of Obstetrics & Gynecology

2 - University of Washington Department of Obstetrics and Gynecology

3 - University of Washington Department of Obstetrics and Gynecology and Department of Global Health

4 - University of California San Diego Department of Obstetrics & Gynecology

5 - University of Washington School of Medicine

6 - University of Washington Department of Laboratory Medicine and Pathology

7 - Seattle Children's Hospital Department of Pediatrics, Seattle Children's Research Institute, University of Washington

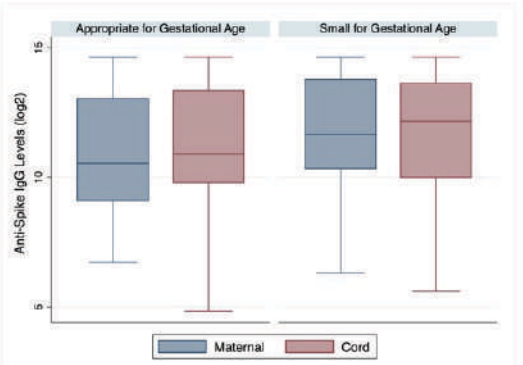
Abstract Body:
Introduction: COVID-19 vaccines given to pregnant persons may protect young infants from severe illness via maternally-derived IgG. The impact of placental insufficiency on transplacental transfer of maternal IgG is unknown. We aimed to evaluate anti-Spike (S) antibody transfer in small for gestational age (SGA) infants versus infants with birthweight appropriate for gestational age (AGA). Methods: In this prospective cohort study among pregnant individuals receiving at least 2 doses of an mRNA COVID-19 vaccine prior to delivery without detectable anti-nucleocapsid IgG, we tested paired maternal and cord samples for anti-S IgG via Roche Elecsys immunoassay, using linear regression to evaluate associations between SGA birthweight (birthweight <10 percentile for gestational age) and anti-S antibody. We included as covariates gestational age at birth, timing of last dose, vaccine doses prior to delivery, race and insurance status. Results: We tested maternal/cord anti-S IgG from 27 SGA and 228 AGA pregnancies. The median gestational age at delivery and birth weight for AGA infants was 39.1 weeks/3274 grams compared to 37.6 weeks/2390 grams for SGA infants. Median cord anti-S IgG was 1,925 BAU/mL (IQR: 876, 10,585) and 4,585 BAU/mL (IQR: 1,006, 12,860) for AGA and SGA infants, respectively (p=0.23). After adjustment for covariates, there was no difference between anti-S concentrations of SGA and AGA infants (beta: -0.51; 95% confidence interval: -1.49, 0.47) (Fig.1). Conclusions: Maternal antibody concentrations may be more important predictors than infant birthweight percentile for SARS-CoV-2 cord IgG concentrations. COVID-19 vaccine administration prior to delivery is important for SGA infants affected by placental insufficiency.

Disclosure:
Any of the authors act as a consultant, employee or shareholder of an industry for: Outside of the submitted work, consultant for GlaxoSmithKline, Pfizer, Sanofi Pasteur, AstraZeneca, Meissa Vaccines, and Moderna.

Images:

Abstract title: COVID-19 maternal antibody concentrations in small for gestational age neonates: does placental insufficiency impact transplacental antibody transfer?

Figure 1. Anti-Spike IgG Levels in pregnancies with infants with birth weight appropriate for gestational age and small for gestational age



#033 Neonatal Survival and Morbidity Following Expectant Management of Previable Premature Rupture of Membranes at a Single Center

Cate, J[1]; Lambert, K[1]; Sugrue, R[1]; Wheeler, S[1]; Grace, M[2]; Dotters-Katz, S[1]

1 - Duke University

2 - Vanderbilt University

Abstract Body:
Objective: To describe outcomes in surviving neonates at 2 years after previable preterm prelabor rupture of membrane (pPPROM) and examine factors associated with survival. Study Design: Retrospective cohort study including individuals with pPPROM(defined as ROM<23/0) who were candidates for expectant management and opted for this at a single tertiary academic center(2013-2022). Primary outcome was 2-year survival and major morbidity among singleton and multifetal gestations born after expectantly managed pPPROM. Secondary analysis of factors associated with 2-year survival among singletons was performed. Results: Of 98 pregnancies with pPPROM who were candidates for expectant management, 64 individuals opted for expectant management, attained viability, and desired intervention(52 singletons and 12 multiples[11 twins, 1 quad]). Of 52 singleton gestations, 29(56%) survived to 2 years, 15(29%) did not, and 8(15%) were alive but <2yrs. Among twin gestations, 5/11(45%) both survived to 2yrs, 1/11(9%) 1 twin survived to 2yrs, 1/11(9%) were lost to follow up before 2yrs, 2/11(18%) were alive but <2yrs and 2/11(18%) both died<2yrs. Of the quad gestation, 3/4(75%) survived to 2yrs. Table 1 demonstrates morbidity outcomes in surviving singleton and multifetal gestations at 2yrs after pPPROM. No maternal or obstetric factors evaluated were found to be significantly associated with 2-year survival among singletons. Conclusion: Over half of neonates born after expectantly managed pPPROM survived in our cohort, but major morbidity was common among infants alive after 2yrs. This study provides important data for patient counseling, but additional studies are necessary to understand factors associated with development of major morbidity and survival following pPPROM.

Disclosure: No

Images:

Table: Outcomes of singleton and multifetal gestation survivors of pPPROM

	Overall (N=41)	Multifetal Gestation No (N=29)	Multifetal Gestation Yes (N=12)
Gestational age at delivery	24.3 [23.6, 24.9]	24.1 [23.6, 25.0]	24.7 [23.7, 24.9]
Any adverse outcome	41 (100.0)	29 (100.0)	12 (100.0)
Outcomes during hospital admission			
IVH	19 (46.3)	13 (44.8)	6 (50.0)
Neonatal Sepsis	11 (26.8)	8 (27.6)	3 (25.0)
Necrotizing Enterocolitis	6 (14.6)	4 (13.8)	2 (16.7)
Intubation/CPAP Required	40 (97.6)	29 (100.0)	11 (91.7)
Hyperbilirubinemia	32 (78.0)	23 (79.3)	9 (100.0)
Outcomes at 2 years			
Feeding tube	13 (31.7)	9 (31.0)	4 (33.3)
Short Bowel Syndrome	2 (4.9)	2 (6.9)	0 (0.0)
Tracheostomy	0 (0.0)	0 (0.0)	0 (0.0)
Reactive airway/ Respiratory issue	18 (43.9)	12 (41.4)	6 (50.0)
Cognitive Delay	19 (46.3)	15 (51.7)	4 (33.3)
Cerebral Palsy	2 (4.9)	1 (3.4)	1 (8.3)
Physical Delay	20 (48.8)	16 (55.2)	4 (33.3)
Hearing Issues	9 (22.0)	7 (24.1)	2 (16.7)
Vision Issues	23 (56.1)	17 (58.6)	6 (50.0)

Values are n (%) or median [25th-75th percentile]
This table includes all individuals who survived to 2 years and were not lost to follow up. It does not compare the outcomes of singleton or multifetal gestation neonates but provides descriptive outcomes of both.

#034 Comparison of Maternal and Infant Outcomes in SARS-COV-2 Affected Pregnancies and Contemporaneous Pregnancies from British Columbia, Canada

Fu, W[1]; McClymont, E[1]; Av-Gay, G[2]; Zhang, Q[3]; Bone, J[3]; Elwood, C[1]; Van Schalkwyk , J[1]; Money, D[1]

1 - University of British Columbia
2 - Women's Health Research Institute
3 - BC Children's Hospital Research Institute

Abstract Body:
Objective: The purpose of this study is to investigate pandemic pregnancy outcomes amongst those diagnosed with SARS-CoV-2 during pregnancy and contemporaneous pregnancies from the same region. Study Design: We conducted a retrospective cohort study using British Columbian (BC) data from CANCOVID-Preg (a national surveillance program for SARS-CoV-2 affected pregnancies) and the BC Perinatal Database (BCPDR), comparing outcomes for delivery dates between March 1, 2020 – March 31, 2021 (corresponding to pre-Delta and Omicron variants time period). We compared maternal outcomes (gestational diabetes, pregnancy-induced hypertension, preterm delivery, mode of delivery,) and infant outcomes (stillbirth, resuscitation required, APGAR at 5 minutes, birth weight, NICU admission, term) between the two cohorts. Effects estimates were assessed from unadjusted and adjusted models (for maternal age, maternal weight, and pre-existing diabetes/hypertension). Results: There were 259 mothers and 261 infants from BC CANCOVID-Preg and 44,752 mothers and 45,415 infants from BCPDR included in the analysis. Compared to all pandemic time pregnancies, SARS-CoV-2-affected pregnancies were more likely to be affected by gestational diabetes (25.5% vs 14.1%), to deliver via Caesarean section than vaginally (47.1% vs 37.6%), to have higher stillbirth rates (1.5% vs 0.4%), have infant APGAR <7 at 5 minutes (4.6% vs 3.2%), and require infant NICU stay (10.3% vs 7.2%). Preterm birth rate was higher in BC CANCOVID-Preg (10.9% vs 7.8%) but this was not significant when assessing for effects estimates. Conclusion: In keeping with the international literature, SARS-CoV-2-affected pregnancies exhibited elevated odds of certain pregnancy and infant outcomes.

Disclosure: No

Images:

Table 1: Effects estimates of outcomes of interest for BC CANCOVID-Preg relative to all BC pregnancies from March 1, 2020-March 31, 2021

Outcome	Adjusted odds ratio	95% Confidence Interval
Gestational Diabetes	2.21	1.58-3.08
Caesarean section	1.56	1.17-2.09
Preterm birth	1.24	0.71-2.16
Stillbirth	4.89	1.51-15.79
APGAR <7 at 5 minutes	1.90	1.02-3.53
NICU stay	1.63	1.01-2.64

#035 Morbidity in Expectant Management of Pre-viable Preterm Prelabor Rupture of Membranes

Judge-Golden, C[1]; Lambert, K[2]; Cate, J[1]; Estin, M[1]; Wheeler, S[1]; Dotters-Katz, S[1]
1 - Duke University Hospital
2 - Duke University School of Medicine

Abstract Body:
Objective: Counseling regarding pre-viable preterm prelabor rupture of membranes (pPPROM) must balance neonatal outcomes with maternal risk, yet data are lacking on this rare antenatal complication. We evaluated incidence and factors associated with maternal morbidity among patients with pPPROM. Study Design: Retrospective cohort of 98 patients with pPPROM (<23wks) in a tertiary health system from 2013-2023 who were candidates for expectant management and did not opt for termination. The primary outcome was composite maternal morbidity (sepsis, venous thromboembolism/pulmonary embolism, blood transfusion, dilation & curettage, endometritis, septic pelvic thrombophlebitis, hysterectomy, ICU admission or death). Secondary outcomes were composite infectious morbidity (endometritis, sepsis, septic pelvic thrombophlebitis) and intrapartum diagnosis of intraamniotic infection. We present descriptive statistics and bivariate associations between composite morbidity and patient/pregnancy characteristics. This study was exempt from IRB review. Results: Composite morbidity was 14.3% (n=14/98) among patients with expectantly managed pPPROM. Seven individuals (7.1%) required dilation & curettage, 6 (6.1%) developed endometritis, 4 (4.1%) required blood products, and 1 (1.0%) developed sepsis. Infectious complications accounted for 42.9% (n=6/14) of total maternal morbidity. Intraamniotic infection complicated 32 (32.9%) cases of pPPROM. Gestational age at pPPROM and at delivery were strongly associated with composite morbidity, although absolute gestational age differences were small. Increasing maternal age was also associated with morbidity. Conclusion: Fourteen percent of individuals with expectantly managed pPPROM experienced morbidity, with increased incidence at earlier gestational age and at greater maternal age. These data add to literature on this rare condition and may inform shared decision making.

Disclosure: No

Images:

Table. Composite maternal morbidity in pPPROM by maternal and pregnancy characteristics

	Total (N=98)	Any morbidity (n=14)	p-value*
Maternal characteristics			
Maternal age at delivery	32 [19, 40]	36.5 [31, 38]	**0.01**
Race/Ethnicity			0.55
Non-Hispanic white	18 (18.4)	2 (14.3)	
Non-Hispanic Black	58 (59.2)	9 (64.3)	
Non-Hispanic Other	7 (7.1)	2 (714.3)	
Hispanic/Latinx	15 (15.3)	1 (7.1)	
Insurance status			0.81
Medicaid	37 (38.5)	5 (35.7)	
Private	59 (61.5)	9 (64.3)	
Maternal conditions			
cHTN	13 (13.4)	0 (0.0)	0.21
Diabetes	9 (9.5)	0 (0.0)	0.35
Maternal substance use			
Tobacco	6 (6.1)	2 (14.3)	0.20
THC	9 (9.2)	2 (14.3)	0.61
Cocaine	1 (1.0)	1 (7.1)	0.14
BMI at admission	31.8 [26.8, 36.9]	31.4 [28.2, 35.8]	0.92
Nulliparous	30 (30.6)	5 (35.7)	0.76
Prior preterm birth	15 (15.3)	2 (14.3)	1.00
Pregnancy Characteristics			
Multiple gestation	22 (22.7)	5 (35.7)	0.30
Gestational age at pPPROM	22.6 [22.0, 23.4]	22.1 [20.6, 22.6]	**0.002**
WBC count at pPPROM†	12.4 [9.9, 15.3]	12.2 [9.6, 13.6]	0.59
Cervical dilation at pPPROM			0.58
Not dilated	48 (49.0)	7 (50)	
1-3 cm	41 (41.8)	7 (50)	
4+ cm	9 (9.2)	0 (0.0)	
Latency antibiotics given	82 (84.5)	11 (78.6)	0.45
Latency time (days)	6.0 [2.0, 15.0]	3.0 [1.0, 13.0]	0.14
Gestational age at delivery	23.4 [22.4, 24.4]	22.4 [20.9, 23.0]	**0.004**

Values are n (%) or median [25th-75th percentile]
*P-values are from Wilcoxon rank-sum test for continuous variables and chi-square or Fisher exact tests as appropriate for categorical variables
†Missing data: WBC count at pPPROM (n=1)

#036 Alinity m HR HPV Investigational Use Only (IUO) Assay: Designed to Meet US Guidelines for Managing Patients in Cervical Cancer Screening Programs

Kostera, J[1]; Cullum, R[2]

1 - Abbott Laboratories

2 - Abbott

Abstract Body:

Objective: Human papillomavirus (HPV) is responsible for 99% of cervical cancers. The Alinity m HR HPV IUO PCR assay was developed with the following design goals: (1) robust detection of high-risk genotypes; (2) partial genotyping for clinically relevant risk stratification where16, 18, and 45 are individually reported and the remaining 11 targeted genotypes are aggregated into two groups A (31/33/52/58) and B (35/39/51/56/59/66/68); (3) use in cervical cancer screening programs. Study Design: The analytical sensitivity (LOD) of the assay was evaluated using 14 plasmid genotype sequences in negative clinical specimens collected in ThinPrep. Precision was evaluated using a 22-member panel in ThinPrep. Reproductivity, HPV detectability agreement between pre and post cytology aliquots, and HPV genotyping concordance compared to an FDA approved test were also performed. Results: The Alinity m HR HPV IUO assay was found to be sensitive ranging from 60 copies/assay to 4800 copies/assay across all genotypes tested. For precision ThinPrep panel members, the total %CV for target cycle numbers ranged from 1.4% to 6.5% across all genotypes targeted at 1X LOD or higher. Agreement estimate % (95%CI) for HPV 16, 18 and others detection ranged from PPA: 87.8% to 91.0% and NPA: 97.0% to 99.8%. Conclusion: The Alinity m HR HPV IUO assay demonstrates excellent analytical performance. Appropriate and prompt clinical management is critical for HPV positive patients and the Alinity m HR HPV IUO assay with extended HPV genotyping enables detection of all vaccine related HPV genotypes, having an important advantage in screening programs of HPV-vaccinated patients.

