

OBSTETRICAL CARE OUTCOMES ASSESSMENT PROGRAM [OB COAP] BIBLIOGRAPHY – UPDATED October 2025

PAPERS:

Souter V, Khalil A, Painter I, Caughey A. **Episiotomy and Obstetric Anal Sphincter Injury in Operative Vaginal Birth.** Letter to the Editor - American Journal Obstetrics & Gynecology. Oct 2025. DOI: https://doi.org/10.1016/j.ajog.2025.10.011. Epub ahead of print.

Spencer SM, Laurent AA, Souter VL, Painter IS, Daly CM. Racial and Ethnic Disparities in Low-Risk Unplanned Cesarean Birth: Disaggregating Asian Data. J Racial Ethn Health Disparities. 2025 Mar 26. doi: 10.1007/s40615-025-02401-0. Epub ahead of print. PMID: 40140239.

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Lengerich BJ, Caruana R, Painter I, Weeks WB, Sitcov K, Souter V. **Interpretable machine learning predicts postpartum hemorrhage with severe maternal morbidity in a lower-risk laboring obstetric population.** Am J Obstet Gynecol MFM. 2024 Aug;6(8):101391. doi: 10.1016/j.ajogmf.2024.101391.

Bosschieter T, Xu Z, Lan H, Lengerich B, Nori H, Painter I, Souter V, Caruana R. Interpretable Predictive Models to Understand Risk Factors for Maternal and Fetal Outcomes. Journal of Healthcare Informatics Research. October 2023. DOI:10.1007/s41666-023-00151-4.

Souter V, Painter I, Sitcov K, Khalil A. **Propensity score analysis of low dose aspirin and bleeding complications in pregnancy.** Ultrasound Obstet Gynecol. 2023 Sep 6. doi: 10.1002/uog.27472. PMID: 37674400.

McLean K, Souter V L, Nethery E. **Expanding midwifery care in the United States: Implications for clinical outcomes and cost.** Birth. 2023 Jul 14. doi: 10.1111/birt.12748. PMID: 37449767

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Fay, E. Hugh O, Francis A, Katz R, Sitcov K, Souter V, Gardosi J. **Customized GROW vs INTERGROWTH-21 birthweight standards to identify small for gestational age associated perinatal outcomes at term.** AJOG MFM. 2021 Dec 4; 4(2):100545. doi: 10.1016/j.ajogmf.2021.100545.

Nethery E, Schummers L, Levine A, Caughey AB, Souter V, Gordon W. **Birth outcomes for planned home and licensed freestanding birth center births in Washington State**. Obstetrics & Gynecology. 2021 Nov 1;138(5):693-702. doi: 10.1097/AOG.0000000000004578

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Chung E, Souter V, Painter I, Sitcov K. **Exclusive Breastfeeding in the Northwest: Disparities Related to Race/Ethnicity and Substance Use.** Academic Pediatrics. 2021 Sep 30;S1876-2859(21)00458-7. doi: 10.1016/j.acap.2021.09.016.

Tiwari, R, Enquobahrie D, Wander Pandora, Painter I, Souter, V. **A retrospective cohort study of race/ethnicity, pre-pregnancy weight, and pregnancy complications.** The Journal of Maternal-Fetal & Neonatal Medicine. 2021. June 8; 1-8. 10.1080/14767058.2021.1914573.

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Souter VL, Nethery E, Kopas ML Wurz H, Sitcov K, Caughey AB. **Comparison of Midwifery and Obstetric Care in Low-Risk Hospital Births.** Obstetrics & Gynecology. 2019; 134 (5) 1056-1065.

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ORAL PRESENTATIONS:

Souter V, Nethery E, McLean K, Sitcov K, Levy B. **Elective Induction of Labor in Nulliparas: has the ARRIVE trial changed obstetric practices and outcomes?** Society for Maternal Fetal Medicine Annual Meeting, February 2022, Kissimmee, FL. Presenting author: Vivienne Souter.

Lengerich, BJ. Caruana R, Weeks W, Painter I, Spencer S, Daly, C, Souter V. **Length of labor and severe maternal morbidity in the NTSV population**. Society for Maternal Fetal Medicine Annual Meeting, Virtual Meeting, 2021. Presenting author: Vivienne Souter.



Chung EK, Painter I, Sitcov K, Souter V. **Disparities in exclusive breastfeeding rates in the Washington state: maternal race/ethnicity and substance use.** Pediatric Academic Societies Annual Meeting, Philadelphia, PA. May 2, 2020; Platform presentation. Presenting author: Chung EK. Meeting unexpectedly cancelled due to the COVID-19 pandemic. American Public Health Association Annual Meeting, virtual meeting, October 28, 2020; Platform presentation. Presenting author: Chung EK.

