



## Alex Butwick

Professor of Anesthesiology, Perioperative and Pain Medicine (OB)

 NIH Biosketch available Online

### CLINICAL OFFICES

- **Anesthesia**

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### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Araseli Hernandez - Administrator

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### Bio

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#### BIO

After completing my fellowship at Stanford, my research has predominantly focused on refining preventive and therapeutic strategies for managing patients with postpartum hemorrhage. Overlapping research interests include: investigations of point-of-care devices for assessing maternal hematologic and coagulation profiles. I have also performed large population-wide studies examining: anesthesia interventions and maternal complications during labor and delivery.

#### CLINICAL FOCUS

- Anesthesia
- Obstetric Anesthesia
- Outcomes Research
- Outcomes, Pregnancy

#### ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine
- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- Child Health Research Institute Grant (CHRI), Lucile Packard Childrens Hospital (2015)
- Mentored Patient-Oriented Research Career Development Award (K23), NICHD, NIH (2013)
- Gerard W. Ostheimer Lecture: 'What's New in Obstetrics -2011?', Annual Meeting of the Society of Obstetric Anesthesia and Perinatology (2012)
- Outstanding Interdepartmental Faculty Professor, Department of Obstetrics and Gynecology, Stanford University School of Medicine (2011)
- Gertie Marx Award (1st prize), Society of Obstetric Anesthesia and Perinatology (SOAP) (2006)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Governance Committee, Society for Obstetric Anesthesiology and Perinatology (2019 - present)
- Member of the Associate Editorial Board, Anesthesia and Analgesia (2019 - present)

- Secretary, Society for Obstetric Anesthesiology and Perinatology (Executive Board Position) (2018 - 2020)
- Host of Annual Meeting for the Society for Obstetric Anesthesia and Perinatology, Society for Obstetric Anesthesia and Perinatology (2016 - 2016)
- Member, Patient Blood Management Committee, American Society of Anesthesiologists (2015 - present)
- Member of the Associate Editorial Board, BMC Pregnancy and Childbirth (2014 - 2018)
- Member of the Associate Editorial Board, International Journal of Obstetric Anesthesia (2013 - present)
- Member, Child Health Research Institute, Stanford University School of Medicine (2012 - present)

## PROFESSIONAL EDUCATION

- Residency: The Royal Sussex County Hospital (2000) United Kingdom
- Board Certification: Anesthesia, The Royal College of Anaesthetists
- Medical Education: St George's Hospital Medical School (1997) England
- FRCA, Fellow of the Royal College of Anaesthetists, UK , Anesthesiology (2003)
- Residency: South Thames West - St George's School of Anaesthesia (2004) UK
- Fellowship: Stanford University School of Medicine (2006) CA
- M.S., Department of Health Research and Policy, Stanford University , Epidemiology (2011)

## LINKS

- Obstetric Anesthesia Facebook Page: <https://www.facebook.com/obstetricanesthesia>
- Twitter profile: <https://twitter.com/aljabut>
- ORCID - publications: <http://orcid.org/0000-0002-2048-0879>
- Researchgate link: [https://www.researchgate.net/deref/http%3A%2F%2Fmed.stanford.edu%2Fprofiles%2FAlexander\\_Butwick%2F](https://www.researchgate.net/deref/http%3A%2F%2Fmed.stanford.edu%2Fprofiles%2FAlexander_Butwick%2F)

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am a clinician investigator with primary research interests in optimizing strategies to better prevent and treat postpartum hemorrhage, a condition which is a leading cause of maternal morbidity and mortality. Integrating a background in clinical epidemiology and clinical research, the overarching goal of my current research is to develop and validate clinical prediction rules which will ultimately aid health-care providers in identifying patients at risk of obstetric morbidity secondary to postpartum hemorrhage. I have also led investigations investigating the clinical utility of point-of-care devices for the assessment of the maternal hematologic and hemostatic profiles. These devices offer the potential to provide real-time and continuous data to assist physicians who manage patients with life-threatening obstetric hemorrhage. For prior and ongoing work, I have received institutional and industry funding for clinical trials in obstetrics, and I am previously been a recipient of federal funding (K23) from the National Institute of Health.

### CLINICAL TRIALS

- Blood Loss Measurement During Cesarean Delivery, Not Recruiting
- In-vitro Study to Assess the Coagulation Effects of Exogenous Oxytocin Using Thromboelastography., Not Recruiting
- Oxytocin Infusions and Blood Loss in Patients Undergoing Elective Cesarean Delivery., Not Recruiting
- Thromboelastography to Assess Age-Related Coagulation Differences in Patients Undergoing Cesarean Delivery, Not Recruiting
- Thromboelastography to Assess Hemostatic Changes in Patients Undergoing Elective Cesarean Delivery., Not Recruiting

## Teaching

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### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Epidemiology (Masters Program)