Disclosure:

Yes, this is sponsored by industry/sponsor: Abbott
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Abbott

#037 Maternal Outcomes of Parvovirus B19 Infections in Pregnancy

Okunbor, J[1]; Watkins, V[2]; Estin, M[2]; Truong, T[2]; Unnithan, S[2]; Federspiel, J[2]; Dotters-Katz, S[2]

1 - Duke University School of Medicine

2 - Department of Obstetrics and Gynecology, Duke University Health System

Abstract Body:

Objective: Parvovirus B19 (Parvo) infection during pregnancy can lead to adverse neonatal outcomes, but little is known about maternal outcomes associated with the infection. The study aims to evaluate outcomes in pregnancies complicated by clinically significant Parvovirus. Study Design: This was a descriptive retrospective study using the National Readmissions Database to identify patients with an inpatient diagnosis code for Parvo during pregnancy. Patients with a delivery code and diagnosis code of Parvo were included. Rates of cesarean delivery, preterm birth, and severe maternal morbidity events were calculated. An additional analysis was performed comparing outcomes with and without patients diagnosed with an intrauterine fetal demise (IUFD). Weighted data used to reflect national estimates.

Results: Out of the 10,833,961 delivered pregnancies identified between 2013 and 2017, 275 had a diagnosis code of Parvo, corresponding to ~1/100,000 deliveries by national estimate of 21,648,640. Vaginal birth (72%) was common, similar to national averages. Additionally, 34 patients (12.4%) had a preterm birth. No patient developed cases of sepsis, acute MI, acute renal failure, ARDS, cardiac arrest, heart failure, CVA, pulmonary edema, anesthesia complication, shock, or hysterectomy in the Parvo population. Of the 275 pregnancies, 36 (13.1%) were diagnosed with an IUFD (Table 1). No patients with IUFD in the setting of Parvovirus developed the maternal complications discussed above. Conclusion: Clinically significant Parvovirus infection during pregnancy, even with infection resulting in IUFD, did not have higher rates of maternal complications compared to the baseline population.

Disclosure: No

Images:

Table 1: Pregnancy outcomes between patients with and without IUFD

Outcome	No IUFD N=238*(%)	IUFD N=36*(%)
Delivery type		
Cesarean	70 (29.3)	6 (16.7)
Vaginal	169 (70.7)	26 (72.2)
Missing	0 (0.0)	4 (11.1)
Preterm birth	15 (6.4)	19 (52.4)

* Weighted to reflected national estimates

#038 Estimating the Burden of Infant Group B Streptococcus Disease in Ontario, Canada: A Population-Based Cohort Study

Fakhraei, R[1]; El-Chaar, D[2]; Sander, B[3]; Thampi, N[4]; Brown, K[5]; Fell, D[6]

1 - University of Ottawa

2 - Ottawa Hospital Research Institute

3 - University of Toronto

4 - Children's Hospital of Eastern Ontario

5 - ICES

6 - Children's Hospital of Eastern Ontario Research Institute

Abstract Body:

Objective: Group B Streptococcus (GBS) is the leading cause of neonatal sepsis and meningitis, and Canada's prevention strategy involves late pregnancy screening and intrapartum antimicrobial prophylaxis (IAP). We estimate the incidence of early-onset GBS disease (EOD) and late-onset GBS disease (LOD) in Ontario, Canada. Methods: Using Ontario's birth registry and health administrative data, we conducted a population-based cohort study comprising pregnant individuals, and their offspring, between April 2012 and March 2018. Liveborn infants were followed for 1 year to identify GBS outcomes, using both laboratory and administrative databases. Incidence rates (IR) were calculated using person-years at risk for EOD (0-6 days), LOD (7-89 days), and ultra-LOD (>90 days). Using Poisson regression, we computed incidence rate ratios (IRR) and 95% confidence intervals (CIs), adjusting for confounders. Results: Among 781,241 infants, 86% and 20% had mothers that completed screening and received IAP, respectively. Of the 670,922 screened deliveries, 22% screened positive for GBS. A total of 1,283 GBS cases were identified (IR: 16.5 per 10,000 person-years), with only 122 culture-confirmed (IR: 1.6 per 10,000). Incidence per 10,000 person-years of EOD (n=648), LOD (n=552) and ULOD (n=83) was 8.3, 7.1 and 1.1, respectively. Within eligible deliveries (>35 weeks), screening completion was associated with a reduced rate (adjusted IRR [95% CI]) of EOD (0.60 [0.42,0.86]), LOD (0.77 [0.54,1.0]) and ULOD (0.86 [0.33,2.30]). Conclusion: The true burden of infant GBS disease in Ontario may be higher than captured by culture confirmation alone. Suboptimal screening completion rates necessitate knowledge translation and alternative measures like maternal vaccination.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Dr. Fell employed by Pfizer (unrelated to the study)

Images:

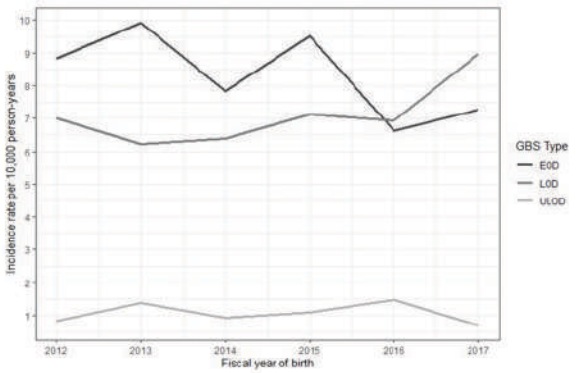


Figure 1. Incidence of infant Group B Streptococcus (GBS) disease per 10,000 person-years by fiscal year of birth. *Abbreviations: EOD, Early-onset GBS disease (0-6 days); LOD, Late-onset GBS disease (7-89 days); ULOD, Ultra-late onset GBS disease (>90 days).*

#039 SARS CoV2 Viral Load and Outcomes in Pregnant and Non-pregnant Women Admitted with COVID-19

Wang, J[1]; Seasely, A[2]; Leal, S[3]; Jones, A[1]; Moates, D[3]; Adams, S[3]; Ye, Y[2]; Erdmann, N[4]; Arora, N[5]; Battarbee, A[2]; Casey, B[2]; Sinkey, R[2]; Subramaniam, A[2]; Tita, A[2]; Dionne, J[4]

1 - University of Alabama at Birmingham, Marnix E. Heersink School of Medicine

2 - Center for Women's Reproductive Health, University of Alabama at Birmingham

3 - Department of Pathology, Division of Laboratory Medicine, University of Alabama at Birmingham

4 - Department of Medicine, Division of Infectious Diseases, University of Alabama at Birmingham

5 - Department of Pediatrics, Division of Neonatology, University of Alabama at Birmingham

Abstract Body:

Objective: To compare quantitative median SARS-CoV2 viral load in hospitalized pregnant women and non-pregnant women of reproductive age and assess for association with adverse infection outcomes. Methods: Retrospective cohort study of pregnant and non-pregnant women with PCR-confirmed COVID-19 based on routine nasopharyngeal swab testing at time of admission to our academic center between 3/1/2020 and 1/6/2022. COVID-19 disease severity, complications, and clinical characteristics during hospitalization were collected from electronic medical records and compared using appropriate statistical tests. Results: 241 pregnant women and 315 non-pregnant women were included (n=556) and most (66%) were admitted during the SARS CoV2 alpha wave prior to wide vaccination availability. Outcomes including ICU admission (29.6% vs 18.7%, p=0.003), duration of hospitalization (5 vs 2 days, p<0.0001), prolonged hospitalization (>14 days) (14.9% vs 8.7%, p=0.028), and death (11.1% vs 1.2%, p<0.0001) were higher in non-pregnant women compared to pregnant women. Despite differences in disease severity and age (29 vs 37 years), median viral load at admission was similar between pregnant and non-pregnant groups, with wide variation (3.63E+04 vs 1.82E+04, p=0.966). We detected no association between admission viral load and age, medical comorbidities, admission reason, presence/duration of symptoms, or viral variant. Conclusion: Median nasopharyngeal viral load at admission was similar despite milder COVID-19 severity on admission and improved outcomes in pregnant women compared to non-pregnant women. Findings could suggest a lower threshold for admission of pregnant patients with COVID-19 during 2020-2021; adjusted analyses are needed to account for group differences at baseline to interpret viral load data.

Disclosure: No

Images:

Table: Demographic and outcome data (n=556)

	Pregnant cohort (n=241) n (% or IQR)	Non-pregnant Cohort (n=315) n (% or IQR)	p-Value
Demographics			
Median Age (years)	29 (24-33)	37 (31-43)	<0.0001
Race African American	118 (62.8)	144 (59.5)	0.38
Caucasian	68 (36.2)	91 (37.6)	
Other	2 (1.1)	7 (2.9)	
Hispanic Ethnicity	53 (22.0)	8 (2.7)	<0.0001
Median BMI (kg/m^2) <25	32 (13.3)	50 (16.3)	<0.001
25-30	48 (19.9)	55 (17.9)	
30-40	110 (45.6)	96 (31.3)	
≥40	51 (21.2)	106 (34.5)	
Baseline Variables			
Symptomatic	132 (45.2)	310 (98.4)	<0.0001
Duration of Symptoms (days) 1-7	206 (90.0)	226 (72.0)	<0.0001
8-14	20 (8.7)	79 (25.2)	
>14	3 (1.3)	9 (2.9)	
Hypertension (including gestational)	28 (11.6)	88 (28.6)	<0.0001
Diabetes (including GDM)	36 (14.9)	51 (16.6)	0.61
Asthma	23 (9.5)	59 (19.2)	<0.01
Median Viral Load	3.63E+04 (5.68E+02-1.66E+06)	1.82E+04 (6.48E02-1.01E+06)	0.966
Hospital Data			
Oxygen Requirement Room Air	188 (78.0)	121 (39.0)	<0.0001
Nasal Cannula Oxygen	21 (8.7)	124 (40.0)	<0.0001
Ventilator	16 (6.6)	40 (12.9)	0.02
ICU Admission	45 (18.7)	91 (29.6)	0.003
Median Duration of Hospitalization (days)	2 (1-5)	5 (3-9)	<0.0001
Prolonged Hospitalization (>14 days)	20 (8.7)	46 (14.9)	0.028
Death	3 (1.2)	35 (11.1)	<0.0001
Variant Alpha	142 (58.9)	226 (71.8)	<0.0001
Delta	77 (32.0)	84 (26.7)	
Omicron	22 (9.1)	5 (1.6)	

#040 Maternal Cytomegalovirus Reinfection during Pregnancy among Women Living with HIV

McClymont, E[1]; Larouche, A[2]; Cote, HC[1]; Diallo, AB[3]; Elwood, C[1]; Kakkar, F[2]; Money, D[1]; Sauve, L[1]; Soudeyns, H[2]; Gantt, S[2]; Boucoiran, I[2]

1 - University of British Columbia

2 - University of Montreal

3 - University of Quebec at Montreal

Abstract Body:

Objectives: To measure the association of maternal CMV reinfection during pregnancy with maternal viremia and congenital infection in a cohort of women living with HIV (WLWH). Study Design: This Canadian multicenter prospective cohort study of 223 pregnant CMV-seropositive WLWH measured maternal CMV viremia by qPCR at each trimester. Conventional CMV serology was used to confirm history of maternal infection. Strain-specific CMV serology was used to detect maternal

reinfection, defined as acquisition of a new antibody response to >1 of the four antigens in the assay between the 1st and 3rd trimester. Congenital infection was identified by CMV qPCR on infant oral samples within three days of life. Results: Of 736 maternal blood specimens collected from WLWH during pregnancy, 27 obtained from 22 (10%) participants were CMV qPCR positive (median: 762 IU/mL). Among 181 infants tested, one (0.6%), whose mother was viremic, had congenital CMV infection. Strain-specific CMV serology was performed on a subset of 14 WLWH with CMV viremia and on 9 aviremic control participants during pregnancy. One case of reinfection (7%) was detected among CMV viremic participants and two (22%) among aviremic controls. Conclusions: CMV viremia was commonly detected during pregnancy among WLWH. Viremia was not associated with CMV reinfection in a subset of participants using strain-specific serology limited to four antigens, however, this assay may underestimate reinfection. Additional testing by novel comprehensive serologic methods is in progress to better characterize maternal CMV reinfection in the larger cohort, and its contribution to congenital infection.

Disclosure: No

#041 Incidence and Symptom Profiling of Vaginitis Containing Aerobic and Anaerobic Pathogens

Thomas-White, K[1]; Wever, F[1]; Navarro, P[1]

1 - Evvy

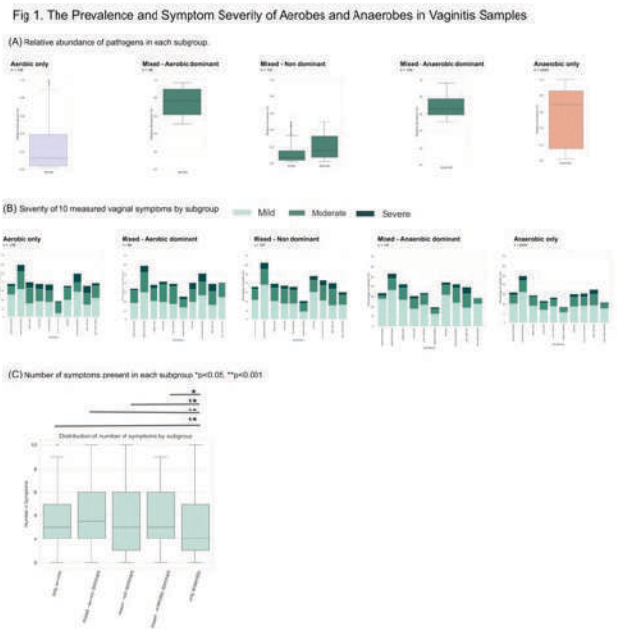
Abstract Body:

Objective: Vaginitis is a common condition that affects women of all ages. Complex cases may involve the simultaneous presence of multiple pathogens in the vagina. The presence of different pathogens and overlapping symptoms makes accurate diagnosis and proper treatment challenging. Here we report the incidence of aerobic and anaerobic organisms and symptom profiling in vaginitis cases. Study Design: Patient health history and shotgun metagenomic vaginal samples were collected over a period of 2 years. Aerobic and anaerobic organisms present at >= 2% relative abundance were identified in a cohort of symptomatic and non-menopausal samples (N=2905) resulting in 5 sub groups: aerobic only (N=136, 4.7%), anaerobic only (N=2409, 82.9%), mixed - aerobic dominant (N=98, 3.4%), mixed - anaerobic dominant (N=105, 3.6%), and mixed non-dominant (N=157, 5.4%). Results: The average relative abundance of pathogens was significantly lower when only aerobic pathogens were present (26.7% aerobic-only vs 54.4% anaerobe-only, $p<0.001$). The number of symptoms ($p<0.05$) and severity of reported symptoms were greater whenever aerobes were present, with the most severe symptoms in the aerobic only, mixed aerobic, and mixed non-dominant groups. No single symptom was associated with the presence of aerobic pathogens. Conclusion: While anaerobes are the most prevalent, mixed vaginitis with aerobes is also common. When aerobic pathogens are present, symptoms tend to be more severe. The presence of both aerobic and anaerobic organisms has significant clinical and therapeutic implications such as varying antibiotic susceptibility. Therefore, solely relying on symptoms for diagnosis may not accurately distinguish between the causes of vaginitis.