Chung E, Sitcov K, Painter I, Souter V. **Disparities in Exclusive Breastfeeding Rates in the Northwest: Maternal Race/Ethnicity and Substance Use.** Pediatric Academic Societies 2020 Meeting, May 2020, Philadelphia PA. Presenting Author: Esther Chung.

Simon R, Albright C, Hitti J, Katz R, Lokken E, Sitcov K, Painter I, Souter V. **Severe Maternal Morbidity Among Lower Risk Pregnancies**. Society for Maternal Fetal Medicine Annual Meeting, February 2020, Dallas TX. Presenting author: Rebecca Simon.

Souter V, Painter I, Sitcov K, Shah N. **Birth Without Intervention Among American Women.** International Normal Labor & Birth Research Conference, June 2019; UK. Presenting author: Kristin Sitcov.

Painter I, Souter V, Sitcov K, Caughey A. **The Impact of Elective Induction of Labor on Cesareans and Obstetric Outcomes**. Society for Maternal Fetal Medicine Annual Meeting, February 2019; Las Vegas NV. Presenting author: Vivienne Souter.

Souter V, Nethery E, Sitcov K, Wurz H, Kauffman E. **Outcomes in Low Risk Singleton Term Births by Intrapartum Provider Type**. International Normal Birth and Research Conference, June 2018 Ann Arbor Michigan. Presenting author: Vivienne Souter.

Souter VL, Kauffman E, Marshall AJ, Katon JK. **Assessing the potential impact of extending antenatal corticosteroid use.** Society for Maternal Fetal Medicine Pregnancy Meeting, January 2017, Las Vegas, NV. Presenting author: Vivienne Souter.

ABSTRACTS:

- 1. Souter V, Painter I, Sitcov K, Khalil A, Caughey AB. **Episiotomy in the US: Have We Got it Right?** Royal College of Obstetrics and Gynecology Annual Meeting, June 2025, London, England, UK.
- 2. Bosschieter T, Nori H, Painter I, Caruana R Comparison of an Externally Validated Interpretable Machine Learning Model with the US Preventive Services Task Force Approach to Preeclampsia Risk Assessment. Royal College of Obstetrics and Gynecology Annual Meeting, June 2025, London, England, UK.



- 3. Stewart N, Ficca M, Souter V, Painter I, Kemp I, Kemp H, Smittenaar P, Sgaier S. Community-Level Social Risk Predicts Severe Maternal Morbidity Independent of Clinical Factors. Royal College of Obstetrics and Gynecology Annual Meeting, June 2025, London, England, UK
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- 5. Bosschieter T, Xu Z, Lan H, Lengerich B, Sitcov K, Nori H, Caruana R, Painter I, Souter V. **Unique Insights into Risk Factors for Antepartum Stillbirth Using Explainable AI.** Society for Maternal Fetal Medicine Annual Meeting, February 2023, San Francisco, CA.
- Bosschieter T, Xu Z, Lan H, Lengerich B, Sitcov K, Nori H, Caruana R, Painter I, Souter V. Understanding Risk Factors for Shoulder Dystocia Using Interpretable Machine Learning. Society for Maternal Fetal Medicine Annual Meeting, February 2023, San Francisco, CA.
- 7. Bosschieter T, Xu Z, Lan H, Lengerich B, Sitcov K, Nori H, Caruana R, Painter I, Souter V. **Predicting Severe Maternal Morbidity at Admission for Delivery Using Intelligible Machine Learning.** Society for Maternal Fetal Medicine Annual Meeting, February 2023, San Francisco, CA.
- 8. Bosschieter T, Xu Z, Lan H, Lengerich B, Nori H, Sitcov K, Souter V, Caruana R. Using Interpretable Machine Learning to Predict Maternal and Fetal Outcomes. DSHealth, SIG Knowledge Discovery and Data Mining. August 2022. Washington DC.
- Bosschieter T, Xu Z, Lan H, Lengerich B, Nori H, Sitcov K, Souter V, Caruana R. Interpretable Machine Learning in Healthcare: A Case Study on Pregnancy. Healthcare AI, International Conference on Machine Learning. July 2022. Baltimore MD.
- 10. Bosschieter T, Lan H, Xu Z, Lengerich B, Nori H, Caruana R, Souter V. Using GAMs to Predict Maternal and Fetal Outcomes in Pregnancy. XPO Research Symposium. May 2022, Stanford CA.
- 11. Souter V, Sitcov K, Caughey A. **Maternal and Newborn Outcomes with Long and Very Long Second Stage Duration.** Society for Maternal Fetal Medicine Annual Meeting, February 2022, Kissimmee, FL.