## Publications

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### PUBLICATIONS

- **Subsequent risk of stillbirth, preterm birth, and small for gestational age: A cross-outcome analysis of adverse birth outcomes.** *Paediatric and perinatal epidemiology*  
Bane, S., Simard, J. F., Wall-Wieler, E., Butwick, A. J., Carmichael, S. L.  
2022
- **A data-driven health index for neonatal morbidities.** *iScience*  
De Francesco, D., Blumenfeld, Y. J., Maric, I., Mayo, J. A., Chang, A. L., Fallahzadeh, R., Phongpreecha, T., Butwick, A. J., Xenochristou, M., Phibbs, C. S., Bidoki, N. H., Becker, M., Culos, et al  
2022; 25 (4): 104143
- **Accuracy of visual estimation of blood loss in obstetrics using clinical reconstructions: an observational simulation cohort study.** *International journal of obstetric anaesthesia*  
Athar, M. W., Abir, G., Seay, R. C., Guo, N., Butwick, A., Carvalho, B.  
2022; 50: 103539
- **Association of Medicaid Expansion With Neuraxial Labor Analgesia Use in the United States: A Retrospective Cross-Sectional Analysis.** *Anesthesia and analgesia*  
Xiao, M. Z., Whitney, D., Guo, N., Sun, E. C., Wong, C. A., Bentley, J., Butwick, A. J.  
2022; 134 (3): 505-514
- **Epidural labour analgesia and autism spectrum disorder: is the current evidence sufficient to dismiss an association?** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Abrams, D. A., Wong, C. A.  
2022; 128 (3): 393-398
- **Viscoelastic haemostatic point-of-care assays in the management of postpartum haemorrhage: a narrative review.** *Anaesthesia*  
Dias, J. D., Butwick, A. J., Hartmann, J., Waters, J. H.  
2022
- **Relation entre le ratio temps de coagulation INTEM/HEPTEM et la concentration plasmatique d'heparine chez les patientes obstétrique : une étude exploratoire in vitro.** *Canadian journal of anaesthesia = Journal canadien d'anesthésie*  
Katz, D., Leffert, L., Getrajman, C., Sison, M., Shin, D. W., Lin, H., Butwick, A.  
1800
- **Placenta Accreta Spectrum Disorders: Knowledge Gaps in Anesthesia Care.** *Anesthesia and analgesia*  
Warrick, C. M., Markley, J. C., Farber, M. K., Balki, M., Katz, D., Hess, P. E., Padilla, C., Waters, J. H., Weiniger, C. F., Butwick, A. J.  
1800
- **Epidural labour analgesia and autism spectrum disorder: is the current evidence sufficient to dismiss an association?** *British journal of anaesthesia*  
Butwick, A. J., Abrams, D. A., Wong, C. A.  
1800
- **Authors reply re: The Ten Group Classification System - First Things First.** *BJOG : an international journal of obstetrics and gynaecology*  
Ladfors, L. V., Muraca, G. M., Zetterqvist, J., Butwick, A. J., Stephansson, O.  
1800
- **Hospital Readmissions after Postpartum Emergency Department Visit**  
Girsén, A., Leonard, S. A., Carmichael, S. L., Gibbs, R. S., Butwick, A.

MOSBY-ELSEVIER.2022: S517-S518

- **Trends in eclampsia in the United States, 2009-2017: a population-based study.** *Journal of hypertension*  
Xiao, M. Z., Whitney, D., Guo, N., Bentley, J., Shaw, G. M., Druzin, M. L., Butwick, A. J.  
2021
- **Evidence Mounts Refuting an Association Between Epidural Use and Neurodevelopmental Adverse Outcomes in Children.** *JAMA network open*  
Butwick, A. J., Wall-Wieler, E.  
2021; 4 (10): e2131722
- **Association of Gestational Age with Postpartum Hemorrhage: An International Cohort Study** *ANESTHESIOLOGY*  
Butwick, A. J., Liu, C., Guo, N., Bentley, J., Main, E. K., Mayo, J. A., Shaw, G. M., Stephansson, O.  
2021; 134 (6): 874-886
- **Association of Epidural Labor Analgesia With Offspring Risk of Autism Spectrum Disorders.** *JAMA pediatrics*  
Wall-Wieler, E., Bateman, B. T., Hanlon-Dearman, A., Roos, L. L., Butwick, A. J.  
2021
- **Antepartum and postpartum anemia: a narrative review.** *International journal of obstetric anesthesia*  
Butwick, A. J., McDonnell, N.  
2021: 102985
- **Risk Factors for Postpartum Readmission Among Women After Having a Stillbirth.** *American journal of obstetrics & gynecology MFM*  
DiTosto, J. D., Liu, C., Wall-Wieler, E., Gibbs, R. S., Girsen, A. I., El-Sayed, Y. Y., Butwick, A. J., Carmichael, S. L.  
2021: 100345
- **Positive predictive value of ICD-10 codes for placenta accreta syndrome: a single center validation study**  
Jotwani, A. R., Leonard, S. A., Butwick, A., Lyell, D. J.  
MOSBY-ELSEVIER.2021: S523-S524
- **Association between Neuraxial Labor Analgesia and Neonatal Morbidity after Operative Vaginal Delivery.** *Anesthesiology*  
Butwick, A. J., Wong, C. A., Lee, H. C., Blumenfeld, Y. J., Guo, N. n.  
2021; 134 (1): 52-60
- **The association between postpartum hemorrhage and postpartum depression: A Swedish national register-based study.** *PloS one*  
Liu, C., Butwick, A., Sand, A., Wikström, A. K., Snowden, J. M., Stephansson, O.  
2021; 16 (8): e0255938
- **Postpartum haemorrhage trends in Sweden using the Robson 10-group classification system: A population-based cohort study.** *BJOG : an international journal of obstetrics and gynaecology*  
Ladfors, L. V., Muraca, G. M., Zetterqvist, J., Butwick, A., Stephansson, O.  
2021
- **Current State and Future Direction of Postpartum Hemorrhage Risk Assessment.** *Obstetrics and gynecology*  
Ende, H. B., Butwick, A. J.  
2021
- **The Society for Obstetric Anesthesia and Perinatology (SOAP) COVID-19 Registry: An analysis of outcomes among pregnant women delivering during the initial SARS-CoV-2 outbreak in the United States.** *Anesthesia and analgesia*  
Katz, D. n., Bateman, B. T., Kjaer, K. n., Turner, D. P., Spence, N. Z., Habib, A. S., George, R. B., Toledano, R. D., Grant, G. n., Madden, H. E., Butwick, A. J., Lynde, G. n., Minehart, et al  
2021
- **Opioid Prescription and Persistent Opioid Use After Ectopic Pregnancy In Reply** *OBSTETRICS AND GYNECOLOGY*  
Butwick, A. J., Wall-Wieler, E.  
2020; 136 (6): 1235
- **Accuracy of postpartum hemorrhage coding in the Swedish Pregnancy Register.** *Acta obstetrica et gynecologica Scandinavica*  
Ladfors, L. V., Muraca, G. M., Butwick, A., Edgren, G., Stephansson, O.  
2020