Disclosure:

Yes, this is sponsored by industry/sponsor: Evvy
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Evvy

Images:



#042 Characteristics Associated with Hepatitis C Virus Test Timing During Pregnancy among People with Opioid Use Disorder

Gosdin, L[1]; Kim, S[1]; Panagiotakopoulos, L[1]; Smid, M[2]; Shakib, J[2]; Louis, J[3]; Wright, T[3]; Sanjuan, P[4]; Leeman, L[4]; Seligman, N[5]; Irvine, C[5]; Rood, K[6]; Bartholomew, A[6]; Wachman, E[7]; Saia, K[7]; Henninger, M[8]; Davidson, A[8]; Gilboa, S[1]; Tong, V[1]; Miele, K[1]

1 - Centers for Disease Control and Prevention

2 - University of Utah

3 - University of South Florida

4 - University of New Mexico

5 - University of Rochester

6 - The Ohio State University

7 - Boston Medical Center

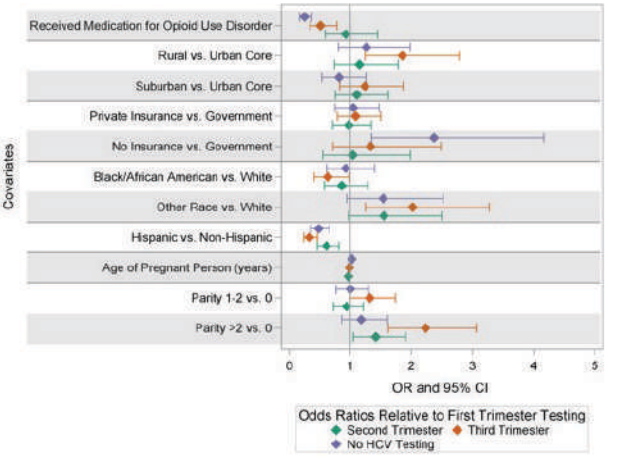
8 - Kaiser Foundation Research Institute Northwest

Abstract Body:

Objective: We aimed to evaluate the gaps in hepatitis C virus (HCV) testing during pregnancy among people with opioid use disorder (OUD) who are at high risk for HCV infection. Study Design: MAT-LINK is a surveillance network of seven clinical sites collecting data on people with opioid use disorder (OUD) during pregnancy from 2014–2021. We describe the association of sociodemographic characteristics and medication for OUD (MOUD) with timing of HCV testing (antibody or nucleic acid). A multinomial logistic regression analysis of HCV test timing was adjusted for age, race, ethnicity, insurance, rurality, parity, and MOUD. Results: Of 3,724 pregnancies, 71.7% had HCV testing (19.4% first trimester, 26.5% second, and 25.8% third); 3.9% had HCV diagnoses but no reported testing. Among those without HCV testing or diagnosis (24.4%), 75.8% received prenatal care. People taking MOUD were less likely to have third trimester (adjusted odds ratio: 0.5 [0.3, 0.8]) and no testing (0.3 [0.2, 0.4]) vs. first trimester testing. Compared to urban centers, people in rural areas (1.9 [95% CI: 1.2, 2.8]) were more likely to have third vs. first trimester testing. Compared to public insurance, people with no insurance (2.4 [1.3, 4.2]) were more likely to have no testing vs. first trimester testing. Among 2,642 pregnancies with HCV testing, 49.3% had a positive test. Conclusions: Structural factors such as rurality and insurance status may be barriers to timely identification of HCV infection during pregnancy among people with OUD. Treatment with MOUD may facilitate opportunities for timely HCV testing.

Disclosure: No

Images:



#043 Feasibility of Mechanical Lysis of Fungal Pathogens for a Future Vulvovaginal Candidiasis Test on a Rapid Molecular Point-of-Care System*

Dvoretzky, R[1]; Wong, D[1]; Park, T[1]; Chang, C[1]; Mateas, P[1]; Mazhari, A[1]; Green, A[1]; Wu, B[1]

1 - Talis Biomedical

Abstract Body:

Objective: Determine the feasibility of lysis of six common fungal pathogens that cause vulvovaginal candidiasis on a rapid molecular point-of-care system. Study Design: A compact, sample-to-answer molecular system designed for rapid testing in POC settings, including OBGYN offices, was used for a series of studies to test different lysis conditions to determine the feasibility of nucleic acid recovery from difficult-to-lyse fungal pathogens. All lysis was performed using a magnetic stir bar and silicate beads with a chaotropic salt-based lysis buffer and enhanced control of the stir bar speed. Extraction, PCR amplification and detection were performed on the benchtop. Results: Initial studies demonstrated the ability to achieve optimal conditions to lyse and detect C. albicans at a concentration as low as 125 CFU/mL. The efficacy of the lysis was further demonstrated using five different Candida species (C. albicans, C. parapsilosis, C. dubliniensis, C. glabrata, and C. krusei) at concentrations of 100,000, 10,000 and 1,000 CFU/mL. The ability to detect all replicates at all concentrations for the five fungal pathogens after lysing for 4 minutes was demonstrated. Conclusion: This feasibility study demonstrates effective lysis of fungal pathogens, enabling

the development of a rapid POC test for vulvovaginal candidiasis. * Currently in development and not available for sale

Disclosure:
Yes, this is sponsored by industry/sponsor: Talis Biomedical
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Talis Biomedical

#044 Maternal Perceptions of Tdap Vaccination and Dissonance between Vaccine Status and Perception

Oyedeji, O[1]; Burnette, S[2]; Maples, JM[1]; Rand, B[2]; Olatt, E[2]; Fortner, K[1]; Zite, N[1]; Paudel, A[1]; Ehrlich, S[2]

1 - University of Tennessee Graduate School of Medicine

2 - University of Tennessee, Knoxville

Abstract Body:
Objective This study describes, among pregnant individuals, perceptions (e.g., benefits, safety, and efficacy) of the Tdap vaccine by vaccination status and explores the presence of dissonance between maternal perceptions and vaccination status. The concept of dissonance describes when behavioral action does not match individual beliefs. Methods Information about vaccination status, intentions, and perceptions was collected via an online REDCap survey from Feb-Nov 2022 (N= 161). Five Likert-Scale items assessed perceptions about the Tdap vaccination in pregnancy. Scores were summed across survey items for a composite perception score. Composite perception scores were dichotomized (positive versus negative) at the 60th percentile. Vaccination status was dichotomized (already vaccinated or intending versus not intending to vaccinate or undecided). Fischer's exact test was used in SAS to examine the differences in Tdap vaccine perceptions by vaccination status. Results Seventy-two percent (n=114) of the cohort was vaccinated or intending to be vaccinated compared to 27.9% (n=44) not intending to vaccinate or were undecided (12.7%, n=20 not intending; 15.2%, n=24 undecided) (Table 1). Among those with negative perception, 41.9% were already vaccinated or intending to vaccinate (n= 26, P<0.001). Among those with positive perception, 8.3% were not intending to vaccinate or undecided (n= 8, P<0.001). Conclusion Approximately forty percent of those with a negative perception of the Tdap vaccine reported being vaccinated or intending vaccination, which suggests dissonance. Further studies of this group are needed to understand contextual factors related to how negative perceptions of the Tdap vaccine were overcome leading to Tdap vaccine receipt or intention.

Disclosure: No

Images:

Table 1. Tdap Vaccine Perception Stratified by Vaccination Status

	Already vaccinated or intending to vaccinate	Not intending to vaccinate or undecided	P value**
	% (n)	% (n)	
Total (N=158)*	72.2 (114)	27.9 (44)	
Positive perception of Tdap	91.7 (88)	8.3 (8)	< 0.001
Negative perception of Tdap	41.9 (26)	58.1 (36)	< 0.001

*3 missing values. **Fischer's exact test was used to compare differences in Tdap vaccine perceptions (positive versus negative) by vaccination status (already vaccinated or intending versus not intending to vaccinate or undecided).

#045 Preferences for Pediatric and Perinatal HCV Screening and Treatment from Focus Group with Sex Workers.

Hoerler, E[1]; Smith, C[1]; Kislovskiy, Y[2]

1 - Drexel University

2 - Allegheny Health Network

Abstract Body:
Objective: In light of proposed CDC guidance considering earlier Hepatitis C Virus (HCV) testing for perinatally exposed infants and children, we sought to understand the preferences of sex workers living with or at high risk of acquiring chronic HCV regarding perinatal HCV screening and treatment. STUDY DESIGN We utilized community based participatory methods and recruited participants from a court diversion program for people charged with prostitution. Participants completed a demographic questionnaire, and then participated in a qualitative focus group using a semi-structured interview guide, which discussed participants' experiences and recommendations for HCV testing and treatment. Participants declined to be recorded, thus researchers took notes from the discussion. We then merged notes and performed preliminary thematic analysis, and two additional focus groups are planned. RESULTS Six women aged 27-50 participated. Themes identified are as follows. (1) While acknowledging general structural, financial, and telehealth barriers discourage HCV screening, participants felt the screening process among parents and children should be tailored to the individual, with earlier screening for children being positively received. (2) Experiences with child protective

services and the judicial system fracture the delivery of HCV care for children and caregivers, making testing and follow-up disjointed. (3) Participants recommended that healthcare providers use communication styles and practices that utilize transparency, unity in messaging, and respect for autonomy. CONCLUSION Earlier perinatal HCV testing may be desired, yet may not acknowledge the ongoing barriers to care. Our preliminary work may help future guidelines and interventions engage this hard-to-access population with high rates of HCV.

Disclosure: No

#046 Characterizing the Preferences of Pregnant People for Preventives to Protect Their Infants Against Respiratory Syncytial Virus

Beusterien, K[1]; Law, A[2]; Maculaitis, M[1]; Will, O[1]; Kopenhafer, L[1]; Olsen, P[1]; Hauber, B[2]; Vietri, J[2]; Cappelleri, J[2]; Coulter, J[2]; Shea, K[2]

1 - Cerner Enviza

2 - Pfizer, Inc.

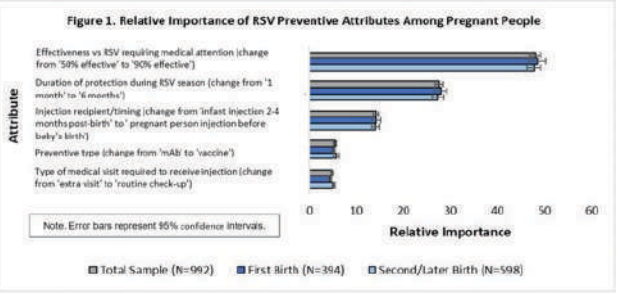
Abstract Body:

Objective: To assess how characteristics of respiratory syncytial virus (RSV) preventives impact pregnant people's intentions to protect their infants with these products. Study Design: An online survey was conducted among pregnant people in the United States. RSV preventive attributes included effectiveness, duration of protection during RSV season, injection recipient/timing, preventive type [monoclonal antibodies [mAbs], vaccine], and type of visit required to receive injection. In a series of 12 choice tasks, pregnant people selected between two hypothetical preventive profiles with varying levels of attributes and a no-preventive option. Hierarchical Bayes estimated attribute-level preference weights. Relative importance (RI) was calculated as the difference between preference weights of most- and least-preferred levels of each attribute, standardized to 0-100 scale; higher RI indicated stronger preference. Pregnant people were compared by number of births. Results: Of 992 pregnant people (median age: 30.0 years), 60.3% were expecting their second/later birth. A preventive (vs. none) was chosen 89.2% of the time. Effectiveness was most important to preventive selection (RI=48.0; Figure 1). Pregnant people preferred a maternal vaccine (vs. infant immunization), but preventive type had limited influence on choice (RI=5.5). Perceptions regarding the importance of RSV preventive attributes were not impacted by number of births. Conclusions: Pregnant people largely preferred an RSV preventive over none. Effectiveness was most influential to RSV preventive choice; maternal vaccine was preferred to infant immunization. Pregnant people are strongly motivated to protect their infants against RSV, underscoring the need for preventives, including maternal vaccines, once available, to be incorporated into routine prenatal care.

Disclosure:

Yes, this is sponsored by industry/sponsor: Pfizer, Inc. Clarification: Industry initiated, executed and funded study Any of the authors act as a consultant, employee or shareholder of an industry for: Pfizer, Inc.

Images:



#047 Barriers to Infection Prevention and Control Practices in the Labor and Delivery Setting

Barnes, LEA[1]; White, KA[1]; Young, MR[2]; Ramsey, PS[3]; Cochran, RL[1]; Perkins, KM[1]

1 - Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention

2 - Department of Gynecology and Obstetrics, Emory University School of Medicine

3 - Division of Maternal-Fetal Medicine, University of Texas Health Science Center at San Antonio

Abstract Body:

Objective: To gain insight into the opinions and experiences of clinicians in performing infection prevention and control (IPC) practices in the labor and delivery (L&D) setting. Study Design Two focus group discussions were conducted during the 2022 Infectious Diseases Society for Obstetrics and Gynecology Annual Meeting among conference attendees. A standardized

script focusing on barriers to IPC practices facilitated the discussion. Sessions were recorded and transcripts were reviewed by three coders using an immersion-crystallization technique. Themes were identified within each question and across all questions. Results There were 18 participants comprising: obstetrician-gynecologists (67%), infectious disease physicians (17%), medical students (11%), and an obstetric anesthesiologist (6%). Three questions were chosen for further thematic analysis and 13 themes were identified across all questions (Table). Participants described how inherent aspects of the L&D setting create barriers to consistently performing IPC practices, including: frequent emergencies, L&D being an entry point to the hospital, and frequent bodily fluid exposures. Other identified barriers included: difficulty locating personal protective equipment, IPC training lacking specificity to the L&D setting, lack of standardization in IPC protocols, and IPC guidance not being clear or easy to find. Finally, there was a shared and recurring theme that the health of women and pregnant people is not prioritized on a larger scale and within healthcare facilities. Conclusion IPC barriers, including those identified in this qualitative study, should be addressed through structural interventions and the development of obstetric-specific IPC resources aimed at decreasing patient risk of healthcare-associated infections and improving healthcare personnel safety.

