

Stephen W. Patrick, MD, MPH, MS, FAAP
Director, Vanderbilt Center for Child Health Policy
Associate Professor of Pediatrics and Health Policy, Division of Neonatology
Vanderbilt University School of Medicine
2525 West End Avenue, Suite 1200
Nashville, TN 37203
(Phone) 615-875-5891 (Fax) 615-343-1763
stephen.patrick@vanderbilt.edu

EDUCATION

8/1998-5/2002 BS, Microbiology and Cell Science, *Highest Honors*
University of Florida, Gainesville, FL

5/2002-5/2007 MD
Florida State University College of Medicine, Tallahassee, FL

9/2005-11/2007 MPH, Health Policy and Management
Harvard University School of Public Health, Boston, MA

07/2010-12/2011 MS, Health and Health Care Research
University of Michigan, Ann Arbor, MI

POST-DOCTORAL TRAINING

6/2007-6/2010 House Officer
Department of Pediatrics and Communicable Diseases
University of Michigan Health System, Ann Arbor, MI

7/2010-6/2012 Robert Wood Johnson Foundation Clinical Scholar
University of Michigan Health System, Ann Arbor, MI

7/2010-6/2013 Neonatal-Perinatal Medicine Fellow
Department of Pediatrics and Communicable Diseases
University of Michigan Health System, Ann Arbor, MI

Certifications

2005-present Pediatric Advanced Life Support
2005-present Basic Life Support/Advanced Cardiac Life Support
2007-present Neonatal Resuscitation Program
2013-present Neonatal Resuscitation Program Instructor

License

5/2010-2014 Board of Medicine, State of Michigan #4301090178
5/2013-present Board of Medicine, State of Tennessee #50051

Board Certification

10/2011-present American Board of Pediatrics – Pediatrics
04/2014-present American Board of Pediatrics – Neonatal-Perinatal Medicine

ACADEMIC, ADMINISTRATIVE, AND CLINICAL APPOINTMENTS

7/2019-present	Associate Professor of Pediatrics and Health Policy with tenure Division of Neonatology Vanderbilt Center for Health Services Research Vanderbilt Center for Addiction Research Vanderbilt Kennedy Center Vanderbilt University Nashville, TN
7/2013-6/2019	Assistant Professor of Pediatrics and Health Policy Division of Neonatology Vanderbilt Center for Health Services Research Vanderbilt Center for Addiction Research Vanderbilt University Nashville, TN
4/2018-present	Director, Vanderbilt Center for Child Health Policy (www.childpolicy.org)
5/2018-present	Adjunct Physician Policy Researcher RAND Corporation Santa Monica, CA

VISITING APPOINTMENTS

2016	Visiting Professor, Tufts University School of Medicine, Department of Pediatrics, Division of Newborn Medicine. March 10, 2016
2016	Marie McCormick Lectureship in Neonatal Health Services Research and Epidemiology, Visiting Professor, Harvard Medical School, Beth Israel Deaconess Medical Center Department of Neonatology, May 19, 2016
2016	Visiting Professor, Harvard Medical School, Boston Children's Hospital Division of Newborn Medicine, May 20, 2016
2017	Visiting Professor, University of Michigan, Department of Pediatrics, Division of Neonatal-Perinatal Medicine, February 21-22, 2017
2019	Teresa and Byron Pollitt Family Chair in Fetal & Neonatal Medicine Visiting Professor's Lectureship, Children's Hospital of Los Angeles/University of Southern California, Division of Neonatology, September 19 th , 2019

GOVERNMENT SERVICE

Appointments

- 8/2013-6/2015 Senior Science Policy Advisor, Office of National Drug Control Policy, Executive Office of the President, The White House, Washington, D.C.
- 7/2014-12/2018 Advisor, Division of Family Health and Wellness, Tennessee Department of Health, State of Tennessee, Nashville, Tennessee
- 6/2015-9/2016 Expert consultant, *A Guide to the Management of Opioid-Dependent Pregnant and Parenting Women and Their Children*, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services, Rockville, MD
- 7/2015-7/2017 Advisory Board Member, Multi-State Plan Program Advisory Board, National Healthcare Operations, Healthcare & Insurance Division, U.S. Office of Personnel Management, Washington, D.C.
- 6/2016-present Special Government Employee, Analgesic Drug Products Advisory Committee, Division of Anesthesia, Analgesia and Addiction Products, U.S. Food and Drug Administration, Department of Health and Human Services, Silver Spring, MD.

September 15-16, 2016: Temporary Voting Member, Joint Meeting of the Anesthetic and Analgesic Drug Products Advisory Committee, the Drug Safety and Risk Management Advisory Committee, and the Pediatric Advisory Committee Meeting to discuss the appropriate development plans for establishing the safety and efficacy of prescription opioid analgesics for pediatric patients.

September 11, 2017: Temporary Voting Member, Pediatric Advisory Committee, Benefit/Risk Assessment of Prescription Opioid Antitussive Products for Treatment of Cough in Pediatric Patients

September 14, 2017: Temporary Voting Member, Joint Meeting of the Anesthetic and Analgesic Drug Products Advisory Committee and the Drug Safety and Risk Management Advisory Committee

September 26, 2019: Temporary Voting Member, Pediatric Advisory Committee/Drug Safety and Risk Management Advisory Committee

- 8/2016-11/2016 Member, Technical Advisory Group, Neonatal Episodes of Care, Health Care Financing and Administration, State of Tennessee, Nashville, Tennessee
- 9/2018-present Guest Researcher, Centers for Disease Control and Prevention, Division of Reproductive Health, Atlanta, Georgia.
- Reviews*
- 2014 Expert Reviewer, Substance Abuse and Mental Health Services Administration and National Center on Substance Abuse and Child Welfare, *Medication-Assisted Treatment for Pregnant Women with Opioid Dependence: Practice and Policy Considerations for Health Care, Addiction Treatment Providers, Child Welfare and Courts*
- 2018 Reviewer, National Academies of Sciences, Engineering, and Medicine. 2018. *Medication-assisted treatment for opioid use disorder: Proceedings of a workshop—in brief*. Washington, DC: The National Academies Press
doi: <https://doi.org/10.17226/25322>.
- Testimonies*
- 6/24/2015 Witness, United States House of Representatives, Energy and Commerce Committee, Health Subcommittee. Examining Public Health Legislation. Testimony provided on the Protecting Our Infants Act of 2015 and neonatal abstinence syndrome.
Testimony: <http://energycommerce.house.gov/hearing/examining-public-health-legislation-hr-2820-hr-1344-and-hr-1462>
Law: <https://www.congress.gov/114/plaws/publ91/PLAW-114publ91.pdf>
- 3/15/2016 Witness, Tennessee General Assembly, House Criminal Justice Subcommittee, Testimony provided on House Bill 1660 and neonatal abstinence syndrome.
<http://wapp.capitol.tn.gov/apps/BillInfo/default.aspx?BillNumber=HB1660&GA=109>
- 2/8/2018 Witness, United States Senate; Committee on Health, Education, Labor and Pensions. “The Opioid Crisis: Impact on Children and Families.”
Testimony: <https://www.help.senate.gov/hearings/the-opioid-crisis-impact-on-children-and-families>
Bill: <https://www.congress.gov/bill/115th-congress/house-bill/6>

PROFESSIONAL ASSOCIATIONS

- 2003-present American Academy of Pediatrics
Section on Neonatal-Perinatal Medicine