- **Machine learning: the next frontier in obstetric anesthesiology?** *International journal of obstetric anesthesia*  
Butwick, A. J., McCarthy, R. J.  
2020
- **Opioid Prescription and Persistent Opioid Use After Ectopic Pregnancy.** *Obstetrics and gynecology*  
Wall-Wieler, E., Shover, C. L., Hah, J. M., Carmichael, S. L., Butwick, A. J.  
2020
- **How do I manage severe postpartum hemorrhage?** *Transfusion*  
Butwick, A., Lyell, D., Goodnough, L.  
2020
- **Maternal and Infant Adverse Outcomes Associated with Mild and Severe Preeclampsia during the First Year after Delivery in the United States** *AMERICAN JOURNAL OF PERINATOLOGY*  
Ton, T. N., Bennett, M. V., Incerti, D., Peneva, D., Druzin, M., Stevens, W., Butwick, A. J., Lee, H. C.  
2020; 37 (4): 398–408
- **Racial and Ethnic Disparities in Hospital-Based Care Associated with Postpartum Depression.** *Journal of racial and ethnic health disparities*  
Chan, A. L., Guo, N. n., Popat, R. n., Robakis, T. n., Blumenfeld, Y. Y., Main, E. n., Scott, K. A., Butwick, A. J.  
2020
- **IV versus oral iron for postpartum anemia: A cost-effectiveness analysis**  
Greiner, K., Caughey, A. B., Butwick, A. J.  
MOSBY-ELSEVIER.2020: S197
- **Antepartum iron-deficiency anemia: An opportunity to reduce severe maternal morbidity**  
Leonard, S. A., Main, E. K., Lyell, D. J., Butwick, A. J., Carmichael, S. L.  
MOSBY-ELSEVIER.2020: S168–S169
- **Antepartum anemia and racial/ethnic disparities in blood transfusion in california**  
Igbinoso, I., Leonard, S. A., Butwick, A. J., Lyell, D. J.  
MOSBY-ELSEVIER.2020: S304
- **Maternal Health after Stillbirth: Postpartum Hospital Readmission in California.** *American journal of perinatology*  
Wall-Wieler, E. n., Butwick, A. J., Gibbs, R. S., Lyell, D. J., Girsen, A. I., El-Sayed, Y. Y., Carmichael, S. L.  
2020
- **Postpartum Hemorrhage: Wherefore Art Thou, Hyperfibrinolysis?** *Anesthesia and analgesia*  
Butwick, A. J.  
2020; 131 (5): 1370–72
- **In Reply.** *Obstetrics and gynecology*  
Butwick, A. J., Wall-Wieler, E. n.  
2020; 136 (6): 1235
- **Evaluation of US State-Level Variation in Hypertensive Disorders of Pregnancy.** *JAMA network open*  
Butwick, A. J., Druzin, M. L., Shaw, G. M., Guo, N. n.  
2020; 3 (10): e2018741
- **Combatting misinformation and myths about obstetric anesthesia.** *International journal of obstetric anesthesia*  
Butwick, A. J., Weiniger, C. F.  
2019
- **Severe Maternal Morbidity Among Stillbirth and Live Birth Deliveries in California.** *Obstetrics and gynecology*  
Wall-Wieler, E., Carmichael, S. L., Gibbs, R. S., Lyell, D. J., Girsen, A. I., El-Sayed, Y. Y., Butwick, A. J.  
2019
- **Oral vs intravenous iron therapy for postpartum anemia: a systematic review and meta-analysis** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*  
Sultan, P., Bampoe, S., Shah, R., Guo, N., Estes, J., Stave, C., Goodnough, L., Halpern, S., Butwick, A.

2019; 222 (1): 19-+

- **Determinants of women's dissatisfaction with anaesthesia care in labour and delivery.** *Anaesthesia*  
Yurashevich, M., Carvalho, B., Butwick, A. J., Ando, K., Flood, P. D.  
2019
- **Assessing the Association Between Blood Loss and Postoperative Hemoglobin After Cesarean Delivery: A Prospective Study of 4 Blood Loss Measurement Modalities** *ANESTHESIA AND ANALGESIA*  
Fedoruk, K., Seligman, K. M., Carvalho, B., Butwick, A. J.  
2019; 128 (5): 926-32
- **Prepregnancy maternal body mass index and venous thromboembolism: a population-based cohort study** *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY*  
Butwick, A. J., Bentley, J., Leonard, S. A., Carmichael, S. L., El-Sayed, Y. Y., Stephansson, O., Guo, N.  
2019; 126 (5): 581-88
- **The Crystalloid Co-Load: Clinically as Effective as Colloid Preload for Preventing Hypotension from Spinal Anaesthesia for Caesarean Delivery.** *Turkish journal of anaesthesiology and reanimation*  
Riley, E. T., Mangum, K., Carvalho, B., Butwick, A. J.  
2019; 47 (1): 35-40
- **A call for multidisciplinary cesarean delivery analgesia care.** *American journal of obstetrics & gynecology MFM*  
Weiniger, C. F., Ioscovich, A. n., Butwick, A. J.  
2019; 1 (3): 100033
- **United States State-Level Variation in the Use of Neuraxial Analgesia During Labor for Pregnant Women.** *JAMA network open*  
Butwick, A. J., Bentley, J., Wong, C. A., Snowden, J. M., Sun, E., Guo, N.  
2018; 1 (8): e186567
- **Maternal Body Mass Index and Use of Labor Neuraxial Analgesia A Population-based Retrospective Cohort Study** *ANESTHESIOLOGY*  
Butwick, A. J., Wong, C. A., Guo, N.  
2018; 129 (3): 448-58
- **Prevalence of Depression Among Women of Reproductive Age in the United States** *OBSTETRICS AND GYNECOLOGY*  
Guo, N., Robakis, T., Miller, C., Butwick, A.  
2018; 131 (4): 671-79
- **Effect of Maternal Body Mass Index on Postpartum Hemorrhage.** *Anesthesiology*  
Butwick, A. J., Abreo, A. n., Bateman, B. T., Lee, H. C., El-Sayed, Y. Y., Stephansson, O. n., Flood, P. n.  
2018
- **Mode of anaesthesia for Caesarean delivery and maternal morbidity: can we overcome confounding by indication?** *British journal of anaesthesia*  
Butwick, A. J., Palanisamy, A. n.  
2018; 120 (4): 621-23
- **Accuracy of international classification of diseases, ninth revision, codes for postpartum hemorrhage among women undergoing cesarean delivery.** *Transfusion*  
Butwick, A. J., Walsh, E. M., Kuzniewicz, M. n., Li, S. X., Escobar, G. J.  
2018
- **Tranexamic Acid for the Management of Obstetric Hemorrhage.** *Obstetrics and gynecology*  
Butwick, A. J., Deneux-Tharaux, C., Sentilhes, L.  
2017; 130 (6): 1386
- **Tranexamic Acid for the Management of Obstetric Hemorrhage** *OBSTETRICS AND GYNECOLOGY*  
Butwick, A. J., Deneux-Tharaux, C., Sentilhes, L.  
2017; 130 (6): 1386
- **Risk Factors for Severe Postpartum Hemorrhage After Cesarean Delivery: Case-Control Studies.** *Anesthesia and analgesia*  
Butwick, A. J., Ramachandran, B., Hegde, P., Riley, E. T., El-Sayed, Y. Y., Nelson, L. M.  
2017