Disclosure: No

Images:

Table: Themes Across All Questions

Number	Theme
1	Frequent urgent and emergent situations influence labor and delivery's unique workflow
2	Inadequate training and education for IPC practices
3	Lack of access to personal protective equipment
4	Women's healthcare is not prioritized
5	Lack of standardization of labor and delivery IPC protocols across institutions and specialties
6	Need to increase provider buy-in (understanding the "why")
7	Obstetrics is a messy business
8	Lack of clear, simple, and easy-to-find guidance on recommended IPC practices
9	Lack of adherence to existing IPC protocols and personal protective equipment use
10	Lack of knowledge of transmission-based precautions
11	Labor and delivery needs an IPC champion
12	Staffing challenges and turnover
13	IPC practices are perceived as medicalization of the birthing experience

IPC, Infection Prevention and Control

#048 Human Immunodeficiency Virus Diagnosis During Pregnancy and Missed Opportunities for Pre-conception Diagnosis

Kretz, A[1]; Harrington, B[1]; Anderson, J[1]; Powell, A[1]

1 - Johns Hopkins School of Medicine

Abstract Body:

Objective: To identify characteristics and missed testing opportunities among patients diagnosed with HIV in pregnancy. Study Design: This retrospective cohort study included pregnant patients attending an HIV obstetrics clinic between January 1, 2005–December 31, 2020. Descriptive statistics, factors associated with diagnosis in pregnancy, missed opportunities for testing prior to pregnancy, and presence of HIV clinical indicator conditions (HCICs) are reported. Results: Among 478 patients, 105 (22%) were diagnosed in pregnancy, of which 79 (75%) were Black and 85 (81%) were tested during routine prenatal screening. At diagnosis, mean age was 27 years (SD = 6), median gravidity was 3 (IQR = 1-5), median viral load was 7989 copies/mL (IQR = 1706-39,883), and median CD4 count was 437 cells/mm^3 (IQR = 285-628). Thirty-five patients (33%) had a history of psychiatric illness, 47 (45%) had a history of substance use, and 58 (55%) had one or more prior sexually transmitted infection (STI). Forty-four patients (41%) had a known HCIC or other infection in the year prior to HIV diagnosis, including 21 (20%) with cervical dysplasia. While 52 patients (50%) had a clinical encounter in the year before diagnosis, the mean time elapsed since a prior HIV test was 30 months (SD = 32). Conclusion: Half of patients diagnosed with HIV during pregnancy interfaced with the health system in the year prior to diagnosis, but most did not have a recent HIV test. Opportunities exist for increased HIV screening, which may promote earlier diagnosis and minimize perinatal transmission.

Disclosure: No

#049 Bacterial Vaginosis, Vaginal PH, and Sexually Transmitted Infections: Neisseria Gonorrhoeae, Chlamydia Trachomatis, Trichomonas Vaginalis

McLaughlin, S[1]; Thibault, C[2]; Golden, M[2]

1 - University of Washington

2 - University of Washington, Public Health Seattle King County

Abstract Body:

Objective: To determine the association between high vaginal pH, bacterial vaginosis (BV) diagnosed by Amsel's Criteria, and Neisseria gonorrhoeae (NG), Chlamydia trachomatis (CT), and Trichomonas vaginalis (TV) in patients with vaginitis symptoms. Study Design: Cross

sectional analysis of clinical data from patients tested for BV, NG, TV, and CT at in Seattle, WA, 1/1/1993-1/30/2022. We used generalized estimating equation Poisson analysis to determine the risk of cervical/vaginal NG, CT, TV associated with BV or vaginal pH >4.5, adjusting for behavioral and biologic confounders. Results: 13,023 patients were concurrently tested for BV and STIs during 17,460 visits. There were 412, 771, and 1,067 prevalent NG, TV, and CT infections, respectively. In a univariate analysis, BV was associated with NG (RR=2.5, p<0.001), TV (RR=2.1, p<0.001), and CT (RR=1.7, p<0.001); high vaginal pH (>4.5) was also associated with NG (RR=3.3, p<0.001), TV (RR=11.2, p<0.001), and CT (RR=2.0, p<0.001). In 3 separate multivariate analyses including both BV and vaginal pH >4.5 as independent variables, BV was no longer associated with NG, TV, or CT; however, vaginal pH >4.5 was associated with NG (RRadj=2.4, p=0.001), TV (RRadj=10.2, p=0.001), and CT (RRadj=1.8, p=0.001). All models were adjusted for race, age, condom use at last sex, number of sex partners in the prior 2-months, and hormonal contraception. Conclusions: High vaginal pH, but not BV, was independently associated with NG, TV, and CT, suggesting that high pH may be responsible for the frequently observed association of BV with NG, TV, and CT.

Disclosure: No

#050 Differences in Indications for Delivery Based on COVID-19 Infections Status Among an Underserved Pregnant Cohort: A Prospective Cohort Study

Fang, M[1]; Chartier, A[2]; Dalal, L[2]; Ciomperlik, H[2]; Matar, J[1]; Chen, H[2]; Stafford, I[2]

1 - Department of Obstetrics and Gynecology, Baylor College of Medicine

2 - Department of Obstetrics, Gynecology, and Reproductive Sciences, McGovern Medical School at the University of Texas Health Science Center at Houston

Abstract Body:

Objective: There is limited information regarding effects of COVID-19 infection status on obstetric interventions, including cesarean delivery (CD) and induction of labor (IOL). Earlier studies cite increased rates of CD and IOL among COVID-positive gravidae, with unclear indications, suggesting influence from COVID-19 positivity. We aimed to investigate differences in indications for primary CD and IOL in gravidae by COVID-19 status. Study design: A prospective cohort study in a safety-net hospital system between 03/2020–01/2022. Demographic, obstetric, and maternal and neonatal outcomes were collected. Primary outcomes were differences in indications for primary CD and IOL, categorized into composites of planned and unplanned delivery. Chi-squared test and T-test were used to compare categorical and continuous variables, respectively. Multivariate Poisson regression models with robust error variance were used to examine the association. Risk ratios and 95% confidence intervals (CI) were calculated. P-value<0.05 determined significance. Results: Our sample included 5216 deliveries, of which 170 (3%) were COVID-positive. The majority of patients were Hispanic (58.6%, n=3057/5216). There were differences in age and race/ethnicity between COVID-19 groups. Overall, risk of IOL and primary CD did not differ by COVID-19 status. However, among induced patients (n=1922), after multivariate adjustment, there was greater risk of unplanned induction in COVID-positive versus negative patients (aRR 1.58, 95% CI 1.13–2.21, P=0.013; Table 1). Conclusions: Although rates of IOL and primary CD by COVID-19 status were not different, there was greater risk of IOL for unplanned indications among COVID-positive patients, most likely explained by induction for maternal complications of coronavirus-like illness.

Disclosure: No

Images:

	COVID-		COVID+		
	n	%	n	%	P-value
Medical indication for IOL					**0.013**
*medical / planned	1420	76.5	41	63.1	
◇unanticipated / intrapartum complications	437	25.5	24	36.9	
Medical indication for primary CD					0.358
°elective or planned	528	50.1	18	42.9	
§unplanned / intrapartum complications	526	49.9	24	57.1	

	Total	n	%	Crude RR (95% CI)	✚Adjusted RR (95% CI)
Medical indication for IOL: ◇unanticipated / intrapartum complications					
COVID-	1857	437	23.5	1.00	1.00
COVID+	65	24	36.9	**1.57 (1.12-2.18)**	**1.58 (1.13-2.21)**
Indication for primary CD: §unplanned / intrapartum complications					
COVID-	1054	526	49.9	1.00	1.00
COVID+	42	24	57.1	1.14 (0.88-1.50)	1.15 (0.88-1.50)

Table 1 Primary outcome: Indication for medical induction of labor and primary cesarean delivery and composites by COVID-19 infection status.
* Composite of IOL medical / planned reasons: hypertensive disorders of pregnancy, maternal diabetes, fetal growth restriction, elective, post-term, cholestasis of pregnancy, maternal cardiac disease
◇ Composite of IOL for unanticipated / intrapartum complications: non-reassuring fetal status, chorioamnionitis, prelabor rupture of membranes, placental abruption, stillbirth, oligohydramnios, maternal complications of coronavirus-like illness
° Composite of primary CD for elective or planned reasons: malpresentation, planned delivery for placenta previa and vasa previa, suspected fetal macrosomia
§ Composite of primary CD for unplanned / intrapartum complications: labor arrest disorders, failed induction, fetal intolerance of labor, non-reassuring fetal status
✚ Risk ratio adjusted for age and race/ethnicity
Abbreviations: CD=cesarean delivery, IOL=induction of labor, RR=risk ratio

#051 Vaginitis Polymerase Chain Reaction (PCR) Testing and Occurrence of Mixed Infections: Results from a Large US Clinical Laboratory

Gunter, A[1]; Hilborne, L[1]; White, T[1]; Alagia, D[1]; Hahn, S[1]

1 - Quest Diagnostics

Abstract Body:
Objective: This study sought to determine the prevalence of vulvovaginal candidiasis (VVC), bacterial vaginosis (BV), trichomoniasis (TV), and mixed infections among vaginitis specimens tested using nucleic acid amplification testing (NAAT). Study Design: This study examined 46,708 consecutive reportable results from vaginal specimens submitted to a large US commercial laboratory for vaginitis testing via PCR to detect the presence of BV, VVC, and/or TV. In addition, VVC results differentiated between Candida glabrata and other candida species. Results: Overall, 61.0% (28,514/46,708) of specimens had at least one disorder detected. Of the 28,514 positive specimens, 21.0% (6,001/28,514) had mixed infections: 97.3% (5,837/6,001) with 2 and 2.7% (164/6,001) with 3 disorders. C. glabrata was present in 6.8% (1,950/28,514) of all positive specimens. Conclusion: The mixed infection rate of 21% among results from a large US commercial laboratory is similar to previously reported mixed infection rates. Given the previously reported superior ability of NAAT to identify mixed infection and differentiate between Candida species (which may have different avenues for treatment), these data support using NAAT as a first-tier diagnostic test for vaginitis.

Disclosure:
Yes, this is sponsored by industry/sponsor: Quest Diagnostics
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Quest Diagnostics

#052 Postpartum Antibiotic and Probiotic Use and Infant Feeding Patterns in a Low-risk, Term Birth Cohort from British Columbia, Canada

Pakzad, Z[1]; Elwood, C[2]; Grabowska, K[2]; Mitchell-Foster, S[2]; Van Schalkwyk , J[2]; Hill, J[3]; Money, D[2]; Team, MMLP[4]

1 - Department of Microbiology and Immunology, University of British Columbia

2 - Department of Obstetrics and Gynaecology, University of British Columbia

3 - Department of Veterinary Microbiology, University of Saskatchewan

4 - University of British Columbia, University of Saskatchewan, Women's Health Research Institute

Abstract Body:
Objective: To describe postpartum antibiotic and probiotic exposure to infants in a low risk term cohort. Study Design: This was a sub-analysis of data from 628 participants enrolled in the Maternal Microbiome Legacy Project, a prospective study evaluating the relationship between maternal and infant microbiomes. Data was collected at 10 days and 3 months postpartum. Results: Of 628 participants, 558 (88.9%) and 459 (73.1%) completed questionnaires at the 10-day and 3-month visits, respectively. 92/558 (16.5%) women took antibiotics from delivery to 10 days, 77/459 (16.8%) 10 days to 3 months. Metronidazole (46/92; 50.0%) and Cefazolin (41/92; 44.6%) were most common in the first 10 days, predominantly for suspected/confirmed chorioamnionitis. Cephalexin (27/77; 35.1%) was most common 10 days to 3 months, predominantly for mastitis. 10/628 (1.6%) infants received Ampicillin/Gentamicin secondary to suspected/confirmed chorioamnionitis. From 10 days to 3 months, 18/459 (3.9%) infants received antibiotics. 72/558 (12.9%) women took probiotics from delivery to 10 days, 82/459 (17.9%) 10 days to 3 months. 19/558 (3.4%) gave infants probiotics within the first 10 days, 102/459 (22.2%) 10 days to 3 months. Women most commonly exclusively fed infants breast milk (288/558 (51.6%) delivery to 10 days, 288/459 (62.7%) 10 days to 3 months), with a sizeable proportion breast milk and formula (174/558 (31.2%) delivery to 10 days, 135/459 (29.4%) 10 days to 3 months). Conclusion: Our findings show substantive postpartum antibiotic and probiotic exposure to infants born at term from low-risk pregnancies. These important potential confounders will be correlated with our infant gut microbiome data.

Disclosure: No

#053 HIV Tests and Diagnoses During Pregnancy Among People with Opioid Use Disorder

Hammerton, S[1]; Gosdin, L[2]; Lampe, M[3]; Seligman, N[4]; Irvine, C[4]; Sanjuan, P[5]; Ko, H[5]; Rood, K[6]; Bartholomew, A[6]; Wachman, E[7]; Iannella, N[7]; Smid, M[8]; Shakib, J[8]; Henninger, M[9]; Davidson, A[9]; Gilboa, S[3]; Kim, S[3]; Miele, K[3]

1 - University of Georgia

2 - Centers for Disease Control and Prevention, Epidemic Intelligence Service

3 - Centers for Disease Control and Prevention

4 - University of Rochester

5 - University of New Mexico Health Sciences Center

6 - The Ohio State University

7 - Boston Medical Center

8 - University of Utah

9 - Center for Health Research, Kaiser Permanente Northwest

Abstract Body:

Objective: Pregnant people with opioid use disorder (OUD) are at high risk for HIV. Screening for HIV during pregnancy can facilitate improved outcomes and decreased perinatal transmission. This analysis describes HIV tests and results among people with OUD during pregnancy and differences by receipt of medication for OUD (MOUD). Study Design: Data were extracted from the electronic health records of people with OUD during pregnancy with a known outcome between 2014 and 2021 as part of the MAT-LINK surveillance network of seven clinical sites. HIV tests included were antibody/antigen and nucleic acid tests with HIV diagnosis defined as any two positive/reactive tests, any detectable viral load, more than one undetectable viral load, or any HIV-specific ICD-9/10-CM code. HIV tests and diagnoses were compared by receipt of MOUD and prenatal care. Results: Of the cohort of 3,724 pregnancies, 89.9% received MOUD and 89.9% received an HIV test. Of persons tested, 1.7% had an HIV diagnosis; among those with viral load testing, 13.6% had a detectable result. The proportion tested, positive, and undetectable were similar in persons who did and did not receive MOUD during pregnancy (Table). Receipt of prenatal care was 44% among those not tested for HIV compared to 86% among those who were tested for HIV. Conclusion: There may be opportunities for improving HIV screening, diagnosis, and viral suppression during pregnancy among people with OUD, which can improve outcomes. Prenatal care, irrespective of MOUD receipt, will likely facilitate HIV screening among people who are pregnant with OUD.

Disclosure: No

Images:

Table: HIV Tests and Diagnoses During Pregnancy Among People with Opioid Use Disorder by Receipt of Medication for Opioid Use Disorder (MOUD) — MAT-LINK, 2014–2021

	Status	Overall		MOUD		No MOUD	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Total[a]	—	3,724	—	3,349	89.9% (88.9, 90.9)	375	10.1% (9.1, 11.1)
HIV Tests[b,c]	Not Tested	377	10.1% (9.1, 11.1)	335	10.0% (9.0, 11.0)	42	11.2% (7.9, 14.5)
	Tested	3,347	89.9% (88.9, 90.9)	3,014	90.0% (89.0, 91.0)	333	88.8% (85.5, 92.1)
HIV Diagnoses[b,d,e]	HIV Negative	3,290	98.3% (97.8, 98.7)	---	---	---	---
	HIV Positive	57	1.7% (1.3, 2.2)	---	---	---	---
Viral Loads[b,e,f]	Detectable	6	13.6% (3.1, 24.2)	---	---	---	---
	Undetectable	38	86.4% (75.8, 96.9)	---	---	---	---

[a]Totals and row percentages by receipt of MOUD with 95% confidence intervals based on Taylor series variance estimation.
[b]Counts and column percentages with 95% confidence intervals based on Taylor series variance estimation for total and stratified groups. Chi-square tests for all comparisons yielded p-values > 0.05; no statistically significant differences were found.
[c]People were considered tested if any HIV test was performed during pregnancy.
[d]HIV diagnosis was defined as any two positive/reactive tests, any detectable viral load, more than one undetectable viral load, or any HIV-specific ICD code. 44 HIV positive results were identified via confirmatory testing and 13 were found by ICD-9-CM (042) and ICD-10-CM (B20* and O98.7*) diagnostic codes.
[e]Data are suppressed for rows that contain cells with values less than five to protect privacy.
[f]Viral load test results were included as available for those with evidence of an HIV diagnosis. If more than one viral load test was available, the closest viral load test prior to the pregnancy outcome was included.