Section on Young Physicians

2014-present AcademyHealth
2015-present Society for Pediatric Research

SCIENTIFIC REVIEWER FOR PEER-REVIEWED JOURNALS

2011-present *Journal of Health Care for the Poor and Underserved*
2012-present *American Journal of Preventive Medicine*
2012-present *Pediatrics*
2013-present *American Journal of Public Health*
2013-present *The Journal of the American Medical Association*
2014-present *Maternal and Child Health Journal*
2014-present *Journal of Perinatology*
2014-present *Pediatric Drugs*
2015-present *American Journal of Perinatology*
2015-present *Academic Pediatrics*
2015-present *The Joint Commission Journal on Quality and Patient Safety*
2015-present *The Journal of Pediatrics*
2015-present *Child Maltreatment*
2015-present *The New England Journal of Medicine*
2016-present *JAMA Pediatrics*
2016-present *JAMA Psychiatry*
2016-present *Addiction*
2016-present *Harvard Journal on Legislation*
2016-present *Health Affairs*
2017-present *The British Medical Journal*
2017-present *The Journal of Addiction Medicine*
2018-present *Drug and Alcohol Dependence*
2018-present *American Journal of Public Health*
2018-present *Pediatric Research*
2019-present *Public Health Reports*
2019-present *The Journal of Primary Prevention*

National Meetings

2015-2016 Abstracts, Pediatric Academic Societies Annual Meeting,
Neonatology Health Services Research and Epidemiology
2019-2020 Theme Co-Director, Child and Family Health, AcademyHealth
Annual Research Meeting

SCIENTIFIC REVIEWER FOR STUDY SECTIONS

2015 National Institutes of Health. National Institute on Drug Abuse,
Behavioral Science Track Award for Rapid Transition Review,
Study Section, ad hoc reviewer

2018 National Institutes of Health. Center for Scientific Review Special
Emphasis Panel, Accelerating the Pace of Drug Abuse Research
Using Existing Data, ad hoc reviewer

2018 Patient Centered Outcomes Research Institute. Medication Assisted Treatment Merit Review, ad hoc reviewer.

NATIONAL INSTITUTES OF HEALTH WORKGROUPS

4/2016 National Institute on Child Health and Human Development of the National Institutes of Health. “Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and Childhood Outcomes Workshop”
Invited speaker and participant. Rockville, Maryland.

10/2018 National Institute on Child Health and Human Development Strategic Planning. Participant. Washington, D.C.

ORGANIZING ROLES IN NATIONAL MEETINGS

4/2015 Pediatric Academic Societies Annual Meeting, San Diego, CA
- Moderator, Platform Presentation Session: “Neonatal Epidemiology and Health Services”
- Moderator, Platform Presentation Session: “Neonatal Health Services Research”
- Poster Facilitator, “Epidemiology and Health Science Services: Maternal Epidemiology I”
- Poster Facilitator, “Epidemiology and Health Science Services: Maternal Epidemiology II”

4/2019 Pediatric Academic Societies Annual Meeting. Baltimore, MD
- Moderator, “Opioid Prescribing, Mental Health, and Substance Use among Adolescents and Young Adults: Can Pediatric Providers Slow the Opioid Epidemic?”
- Moderator, “Neonatal Abstinence Syndrome: Eat. Sleep. Console. Repeat - and Other New Thoughts for 2019”

12/2019 Hot Topics in Neonatology. National Harbor, MD
- Moderator, Neonatal Abstinence Syndrome session

ORGANIZATIONAL LEADERSHIP

American Medical Association, Chicago, IL

2003-2004 Vice Chair, Region 4 (FL, GA, NC, SC, PR, TN, AL), Medical Student Section

2004-2005 National Chair, Community Service Committee, Medical Student Section

2005-2006 Delegate, AMA House of Delegates
- Member of the Medical Student Section Delegation
- Member of the Florida Delegation

2004-2006 National Chair, Cover the Uninsured Task Force, Medical Student Section

2005-2006 Member, Council on Medical Service

2006-2007 National Co-Chair, Health Care Access Task Force, Medical Student Section

2008-2009 Member, Legislative Advocacy Committee, Resident and Fellow

Section

2010-2011 Vice Chair, Committee on Medical Education, Resident and Fellow Section

Florida Medical Association, Tallahassee, FL

2004-2005 Member, Council on Medical Economics

Florida State University College of Medicine, Tallahassee, FL

2006-2007 Member, Admissions Committee

University of Michigan Health System, Ann Arbor, MI

2007-2010 Member, Graduate Medical Education Committee Department of Pediatrics and Communicable Diseases

American Academy of Pediatrics, Elk Grove Village, IL

2008-2009 Member, Executive Committee Member, Section on Medical Students, Residents and Fellowship Trainees

2008-2009 District V Coordinator (MI, OH, IN, ON)

2010-2011 Liaison, Committee on Federal Government Affairs

- Subcommittee on Access

2015-present Member, Committee on Substance Use and Prevention

2016-2017 Expert consultant, Fetal Alcohol Spectrum Disorders Quality Improvement Programs

Vermont Oxford Network, Burlington, VT

2012-2015 iNICQ international quality improvement collaborative on neonatal abstinence syndrome involving more than 100 neonatal intensive care units in the United States and abroad.

- Member, Scientific Steering Committee

- Faculty member

- Expert Discussant

- Co-Author of Improvement Toolkit

March of Dimes, Tennessee Chapter, Nashville, TN

2015-2017 Member, Advocacy and Government Affairs Committee

Department of Health Policy, Vanderbilt University School of Medicine, Nashville, TN

2015-2019 Member, Faculty Search Committee

Robert Wood Johnson Clinical Scholars Alumni Association, Chapel Hill, NC

2016-2017 Founding Co-President

March of Dimes, White Plains, NY

2016-2017 Inaugural member, March of Dimes National Advocacy Leaders Team

American College of Obstetricians and Gynecologists, Washington, D.C.

2018-2019 Member, Alliance for Innovation in Maternal Health, National Maternal Substance Use Expert Team

SELECTED COMMUNITY SERVICE

2009 Alpha House Shelter, Ann Arbor, MI
2009 Hope Clinic International, Esteli, Nicaragua
2014-2016 Middle Tennessee Neonatal Abstinence Syndrome Community Collaborative
2015-present Davidson County, Tennessee, Fetal Infant Mortality Review Committee

HONORS AND AWARDS

2004 American Medical Association Foundation Excellence in Medicine Leadership Award
2004 Florida Medical Association Mullen Award for Outstanding Community Service
2006 Florida Medical Foundation Scholarship
2007 Florida State University College of Medicine Individual Achievement Award for "commitment to ensuring quality medical care for those most in need."
2010 Top Presentation, Research Day, University of Michigan Department of Pediatrics (Medicaid: A Program for Children? Trends From 1991-2005)
2011 Pediatric Academic Societies Young Investigator's Travel Award (Regional Variation in Lumbar Punctures for Early Onset Neonatal Sepsis)
2012 Academic Pediatric Association Research Award; Best Abstract by a Fellow – Pediatric Academic Societies (Federal Medical Assistance Percentage Policy and Medicaid/CHIP Enrollment for Children)
2013 Top 20 most influential articles published in 2012 - RWJF *Year in Research* poll (Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009)
2013 National Finalist – White House Fellows Program
2013, 2015, 2016 NIH Loan Repayment Award for Pediatric Research – National Institute on Drug Abuse
2015 Burroughs-Wellcome Fund Trainee Travel Award, Translational Science 2015 Meeting (Higher Dose and Duration of Maternal Prescription Opioid Use Increases Risk of Neonatal Abstinence Syndrome)
2016 Tennessee Chapter of the American Academy of Pediatrics Early Career Physician of the Year
2017 Nemours Child Health Services Research Award, AcademyHealth
2019 Society for Pediatric Research Young Investigator Award

TEACHING ACTIVITIES

- 2013-present Division of Neonatology – Pediatric Resident Core Curriculum
Lecture Series – “Neonatal Abstinence Syndrome.”
- 2014-2016 Division of Neonatology Journal Club – Fellow mentor and co-
leader
- 2014-2017 Department of Pediatrics Fellow Core Curriculum – Biostatistics

RESEARCH SUPERVISION

Research Mentor for Medical Students

- 2014-2016 M. Katherine Charles, MS4*
Project title: Infant Sex and Risk of Neonatal Abstinence
Syndrome
Current Position: House Officer, Duke University, Durham, NC