- **Effect of a High-Rate Versus a Low-Rate Oxytocin Infusion for Maintaining Uterine Contractility During Elective Cesarean Delivery: A Prospective Randomized Clinical Trial.** *Anesthesia and analgesia*  
Duffield, A., McKenzie, C., Carvalho, B., Ramachandran, B., Yin, V., El-Sayed, Y. Y., Riley, E. T., Butwick, A. J.  
2017; 124 (3): 857-862
- **Postpartum hemorrhage following vaginal delivery: risk factors and maternal outcomes.** *Journal of perinatology*  
Miller, C. M., Cohn, S., Akdagli, S., Carvalho, B., Blumenfeld, Y. J., Butwick, A. J.  
2017; 37 (3): 243-248
- **Improving post-caesarean analgesia: Where to next?** *BJOG : an international journal of obstetrics and gynaecology*  
Butwick, A.  
2017
- **Clinical and microbiological features of maternal sepsis: a retrospective study** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Abir, G., Akdagli, S., Butwick, A., Carvalho, B.  
2017; 29: 26-33
- **Comparative Effectiveness of Lower Leg Compression Devices Versus Sequential Compression Devices to Prevent Postspinal Hypotension During Cesarean Delivery.** *Anesthesia and analgesia*  
Carvalho, B. n., Zheng, L. L., Butwick, A. n.  
2017; 124 (2): 696-97
- **Patterns and predictors of severe postpartum anemia after Cesarean section** *TRANSFUSION*  
Butwick, A. J., Walsh, E. M., Kuzniewicz, M., Li, S. X., Escobar, G. J.  
2017; 57 (1): 36-44
- **Postcesarean delivery analgesia.** *Best practice & research. Clinical anaesthesiology*  
Carvalho, B. n., Butwick, A. J.  
2017; 31 (1): 69-79
- **The Society for Obstetric Anesthesia and Perinatology Consensus Statement on the Anesthetic Management of Pregnant and Postpartum Women Receiving Thromboprophylaxis or Higher Dose Anticoagulants.** *Anesthesia and analgesia*  
Leffert, L. n., Butwick, A. n., Carvalho, B. n., Arendt, K. n., Bates, S. M., Friedman, A. n., Horlocker, T. n., Houle, T. n., Landau, R. n., Dubois, H. n., Fernando, R. n., Houle, T. n., Kopp, et al  
2017
- **Obstetric interventions and maternal morbidity among women who experience severe postpartum hemorrhage during cesarean delivery.** *International journal of obstetric anesthesia*  
Seligman, K. n., Ramachandran, B. n., Hegde, P. n., Riley, E. T., El-Sayed, Y. Y., Nelson, L. M., Butwick, A. J.  
2017; 31: 27-36
- **Nitrous oxide for labor analgesia: Utilization and predictors of conversion to neuraxial analgesia.** *Journal of clinical anesthesia*  
Sutton, C. D., Butwick, A. J., Riley, E. T., Carvalho, B. n.  
2017; 40: 40-45
- **Neuraxial Anesthesia in Obstetric Patients Receiving Thromboprophylaxis With Unfractionated or Low-Molecular-Weight Heparin: A Systematic Review of Spinal Epidural Hematoma.** *Anesthesia and analgesia*  
Leffert, L. R., Dubois, H. M., Butwick, A. J., Carvalho, B. n., Houle, T. T., Landau, R. n.  
2017; 125 (1): 223-31
- **A Standardized Approach for Transfusion Medicine Support in Patients With Morbidly Adherent Placenta.** *Anesthesia and analgesia*  
Panigrahi, A. K., Yeaton-Massey, A. n., Bakhtary, S. n., Andrews, J. n., Lyell, D. J., Butwick, A. J., Goodnough, L. T.  
2017
- **National and International Guidelines for Patient Blood Management in Obstetrics: A Qualitative Review** *ANESTHESIA AND ANALGESIA*  
Shaylor, R., Weiniger, C. F., Austin, N., Tzabazis, A., Shander, A., Goodnough, L. T., Butwick, A. J.  
2017; 124 (1): 216-232
- **The impact of postpartum hemoglobin levels on maternal quality of life after delivery: a prospective exploratory study.** *Annals of hematology*  
Miller, C. M., Ramachandran, B., Akbar, K., Carvalho, B., Butwick, A. J.