#054 Syphilis Screening During Pregnancy Among People with Opioid Use Disorder

Miele, K[1]; Gosdin, L[2]; Smid, M[3]; Shakib, J[3]; Louis, J[4]; Wright, T[4]; Sanjuan, P[5]; Ko, H[5]; Seligman, N[6]; Irvine, C[6]; Rood, K[7]; Bartholomew, A[7]; Wachman, E[8]; Iannella, N[8]; Henninger, M[9]; Davidson, A[9]; Carlson, J[10]; Gilboa, S[1]; Kim, S[1]

1 - Centers for Disease Control and Prevention
2 - Epidemic Intelligence Service, Centers for Disease Control and Prevention
3 - University of Utah
4 - University of South Florida
5 - University of New Mexico Health Sciences Center
6 - University of Rochester
7 - The Ohio State University
8 - Boston Medical Center
9 - Center for Health Research, Kaiser Permanente Northwest
10 - Centers for Disease Control and Prevention; Eagle Global Scientific, LLC

Abstract Body:

Objective: People with opioid use disorder (OUD) in pregnancy are at risk for syphilis and late prenatal care. This complicates preventing congenital syphilis, which requires treatment initiation at least 30 days before the pregnancy outcome. This analysis examines whether prescription of medication for opioid use disorder (MOUD) is associated with timely syphilis screening (at least 30 days before the pregnancy outcome) among people with OUD during pregnancy. Study Design: MAT-LINK is a surveillance network of seven clinical sites collecting data on people with OUD during pregnancy from 2014 to 2021. Poisson regression models were used to test the association between MOUD (exposure) and the timing of syphilis screening (outcome). Adjustments were made for age, race, ethnicity, urbanicity, insurance, and parity; prenatal care is not included as it is hypothesized to be on the causal pathway. Results: Of 3,724 pregnancies, 99.2% had any syphilis screening and 1.7% had a positive syphilis screening. Of those with screening less than 30 days before the pregnancy outcome (n=1,075; 29.1% of those screened), 37.4% initiated prenatal care in the first or second trimester. Compared to people not taking MOUD (n=373), people taking MOUD (n=3,322) were more likely to have timely screening (adjusted risk ratio: 1.24 [95% CI: 1.14, 1.36]). Conclusion: There may be missed opportunities for timely syphilis screening in pregnancies complicated by OUD, although some people with OUD may present for prenatal care too late to prevent congenital syphilis. For people with OUD in pregnancy prescription of MOUD may facilitate timely syphilis screening.

Disclosure: No

Images:

Table 1. Syphilis Screening During Pregnancy Among People with Opioid Use Disorder – MAT-LINK, 2014-2021

	Syphilis Screening [1]						
	Total Pregnancies		<30 Days Before Pregnancy Outcome		≥30 Days Before Pregnancy Outcome		Adjusted Risk Ratio [2]
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	aPR (95% CI)
Total	3695	100	1075	25.1 (23.6, 26.6)	2620	70.9 (69.4, 72.4)	
Medication for Opioid Use Disorder							
Yes	3322	89.9 (88.9, 90.9)	916	85.2 (83.0, 87.4)	2406	91.8 (90.8, 92.9)	1.24 (1.14, 1.36)
No	373	10.1 (9.1, 11.1)	159	14.8 (12.6, 17.0)	214	8.2 (7.1, 9.2)	ref
Age at Pregnancy Outcome							
≤24	397	10.7 (9.7, 11.8)	103	9.6 (7.8, 11.3)	294	11.2 (10.0, 12.4)	1.12 (1.03, 1.21)
25-29	1209	32.7 (31.2, 34.3)	329	30.6 (27.8, 33.4)	880	33.6 (31.7, 35.4)	1.11 (1.04, 1.18)
30-34	1288	34.9 (33.3, 36.4)	374	34.8 (31.9, 37.7)	914	34.9 (33.0, 36.7)	1.08 (1.02, 1.15)
≥35	801	21.7 (20.3, 23.1)	269	25.0 (22.3, 27.7)	532	20.3 (18.7, 21.9)	ref
Urbanicity [3]							
Rural	269	7.3 (6.5, 8.2)	98	9.1 (7.5, 11.0)	171	6.5 (5.6, 7.5)	0.89 (0.81, 0.97)
Urban	3337	85.7 (84.5, 86.8)	880	83.8 (81.6, 86.0)	2251	86.4 (85.1, 87.8)	ref
Suburban	356	7.0 (6.1, 7.9)	91	6.9 (5.3, 8.5)	183	7.0 (6.0, 8.1)	0.99 (0.91, 1.07)
Insurance Status at Delivery							
Public	3098	83.8 (82.7, 85.0)	912	84.8 (82.7, 87)	2186	83.4 (82.0, 84.9)	0.91 (0.85, 0.96)
Private	449	12.1 (11.1, 13.2)	106	9.7 (7.9, 11.4)	345	13.2 (11.9, 14.4)	ref
None, other [4], not reported	148	4.0 (3.4, 4.6)	59	5.5 (4.1, 6.9)	89	3.4 (2.7, 4.1)	0.80 (0.69, 0.93)
Parity							
Nulliparous	743	20.1 (18.9, 21.4)	217	20.3 (17.8, 22.7)	526	20.1 (18.6, 21.6)	1.04 (0.98, 1.10)
1-2	1825	49.5 (47.9, 51.1)	510	47.7 (44.6, 50.8)	1315	50.2 (48.3, 52.2)	1.02 (0.99, 1.06)
≥3	1119	30.1 (28.9, 31.8)	343	32.1 (29.2, 34.9)	776	29.7 (27.9, 31.4)	ref
Trimester of Prenatal Care Initiation							
First	1139	31.0 (29.5, 32.5)	152	14.3 (12.1, 16.5)	987	37.8 (36.0, 39.7)	N/A
Second	1284	35.0 (33.4, 36.5)	246	23.1 (20.6, 25.7)	1038	39.8 (37.9, 41.7)	N/A
Third	477	13.4 (12.2, 14.7)	330	31.0 (28.3, 33.8)	147	5.3 (4.5, 6.2)	N/A
None	572	15.6 (14.5, 16.7)	335	31.5 (28.8, 34.3)	237	9.1 (8.0, 10.1)	N/A
Number of Prenatal Care Visits							
None	654	17.7 (16.5, 18.9)	372	34.6 (31.8, 37.4)	282	10.8 (9.6, 11.9)	N/A
1-5	857	23.2 (21.8, 24.6)	378	35.2 (32.3, 38.1)	479	18.3 (16.8, 19.7)	N/A
6-10	704	19.1 (17.8, 20.3)	130	12.1 (10.1, 14.0)	574	21.9 (20.3, 23.5)	N/A
11-15	615	16.6 (15.4, 17.9)	85	7.9 (6.3, 9.5)	530	20.2 (18.7, 21.8)	N/A
16 or More	865	23.4 (22.1, 24.8)	110	10.2 (8.4, 12.1)	755	28.8 (27.1, 30.5)	N/A

[1] Any testing for syphilis during the pregnancy period. Pregnancies with no syphilis screening are excluded.
[2] Adjusted risk ratio of timely syphilis screening adjusted for age, race, ethnicity, urbanicity, insurance, and parity.
[3] Based on ZIP codes classified into Rural-Urban Commuting Area Codes further classified to three categories of urbanicity and rurality. https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/; https://depts.washington.edu/uwruca/ruca-maps.php
[4] Other insurance includes unspecified health insurance types.

#055 Comparisons of Perceptions About Novel Respiratory Virus Vaccines Among Pregnant and Non-Pregnant Healthcare Workers

Haghighi, C[1]; Sosa, M[2]; Eckert, LO[2]; Shree, R[2]; Englund, JA[3]; Kachikis, A[2]

1 - Wake Forest School of Medicine

2 - University of Washington, Department of Obstetrics and Gynecology

3 - Seattle Children's Research Institute, Department of Pediatrics

Abstract Body:

Objective: The introduction of COVID-19 vaccines highlighted issues in understanding vaccine acceptance for novel vaccines among pregnant and lactating individuals. We investigated vaccine perceptions of novel respiratory syncytial virus (RSV) and universal influenza vaccines in healthcare workers (HCW) compared to non-HCW. STUDY DESIGN: We administered an online REDCap survey assessing self-reported opinions about potential RSV and influenza vaccines to participants in an ongoing online prospective cohort study of pregnant, lactating, or recently pregnant adults. This study was IRB-exempt by the University of Washington Human Subjects Division. RESULTS: As of March 20, 2023, 14,339 individuals responded to the follow-up survey: 96.7% were US residents, 99.7% identified as female, and 55.6% were HCW. Altogether, 1716 (12.0%) were pregnant at the survey time, 6391 (44.6%) were lactating, and 6232 (43.5%) were recently pregnant or lactating. Overall, 61.6% (n=8817) reported good understanding of RSV infection. Pregnant HCW were "likely" or "extremely likely" to consider participating in a Phase 1 clinical trial for a novel RSV or influenza vaccine compared to non-HCW (43.4% vs. 41.3%, p=0.02; 56.5% vs. 53.2%, p=0.002, respectively). For RSV and influenza vaccines respectively, HCW preferred protein-based vaccines (77.6%, 79.9%) over viral-vector (33.3%, 37.8%) or DNA-based (26.6%, 29.5%) vaccines. Paradoxically, non-HCW stated they would get "as many vaccines as recommended" in pregnancy compared to HCW (61.0% vs. 53.0%, p<0.001). CONCLUSIONS: HCW report increased willingness to engage in vaccine clinical trials when pregnant or lactating compared to non-healthcare workers. Proactive engagement with pregnant and lactating populations may improve vaccine acceptance for new vaccines.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: Outside of the submitted work, consultant for GlaxoSmithKline, Pfizer, Sanofi Pasteur, AstraZeneca, Meissa Vaccines, and Moderna.

Images:

Figure 1. Novel Respiratory Virus Vaccine Acceptability in Healthcare and Non-Healthcare Workers

Figure 1a. Number of Vaccines Acceptable during Pregnancy or Lactation

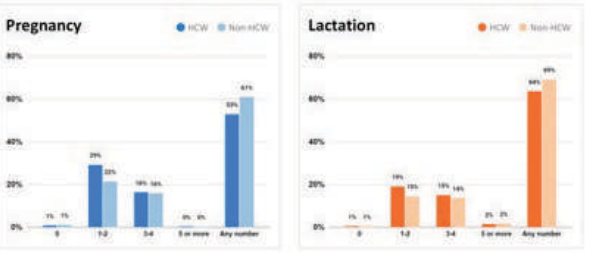
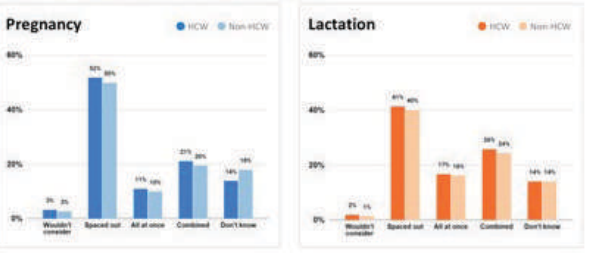


Figure 1b. Timing of Vaccines During Pregnancy or Lactation



*HCW = Healthcare Worker

#056 Practice, Policy and Evidence Facilitating Promotion of Vaccination in Pregnancy in Canada: a Scoping Review

Surti, M[1]; Amarbayan, MM[1]; Mcneil, D[2]; Hayden, A[3]; Donald, M[4]; Patey, A[5]; Castillo, E[6]

1 - University of Calgary

2 - Faculty of Nursing, University of Calgary, Alberta, Canada; and Maternal, Newborn, Child and Youth Strategic Clinical Network, Alberta Health Services, Edmonton, Alberta, Canada

3 - Libraries & Cultural Resources, University of Calgary Taylor Family Digital Library, University of Calgary

4 - Department of Medicine, University of Calgary

5 - Centre for Implementation Research, Ottawa Hospital Research Institute, Canada; School of Rehabilitation Therapy, Queen's University, Kingston, Canada School of Epidemiology and Public Health, University of Ottawa, Ottawa, Canada

6 - Department of Obstetrics and Gynaecology, University of Calgary, Calgary, Alberta

Abstract Body:

Objective: Vaccination in pregnancy (VIP) is a protective measure for pregnant individuals and their babies. Health care provider's (HCPs) recommendations are important in promoting VIP. However, a lack of strong recommendations and accessible resources to facilitate communication impact uptake. This study sought to determine the extent of and characterize the resources available for parent-provider vaccine communication in pregnancy, in Canada, using a behavioural theory-informed approach. Study Design: In accordance with the Joanna Briggs Institute (JBI) methodology, nine disciplinary and interdisciplinary databases were searched, and a systematic grey literature search was conducted in March and January 2022, respectively. Eligible studies included resources available to HCPs practicing in Canada when discussing VIP, and resources tailored to pregnant individuals. Two reviewers piloted a representative sample of published and grey literature using inclusion-exclusion criteria and the AACODS guidelines (for grey literature only). Sixty-five published articles and 1,079 grey reports were screened for eligibility, of which 19 articles and 166 reports were included, respectively. Results: From the nineteen published literature articles and 166 grey literature reports, 94% were driven by the 'Knowledge' domain of the Theoretical Domains Framework, while n=34 (18%) addressed the 'Skills' domain. Other gaps included a lack of VIP-specific tools to address hesitancy and a lack of information on culturally safe or trauma-informed counseling practices. Conclusion: The study suggests a need for resources in Canada to improve VIP communication skills and improve access to vaccination information for HCPs and pregnant individuals. The absence of such resources may hinder VIP uptake.

Disclosure: No

#057 Breast Milk Feeding Initiation among Pregnant Persons with Hepatitis C Virus Infection – Surveillance for Emerging Threats to Pregnant People and Infants Network

Chang, D[1]; Woodworth, K[2]; Nguyen, K[3]; Akosa, A[1]; Lewis, E[2]; Panagiotakopoulos, L[2]; Wester, C[2]; Tong, V[2]

1 - Eagle Global Scientific

2 - Centers for Disease Control and Prevention

3 - Oak Ridge Institute for Science and Education/Centers for Disease Control and Prevention

Abstract Body:

Objective: We describe maternal characteristics and prevalence of initiating breast milk feeding among pregnant persons with hepatitis C virus (HCV) infection. Study Design: Persons in the Surveillance for Emerging Threats to Pregnant People and Infants Network from Massachusetts, New York City, New York State, Pennsylvania, and Tennessee with a positive HCV PCR test within one year prior to or during pregnancy that resulted in live birth during 2018-2021 were included. We examined initiation of breast milk (direct or expressed) feeding during birth hospitalization by maternal characteristics, including education, insurance status, substance use (alcohol, tobacco, cannabis, illicit use of opioids, other illicit substances), use of prescription opioids, and use of medications for opioid use disorder (MOUD). Results: Of 1,949 HCV-positive persons with live birth, 51.2% reported feeding breast milk to their infants. The proportion of those who did not feed breast milk was higher among those with other/no insurance, lower education levels, and no prenatal care. The proportion of not feeding breast milk was also higher among those who reported any substance use and use of prescription opioids or MOUD. Conclusion: Only half of HCV-positive pregnant persons initiated breast milk feeding to their infants during birth hospitalization. Contraindications to breast milk feeding with select substances may exist in this population; however, pregnant persons with HCV infection may require additional lactation support and education to provide their infants with the benefits of breast milk. Postpartum individuals who are not feeding breast milk should be

considered for curative treatment with direct acting antivirals.