Research Mentor for Pediatric Residents

- 2018-present Kathleen Doherty, MD*
Project title: Establishing a Gold Standard Definition of Neonatal
Abstinence Syndrome.
Current Position: House Officer, Vanderbilt University Medical
Center

Research Mentor for Pediatric Fellows

- 2015-2017 Faouzi Issam Maalouf, MD*
Project title: Efficacy of Outpatient Treatment and Management
for Neonatal Abstinence Syndrome
Current Position: Assistant Professor, American University Beirut,
Beirut, Lebanon
- 2015-2017 Jason Pryor, MD, MPH
Project title: Patterns of alcohol consumption among women with
intended pregnancies
Current Position: Neonatologist, Carilion Clinic, Roanoke, VA
- 2015-2016 Nicole L. G. Villapiano, MD, MSc.
Project: Rural and Urban Differences in Neonatal Abstinence
Syndrome and Maternal Opioid Use, 2004 to 2013
Current Position: Primary Care Physician, Family Health Network,
Cortland, NY
- 2016-present Tyler N.A. Winkelman, MD, MSc
Project: Neonatal Abstinence Syndrome in the US Medicaid
Program
Current Position: Assistant Professor, University of Minnesota
School of Medicine, Minneapolis, Minnesota

2016-present Lauren Sanlorenzo, MD, MST, MPH*
Project title: The Impact of Polysubstance Exposure on Neonatal Abstinence Syndrome Severity
Current Position: Assistant Professor, Vanderbilt University Medical Center, Nashville, TN

2017-present Susan Lopata, MD*
Project title: Improving Systems of Care for Infants Exposed to Hepatitis C
Current Position: Vanderbilt University, Neonatology Fellow, Nashville, TN

Research mentor for junior faculty

2018-present Ashley Leech, PhD*
Project title: Comparative Effectiveness in Treatment of Opioid Use Disorder in Pregnancy
Current Position: Assistant Professor, Vanderbilt University Medical Center, Nashville, TN

Dissertation Committee

2017-Present Elizabeth Greener, BA
Project title: Market Shocks and Their Effect on Healthcare Utilization and Outcomes for Pregnant Women with Opioid Use Disorder
Current Position: PhD Candidate, University of Rochester Department of Public Health Sciences

*Primary mentor

GRANTS

Current Research Support:

Source: National Institute on Drug Abuse, National Institutes of Health
1K23DA038720
Title: Neonatal Abstinence Syndrome: Risk of Drug Withdrawal in Opioid-Exposed Infants
Role: Principal Investigator
Costs: \$810,275.07 (5 years)
Effort: 75% (2/2015-1/2020)

Source: The Boedecker Foundation
Title: Improving Care for Infants with Neonatal Abstinence Syndrome
Role: Principal Investigator
Costs: \$140,000 (1 year)
Effort: 5% concurrent effort (1/2019-1/2020)

Source: National Institute on Drug Abuse, National Institutes of Health, R01

1R01DA045729
 Title: Improving Access to Treatment for Women with Opioid Use Disorder
 Role: Principal Investigator
 Costs: \$1,404,586 (4 years)
 Effort: 25% (4/2018-1/2022)

Source: National Institute on Drug Abuse, National Institutes of Health, R21
 R21DA045212
 Title: An Exploratory Analysis of the Association of State Policies with
 Neonatal Abstinence Syndrome
 Role: Consultant (PI: Faherty, RAND Corporation)
 Costs: \$255,803 (2 years)
 Effort: Consultant (3/2018-2/2020)

Source: National Institute on Drug Abuse, National Institutes of Health, P50
 P50DA046351
 Title: Center for Opioid Policy Research
 Role: Co-Investigator (PI: Stein, RAND Corporation)
 Costs: \$4,590,706 (4 years)
 Effort: 5% (7/2018-6/2023)

Source: Robert Wood Johnson Foundation
 Title: Health and Educational Outcomes of Low-Resource, Vulnerable Children
 in Tennessee
 Role: Co-Investigator (PI: Buntin, Heinrich)
 Costs: \$1,200,000 (30 months)
 Effort: 5% year 1, 8% years 2 and 3 (11/2018-4/2021)

Source: National Institute on Child Health and Human Development, R01
 R01HD097344
 Title: Antipsychotics and the Risk of Unexpected Death in Children and Youth
 Role: Co-Investigator (PI: Ray)
 Costs: \$2,490,582 (5 years)
 Effort: 10% concurrent effort (12/2019-12/2023)

Completed Research Support:

Source: The Robert Wood Johnson Foundation
 Title: Robert Wood Johnson Foundation Clinical Scholars Program
 Role: Fellow in health services and health policy research
 Costs: \$250,000 (2 years)
 Effort: 80% (7/2010-6/2012)

Source: National Institutes of Health and Vanderbilt Clinical Research Scholars
 Program KL2 - 5KL2TR000446-08
 Title: Neonatal Abstinence Syndrome: Risk of Drug Withdrawal in Opioid-
 Exposed Infants

Role: Principal Investigator
Costs: \$450,000 (3 years)
Effort: 75% (7/2014-1/2015)

Source: United States Department of Health and Human Services, Health Resources and Services Administration and the State of Tennessee
Department of Health

Title: Prescription Opioid Prescribing Patterns as Predictors of Neonatal Abstinence Syndrome

Role: Principal Investigator
Costs: \$110,690 (1 year)
Effort: 10% concurrent effort (4/2014-6/2015)

Source: National Institute for Health Care Management Foundation
Title: The Prescription Opioid Epidemic: Understanding its Complications and the Effectiveness of State Policies

Role: Principal Investigator
Costs: \$57,072 (1 year)
Effort: Concurrent effort (1/2016-6/2017)

Source: National Institutes of Health, Office of the Director
U2-COD023375-02S1

Title: Project ECHO (Environmental influences on Child Health Outcomes) Coordination Center, Supplement on Neonatal Opioid Withdrawal Syndrome

Role: Co-Investigator (PI: P. Brian Smith, MD, MPH, MHS, Duke University)
Costs: \$250,000 (1 year)
Effort: 10% concurrent effort (10/2017-9/2018)

Source: The Memorial Foundation

Title: Improving Care for Infants with Neonatal Abstinence Syndrome

Role: Principal Investigator
Costs: \$281,734 (2 years)
Effort: 5% concurrent effort (9/2017-8/2019)

Pending/Under Review:

Source: Centers for Medicaid and Medicare Services
Title: Improving Outcomes for Pregnant Women and Infants Affected by the Opioid Crisis

Role: Principle Investigator
Costs: \$5,380,000 (5 years)
Effort: 20%

Source: The Boedecker Foundation

Title: Improving Care for Infants with Neonatal Abstinence Syndrome

Role: Principal Investigator

Costs: \$140,000 (1 year)
Effort: 5% concurrent effort (1/2020-1/2021)
Source: March of Dimes
Title: Optimizing Care for Opioid-Exposed Infants
Role: Principle Investigator
Costs: \$1,100,000 (2.5 years)
Effort: 10%