2016; 95 (12): 2049-2055

- **Evaluation of high-risk obstetric patients: a survey of US academic centers** *JOURNAL OF CLINICAL ANESTHESIA*  
Butwick, A. J., Tiouririne, M.  
2016; 33: 460-468
- **Knowledge of blood loss at delivery among postpartum patients** *PEERJ*  
Farber, M. K., Miller, C. M., Ramachandran, B., Hegde, P., Akbar, K., Goodnough, L. T., Butwick, A. J.  
2016; 4
- **Availability and Readability of Online Patient Education Materials Regarding Regional Anesthesia Techniques for Perioperative Pain Management.** *Pain medicine*  
Kumar, G., Howard, S. K., Kou, A., Kim, T. E., Butwick, A. J., Mariano, E. R.  
2016
- **Maternal outcomes of term breech presentation delivery: impact of successful external cephalic version in a nationwide sample of delivery admissions in the United States** *BMC PREGNANCY AND CHILDBIRTH*  
Weiniger, C. F., Lyell, D. J., Tsen, L. C., Butwick, A. J., Shachar, B., Callaghan, W. M., Creanga, A. A., Bateman, B. T.  
2016; 16
- **Does Time of Delivery Influence the Risk of Neonatal Morbidity?** *American journal of perinatology*  
Brookfield, K. F., O'Malley, K., El-Sayed, Y. Y., Blumenfeld, Y. J., Butwick, A. J.  
2016; 33 (5): 502-509
- **Israeli survey of anesthesia practice related to placenta previa and accreta.** *Acta anaesthesiologica Scandinavica*  
Ioscovich, A., Shatalin, D., Butwick, A. J., Ginosar, Y., Orbach-Zinger, S., Weiniger, C. F.  
2016; 60 (4): 457-464
- **Labor outcome at extremely advanced maternal age.** *American journal of obstetrics and gynecology*  
Osmundson, S. S., Gould, J. B., Butwick, A. J., Yeaton-Massey, A., El-Sayed, Y. Y.  
2016; 214 (3): 362 e1-7
- **Checklists and multidisciplinary team performance during simulated obstetric hemorrhage.** *International journal of obstetric anesthesia*  
Hilton, G., Daniels, K., Goldhaber-Fiebert, S. N., Lipman, S., Carvalho, B., Butwick, A.  
2016; 25: 9-16
- **Racial and Ethnic Disparities in Mode of Anesthesia for Cesarean Delivery.** *Anesthesia and analgesia*  
Butwick, A. J., Blumenfeld, Y. J., Brookfield, K. F., Nelson, L. M., Weiniger, C. F.  
2016; 122 (2): 472-9
- **Racial and Ethnic Disparities in Mode of Anesthesia for Cesarean Delivery** *ANESTHESIA AND ANALGESIA*  
Butwick, A. J., Blumenfeld, Y. J., Brookfield, K. F., Nelson, L. M., Weiniger, C. F.  
2016; 122 (2): 472-479
- **Can extra carbs improve perinatal outcomes?** *BJOG : an international journal of obstetrics and gynaecology*  
Sutton, C. n., Butwick, A. J.  
2016; 123 (4): 518
- **Study to investigate the association between placenta accreta subtype and red blood cell transfusion**  
Bakhtary, S., Yeaton-Massey, A., Panigrahi, A., Lyell, D., Goodnough, L. T., Butwick, A. J.  
MOSBY-ELSEVIER.2016: S380-S381
- **Trial of labor versus primary cesarean delivery in women with extreme obesity**  
Osmundson, S. S., O'Malley, K., Butwick, A. J.  
MOSBY-ELSEVIER.2016: S131
- **In Response.** *Anesthesia and analgesia*  
Bateman, B. T., Butwick, A. J., Huybrechts, K. F.  
2015; 121 (5): 1397-1398



- **Morbidity associated with cesarean delivery in the United States: is placenta accreta an increasingly important contributor?** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*  
Creanga, A. A., Bateman, B. T., Butwick, A. J., Raleigh, L., Maeda, A., Kuklina, E., Callaghan, W. M.  
2015; 213 (3)
- **Mode of anaesthesia for preterm Caesarean delivery: secondary analysis from the Maternal-Fetal Medicine Units Network Caesarean Registry†‡.** *British journal of anaesthesia*  
Butwick, A. J., El-Sayed, Y. Y., Blumenfeld, Y. J., Osmundson, S. S., Weiniger, C. F.  
2015; 115 (2): 267-274
- **Risk Factors for Prolonged Postpartum Length of Stay Following Cesarean Delivery** *AMERICAN JOURNAL OF PERINATOLOGY*  
Blumenfeld, Y. J., El-Sayed, Y. Y., Lyell, D. J., Nelson, L. M., Butwick, A. J.  
2015; 32 (9): 825-832
- **Transfusion and coagulation management in major obstetric hemorrhage** *CURRENT OPINION IN ANESTHESIOLOGY*  
Butwick, A. J., Goodnough, L. T.  
2015; 28 (3): 275-284
- **Second-line uterotonics and the risk of hemorrhage-related morbidity.** *American journal of obstetrics and gynecology*  
Butwick, A. J., Carvalho, B., Blumenfeld, Y. J., El-Sayed, Y. Y., Nelson, L. M., Bateman, B. T.  
2015; 212 (5): 642 e1-7
- **Antenatal Corticosteroids for Preterm Premature Rupture of Membranes: Single or Repeat Course?** *AMERICAN JOURNAL OF PERINATOLOGY*  
Brookfield, K. F., El-Sayed, Y. Y., Chao, L., Berger, V., Naqvi, M., Butwick, A. J.  
2015; 32 (6): 537-543
- **The impact of advanced maternal age on peripartum thromboelastographic coagulation profiles: a prospective observational exploratory study** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*  
Butwick, A., Gutierrez, M. C., Hilton, G.  
2015; 62 (5): 504-512
- **Second-line uterotonics and the risk of hemorrhage-related morbidity** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*  
Butwick, A. J., Carvalho, B., Blumenfeld, Y. J., El-Sayed, Y. Y., Nelson, L. M., Bateman, B. T.  
2015; 212 (5)
- **In response.** *Anesthesia and analgesia*  
Ducloy-Bouthors, A., Vallet, B., Susen, S., Wong, C. A., Butwick, A., Lockhart, E.  
2015; 120 (4): 956-957
- **Does the Ratio of Membrane Rupture To Labor Duration Predict Maternal Morbidity Among Women With a Successful VBAC?**  
Girsan, A. I., Shachar, B., Blumenfeld, Y. J., Aziz, N., El-Sayed, Y. Y., Butwick, A. J.  
SAGE PUBLICATIONS INC.2015: 341A
- **Does the Ratio Between the Duration of Membrane Rupture To the Duration of Labor Influence the Risk of Neonatal Morbidity in Term Women Undergoing Vaginal Delivery?**  
Butwick, A. J., Shachar, B., El-Sayed, Y. Y., Blumenfeld, Y. J., Girsan, A. I.  
SAGE PUBLICATIONS INC.2015: 337A
- **Medical Advances in the Treatment of Postpartum Hemorrhage (vol 119, pg 1140, 2014)** *ANESTHESIA AND ANALGESIA*  
Ducloy-Bouthors, A. S.  
2015; 120 (2): 494
- **Risk Factors for Prolonged Postpartum Length of Stay Following Cesarean Delivery.** *American journal of perinatology*  
Blumenfeld, Y. J., El-Sayed, Y. Y., Lyell, D. J., Nelson, L. M., Butwick, A. J.  
2015
- **Mode of delivery in women of extremely advanced maternal age**  
Osmundson, S., Gould, J., Butwick, A., Yeaton-Massey, A., El-Sayed, Y.  
MOSBY-ELSEVIER.2015: S201-S202