Disclosure: No

#058 Perception of a Group B Streptococcus Vaccine (GBS) Among Pregnant and Lactating Individuals following the COVID-19 Vaccine Experience

Sosa, M[1]; Haghighi, C[2]; Eckert, LO[3]; Stolarczuk, J[1]; Shree, R[1]; Englund, JA[4]; Kachikis, A[1]

1 - Department of Obstetrics and Gynecology, University of Washington, Seattle.

2 - School of Medicine, Wake Forest University, Winston-Salem, North Carolina.

3 - Department of Global Health, University of Washington, Seattle

4 - Seattle Children's Hospital Research Institute, Department of Pediatrics, University of Washington, Seattle

Abstract Body:

Objective: We sought to understand the perception of a novel GBS vaccine among pregnant and lactating persons in the setting of the COVID vaccine experience. Study Design: As part of an ongoing survey-based prospective cohort study, participants who were pregnant or lactating or recently pregnant or lactating were asked about GBS knowledge and GBS vaccine acceptability . Participants in this IRB-exempt study completed surveys via REDCap online. Results: Among 14,903 participants who completed the follow-up survey, 1,785 were pregnant, 6,661 were lactating and 6,457 were recently pregnant or lactating with an average age of 33 years. The majority lived in the US (96.7%), identified as female (99.7%), held a Graduate/ Professional degree (66.6%) and worked in healthcare (55.5%). Regarding GBS knowledge, 35.1% (n=5,221) reported moderate and 48.0% (n=7,147) reported a good understanding of GBS. Most participants (57.1%, n = 8,486) associated GBS infection in the neonate as life-threatening. There was mixed opinion on participation in a Phase I Clinical Trial for a GBS vaccine while pregnant (n= 5,119, 34.6% likely; n=6,318, 42.7% unlikely) with more respondents preferring participation when lactating (n= 7,450, 50.6%). Most participants preferred protein based (n=10,214, 70.5%) and mRNA-based (n=10,354, 71.5%) vaccines for the GBS vaccine. Conclusion: Participants expressed a good understanding of GBS. There is mixed acceptability of a novel GBS vaccine clinical trial during pregnancy with a greater acceptability during lactation. It is critical to appreciate the perspective of pregnant and lactating people as new vaccines are developed.

Disclosure:
Any of the authors act as a consultant, employee or shareholder of an industry for: Outside of the submitted work, consultant for GlaxoSmithKline, Pfizer, Sanofi Pasteur, AstraZeneca, Meissa Vaccines, and Moderna.

Images:

Figure 1: Participation in a Phase I Clinical Trial during Pregnancy versus during Lactation

Figure 1a: Participation while Pregnant

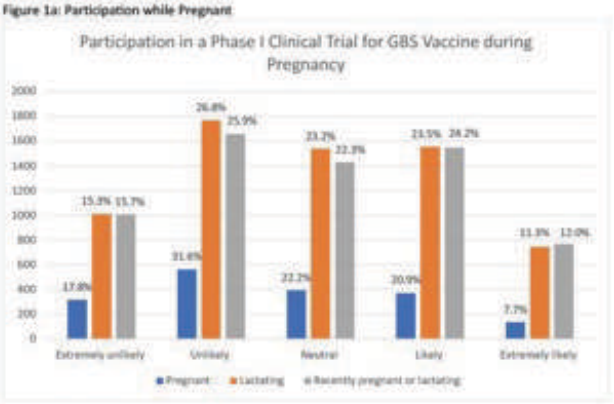
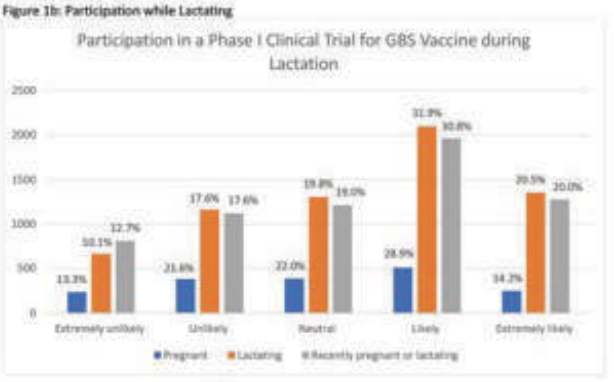


Figure 1b: Participation while Lactating



#059 Erythropoietin Levels in Pregnant Patients with Anemia and Pyelonephritis

Al-Shibli, N[1]; Weaver, K[1]; Grace, M[2]; Kuller, J[1]; Heine, P[3]; Unnithan, S[4]; Erkanli, A[4]; Dotters-Katz, S[1]

1 - Duke University, Department of Obstetrics and Gynecology

2 - Vanderbilt University, Department of Obstetrics and Gynecology

3 - Wake Forest Baptist Medical Center, Department of Obstetrics and Gynecology

4 - Duke University School of Medicine, Department of Biostatistics and Bioinformatics

Abstract Body:

Objective: Anemia is observed in 30% of pregnancies with pyelonephritis, yet little is known about the underlying etiology. Our objective was to measure erythropoietin (EPO) levels in pregnant patients at diagnosis of acute pyelonephritis; secondary objectives were to assess

markers of iron deficiency and hemolysis. Study Design: Prospective cohort study of pregnant people age ≥18 with pyelonephritis defined as presence of UTI symptoms plus flank pain, fever, or nausea/vomiting. Blood samples for EPO, iron, transferrin, lactate dehydrogenase, and haptoglobin were obtained within 72 hours of diagnosis. Demographics and clinical data were abstracted from the medical record. Wilcoxon Signed Rank test compared study EPO levels to non-infected pregnancy values established in the literature.† Secondary outcomes included number of patients with iron/hemolysis labs within trimester-specific reference ranges. Results: The study cohort included 17 pregnant patients with pyelonephritis in the 2nd and 3rd trimester. Anemia was present on admission in 35.3 % (6/17) of patients. EPO levels were significantly higher in pyelonephritis patients during the 2nd trimester (P=0.0001) compared to literature established EPO levels in non-infected controls. Secondary analysis demonstrated low iron and haptoglobin levels in most patients, and normal LDH levels in all patients (Table 1). Conclusion: EPO levels in pregnant pyelonephritis patients were significantly higher compared to normal pregnancy levels established in the literature. Evaluation of iron and hemolysis studies showed inconsistent results but were often abnormal. This pilot study may suggest a relationship between ineffective erythropoiesis and renal inflammation in pregnancy.

Disclosure: No

Images:

Table 1: Erythropoietin (EPO) levels in antepartum pyelonephritis

	2nd Trimester	3rd Trimester
Erythropoietin (EPO) levels (mU/mL), Mean ± SD		
Pyelonephritis*	48.6 ± 21.9	70.3 ± 44.2
Non-Infected†	10.58 ± 0.66	15.25 ± 1.28
P-Value‡	0.001	0.0625
Secondary Outcomes, # patients with values within reference range n, (%)		
Iron	10/12, (83)	2/4, (50)
Transferrin	5/12, (42)	2/4, (50)
Lactate dehydrogenase (LDH)	0/12, (0)	0/4, (0)
Haptoglobin§	6/10, (60)	4/4, (100)

*Study Cohort
†Reference values pooled from Harstad and Beguin et al [1, 2]
‡One-sided Wilcoxon Signed Rank Test
§Haptoglobin values were unknown for two participants
[1]Beguin, Y., et al., *Blunted erythropoietin production and decreased erythropoiesis in early pregnancy.* Blood, 1991. **78**(1): p. 89-93.
[2]Harstad, T.W., R.A. Mason, and S.M. Cox, *Serum erythropoietin quantitation in pregnancy using an enzyme-linked immunoassay.* Am J Perinatol, 1992. **9**(4): p. 233-5.

#060 Feasibility of a 30-Minute Sample-to-Answer Chlamydia Trachomatis, Neisseria Gonorrhea, and Trichomonas Vaginalis Multiplex Test on a Rapid Molecular Point-of-Care System*

Nguyen, B[1]; Pryce, M[1]; Parker, E[1]; Liang, J[1]; Wei, C[1]; Crowley, C[1]; Green, A[1]; Wu, B[1]

1 - Talis Biomedical

Abstract Body:

Objective: Determine the feasibility of a 30-minute test for Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG), and Trichomonas vaginalis (TV) from urine and vaginal swab samples on a rapid molecular point-of-care system. Study Design: A multiplex sample-to-answer molecular test is being developed for common STIs on a rapid molecular point-of-care system that enables easy-to-perform testing by untrained users in CLIA-waived settings. A series of preliminary analytical studies were conducted to characterize inclusivity, exclusivity, and limit of detection (LOD) of the feasibility-stage CT/NG/TV test. Results: The CT assay was inclusive to all 13 serovars tested, the NG assay was inclusive to both strains tested, and the TV assay was inclusive to all six strains tested. In the exclusivity study, none of the organisms tested cross-reacted with the CT, NG, or TV assays. The preliminary sensitivity, as defined by detection of 3/3 spiked individual clinical urine or clinical vaginal swab matrix samples, was 1 IFU/mL in urine and 1 IFU/mL in vaginal swab matrix for CT. The preliminary sensitivity for TV was 2 cells/ml in urine and 2 cells/ml in vaginal swab matrix. LOD testing for NG is in progress. Conclusion: Once complete, this CLIA-waived CT/NG/TV test will enable healthcare providers to perform rapid lab-quality STI testing at the point of care. *Currently in development and not available for sale

Disclosure:

Yes, this is sponsored by industry/sponsor: Talis Biomedical

Clarification: Industry initiated, executed and funded study

Any of the authors act as a consultant, employee or shareholder of an industry for: Talis Biomedical

#061 Is Gravidity Associated with COVID-19 Vaccination among Pregnant Women in Jamaica?

Pinkney, J[1]; Bogart, L[2]; Carroll, K[3]; Bryan, L[3]; Witter, G[3]; Ashour, D[1]; Hurtado, R[1]; Goldfarb, I[1]; Hyle, E[1]; Psaros, C[1]; Ojikutu, B[4]

1 - Massachusetts General Hospital

2 - RAND Corporation

3 - University of the West Indies

4 - Brigham and Women's Hospital

Abstract Body:

Objective: Studies in the United States (US) have found that low gravidity is associated with a high likelihood of COVID-19 vaccination in pregnant individuals. To date, low- and middle- income countries have limited data evaluating this association. This study examines differences in self-reported COVID-19 vaccination by gravidity in a cohort of pregnant women from Jamaica, a middle-income country. Study Design: A convenience sample of 79 pregnant Jamaican women were recruited from a teaching hospital (May–July 2022). We assessed self-reported COVID-19 vaccination, medical mistrust, and sources of COVID-19 vaccine information. We examined bivariate associations between vaccination and socio-demographic variables. We employed modified Poisson regression to estimate prevalence ratios (PR) and 95% confidence intervals (CI) for vaccination in primigravida versus multigravida pregnant women, adjusting for age, education, and comorbidities. Results: Forty participants (51%) were primigravidas (Table 1). Primigravidas were younger than multigravidas [mean (SD) = 28 (±5.0) vs. 31 (±4.4), respectively]. Self-reported COVID-19 vaccination was higher in primigravidas (75%) versus multigravidas (46%) (crude PR=1.58, 95%CI=1.09 - 2.29; p=0.009), but this association was reduced to marginally significant after adjusting for age, education, and comorbidities (aPR=1.42, 95%CI=0.97 - 2.09; p=0.07). Trusted sources of COVID-19 vaccine information differed slightly between primigravidas and multigravidas (Table 1). Mistrust did not differ between primigravidas and multigravidas (Table 2). Conclusion: Granular studies examining maternal vaccination behaviors by gravidity are needed to determine potential reasons for differences between primigravida and multigravida pregnant women in Jamaica. Knowledge in this area could identify subpopulations for intensive maternal vaccination messaging efforts.

Disclosure: No

Images:

Table 1: Population characteristics by gravidity

Characteristic	Total (N=79) N (%)	Primigravidas (n=40) N (%)	Multigravidas (n=39) N (%)	p-value*
Age, years, mean (SD)	29 (4.9)	28 (5.0)	31 (4.4)	0.005
Race				0.340
Black	76 (97.4)	40 (100.0)	36 (94.7)	
White	1 (1.3)	0 (0)	1 (2.6)	
Other	1 (1.3)	0 (0)	1 (2.6)	
Health insurance coverage				0.113
Yes	55 (71.4)	31 (79.5)	24 (63.2)	
Employed				0.376
Yes	67 (85.9)	33 (82.5)	34 (89.5)	
Occupation				1
Healthcare	9 (13.9)	5 (15.2)	4 (12.5)	
Other	56 (86.2)	28 (84.9)	28 (87.5)	
Education				0.105
Less than college	24 (30.8)	9 (22.5)	15 (39.5)	
Some college or higher	54 (69.2)	31 (77.5)	23 (60.5)	
Comorbidities				
None	63 (79.8)	33 (82.5)	30 (76.9)	0.538
Diabetes	0 (0)	0 (0)	0 (0)	1
Hypertension	3 (3.8)	1 (2.5)	2 (5.1)	0.615
Obesity	4 (5.1)	2 (5.0)	2 (5.1)	1
Autoimmune disease	4 (5.1)	2 (5.0)	2 (5.1)	1
Other	5 (6.3)	2 (5.0)	3 (7.7)	0.675
Prior COVID-19 infection				0.155
Yes	20 (25.6)	13 (32.5)	7 (18.4)	
Sources of COVID-19 information				
People I know, like friends, family, neighbors, or co-workers	18 (22.8)	10 (25.0)	8 (20.5)	0.635
Social Media (Facebook, Twitter, WhatsApp)	10 (12.7)	8 (20.0)	2 (5.1)	0.087
News (TV)	26 (32.9)	15 (37.5)	11 (28.2)	0.379
News (Internet)	26 (32.9)	16 (40.0)	10 (25.6)	0.175
Healthcare professionals such as doctors and nurses	51 (64.6)	24 (60.0)	27 (69.2)	0.391
Local public health officials	26 (32.9)	10 (25.0)	16 (41.0)	0.130
Federal government health agencies (e.g., CDC† or Ministry of Health)	23 (29.1)	15 (37.5)	8 (20.5)	0.097
Federal government officials (JLP††/Holness administration)	4 (5.1)	4 (10.0)	0 (0)	0.116
Self-reported COVID-19 vaccination				0.009
Yes	48 (60.8)	30 (75.0)	18 (46.2)	
Vaccine type				0.966
AstraZeneca	25 (53.2)	15 (50.0)	10 (58.8)	
Pfizer	15 (31.9)	10 (33.3)	5 (29.4)	
J&J	5 (10.6)	3 (10.0)	2 (11.8)	
Moderna	0 (0)	0 (0)	0 (0)	
Sinopharm	1 (2.1)	1 (3.3)	0 (0)	