PEER-REVIEWED PUBLICATIONS

1. Odetola FO, Mann C, Hansen KW, **Patrick S**, Bratton SL. Source of Admission and Outcomes for Critically Injured Children in the Mountain States. *Archives of Pediatrics and Adolescent Medicine*. 2010;164(3):277-282
2. **Patrick SW**, Schumacher RE, Benneyworth BD, Krans EE, McAllister JM, Davis MM. Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009. *JAMA*. 2012 May 9;307(18):1934-40. Epub 2012 Apr 30.
3. **Patrick SW**, Choi H, Davis MM. Increase In Federal Match Associated With Significant Gains In Coverage For Children Through Medicaid And CHIP. *Health Affairs*. 2012 Aug;31(8):1796-802.
4. **Patrick SW**, Schumacher RE, Davis MM. Variation in Lumbar Punctures for Early Onset Neonatal Sepsis: A Nationally Representative Serial Cross-Sectional Analysis, 2003–2009. *BMC Pediatrics*. 2012, 12:134.
5. **Patrick SW**, Freed GL. Intergenerational Enrollment and Expenditure Changes in Medicaid: Trends from 1991 to 2005. *BMC Health Services Research*. 2012, 12:327.
6. **Patrick SW**, Davis MM, Meddings JA, Hieber S, Lee GM, Stillwell TL, Chenoweth, CE, Espinosa C, Schumacher RE. Accuracy of Hospital Administrative Data in Reporting Central-Line Associated Bloodstream Infections in Newborns. *Pediatrics*. 2013-03;131 Supplement 1:S75-80.
7. Sun GH, Auger KA, Aliu O, **Patrick SW**, DeMonner S, Davis MM. Post-Tonsillectomy Hemorrhage in Children with von Willebrand Disease and Hemophilia. *JAMA Otolaryngology - Head & Neck Surgery*. 2013;139(3):245-249.
8. Sun GH, Auger KA, Aliu O, **Patrick SW**, Demonner S, Davis MM. Variation in Inpatient Tonsillectomy Costs Within and Between US Hospitals Attributable to Postoperative Complications. *Med Care*. 2013 Dec;51(12):1048-54.
9. Haggins A, **Patrick SW**, Demonner S, Davis MM. When Coverage Expands: CHIP as a Natural Experiment in Utilization of Healthcare Services. *Academic Emergency Medicine*. 2013 Oct;20(10):1026-32.
10. Harris MJ, Gay JC, Neef JM, **Patrick SW**, Sedman, A. Comparison of Administrative Data versus Infection Control Data in Identifying Central Line-Associated Blood Stream Infections in Children’s Hospitals. *Hospital Pediatrics*. 2013; 3:307-313.
11. Auger KA, **Patrick SW**, Davis MM. Infant Hospitalizations for Pertussis Before and After Tdap Recommendations For Adolescents. *Pediatrics*, 2013 Nov;132(5):e1149-55. Epub 2013 Oct 21.

12. **Patrick SW**, Kaplan HC, Passarella M, Davis MM, Lorch SA. Variation in Treatment of Neonatal Abstinence Syndrome Among US Children's Hospitals, 2004-2011. *Journal of Perinatology* 2014 Nov;34(11):867-72. Epub 2014 Jun 12.
13. **Patrick SW**, Kawai AT, Kleinman K, Jin R, Vaz L, Gay C, Kassler W, Goldmann D, Lee GM. Significant Decreases in Healthcare-Associated Infections Among Hospitalized Children in the US from 2007-2012. *Pediatrics*. 2014 Oct;134(4):705-12. Epub 2014 Sep 8.
14. Warren MD, Miller AM, Traylor J, Bauer A, **Patrick SW**. Implementation of a Statewide Surveillance System for Neonatal Abstinence Syndrome — Tennessee, 2013. *MMWR Morbidity and Mortality Weekly Report*. 2015 Feb 13;64(5):125-8.
15. **Patrick SW**, Dudley J, Martin PR, Harrell FE, Warren MD, Hartmann KE, Ely EW, Grijalva GC, Cooper WO. Prescription Opioid Epidemic and Infant Outcomes. *Pediatrics*. 2015 May;135(5):842-850. Epub 2015 April 13.
16. Tolia V, **Patrick SW**, Bennett M, Sousa J, Smith PB, Clark R, Spitzer AR. Increasing Neonatal Abstinence Syndrome in US Neonatal Intensive Care Units. *The New England Journal of Medicine*. 2015 May 28;372(22):2118-26 Epub 2015 Apr 26.
17. **Patrick SW**, Davis MM, Lehmann CU, Cooper WO. Increasing Incidence and Geographic Distribution of Neonatal Abstinence Syndrome: United States 2009-2012. *Journal of Perinatology*. 2015 Aug;35(8):650-5. Epub 2015 Apr 30.
18. **Patrick SW**, Burke JF, Biel TJ, Auger KA, Goyal N, Cooper WO. Risk of Hospital Readmission Among Infants with Neonatal Abstinence Syndrome. *Hospital Pediatrics*. 2015 Oct;5(10):513-9.
19. **Patrick SW**, Warner KE, Pordes E, Davis MM. Cigarette Tax Increase and Infant Mortality. *Pediatrics*. 2016 Jan;137(1):1-8. Epub 2015 Dec 1.
20. **Patrick SW**, Schumacher RE, Horbar JD, Buss-Frank ME, Morrow KA, Ferrelli KR, Picarillo AP, Gupta M, Soll RF. Improving Care for Infants with Neonatal Abstinence Syndrome. *Pediatrics*. 2016 May;137(5). Epub 2016 Apr 15.
21. **Patrick SW**, Fry CE, Jones TF, Buntin MB. Implementation Of Prescription Drug Monitoring Programs Associated With Reductions In Opioid-Related Death Rates. *Health Affairs*. 2016 Jul 1;35(7):1324-32. Epub 2016 Jun 22.
22. Ko JY, **Patrick SW**, Tong VT, Patel R, Lind JN, Barfield WD. Incidence of Neonatal Abstinence Syndrome in 28 States, 1999-2013. *MMWR Morbidity and Mortality Weekly Report* 2016;65:799–802.
23. Villapiano NLC, Winkelman TNA, Kozhimannil KB, Davis MM, **Patrick SW**. Rural and Urban Differences in Neonatal Abstinence Syndrome and Maternal Opioid Use, 2004 to 2013. *JAMA Pediatrics*. 2017 Feb 1;171(2):194-196.
24. Ko JY, Wolicki S, Barfield WD, **Patrick SW**, Broussard CS, Yonkers KA, Naimon R, Iskander J. CDC Grand Rounds: Public Health Strategies to Prevent Neonatal Abstinence Syndrome. *MMWR Morbidity and Mortality Weekly Report*. 2017 Mar 10;66(9):242-245.
25. Pryor JR, **Patrick SW**, Sundermann AC, Wu P, Hartmann KE. Pregnancy Intention and Maternal Alcohol Consumption. *Obstetrics & Gynecology*. 2017 Mar 6.