- **Patterns of Second-Line Uterotonic Use in a Large Sample of Hospitalizations for Childbirth in the United States: 2007-2011** *ANESTHESIA AND ANALGESIA*  
Bateman, B. T., Tsen, L. C., Liu, J., Butwick, A. J., Huybrechts, K. F.  
2014; 119 (6): 1344-1349
- **Elective cesarean section at 38 weeks versus 39 weeks: neonatal and maternal outcomes in a randomised controlled trial reply** *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY*  
Cho, Y., Carvalho, B., Butwick, A., Blumenfeld, Y., Riley, E.  
2014; 121 (13): 1748-1749
- **Elective cesarean section at 38 weeks versus 39 weeks: neonatal and maternal outcomes in a randomised controlled trial.** *BJOG : an international journal of obstetrics and gynaecology*  
Cho, Y., Carvalho, B., Butwick, A., Blumenfeld, Y., Riley, E.  
2014; 121 (13): 1748-?
- **Medical Advances in the Treatment of Postpartum Hemorrhage** *ANESTHESIA AND ANALGESIA*  
Ducloy-Bouthors, A., Susen, S., Wong, C. A., Butwick, A., Vallet, B., Lockhart, E.  
2014; 119 (5): 1140-1147
- **Risk factors for obstetric morbidity in patients with uterine atony undergoing Caesarean delivery** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Carvalho, B., El-Sayed, Y. Y.  
2014; 113 (4): 661-668
- **Anticoagulant prescribing practices and anesthetic interventions among anticoagulated pregnant patients: a retrospective study.** *International journal of obstetric anaesthesia*  
Butwick, A., Hass, C., Wong, J., Lyell, D., El-Sayed, Y.  
2014; 23 (3): 238-245
- **Perioperative and transfusion outcomes in women undergoing cesarean hysterectomy for abnormal placentation.** *Transfusion*  
Brookfield, K. F., Goodnough, L. T., Lyell, D. J., Butwick, A. J.  
2014; 54 (6): 1530-1536
- **Preferred spoken language mediates differences in neuraxial labor analgesia utilization among racial and ethnic groups.** *International journal of obstetric anaesthesia*  
Caballero, J. A., Butwick, A. J., Carvalho, B., Riley, E. T.  
2014; 23 (2): 161-167
- **Predictors for Perioperative Injury at Cesarean Delivery.**  
Girsen, A. I., Butwick, A., Faucett, A. M., Lyell, D. J.  
SAGE PUBLICATIONS INC.2014: 158A-159A
- **Preventing spinal hypotension during Caesarean delivery: what is the latest?** *British journal of anaesthesia*  
Butwick, A. J., Columb, M. O., Carvalho, B. n.  
2014
- **Chorioamnionitis and antenatal steroid therapy: single vs repeat course?**  
Brookfield, K., Chao, L., Berger, V., Naqvi, M., El-Sayed, Y., Butwick, A.  
MOSBY-ELSEVIER.2014: S16
- **Maternal characteristics and neonatal outcomes in women with eclampsia versus severe preeclampsia**  
Judy, A., Chao, L., Girsen, A., O'Malley, K., Lyell, D., Blumenfeld, Y., Butwick, A., El-Sayed, Y.  
MOSBY-ELSEVIER.2014: S188-S189
- **Does low-dose aspirin for preeclampsia prevention increase the risk of antepartum bleeding or placental abruption?**  
Ohno, M., Girsen, A., O'Malley, K., Blumenfeld, Y., Lyell, D., Butwick, A., El-Sayed, Y.  
MOSBY-ELSEVIER.2014: S189
- **Ethnic disparities among patients undergoing general anesthesia for cesarean delivery**  
Butwick, A., Blumenfeld, Y., Brookfield, K., Weiniger, C.  
MOSBY-ELSEVIER.2014: S259