*p-values were estimated using Chi-square or Fisher exacts tests for categorical variables, and Kruskal-Wallis test for continuous variables
† CDC = United States Center for Disease Control and Prevention
†† JLP = Jamaica Labor Party (one of two major political parties in Jamaica)

Table 2: Crude and adjusted associations between gravidity and self-reported COVID-19 vaccination, and gravidity and three medical mistrust beliefs

End Point	Prevalence Ratio Crude	95% CI	Adjusted**	95% CI	p-value***
Self-reported COVID-19 vaccination	1.58	(1.09, 2.29)	1.42	(0.97, 2.09)	0.072
I don't trust the COVID-19 vaccine	0.64	(0.33, 1.24)	0.72	(0.34, 1.50)	0.377
The government cannot be trusted to tell the truth about COVID-19	0.81	(0.54, 1.21)	1.02	(0.63, 1.65)	0.92
I'm worried that COVID-19 vaccines could be harmful	0.71	(0.44, 1.16)	0.85	(0.47, 1.53)	0.59

*Comparing primigravidas with multigravidas using multigravidas as the reference group
** Prevalence ratios were adjusted for age, education, and comorbidities
*** adjusted p-values

#062 Provider Knowledge and Use of Processes Associated with Increasing HPV Vaccination

Maples, J[1]; Chamberlin, SM[1]; Mastronardi, A[1]; Oyedeji, O[1]; Zite, N[1]; Moss, H[1]; Perry, J[1]; Booker, M[1]; Kilgore, L[1]

1 - University of Tennessee Graduate School of Medicine

Abstract Body:

Objective: ACIP recommends that everyone, as early as age 9, through age 26 be vaccinated against HPV. This descriptive study reports the use and/or knowledge of systematic processes associated with increasing HPV vaccination administration among providers. Methods: Sixty out of 70 (85.7%) providers responded to a REDCap survey that was emailed to the Departments

of Family Medicine and Obstetrics and Gynecology at a single institution. Survey items included knowledge of standing orders for administering HPV vaccination, knowledge of enrollment in the state immunization registry system, and frequency of assessing and/or recommending HPV vaccination in patients with and without evidence of prior HPV infection. Data are reported as percentages. Results: Respondents included resident physicians (n=33), attending physicians (n=25) and midwife practioners (n=2). Approximately half (51.7%) of respondents indicated their practice has standing orders for administering the HPV vaccine and almost half (46.7%) indicated that their practice was enrolled in the statewide immunization registry. More respondents (36.8%) indicated they 'always' assessed HPV vaccination status for 11- to 18-year-old patients, compared to those 19-26 (23.3%)(Table 1). Compared to provider recommendations for 19- to 26-year-olds, more providers 'always' (61.4%) recommend the HPV vaccine for patients ages 11-18 regardless of evidence of past HPV infection. Conclusion: Fewer providers assess for and recommend HPV vaccination, regardless of evidence of past HPV infection, among 19- to 26-year-olds. Increasing provider knowledge of standing orders for administering the HPV vaccination and the utility of state immunization registry in assessing vaccination status could potentially increase compliance with HPV vaccine recommendations.

Disclosure: No

Images:

Table 1

Frequency of HPV Vaccination Status Assessment				
	Always (%)	Very Often (%)	Sometimes (%)	Rarely/Never (%)
11- to 18-year-olds	36.8	45.6	12.3	5.3
19- to 26-year-olds	23.3	45.0	26.7	5.0
Frequency of HPV Vaccination Recommendation *Without* Evidence of Prior HPV Infection				
	Always (%)	Very Often (%)	Sometimes (%)	Rarely/Never (%)
11- to 18-year-olds	61.4	21.1	15.8	1.7
19- to 26-year-olds	47.5	28.8	20.3	3.4
Frequency of HPV Vaccination Recommendation *With* Evidence of Prior HPV Infection				
	Always (%)	Very Often (%)	Sometimes (%)	Rarely/Never (%)
11- to 18-year-olds	61.4	24.6	12.3	1.7
19- to 26-year-olds	41.7	36.7	16.7	5.0

#063 Antepartum Risk Factors for Neonatal Necrotizing Enterocolitis and Bowel Perforations

Phillips, W[1]; Holliday, C[1]; Perez, W[1]; Munn, M[1]

1 - Frederick P. Whiddon College of Medicine

Abstract Body:

The purpose of this project was to identify risk factors, for the development of necrotizing enterocolitis (NEC) in preterm infants. A chart review was performed on neonates diagnosed with NEC born between 2019-2022 at our institution. Data were collected through REDCap®. All numerical data were summarized using mean and standard deviation. All categorical data was summarized using frequency and percentage. Two patients in the control group (n=28) were matched with a NEC patient in the treatment group (n=14) by gestational age in weeks. A block design analysis was used to compare numerical outcomes between patients in treatment and control groups. Categorical outcomes for two groups were compared using a Cochran-Mantel-Haenszel test. Odds ratios were calculated to determine strength of the association between NEC and specified risk factors. Significant differences were found between cases and controls. There was a higher postnatal antibiotic use (p=0.00455), higher chorioamnionitis (p=0.0045) in NEC cases when compared to controls. There was a lower percentage of neonates with NEC were given probiotics (p=0.0133), Infants in the NEC group had lower birthweights (p<0.0001), and younger gestational ages. (p<0.0001), There was no significant difference between control and NEC neonates and indomethacin use (p=0.2207). Risk factors for the development of NEC born preterm include antibiotic use and chorioamnionitis. The used of probiotics was lower in the controls. Indomethacin use did not appear to be more common in the infants who developed NEC.

Disclosure: No

#064 Incident Bacterial Vaginosis in a Community-Based Cohort of Women

Muzny, C[1]; Aaron, K[1]; Tamhane, A[2]; Long, D[3]; Van Gerwen , O[1]; Graves, K[1]; Eastlund, I[1]; Elnaggar, J[4]; Cerca, N[5]; Taylor, C[4]

1 - University of Alabama at Birmingham, Division of Infectious Diseases

2 - University of Alabama at Birmingham, Division of Nephrology

3 - University of Alabama at Birmingham School of Public Health, Department of Biostatistics

4 - Louisiana State University Health Sciences Center, Department of Microbiology, Immunology, and Parasitology

5 - Minho University, Centre of Biological Engineering, Laboratory of Research in Biofilms Rosário Oliveira

Abstract Body:

Objectives: In an ongoing community-based BV pathogenesis study, we evaluated time to incident BV (iBV) as well as select characteristics of women with this infection. Methods: Non-pregnant women ages 18-45 with normal vaginal microbiota (no Amsel criteria, normal Nugent score), no antibiotic use in the past 14 days, no concurrent STIs, and a current male sexual partner were followed for 9 weeks. Participants completed an enrollment questionnaire and self-collected twice daily vaginal specimens for Gram stain and future vaginal microbiota analysis. iBV was defined as a Nugent score of 7-10 on ≥4 consecutive vaginal specimens. Results: Between November 2020-March 2023, 278 women were screened; 68 enrolled. Fourteen were disqualified due to a second baseline Nugent score >3 (n=8), an STI diagnosis (n=5), or COVID-19 (n=1); 54 were followed prospectively. Mean age was 29.1 years (SD=8.3); 53.7% and 33.3% were Caucasian and African American, respectively. Median follow-up was 58 days (IQR 21-63 days). The probability of developing iBV at 30 days was 12.8% (95% CI: 5.9%-26.5%) and 16.3% (95% CI: 7.9%-31.9%) at day 62 (incidence rate 0.29/100 person-days). Mean age was similar among groups. Women with iBV were of varying races; all were non-Hispanic/Latino. The majority of women with iBV had a masters/doctoral degree (57.1%), currently used contraceptives (57.1%), never smoked (85.7%), never douched (85.7%), and denied a lifetime BV or STI history (57.1% and 57.1%, respectively). Conclusion: iBV was less common in this cohort than in previous studies. This study is ongoing and future analysis will examine predictors of iBV.

Disclosure:

Any of the authors act as a consultant, employee or shareholder of an industry for: BioNTech, Abbott, Visby

Images:

Table 1. Select characteristics of women who have sex with men participating in a BV pathogenesis study, stratified by iBV status (n=54)*

Characteristic	iBV (n=7)	No iBV (n=47)
Age, years (mean, SD)	29.9 (9.2)	29.0 (8.3)
Race		
Caucasian	3 (42.9%)	26 (55.3%)
African American	2 (28.6%)	16 (34.0%)
Asian	2 (28.6%)	3 (6.4%)
Ethnicity		
Non-Hispanic/Latino	7 (100%)	42 (89.4%)
Hispanic/Latino	0 (0%)	5 (10.6%)
Education		
High school/GED	1 (14.3%)	1 (14.3%)
Some college/Associate degree	1 (14.3%)	17 (36.2%)
Bachelor degree	1 (14.3%)	12 (25.5%)
Masters/Doctoral degree	4 (57.1%)	17 (36.2%)
Tobacco use		
Current	0 (0%)	1 (2.1%)
Past	1 (14.3%)	7 (14.9%)
Never	6 (85.7%)	38 (80.9%)
History of sex with women (lifetime)		
Yes	1 (14.3%)	4 (8.5%)
No	6 (85.7%)	43 (91.5%)
History of STI (lifetime)		
Yes	3 (42.9%)	24 (51.1%)
No	4 (57.1%)	23 (48.9%)
History of BV (lifetime)		
Yes	3 (42.9%)	17 (36.2%)
No	4 (57.1%)	30 (63.8%)
Contraception use		
Current	4 (57.1%)	25 (53.2%)
Past	2 (28.6%)	15 (31.9%)
Never	1 (14/3%)	7 (14.9%)
Douching history at enrollment		
Never	6 (85.7%)	37 (78.7%)
>3 months	1 (14.3%)	10 (21.3%)

*Data presented as n (column %) unless otherwise specified; data missing for tobacco use (n=1).

#066 Clinical Utility and Evaluation of the Alinity m STI assay at a Large Academic Medical Center in the Southeastern United States

Kostera, J[1]; Cullum, R[2]

1 - Abbott Laboratories

2 - Abbott

Abstract Body:

Objective: Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) have long been recognized as pathogens responsible for reproductive harm. Accruing evidence has supported that Trichomonas vaginalis (TV) and Mycoplasma genitalium (MG) infections are also responsible for female and male urogenital epithelia, preterm birth, and infertility. The objective of this study was to use the clinical utility of the Alinity m STI (CT/NG/TV/MG) assay and compare results to Hologic Aptima CT/NG and TV assays for STI testing at Tampa General Hospital. Study Design: Informed consent for urine collection was obtained from 200 symptomatic and asymptomatic patients, including 16 from Labor and Delivery (L&D). Samples were acquired as part of routine patient care for testing with Aptima CT/NG and TV assays and the Alinity m STI assay. Results: The Alinity m STI assay overall agreement to Hologic was 99.5% (199/200) for CT, 99.5% (199/200) for NG and 98.4% (190/193) for TV. Using the Alinity m STI assay results, the incidence for

each pathogen was determined to be 6.5% for CT, 4.5% for NG, 7.5% for TV, and 7.5% for MG. 25% (4/16) of the L&D cohort was positive for TV with 75% of the individuals being asymptomatic. Conclusion: The Alinity m STI assay was observed to have a great overall agreement with the other on market CT/NG/TV (≥98.4%) assay. A feature unique to the Alinity m STI assay is the simultaneous detection and differentiation of CT, NG, TV, and MG in a single test that can identify co-infections that regularly have overlapping symptoms.

Disclosure:
Yes, this is sponsored by industry/sponsor: Abbott
Clarification: Industry initiated, executed and funded study
Any of the authors act as a consultant, employee or shareholder of an industry for: Abbott

#067 COVID-19 Vaccine Hesitancy During Pregnancy: A Qualitative Study

Casubhoy, I[1]; Kretz, A[2]; Tan, H[3]; Morgan, R[3]

1 - Johns Hopkins Bloomberg School of Public Health

2 - Johns Hopkins Bloomberg School of Public Health and Johns Hopkins School of Medicine

3 - Johns Hopkins Bloomberg School of Public Health, Department of International Health

Abstract Body:
Objective: To understand reasons for COVID-19 vaccine hesitancy in pregnant people to improve messaging and uptake of the vaccine in this population. Study Design: We are conducting semi-structured qualitative interviews with pregnant or recently pregnant participants, who have been recruited via social media, to determine reasons for COVID-19 vaccine hesitancy during pregnancy. Data collection is ongoing, and we aim to complete 20-25 interviews by the end of July 2023. Interviews are being recorded and transcribed, and data will be analyzed using thematic analysis and the framework approach. Results: Preliminary results show the main reasons for COVID-19 vaccine hesitancy during pregnancy include fear of short- and long-term effects on the fetus and the pregnant person. Participants generally trusted their healthcare providers but felt they had not adequately communicated information about the COVID-19 vaccine. Participants added that they may have been more likely to get the vaccine if their healthcare providers had highlighted the vaccine's benefits and safety during pregnancy, as well as the best timing for getting the vaccine. Some participants recommended that counseling on the COVID-19 vaccine should be integrated into antenatal care. Conclusion: Preliminary results indicate that COVID-19 vaccine hesitancy during pregnancy is driven largely by fears of effects on the fetus and self. Healthcare providers play a crucial role in counseling about the COVID-19 vaccine and may be able to increase uptake among pregnant people by incorporating COVID-19 vaccination counseling as a routine part of prenatal care and providing information on the vaccine's safety in pregnancy.

Disclosure: No

#068 Maternal SARS-CoV2 infection: Associations between Placental Histopathological Lesions and Neonatal Birth Weight

Quesnel, G[1]; Labrecque, AA[2]; Castillo, E[1]; Kuret, V[1]

1 - University of Calgary

2 - Université de Montréal

Abstract Body:
Background: Previous studies on the placental and neonatal correlates of maternal SARS-CoV2 infection have shown associations with various placental lesions and neonatal outcomes. Our goal was to determine the prevalence of maternal vascular malperfusion lesions and small-for-gestational-age birth weight following SARS-CoV2 infection in pregnancy. Additionally, we sought to determine whether maternal vascular malperfusion lesions were associated with small-for-gestational-age birth weight, and whether lead time from infection to delivery affected these outcomes. Methods: This is a retrospective cohort study of 602 singleton pregnancies with confirmed maternal SARS-CoV2 infection. Placental pathology findings were correlated with maternal, obstetrical, and neonatal data as well as timing of infection. Logistic regression analysis was performed to determine the relationship between maternal SARS-CoV2 infection, presence of maternal vascular malperfusion lesions, and small-for-gestational-age birth weight, while adjusting for key demographic and obstetrical confounders as well as gestational age at time of infection and lead time from infection to delivery. Results: Small-for-gestational-age birth weight was present in 11% of pregnancies. Maternal

vascular malperfusion lesions showed a prevalence of 31%. Distal villous hypoplasia, a type of maternal vascular malperfusion lesion, demonstrated a significant association with small-for-gestational-age birthweight (OR 4.1). Conclusions: This study demonstrates an association between a subtype of maternal vascular malperfusion and small-for-gestational-age birth weight in pregnancies affected by SARS-CoV2 infection. This suggests that the development of small-for-gestational-age birth weight following SARS-CoV2 infection may be mediated by maternal vascular insult.

Disclosure: No

POSTERS

THESE POSTERS HAVE BEEN SUBMITTED AS A STUMP-THE-PROFESSOR CASE BUT HAVE BEEN ACCEPTED AS A POSTER BY THE SCIENTIFIC COMMITTEE.