26. Kozhimannil KB, Graves AJ, Levy R, **Patrick SW**. Predictors of Prescription Opioid Abuse Among Pregnant US Women. *Women's Health Issues*. 2017 Mar 31.
27. Charles MK, Cooper WO, Jansson LJ, Dudley J, Slaughter J, **Patrick SW**. Male Sex Associated with Increased Risk of Neonatal Abstinence Syndrome. *Hospital Pediatrics*. 2017 May 2. pii: hpeds.2016-0218.
28. **Patrick SW**, Bauer A, Warren MD, Jones TF, Wester C. Increasing Prevalence of Hepatitis C Among Women with Recent Live Births— United States and Tennessee, 2009–2014. *MMWR Morbidity and Mortality Weekly Report*. 2017 May 12;66(18):470-473.
29. Winkelman TNA, Villapiano N, Kozhimannil KB, Davis MM, **Patrick SW**. Incidence and Costs of Neonatal Abstinence Syndrome among Infants with Medicaid: 2004–2014. *Pediatrics*. 2018 Apr;141(4).
30. Maalouf FI, Cooper WO, Slaughter JC, Dudley J, **Patrick SW**. Outpatient Pharmacotherapy for Neonatal Abstinence Syndrome. *The Journal of Pediatrics*. 2018 May 7.
31. Hatch LD, Scott TA, Walsh WF, Goldin AB, Blakely ML, **Patrick SW**. National and Regional Trends in Gastrostomy in Very Low Birth Weight Infants in the US: 2000-2012. *The Journal of Perinatology*. 2018 Jun 21.
32. **Patrick SW**, Buntin MB, Martin PR, Scott TA, Dupont W, Richards M, Cooper WO. Barriers to Accessing Treatment for Pregnant Women with Opioid Use Disorder in Appalachian States. *Substance Abuse*. 2018 Jun 27:1-18.
33. Reese J, Scott TA, **Patrick SW**. Changing Patterns of Patent Ductus Arteriosus Surgical Ligation in the United States. *Seminars in Perinatology*. 2018 Jun;42(4):253-261.
34. Ray WS, Stein CM, Murray KT, **Patrick SW**, Fuchs C, Daugherty J, Hall K, Cooper WO. Antipsychotics and Increased Risk of Unexpected Death in Children and Youth, *JAMA Psychiatry*. 2018 Dec 12.
35. Maalouf FI, Cooper WO, Stratton SM, Dudley J, Ko J, Banerji A, **Patrick SW**. Positive Predictive Value of Administrative Data for Neonatal Abstinence Syndrome. *Pediatrics*. 2018 Dec 4.
36. Colby JM, Adams B, Morad A, Presley L, **Patrick SW**. Umbilical cord tissue and meconium may not be equivalent for confirming in utero substance exposure. *Journal of Pediatrics*. 2018 Oct 17.
37. Whitmore C, White MN, Buntin MB, Fry CE, Calamari K, **Patrick SW**. State Laws and Policies to Reduce Opioid-Related Harm: A Qualitative Assessment of PDMPs and Naloxone Programs in Ten U.S. States. *Preventive Medicine Reports*. 2018 Dec 30;13:249-255.
38. **Patrick SW**, Faherty LJ, Dick A, Scott TA, Dudley J, Stein BD. Association Among County-Level Economic Factors, Clinician Supply, Metropolitan or Rural Location, and Neonatal Abstinence Syndrome. *JAMA*. 2019 Jan 29;321(4):385-393.
39. Osmundson SS, Wiese AD, Min JY, Hawley RE, **Patrick SW**, Griffin MR, Grijalva CG. Delivery Type, Opioid Prescribing, and the Risk of Persistent Opioid Use after Delivery. *American Journal of Obstetrics & Gynecology*. 2019 Apr;220(4):405-407

40. **Patrick SW**, Frank RG, McNeer E, Stein BD. Improving the Child Welfare System to Respond to the Needs of Substance-Exposed Infants. *Hospital Pediatrics*. 2019 Aug;9(8):651-654.
41. Sanlorenzo LA, Cooper WO, Dudley JA, Stratton S, Maalouf FI, **Patrick SW**. Identifying Risk for Severe Neonatal Abstinence Syndrome Among Polysubstance Exposed Infants. *Hospital Pediatrics*. 2019 Aug;9(8):569-575.
42. Crook TW, Munn E, Scott TA, Morad A, Wyatt J, Johnson DP, White M, **Patrick SW**. Improving the Discharge Process for Opioid Exposed Neonates. *Hospital Pediatrics*. 2019 Aug;9(8):643-648.
43. Faherty LJ, Kranz AM, **Patrick SW**, Stein BD. State Policies to Reduce Substance Use in Pregnancy Were Increasingly Punitive from 2000 to 2015. *JAMA Network Open*. 2019 Nov 1;2(11):e1914078
44. Leech AA, Cooper WO, McNeer E, Scott TA, **Patrick SW**. Neonatal Abstinence Syndrome in the United States, 2009-2016. *In press, Health Affairs*.
45. Lopata SM, McNeer E, Dudley JA, Wester C, Cooper WO, Carlucci JG, Espinosa CM, Dupont W, **Patrick SW**. Hepatitis C Testing Among Perinatally Exposed Infants. *In press, Pediatrics*.
46. Goyal NK, Rohde JF, Short V, **Patrick SW**, Abatemarco D, Chung EK. Well Child Care Adherence After Intrauterine Opioid Exposure. *In Press, Pediatrics*.

REVIEWS

47. **Patrick S**, Donn SM. New Techniques in Neonatal Ventilation: Volume-targeted ventilation can be a powerful tool in preventing neonatal lung injury. *Advance for Respiratory Care and Sleep Medicine*. 2011; 20(3): 14.
48. **Patrick SW**, Schumacher RE, Davis MM. Methods of Mortality Risk Adjustment in the Neonatal Intensive Care Unit: A 20-Year Review. *Pediatrics*. 2013-03;131 Supplement 1:S68-74.
49. Krans EE, **Patrick SW**. Opioid Use Disorder in Pregnancy: Health Policy in the Midst of an Epidemic. *Obstetrics & Gynecology*. 2016 Jul;128(1):4-10.
50. Pryor JR, Maalouf, FI, Krans EE, Schumacher RE, Cooper WO, **Patrick SW**. The Opioid Epidemic and Neonatal Abstinence Syndrome in the US: A Review of the Continuum of Care. *Archives of Disease in Childhood: Fetal and Neonatal Edition*. 2017 Jan 10.
51. Thao V, Enns E, **Patrick SW**, Kozhimannil KB. Decision Science Can Help Policy Makers Identify and Evaluate Policies to Treat Opioid Use Disorder among Pregnant Women. *Women's Health Issues*. 2018 Jan; 28(7); 2-5.
52. Sanlorenzo, LA, Stark AR, **Patrick SW**. Neonatal Abstinence Syndrome: An Update. *Current Opinion in Pediatrics*. 2018 Jan 17, epub ahead of print.
53. Coyle MG, Brogly SB, Ahmed MS, **Patrick SW**, Jones HE. Neonatal Abstinence Syndrome. *Nature Reviews Disease Primers*. 2018 Nov 22;4(1):47.

EDITORIALS

54. **Patrick SW**, Davis MM. Reformulating the Federal Match as a Key to the Sustainability of Medicaid. *JAMA Pediatrics*. 2013-03-01;167:218-20.
55. **Patrick SW**, Cooper WO. Promise and Peril: Dissemination of Findings from Studies of Drugs Used in Pregnancy and Their Association with Congenital

- Anomalies. *Birth Defects Research Part A: Clinical and Molecular Teratology*. 2015 Aug;103(8):729-32. Epub 2015 Jul 8.
56. **Patrick SW**. The Triple Aim for Neonatal Abstinence Syndrome. *The Journal of Pediatrics*. 2015 Dec;167(6):1189-91. Epub 2015 Oct 9.
57. **Patrick SW**. A Comprehensive Approach to the Opioid Epidemic. *Obstetrics & Gynecology*. 2017 Jun 6.
58. **Patrick SW**, Cooper WO, Davis MM. Prescribing opioids and psychotropic drugs in pregnancy. *BMJ*. 2017 Aug 2;358.
59. **Patrick SW**. Improving Public Health Systems for Substance-Affected Pregnancies. *American Journal of Public Health*. 2018. 109(1), pp. 22–23.
60. **Patrick SW**, Davis CS, Stein BD. Opioid Litigation and Maternal-Child Health: Investing in the Future. *In press, JAMA Pediatrics*.