- **12.** VanBlaricom A, Souter V. **Quality Metrics and Outcomes in Hospitals with and without OB-GYN Hospitalists.** Society of OBGYN Hospitalists Annual Meeting, September 2021, Chicago IL.
- 13. Lengerich, BJ. Caruana R, Weeks W, Painter I, Spencer S, Daly, C, Souter V. Length of labor and severe maternal morbidity in the NTSV population. American Journal of Obstetrics & Gynecology, Volume 224, Issue 2, S33.
- 14. Lengerich, BJ. Caruana R, Weeks W, Painter I, Spencer S, Daly, C, Souter V. **Insights into severe maternal morbidity in the NTSV population**. American Journal of Obstetrics & Gynecology, Volume 224, Issue 2, S629 S630.
- 15. Kauffman E, Kline C, Dwyer E, Kline-Sharpe C, Albright C, Souter V. **Postpartum Readmission: Risk Factors and Diagnoses.** Society for Maternal Fetal Medicine Annual Meeting, February 2021, Virtual Meeting.
- 16. Olerich K, Fay E, Hwang J. Cesarean section rates by induction of labor indication in diabetic pregnancies American Journal of Obstetrics & Gynecology Vol. 224 Issue 2 S124–S125 Published in issue: February 2021.
- 17. Paek B, Walker M, Kline CR, Albright CM, DeRegt, Sitcov K, Souter V. Excess risk of preterm delivery in monochorionic diamniotic twins: a review of 1536 twin pregnancies. American Journal of Obstetrics & Gynecology Vol. 224 Issue 2S427 Published in issue: February 2021
- 18. Dwyer ER, Souter V, Sitcov K, Painter I. Racial and Ethnic Disparities in Perinatal Process Measures. Obstetrics & Gynecology. 135:34S, May 2020.
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- 22. Olerich K, Souter V, Painter I, Sitcov K, Fay E, Hwang J. Cesarean Birth Rates in Pregestational Diabetic Pregnancies. Society for Maternal Fetal Medicine, February 2020, Dallas TX.



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- 26. Estrada S, Souter V, Painter I, Napolitano P, Kauffman E, Foglia L. **Impact of Late Preterm Steroid Guidelines on Antenatal Steroid Use.** Society of Maternal Fetal Medicine Annual Meeting, February 2019, Las Vegas NV
- 27. Kauffman E, Sitcov K, Souter V. **Evaluation of cesarean delivery without attempting vaginal birth** American Journal of Obstetrics & Gynecology. January 2018 Volume 218, Issue 1, Supplement, Pages S544–S545
- 28. Painter I, K, Kauffman E, Souter VL: **Obstetric risk factors and disparities in maternal outcomes in the Hispanic women in Washington State**. American Journal of Obstetrics & Gynecology. January 2018 Volume 218, Issue 1, Supplement, Page S545
- 29. Painter I, Sitcov K, Kauffman E, Souter VL: **Risk factors and disparities in maternal outcomes in racial minorities in Washington State**. American Journal of Obstetrics & Gynecology. January 2018 Volume 218, Issue 1, Supplement, Page S545
- 30. Souter V, Chien AJ, Kauffman E, Sitcov K, Caughey AB. **Outcomes associated with prolonged second stage of labor in nulliparas.** American Journal of Obstetrics & Gynecology January 2018. Volume 218, Issue 1, Supplement, Page S226
- 31. Souter V, Kauffman E, Chien AJ, Sitcov K, Caughey AB. Length of the second stage of labor in nulliparas in a contemporary US hospital population. American Journal of Obstetrics & Gynecology January 2018. Volume 218, Issue 1, Supplement, Pages S225–S226



- 32. Souter V, Sitcov K, Kauffman E. **Mode of delivery before and after publication of guidelines to reduce primary cesarean deliveries.** American Journal of Obstetrics & Gynecology January 2018. Volume 218, Issue 1, Supplement, Page S544
- 33.de Regt RH, Kauffman E, Marshall AJ, Souter VL. **Delivery management of dichorionic twins from the obstetrics clinical outcomes assessment program (OB COAP).** American Journal of Obstetrics & Gynecology, January 2017 Volume 216, Issue 1, Supplement 216:S426
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- 41. Chien A, Sitcov K, Katon J, Souter V, Kauffman E. Can we Reduce the Primary Cesarean Section Rate? The Obstetrics Clinical Outcomes Assessment Program (OB COAP) shows it can be done. CityMatch Meeting Salt Lake City UT, September 2015