- **Risk factors for prolonged length of stay following cesarean delivery**  
Blumenfeld, Y., El-Sayed, Y., Lyell, D., Nelson, L., Butwick, A.  
MOSBY-ELSEVIER.2014: S253
- **Obstetric Anesthesia Clinics (Commentary Article)** *Society of Obstetric Anesthesia and Perinatology - Summer Newsletter*  
Butwick, A., Tiouririne, M.  
2014
- **Platelet Counts and Coagulation Tests Prior to Neuraxial Anesthesia in Patients With Preeclampsia A Retrospective Analysis** *CLINICAL AND APPLIED THROMBOSIS-HEMOSTASIS*  
Sultan, P., Butwick, A.  
2013; 19 (5): 529-534
- **Anesthetic management of a parturient with VACTERL association undergoing Cesarean delivery.** *Canadian journal of anaesthesia = Journal canadien d'anesthésie*  
Hilton, G., Mihm, F., Butwick, A.  
2013; 60 (6): 570-576
- **Methodological queries about point-of-care haemoglobin data** *ANAESTHESIA*  
Butwick, A.  
2013; 68 (5): 540-541
- **Postpartum hemorrhage and low fibrinogen levels: the past, present and future.** *International journal of obstetric anesthesia*  
Butwick, A. J.  
2013; 22 (2): 87-91
- **General anesthesia at cesarean delivery portends worse maternal and neonatal outcomes** *33rd Annual Pregnancy Meeting of the Society-for-Maternal-Fetal-Medicine (SMFM)*  
Brookfield, K., Osmundson, S., Naqvi, M., Butwick, A., Lyell, D.  
MOSBY-ELSEVIER.2013: S283-S283
- **What's New in Obstetric Anesthesia in 2011? Reducing Maternal Adverse Outcomes and Improving Obstetric Anesthesia Quality of Care** *ANESTHESIA AND ANALGESIA*  
Butwick, A.  
2012; 115 (5): 1137-1145
- **2012 Gerard W. Ostheimer Lecture - What's new in obstetric anesthesia?** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Butwick, A. J.  
2012; 21 (4): 348-356
- **Postpartum hemorrhage treated with a massive transfusion protocol at a tertiary obstetric center: a retrospective study** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Gutierrez, M. C., GOODNOUGH, L. T., Druzin, M., Butwick, A. J.  
2012; 21 (3): 230-235
- **Continuous spinal anesthesia for Cesarean hysterectomy and massive hemorrhage in a parturient with placenta increta** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*  
Sultan, P., Hilton, G., Butwick, A., Carvalho, B.  
2012; 59 (5): 473-477
- **Managing Patients with Abnormal Placentation: What Are the Best Anesthetic and Transfusion Strategies?** *ANESTHESIOLOGY*  
Butwick, A. J.  
2012; 116 (5): 1156-1157
- **Non-invasive haemoglobin measurement in patients undergoing elective Caesarean section** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A., Hilton, G., Carvalho, B.  
2012; 108 (2): 271-277
- **How we treat: transfusion medicine support of obstetric services** *TRANSFUSION*  
Goodnough, L. T., Daniels, K., Wong, A. E., Viele, M., Fontaine, M. F., Butwick, A. J.

2011; 51 (12): 2540-2548

- **Epidural Catheter Removal in Patients on Warfarin Thromboprophylaxis A More Cautious Interpretation of Results Required?** *REGIONAL ANESTHESIA AND PAIN MEDICINE*  
Carvalho, B., Mariano, E. R., Butwick, A. J.  
2011; 36 (6): 632-632
- **An In Vitro Investigation of the Coagulation Effects of Exogenous Oxytocin Using Thromboelastography in Healthy Parturients** *ANESTHESIA AND ANALGESIA*  
Butwick, A., Harter, S.  
2011; 113 (2): 323-326
- **The Proseal laryngeal mask airway and elective caesarean section** *ANAESTHESIA AND INTENSIVE CARE*  
Dyer, R. A., James, M. F., Butwick, A. J., Carvalho, B.  
2011; 39 (4): 760-761
- **Non-invasive measurement of hemoglobin during cesarean hysterectomy: a case series** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Butwick, A. J., Hilton, G., Riley, E. T., Carvalho, B.  
2011; 20 (3): 240-245
- **Oxytocin for labour and caesarean delivery: implications for the anaesthesiologist** *CURRENT OPINION IN ANESTHESIOLOGY*  
Dyer, R. A., Butwick, A. J., Carvalho, B.  
2011; 24 (3): 255-261
- **The effectiveness of preemptive sphenopalatine ganglion block on postoperative pain and functional outcomes after functional endoscopic sinus surgery** *56th Annual Fall Scientific Meeting of the American-Rhinologic-Society (ARS)*  
Cho, D., Drover, D. R., Nekhendzy, V., Butwick, A. J., Collins, J., Hwang, P. H.  
WILEY-BLACKWELL.2011: 212-18
- **The Association Between Thromboelastographic Parameters and Total Estimated Blood Loss in Patients Undergoing Elective Cesarean Delivery** *ANESTHESIA AND ANALGESIA*  
Butwick, A., Ting, V., Ralls, L. A., Harter, S., Riley, E.  
2011; 112 (5): 1041-1047
- **The postoperative anaesthetic review.** *Journal of perioperative practice*  
Sultan, P., Jigajinni, S., McGlennan, A., Butwick, A.  
2011; 21 (4): 135-139
- **Anticoagulant and antithrombotic drugs in pregnancy: what are the anesthetic implications for labor and cesarean delivery?** *JOURNAL OF PERINATOLOGY*  
Butwick, A. J., Carvalho, B.  
2011; 31 (2): 73-84
- **Retrospective analysis of anesthetic interventions for obese patients undergoing elective cesarean delivery** *JOURNAL OF CLINICAL ANESTHESIA*  
Butwick, A., Carvalho, B., Danial, C., Riley, E.  
2010; 22 (7): 519-526
- **ST depression at caesarean section and the relation to oxytocin dose. A randomised controlled trial** *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY*  
Butwick, A., Dyer, R.  
2010; 117 (9): 1165-1165
- **Minimum effective bolus dose of oxytocin during elective Caesarean delivery** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Carvalho, B.  
2010; 105 (1): 92-93
- **Minimum effective bolus dose of oxytocin during elective Caesarean delivery - Conflict of interest** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Carvalho, B.  
2010; 104 (6): 783-785
- **Neuraxial anesthesia in obstetric patients receiving anticoagulant and antithrombotic drugs** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*