AMERICAN ACADEMY OF PEDIATRICS PUBLICATIONS

Committee on Substance Use and Prevention

61. Levy SJ, Williams JF, Committee on Substance Use and Prevention. Substance Use Screening, Brief Intervention, and Referral to Treatment: Clinical Report. *Pediatrics*. 2016 Jun 20.
62. Committee on Substance Use and Prevention. Substance Use Screening, Brief Intervention, and Referral to Treatment: Policy Statement. *Pediatrics*. 2016 Jun 20.
63. Smith VC, Wilson CR, Committee on Substance Use and Prevention. Families Affected by Parental Substance Use. *Pediatrics*. 2016 Aug;138(2). Epub 2016 Jul 18.
64. Committee on Substance Use and Prevention. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. *Pediatrics*. 2016 Aug 22.
65. Siqueira LM. Committee on Substance Use and Prevention. Nicotine and Tobacco as Substances of Abuse in Children and Adolescents. *Pediatrics*. 2017 Jan;139(1).
66. **Patrick SW**, Schiff DM, Committee on Substance Use and Prevention. A Public Health Response to Opioid Use in Pregnancy. *Pediatrics*. 2017 Mar;139(3). Epub 2017 Feb 20.
67. Ryan SA, Ammerman SD, Committee on Substance Use and Prevention. Counseling Parents and Teens About Marijuana Use in the Era of Legalization of Marijuana. *Pediatrics*. 2017 Mar;139(3).
68. Ryan SA, Ammerman SD, O'Connor ME, Committee on Substance Use and Prevention. Marijuana Use During Pregnancy and Breastfeeding: Implications for Neonatal and Childhood Outcomes. *Pediatrics*. 2018 Sep;142(3).
69. Turchi RM, Smith VC. Committee on Substance Use and Prevention. The Role of Integrated Care in a Medical Home for Patients With a Fetal Alcohol Spectrum Disorder. *Pediatrics*. 2018 Oct;142(4).
70. Quigley J, Committee on Substance Use and Prevention. Alcohol Use by Youth. *Pediatrics*. 2019 July;144(1). Epub 2019 Jun 24.
71. Ryan SA, Kokotailo P, Committee on Substance Use and Prevention. Alcohol Use by Youth. *Pediatrics*. 2019 July;144(1). Epub 2019 Jun 24.

OTHER PUBLICATIONS

72. Reddy UM, Davis JM, Ren Z, Greene MF; Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and **Childhood Outcomes Workshop Invited Speakers**. Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and Childhood Outcomes: Executive Summary of a Joint Workshop by the Eunice Kennedy Shriver National Institute of Child Health and Human Development, American College of Obstetricians and Gynecologists, American Academy of Pediatrics, Society for Maternal-Fetal Medicine, Centers for Disease Control and Prevention, and the March of Dimes Foundation. *Obstetrics & Gynecology*. 2017 Jun 7.

CASE REPORTS

73. **Patrick SW**, Kershaw DB, Attar MA. Multiple Organ Dysfunction Following Aspiration of Maternal Blood. *The Internet Journal of Pediatrics and Neonatology*. 2012 Volume 14 Number 1.

LETTERS

74. Terplan M, **Patrick S**, Jansson LM. Re: Neonatal Abstinence Syndrome and High School Performance. *Pediatrics*. 2017 Jun;139(6).
75. Schiff DA, **Patrick SW**. Treatment of Opioid Use Disorder During Pregnancy and Cases of Neonatal Abstinence Syndrome. *JAMA Pediatrics*. 2017 Jul 1;171(7):707.
76. Schiff DA, **Patrick SW**, Terplan M. Contribution of Opioid-Related Overdose Deaths on Maternal Mortality. *The New England Journal of Medicine*. 2018 Feb 8;378(6):587.

BOOK CHAPTERS

77. Aschner JL, **Patrick SW**, Stark AR, Lee SK. *Chapter 1. The Scope and Organization of Neonatology: North American and Global Comparisons*. Avery's Neonatology: Pathophysiology and Management of the Newborn, 7th Edition. MacDonald MG, Seshia MMK. 2016, Philadelphia, PA: Wolters Kluwer.
78. **Patrick SW**. *Chapter 12: Maternal Drug Use, Infant Exposure and Neonatal Abstinence Syndrome*. Manual of Neonatal Care, 8th Edition. Cloherty JP, et al. 2016, Philadelphia, PA: Lippincott, Williams & Wilkins.
79. Jansson LM, **Patrick SW**. (2018). Breastfeeding and the Substance-Exposed Dyad. In T.E. Wright (Ed.), *Opioid Use Disorders in Pregnancy: Management Guidelines for Improving Outcomes* (pp. 127-138). Cambridge, UK: Cambridge University Press.
80. Jansson LM, **Patrick SW**. *Chapter 7: Neonatal Abstinence Syndrome*. Current Advances in Neonatal Care, An Issue of Pediatric Clinics of North America, 1st Edition. Sood D, Brodsky D. 2019, Philadelphia, PA: Elsevier.

PUBLICATIONS UNDER REVIEW

81. Jazowski SA, **Patrick SW**, Dusetzina SB. Identifying Off-Label Pharmaceutical Company Promotion of Fentanyl for Cancer Pain Management. *Under Review*.

82. Winkelman TNA, Ford BR, Schlafer R, McWilliams A, Admon L, **Patrick SW**. Medicaid expansion and receipt of medication for opioid use disorder among pregnant women involved in the criminal justice system. *Under review*.
83. Faherty L, Kranz A, Russell-Fritch J, Ruder T, **Patrick SW**, Stein BD. Antenatal admissions among women with opioid-affected and non-opioid-affected deliveries. *Under Review*.
84. Hatch LD, Scott TA, Slaughter JC, Xu M, Smith AH, Stark A, **Patrick SW**, Ely W. “Outcomes, Resource Utilization, and Financial Costs of Unplanned Extubations in Preterm Infants.” *Under Review*.
85. Brown C, Williams DJ, Hall M, Freundlich K, Johnson DP, Lind C, Rehm K, Frost P, Doupnik SK, Ibrahim D, **Patrick SW**, Howard LM, Gay JC. “Trends in Length of Stay and Readmissions in Children’s Hospitals.” *Under review*.
86. Min JY, Osmundson SS, Griffin MR, Mitchel EM, Wiese AD, **Patrick SW**, Grijalva GG. “Variation in Discharge Opioid Prescribing After Vaginal Births in Tennessee Hospitals.” *Under review*.

NON PEER-REVIEWED PUBLICATIONS

Invited Articles

87. **Patrick S**. Translating Research Findings to the Press and Policy Makers. *Robert Wood Johnson Foundation Human Capital Grantee Network*. June 27, 2012.
88. **Patrick SW**. Responding to the Rise in Neonatal Abstinence Syndrome. *American Academy of Pediatrics, Section on Neonatal-Perinatal Medicine Newsletter*. August 2015: 9-10.

Blog

89. Moore JE, Bateman BT, **Patrick SW**. Opioid Crisis in Medicaid: Saving Mothers & Babies. *Health Affairs Blog*. May 1, 2018. Available at: <https://www.healthaffairs.org/doi/10.1377/hblog20180426.63403/full/>

Lay Press Editorials

90. **Patrick S**. The Tragedy of the Underinsured. *USA Today*. September 23, 2009.
91. **Patrick S**. Docs Are Not Props in Health Reform Debate. *Ann Arbor.com*. October 11, 2009.
92. **Patrick S**. Underinsured and Fighting for Life in a Broken System. *Daytona Beach News Journal*. March 21, 2010.
93. **Patrick S**. Healthcare Reform Law Benefits All Americans. *Ann Arbor.com*. March 28, 2010.
94. Congresswoman Clark K, **Patrick SW**. Congress should act on treatment for drug-dependent newborns. *The Boston Globe*. May 5, 2015.
95. Zickafoose J, **Patrick SW**. How the American Health Care Act would hurt children. *The Tennessean*. May 18, 2017
96. **Patrick SW**. Why the United States needs a national drug policy. *The Tennessean*. July 11, 2017.
97. **Patrick SW**. Opioid-dependent newborns in my West Virginia hometown point to a path out of drug crisis. *USA Today*. March 5, 2019.