#01 Gonococcal Endocarditis, a Life-Threatening Complication of a "Screenable" Infection

Ornelas, D[1]; Ornelas, D[1]

1 - University of California, Riverside, School of Medicine

Case:

31-year-old African American female with a history of untreated Hepatitis B and Hepatitis C presented to the ED complaining of acute onset shortness of breath for one day, associated with subjective fever, chills, non- bloody emesis, and intermittent pleuritic chest pain. Vital signs revealed hypotension, tachycardia, tachypnea, but normal saturation on room air. Initial labs were significant for leukocytosis (WBC of 20,000) and a lactate of 1.50. Physical exam was positive for shortness of breath, cough, pleuritic chest pain, and vomiting, but was negative for hemoptysis and wheezing, palpitations or lower extremity edema. The patient was started on Ceftriaxone and blood and urine cultures were collected. Sexual history was poorly documented at the time. Urine Drug Screen was positive for cocaine. Chest X-ray showed patchy consolidation at the right lung base, and the patient was then admitted to medicine for severe sepsis secondary to right lung community-acquired pneumonia.

The patient's repeat chest x-ray showed worsening multifocal pneumonia with bilateral interstitial edema, for which she was continued on Ceftriaxone and started on Azithromycin. Bedside POCUS revealed a dilated IVC, an enlarged RV, and bilateral B lines, which were concerning for right heart strain and pulmonary edema. Thus, the patient was given IV Lasix 40 mg for diuresis and a CT angiography of the chest ultimately ruled out a pulmonary embolus. Cardiovascular findings included an elevated BNP at 5,776 and ST segment changes on EKG, and thus a Transthoracic Echocardiogram (TTE) was ordered. Over the next day, the patient clinically worsened with an up- trending lactate (1.5 – 2.1), requiring high flow nasal cannula and eventual transfer to the MICU.

During her four-day MICU course, pulmonary evaluation revealed bilateral pleural effusions, which warranted CPAP. Per infectious disease recommendations, Vancomycin was added to the patient's antibiotic regimen and her lactate level normalized and WBC down trended thereafter. Cardiovascular-wise, physical exam revealed a systolic murmur at the left lower sternal border (LLSB). Additionally, the patient's TTE results revealed a large mitral valve (MV) vegetation [1.8 cm (L) x 0.7 cm (W)] with associated perforation and severe MV regurgitation with marked dilation of the left atrium, suspicious for bacterial endocarditis. Per cardiology, the patient was diuresed more aggressively with IV Lasix 40 mg BID with plans of transfer for mitral valve replacement. The patient's blood cultures came back positive for gram negative diplococci on hospital day 3 and she was diagnosed with septicemia from Neisseria Gonorrhea, for which only Ceftriaxone was continued (2g IV q 12h).

Ultimately, the patient was diagnosed with gonococcal endocarditis secondary to Neisseria Gonorrhea septicemia and underwent urgent mitral valve replacement with a mechanical valve. The patient tolerated the surgery well, had an uncomplicated post-operative course, was stable on discharge, and continued 4-weeks of Ceftriaxone 2 mg IV q 12 hours via a PICC line. Valve tissue culture showed no organisms, nor anaerobic or fungal growth, but pathology was positive for foci of degenerating/necrotic structures suggestive of gram-negative cocci. Neisseria Gonorrhea infection is currently the 2nd most common reportable sexually transmitted disease (STD), with an annual incidence of 700,000 new cases in the US (1). Disseminated gonococcal infection occurs in 0.5%-3% of cases, most commonly presenting with arthralgias, tenosynovitis, purulent arthritis, and skin lesions (1). Rarely, Gonococcal Endocarditis (GE) can occur in 1%-2% of cases, with only 99 cases reported in the literature since 1938 (1). Although rare, the mortality rate is strikingly high at 19%, despite appropriate antibiotics and surgical intervention, raising the need for heightened clinical suspicion of GE in sexually active individuals (2). GE is diagnosed at a mean age of 28.8 years and has a male predominance (57% of cases) (2). Currently, the CDC recommends annual gonococcal screening for females below the age of 25 years, homosexual males, and HIV patients at high risk (1). Because gonorrhea is most commonly diagnosed between the ages of 15-35, the screening guidelines should be expanded to include females up to the age of 35, minimum, and perhaps higher depending on the individual's sexual history (2). Additionally, women appear to be at a higher risk of developing disseminated gonococcal disease, further illustrating the need for women's health providers to more aggressively screen for gonorrhea in women, and to also be more suspicious of symptoms of disseminated

disease, specifically generalized fatigue, fevers, chills, arthritis, petechial rash, new cardiac murmurs, and signs of acute heart failure (1).

Early clinical suspicion of GE is complicated by the fact that the majority of patients do not develop mucosal genitourinary (GU) symptoms that would help diagnose the primary infection. In fact, only 27% cases of GE presented with primary GU gonococcal infection, either concomitantly or months prior to the diagnosis of endocarditis (2). In order for clinicians to detect primary gonorrhea infections more frequently, we propose expanding the frequency of screening, perhaps biannually rather than annually. All in all, we hope to "stump the professors" with our case of gonococcal endocarditis requiring valve replacement in a 31-year-old female who did not present with GU symptoms of primary infection and bring to light the need for modifications in STD screening for women. We want to prevent patients from falling through the cracks of narrow guidelines and prevent life- threatening complications of a common, "screenable" STD.

References:

1. Said M, Tirthani E. Gonococcal Infective Endocarditis Returns. Cureus. 2021 Sep 14;13(9):e17955. doi: 10.7759/cureus.17955. PMID: 34660143; PMCID: PMC8515499.

2. Katragadda S, Miatech JL, Zboril A, Echefu G, Negulescu C. Tainted Love: A Case of Gonococcal Endocarditis. Cureus. 2022 Jun 29;14(6):e26420. doi: 10.7759/cureus.26420. PMID: 35911287; PMCID: PMC9336115.

#02 Peripartum infection of the pubic symphysis by an unusual organism

Fang, M[1]; Carrillo-Kappus, K[2]; Gatta, L[2]; Dotters-Katz, S[2]

1 - Department of Obstetrics and Gynecology, Baylor College of Medicine

2 - Department of Obstetrics and Gynecology, Duke University Medical Center

Case:

31-year-old African American female with a history of untreated Hepatitis B and Hepatitis C presented to the ED complaining of acute onset shortness of breath for one day, associated with subjective fever, chills, non- bloody emesis, and intermittent pleuritic chest pain. Vital signs revealed hypotension, tachycardia, tachypnea, but normal saturation on room air. Initial labs were significant for leukocytosis (WBC of 20,000) and a lactate of 1.50. Physical exam was positive for shortness of breath, cough, pleuritic chest pain, and vomiting, but was negative for hemoptysis and wheezing, palpitations or lower extremity edema. The patient was started on Ceftriaxone and blood and urine cultures were collected. Sexual history was poorly documented at the time. Urine Drug Screen was positive for cocaine. Chest X-ray showed patchy consolidation at the right lung base, and the patient was then admitted to medicine for severe sepsis secondary to right lung community-acquired pneumonia.

The patient's repeat chest x-ray showed worsening multifocal pneumonia with bilateral interstitial edema, for which she was continued on Ceftriaxone and started on Azithromycin. Bedside POCUS revealed a dilated IVC, an enlarged RV, and bilateral B lines, which were concerning for right heart strain and pulmonary edema. Thus, the patient was given IV Lasix 40 mg for diuresis and a CT angiography of the chest ultimately ruled out a pulmonary embolus. Cardiovascular findings included an elevated BNP at 5,776 and ST segment changes on EKG, and thus a Transthoracic Echocardiogram (TTE) was ordered. Over the next day, the patient clinically worsened with an up- trending lactate (1.5 – 2.1), requiring high flow nasal cannula and eventual transfer to the MICU.

During her four-day MICU course, pulmonary evaluation revealed bilateral pleural effusions, which warranted CPAP. Per infectious disease recommendations, Vancomycin was added to the patient's antibiotic regimen and her lactate level normalized and WBC down trended thereafter. Cardiovascular-wise, physical exam revealed a systolic murmur at the left lower sternal border (LLSB). Additionally, the patient's TTE results revealed a large mitral valve (MV) vegetation [1.8 cm (L) x 0.7 cm (W)] with associated perforation and severe MV regurgitation with marked dilation of the left atrium, suspicious for bacterial endocarditis. Per cardiology, the patient was diuresed more aggressively with IV Lasix 40 mg BID with plans of transfer for mitral valve replacement. The patient's blood cultures came back positive for gram negative diplococci on hospital day 3 and she was diagnosed with septicemia from Neisseria Gonorrhea, for which only Ceftriaxone was continued (2g IV q 12h).

Ultimately, the patient was diagnosed with gonococcal endocarditis secondary to Neisseria Gonorrhea septicemia and underwent urgent mitral valve replacement with a mechanical valve. The patient tolerated the surgery well, had an uncomplicated post-operative course, was stable on discharge, and continued 4-weeks of Ceftriaxone 2 mg IV q 12 hours via a PICC line. Valve tissue culture showed no organisms, nor anaerobic or fungal growth, but pathology was positive for foci of degenerating/necrotic structures suggestive of gram-negative cocci. Neisseria Gonorrhea infection is currently the 2nd most common reportable sexually transmitted disease (STD), with an annual incidence of 700,000 new cases in the US (1). Disseminated gonococcal infection occurs in 0.5%-3% of cases, most commonly presenting with arthralgias, tenosynovitis, purulent arthritis, and skin lesions (1). Rarely, Gonococcal Endocarditis (GE) can occur in 1%-2% of cases, with only 99 cases reported in the literature since 1938 (1). Although rare, the mortality rate is strikingly high at 19%, despite appropriate antibiotics and surgical intervention, raising the need for heightened clinical suspicion of GE in sexually active individuals (2). GE is diagnosed at a mean age of 28.8 years and has a male predominance (57% of cases) (2). Currently, the CDC recommends annual gonococcal screening for females below the age of 25 years, homosexual males, and HIV patients at high risk (1). Because gonorrhea is most commonly diagnosed between the ages of 15-35, the screening guidelines should be expanded to include females up to the age of 35, minimum, and perhaps higher depending on the individual's sexual history (2). Additionally, women appear to be at a higher risk of developing disseminated gonococcal disease, further illustrating the need for women's health providers to more aggressively screen for gonorrhea in women, and to also be more suspicious of symptoms of disseminated disease, specifically generalized fatigue, fevers, chills, arthritis, petechial rash, new cardiac murmurs, and signs of acute heart failure (1).

Early clinical suspicion of GE is complicated by the fact that the majority of patients do not develop mucosal genitourinary (GU) symptoms that would help diagnose the primary infection. In fact, only 27% cases of GE presented with primary GU gonococcal infection, either concomitantly or months prior to the diagnosis of endocarditis (2). In order for clinicians to detect primary gonorrhea infections more frequently, we propose expanding the frequency of screening, perhaps biannually rather than annually. All in all, we hope to "stump the professors" with our case of gonococcal endocarditis requiring valve replacement in a 31-year-old female who did not present with GU symptoms of primary infection and bring to light the need for modifications in STD screening for women. We want to prevent patients from falling through the cracks of narrow guidelines and prevent life- threatening complications of a common, "screenable" STD.

#03 Don't Trust the Culture: A Surprising Diagnosis for maternal and neonatal illness

Meller, N[1]

1 - Sheba Medical Center, Israel

Case:

A 35-year-old patient with Crohn's disease treated with immunomodulatory medication (6-MP), was admitted to the obstetric emergency room at 36+2 weeks of gestation due to abdominal pain. She is G7P4AB2 with a history of 4 normal term vaginal deliveries and 2 missed abortions in the first trimester. Until the current admission, the ongoing pregnancy was uncomplicated. Group B streptococcus (GBS) status was unknown. The patient complained of lower abdominal pain for the past 24 hours. She did not have a fever, nor any other gastrointestinal or genitourinary complaints. Additionally, she did not report water leakage or bleeding, and she reported normal fetal movement.

On physical examination, the patient had tachycardia of 127 beats per minute, normal blood pressure, and a fever of 38.4 Celsius degrees. She had diffuse lower abdominal tenderness, and uterine tone was normal but tender. On vaginal examination, the cervix was closed, and no leakage of water or other abnormal discharge was detected. The fetal monitor showed a tachycardic baseline of 170 beats per minute, with normal variability but decreased reactivity. The sonographic biophysical score was normal. Laboratory results showed a normal WBC count, hemoglobin of 10.84, and platelets of 103K. Chemistry was within the normal range, except for the CRP level, which was 67. Based on the fever without an alternative source, uterine tenderness, and tachycardic fetal monitor, the patient was diagnosed with chorioamnionitis and was

admitted to the delivery room for induction of labor. The patient was treated with ampicillin-gentamycin, according to our institute protocol. The labor was normal, and there were no adverse events. The fetal Apgar score and fetal blood pH were normal.

Post-partum and under antibiotic treatment, the patient did not have a fever, and the CRP level was normalized. Maternal blood and urine cultures were negative. Uterine cervix culture was positive for E-coli resistant to ampicillin. However, the antibiotic treatment was not changed accordingly. The fetal blood culture was negative as well. On the 6th day of life, the neonate was admitted to the NICU because of gray color and apathy. Upon physical examination, oxygen desaturation of 80%, apneic events, low responsiveness, and reduced muscle tone were noted. ECG was normal and ruled out myocarditis. Additionally during hospitalization normal stool became diarrhea, and an abdominal X-ray revealed ileus with distended bowel loops. Laboratory results showed leukocytosis (up to 30K), thrombocytopenia (nadir was 37K), mildly elevated liver enzymes, and elevated CRP (up to 107). Working diagnosis was sepsis and the neonate was treated with Meropenem, Vancomycin, and Acyclovir. Lumbar puncture, as part of the sepsis evaluation, revealed 1 WBC per HPF, glucose of 45 mg/dL, and no apparent microorganisms. Only CSF PCR assay revealed the final diagnosis –Enteroviral infection. Stool virology was also positive for Enterovirus family, and Echovirus 6 was identified. After final diagnosis was made, the antibiotic treatment was stopped. The neonate was discharged on the 13th day of life in good physical and neurological state after receiving supportive care.

Enteroviruses generally cause mild and self-limited diseases, but might cause a life threatening illness in neonates. Clinical manifestations are usually similar to those caused be bacterial sepsis and might include fever, lethargy, and poor oral intake. Severe life threatening complications include Myocarditis, Hepatitis and coagulopathy and Meningoencephalitis. Transmission can be fecal–oral or, less frequently, vertical. Preceding maternal infection mimicking chorioamnionitis, in the absence of risk factors for bacterial intrauterine infection, was described as a classic finding.

References:

1. Zhang M, et al. Clinical characteristics of severe neonatal enterovirus infection: a systematic review. BMC Pediatr. 2021 Mar 15;21(1):127. doi:10.1186/s12887-021-02599-y.

2. Chuang YY, et al. Enteroviral infection in neonates. J Microbiol Immunol Infect. 2019 Dec; 52(6):851-857. doi:10.1016/j.jmii.2019.08.018.

3. Cantey JB, et al. A persistently fussy, febrile infant. Cli(Phila). 2012 Jan;51(1):93-5. doi:10.1177/0009922811400408.

IDSOG

INFECTIOUS DISEASES SOCIETY FOR OBSTETRICS AND GYNECOLOGY

1-3 AUGUST 2024

IDSOG ANNUAL MEETING

The Nines
Portland, Oregon

SAVE THE DATE