- Butwick, A. J., Carvalho, B.  
2010; 19 (2): 193-201
- **Minimum effective bolus dose of oxytocin during elective Caesarean delivery** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Coleman, L., Cohen, S. E., Riley, E. T., Carvalho, B.  
2010; 104 (3): 338-343
  - **Retrospective analysis of transfusion outcomes in pregnant patients at a tertiary obstetric center** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Butwick, A. J., Aleshi, P., Fontaine, M., Riley, E. T., GOODNOUGH, L. T.  
2009; 18 (4): 302-308
  - **Obstetric hemorrhage during an exit procedure for severe fetal airway obstruction** *40th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*  
Butwick, A., Aleshi, P., Yamout, I.  
SPRINGER.2009: 437-42
  - **A survey of perioperative and postoperative anesthetic practices for cesarean delivery.** *Anesthesiology research and practice*  
Aiono-Le Tagaloa, L., Butwick, A. J., Carvalho, B.  
2009; 2009: 510642-?
  - **Vaginal twin delivery: a survey and review of location, anesthesia coverage and interventions** *38th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*  
Carvalho, B., Saxena, A., Butwick, A., Macario, A.  
CHURCHILL LIVINGSTONE.2008: 212-16
  - **Intraoperative forced air-warming during cesarean delivery under spinal anesthesia does not prevent maternal hypothermia** *ANESTHESIA AND ANALGESIA*  
Butwick, A. J., Lipman, S. S., Carvalho, B.  
2007; 105 (5): 1413-1419
  - **Can we improve maternal outcome for high-risk obstetric patients?** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Carvalho, B.  
2007; 16 (4): 311-313
  - **Successful spinal blockade in a parturient with myotonia congenita** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Butwick, A. J.  
2007; 16 (3): 292-293
  - **Neuraxial anesthesia for cesarean delivery in a parturient with type 1 von Willebrand disease and scoliosis** *JOURNAL OF CLINICAL ANESTHESIA*  
Butwick, A. J., Carvalho, B.  
2007; 19 (3): 230-233
  - **Fulminant hepatic failure due to hepatitis B reactivation in pregnancy**  
Evers, A. R., Butwick, A. J.  
LIPPINCOTT WILLIAMS & WILKINS.2007: B105
  - **The effect of colloid and crystalloid preloading on thromboelastography prior to Cesarean delivery** *Annual Meeting of the Obstetric-Anaesthetists-Association*  
Butwick, A., Carvalho, B.  
SPRINGER.2007: 190-95
  - **Anesthetic interventions during vaginal twin deliveries**  
Carvalho, B., Saxena, A., Butwick, A., Macario, A.  
LIPPINCOTT WILLIAMS & WILKINS.2006: B43
  - **Effects of crystalloid and colloid preloads on coagulation assessed by thromboelastography in parturients prior to elective cesarean section**  
Butwick, A. J., van der Starre, P., Carvalho, B.  
LIPPINCOTT WILLIAMS & WILKINS.2006: B9
  - **Oxytocin requirements at cesarean section: An opinion-based survey of obstetricians**

- 
- Campitelli, Butwick, A. J., Carvalho, B., Riley, E. T., Cohen, S. E.  
LIPPINCOTT WILLIAMS & WILKINS.2006: B34
- **Uterine inversion and postpartum hemorrhage treated with recombinant factor VIIA**  
Butwick, A. J., Kolz, M. L., Riley, E.  
LIPPINCOTT WILLIAMS & WILKINS.2006: B56
  - **Evaluation of a high-risk obstetric anesthetic clinic based in a large tertiary obstetric referral center**  
Horstman, D. J., Butwick, A., Riley, E., Carvalho, B.  
LIPPINCOTT WILLIAMS & WILKINS.2006: B30
  - **Remifentanyl patient-controlled analgesia in labor** *ANESTHESIA AND ANALGESIA*  
Butwick, A., Carvalho, B.  
2006; 102 (1): 333-333
  - **Recombinant factor VIIa for life-threatening post-partum haemorrhage** *BRITISH JOURNAL OF ANAESTHESIA*  
Butwick, A. J., Riley, E. T.  
2005; 95 (4): 558-558
  - **Recombinant factor VIIa for life-threatening post-partum haemorrhage** *BRITISH JOURNAL OF ANAESTHESIA*  
Ahonen, J., Jokela, R.  
2005; 95 (4): 558
  - **Maternal and neonatal side-effects of remifentanyl patient-controlled analgesia in labour** *BRITISH JOURNAL OF ANAESTHESIA*  
Volikas, I., Butwick, A., Wilkinson, C., Fleming, A., Nicholson, G.  
2005; 95 (4): 504-509
  - **Management of pregnancy in a patient with beta thalassaemia major** *INTERNATIONAL JOURNAL OF OBSTETRIC ANESTHESIA*  
Butwick, A., Findley, I., Wonke, B.  
2005; 14 (4): 351-354
  - **Anesthetic management for cesarean section in a parturient with myotonia congenita**  
Butwick, A. J., Riley, E.  
LIPPINCOTT WILLIAMS & WILKINS.2005: A61
  - **Does forced air-warming reduce hypothermia and shivering for patients undergoing cesarean section with spinal anesthesia?**  
Butwick, A. J., Lipman, S. S., Andes, L., Cohen, S. E., Carvalho, B.  
LIPPINCOTT WILLIAMS & WILKINS.2005: A29
  - **Ventilator-assisted nasotracheal intubation** *ANAESTHESIA*  
Butwick, A., Garewal, D.  
2004; 59 (2): 197-197
  - **A pilot study of the effect of the Queen's Square external bladder stimulator on urinary retention after knee replacement surgery** *ANAESTHESIA*  
Butwick, A., Carter, P., Dolin, S. J.  
2003; 58 (6): 587-591