Institutional and Government Reports

98. Schumacher RE, **Patrick SW**. *Quality Improvement Toolkit: Controversies in Caring for Infants and Families Impacted By Neonatal Abstinence Syndrome*. Burlington, VT: Vermont Oxford Network; 2015.
99. Substance Abuse and Mental Health Services Administration (SAMHSA). (2016b). *Advancing the care of women with opioid use disorder while pregnant or parenting: Clinical indications for developing a national guide*. Rockville, MD: SAMHSA. <https://www.regulations.gov/document?D=SAMHSA-2016-0002-0001>
100. Substance Abuse and Mental Health Services Administration (SAMHSA). (2018). *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants*. Rockville, MD: SAMHSA. <https://store.samhsa.gov/shin/content/SMA18-5054c/SMA18-5054.pdf>

SELECTED PRESENTATIONS

Intramural

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| 10/2011 | Patrick SW , Choi H, Davis MM. “The Effect of Federal Financing on Medicaid Enrollment for Children.” Peer reviewed, platform presentation. University of Michigan Pediatric Research Symposium. Ann Arbor, Michigan. |
| 10/2011 | Patrick SW , Davis MM, Schumacher RE. “Implications of Neonatal Abstinence Syndrome for Health Care Utilization and Expenditures.” Peer reviewed, poster presentation. University of Michigan Pediatric Research Symposium. Ann Arbor, Michigan. |
| 07/2012 | Patrick SW , Schumacher RE, Benneyworth BD, Krans EE, McAllister JM, Davis MM. “Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009.” Invited speaker, Grand Rounds, University of Michigan Department of Pediatrics and Communicable Diseases. Ann Arbor, Michigan. |
| 10/2012 | Patrick SW . “Policy to Practice: Health Services Research in Neonatology.” Invited speaker, Child Health Evaluation and Research Unit research seminar. University of Michigan. Ann Arbor, Michigan. |
| 10/2013 | Patrick SW . “Opiates and Infants: Understanding Neonatal Abstinence Syndrome.” Invited speaker, Pediatric Research Conference. Department of Pediatrics, Vanderbilt University, Nashville, Tennessee. |
| 11/2014 | Patrick SW . “Neonatal Abstinence Syndrome: Risk of Drug Withdrawal in Opioid-Exposed Infants.” Invited Speaker, 2014 Vanderbilt Translational Research Forum, Vanderbilt University, Nashville, Tennessee. |
| 2/2015 | Patrick SW . “The Prescription Opioid Epidemic and Neonatal |

- Abstinence Syndrome - A Public Health Approach.” Invited speaker, Grand Rounds, Department of Pediatrics, Vanderbilt University, Nashville, Tennessee.
- 5/2015 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker. Pediatric Educational Lecture Series, Monroe Carell Jr. Children’s Hospital at Vanderbilt, Nursing Education Department, Nashville, Tennessee.
- 9/2015 **Patrick SW.** “Neonatal Abstinence Syndrome: Informing Public Health Systems.” Invited speaker, Pediatric Research Conference. Department of Pediatrics, Vanderbilt University, Nashville, Tennessee.
- 11/2015 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker, 2015 Neonatal Medicine Annual Symposium: Advances and Controversies in Neonatal Medicine, Vanderbilt University, Nashville, Tennessee.
- 5/2016 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited speaker, joint conference of Obstetrics and Anesthesia at Vanderbilt University School of Medicine, Nashville, Tennessee.
- 3/2017 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker. 14th Annual Neonatal Care Update, Vanderbilt University School of Medicine, Franklin, Tennessee.
- 12/2017 **Patrick SW.** “The Effect of the Opioid Epidemic on Pregnant Women and Infants.” Invited speaker, Grand Rounds. Department of Health Policy, Vanderbilt University School of Medicine, Nashville, Tennessee.
- 12/2017 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, Biomedical Sciences Advisory Board Meeting, Vanderbilt University School of Medicine, Nashville, Tennessee.
- 2/2018 **Patrick SW.** “Improving Outcomes for Pregnant Women and Infants Impacted by the Opioid Epidemic.” Invited speaker, Vanderbilt University Department of Pediatrics Research Conference. Nashville, Tennessee.
- 6/2018 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited speaker Policy Panel, 27th Annual Joel G. Hardman Student-Invited Pharmacology Forum, Nashville, Tennessee
- 7/2018 **Patrick SW.** “Roundtable Discussion with First Lady of the United States and Assistant Secretary for Health, Department of Health and Human Services on Families Affected by the Opioid Epidemic.” Organizer and participant. Vanderbilt University Medical Center, Nashville. Tennessee.
- 8/2018 Jones CK, **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, Flexner Discovery

Lecture. Vanderbilt University Medical Center, Nashville, Tennessee.

Extramural
International

9/2016

Patrick SW. “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker and panelist. Applying Regulatory Science to Neonates: Second Annual Scientific Workshop. European Medicines Agency, London, England, United Kingdom.

National
Federal Government

8/2012

Patrick SW. “Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009.” Invited speaker, Leadership Meeting on Maternal Addiction, Opioid Exposed Infants and Neonatal Abstinence Syndrome, Office of National Drug Control Policy, The White House. Washington, D.C.

08/2013

Patrick SW. “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Office of National Drug Control Policy, Executive Office of the President, Washington, D.C.

09/2013

Spitznas C and **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited speaker, Association of State and Territorial Health Officials and Notational Governors Association Webinar, Washington, D.C.

09/2013

Patrick SW. “Prescription Drug Use and Neonatal Abstinence Syndrome” Invited speaker, Interagency Working Group on Prescription Drug Abuse, Office of National Drug Control Policy, Executive Office of the President, Washington, D.C.

04/2014

Patrick SW. “Neonatal Abstinence Syndrome.” Invited speaker, panelist. United States Senate Committee on Health, Education, Labor and Pensions Staff Prescription Drug Abuse Working Group. Washington, D.C.

12/2015

Patrick SW. “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, National Institutes of Health, Interagency Coordinating Committee on Fetal Alcohol Spectrum Disorders Executive Committee Meeting. Rockville, Maryland.

12/2015

Patrick SW. “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker, Centers for Disease Control and Prevention, Division of Reproductive Health Seminar. Atlanta, Georgia.

8/2016

Barfield W, Broussard CS, Yonkers KA, **Patrick SW.** “Primary Prevention and Public Health Strategies to Prevent Neonatal Abstinence Syndrome.” Invited speaker and panelist, Public Health Grand Rounds, Centers for Disease Control and Prevention,

Atlanta, Georgia.

<http://www.cdc.gov/cdcgrandrounds/archives/2016/august2016.htm>

- 8/2016 **Patrick SW.** “Public Health Grand Rounds, Beyond the Data.” Centers for Disease Control and Prevention, Atlanta, Georgia. <https://youtu.be/KoqZvpMJU-8>
- 11/2016 **Patrick SW.** “Making Health Care Better Series on Substance Use Disorders.” The White House, Washington, D.C. <https://youtu.be/oTY4DwhVwR4>
- 6/2017 **Patrick SW.** “The Triple Aim for Neonatal Abstinence Syndrome.” Institute for Medicaid Innovation. Opioid Epidemic: Crisis to Care in Medicaid. Russell Senate Office Building, Washington, D.C.
- 4/2018 **Patrick SW.** “The Story of Mothers and Infants: The Opioid Epidemic.” Society for Pediatric Research Congressional Briefing. Rayburn Office Building, Washington, D.C.
- 6/2018 **Patrick SW,** Jones HE. “Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants.” Invited speaker, Continuing Medical Education Course Sponsored by the Substance Abuse and Mental Health Administration in conjunction with the University of North Carolina. Chapel Hill, North Carolina.
- 7/2018 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, Administration for Children and Families (ACF) Early Childhood National Centers for Training and Technical Assistance, Understanding How the Opioid Crisis and Substance Use Disorders Impact Head Start Children, Families, and Staff: Creating a Path Forward. Washington, D.C.
- 8/2018 **Patrick SW,** Malanga, C. “Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants.” Invited speaker, Continuing Medical Education Course Sponsored by the Substance Abuse and Mental Health Administration in conjunction with the University of Pennsylvania. Philadelphia, Pennsylvania.
- 10/2018 **Patrick SW.** “Current Knowledge and Gaps in Care for Infants with NAS.” Keynote Speaker, US Department of Health and Human Services National Convening on Neonatal Abstinence Syndrome at Thomas Jefferson University. Philadelphia, Pennsylvania.
- 10/2018 **Patrick SW.** “Improving Outcomes for Families Affected by the Opioid Epidemic.” Speaker and panelist, Committee on Medication-Assisted Treatment for Opioid Use Disorder. National Academy of Medicine. Washington, D.C.
- 9/2019 **Patrick SW.** “Current State of the Opioid Crisis.” Plenary speaker, Human Services Programs And The Opioid Crisis: Annual Poverty Research and Policy Forum. Sponsored by the Office of Human

Services Policy, Assistant Secretary for Planning and Evaluation,
U.S. Department of Health and Human Services, Washington D.C.

Invited Presentations at National Meetings

- 6/2004 **Patrick SW.** “Covering the Uninsured.” Invited speaker. American Medical Association Annual Meeting. Atlanta, Georgia.
- 5/2014 **Patrick SW.** “Improving Care for Infants with Neonatal Abstinence Syndrome.” Invited speaker and panelist. Center for Evidence-based Policy, Medicaid Evidence-based Decisions Project (MED), Oregon Health and Science University, MED Governance Conference. Portland, Oregon.
- 10/2014 **Patrick SW** and Schumacher RE. “iNICQ NAS: Innovation in Action.” Moderator, panel discussion, Vermont Oxford Network Annual Quality Congress. Chicago, Illinois.
- 4/2015 **Patrick SW.** “Improving Care to Families Affected by NAS by Understanding Structures of Care, State and Federal Drug Control Policies.” Invited Presentation and Panel Discussion. Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. San Diego, California.
- 5/2015 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker and panelist. Center for Evidence-based Policy, Medicaid Evidence-based Decisions Project (MED), Oregon Health and Science University, MED Governance Conference. Nashville, Tennessee.
- 10/2015 **Patrick SW.** “The Evolving Epidemic.” Invited speaker, Vermont Oxford Network Annual Quality Congress. Chicago, Illinois.
- 10/2015 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker, Vermont Oxford Network Annual Quality Congress. Chicago, Illinois.
- 2/2016 **Patrick SW.** “Federal and State Efforts to Address Neonatal Abstinence Syndrome and Opioid Abuse.” Invited speaker and panelist. National Child Health Policy Conference, AcademyHealth. Washington, D.C.
- 4/2016 Campopiano M, Jones H, Coffa D, Terplan M, **Patrick SW**, Hayashi S, Perpich J. “Clinical Guidance for Treating Opioid-Dependent Pregnant and Parenting Women and Their Babies.” Invited speaker and panelist. American Society of Addiction Medicine Annual Conference. Baltimore, Maryland.
- 9/2016 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker and panelist. Academy of Neonatal Nursing, 1st Annual National Neonatal Nurses Conference. Nashville, Tennessee.
- 10/2016 **Patrick SW**, Whalen B, Marcellus L, Buus-Frank M. “Just Say Yes to Improvement! A Workshop Focused on Evidence-Based

- Practices to Improve Outcomes for Infants and Families Affected by Neonatal Abstinence Syndrome.” Invited speaker and panelist. National Association of Neonatal Nurses 32nd Annual Educational Conference. Palm Springs, California.
- 4/2017 **Patrick SW**, Campopiano M, Ford S, Schroeder M, Shepherd RA, Wexelblatt S. “Substance Use and the Mother-Baby Dyad: Risk Assessment, Risk Reduction, and Collaborative Care Models to Management.” Invited speaker and panelist. National Rx Drug Abuse and Heroin Summit. Atlanta, Georgia.
- 5/2017 **Patrick SW**, Holmes AV, Seashore C, Wexelblatt S, Grossman M, Wachman E. “Achieving the Triple Aim for Neonatal Abstinence Syndrome.” Invited speaker and panelist. Pediatric Academic Societies Annual Meeting. San Francisco, California.
- 6/2017 **Patrick SW**, Holmes AV, Seashore C, McAllister J, Grossman M. “Achieving the Triple Aim for Neonatal Abstinence Syndrome.” Invited speaker and panelist. Pediatric Hospital Medicine. Nashville, Tennessee.
- 9/2017 Holmes AV, **Patrick SW**. “Family-Centered Care for Neonatal Abstinence Syndrome.” Invited speaker and panelist. American Academy of Pediatrics National Conference and Expedition. Chicago, Illinois.
- 10/2017 **Patrick SW**, Marcellus L. “Hot Topics in Combatting the Growing Neonatal Abstinence Syndrome Epidemic.” Invited speaker, Vermont Oxford Network Annual Quality Congress. Chicago, Illinois.
- 3/2018 **Patrick SW**, Gonzalez L, Dreyzehner J. “Addressing the Opioid Crisis in Children and Families.” Invited speaker and panelist, American Academy Pediatrics Annual Leadership Forum. Schaumburg, Illinois.
- 5/2018 Campbell D, **Patrick SW**, Crowley M, Bada H. “NICU Follow-Up Club: Continuing Care Needs and Outcomes for Babies Affected by Neonatal Abstinence Syndrome.” Invited speaker and panelist, Pediatric Academics Society Annual Meeting. Toronto, Ontario, Canada.
- 9/2018 **Patrick SW**. “Improving Outcomes for Pregnant Women and Infants Impacted by the Opioid Epidemic.” Keynote presentation, Academy of Neonatal Nurses Annual Meeting. New Orleans, Louisiana.
- 3/2019 **Patrick SW**. “Improving Outcomes for Opioid-Exposed Infants.” Invited speaker, Association of Medical School Pediatric Department Chairs Annual Meeting. Savannah, Georgia.
- 3/2019 **Patrick SW**. “AAP Advocacy Lecture: Neonatal Abstinence Syndrome: New Insights into Epidemiology, Assessment, and Treatment.” Invited speaker, Society for Pediatric Anesthesiology—American Academy of Pediatrics Annual Meeting. Houston, Texas.

- 3/2019 **Patrick SW.** “Implementing Systems of Care for NAS.” Breakout session leader for 2 sessions, American Academy of Pediatrics 2019 Workshop on Neonatal-Perinatal Practice Strategies. Scottsdale, Arizona.
- 3/2019 **Patrick SW.** “Improving Outcomes for Opioid-Exposed Infants.” Invited speaker, American Academy of Pediatrics 2019 Workshop on Neonatal-Perinatal Practice Strategies. Scottsdale, Arizona.
- 4/2019 **Patrick SW,** Terplan M. “Improving Outcomes for Pregnant Women with Opioid Use Disorder and Their Infants.” Invited speaker, Rx Drug Abuse and Heroin Summit. Atlanta, Georgia.
- 10/2019 **Patrick SW.** “Newborns Exposed to Substances: Understanding Their Needs and Supporting Their Caregivers.” Invited plenary speaker, American Academy of Pediatrics National Conference and Exhibition. New Orleans, Louisiana.
- 10/2019 Holmes AV, **Patrick SW.** “Family-Centered Care for Neonatal Abstinence Syndrome.” Invited speaker and panelist, American Academy of Pediatrics National Conference and Expedition. New Orleans, Louisiana.
- 12/2019 **Patrick SW.** “Improving Outcomes for Pregnant Women and Infants Affected by the Opioid Crisis.” Invited speaker, Hot Topics in Neonatology. National Harbor, MD.

Abstracts, Platform Presentations at National Meetings

- 5/2010 **Patrick SW,** Freed GL. “Medicaid: A Program for Children? Trends From 1991-2005.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Vancouver, British Columbia.
- 5/2012 **Patrick SW,** Choi H, Davis MM. “The Effect of Federal Financing on Medicaid Enrollment for Children.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Boston, Massachusetts.
- 6/2012 **Patrick SW,** Davis, MM, Meddings JA, Hieber S, Lee GM, Stillwell TL, Chenoweth, CE, Espinosa C, Schumacher RE. “Accuracy of Hospital Administrative Data in Reporting Central-Line Associated Bloodstream Infections in Newborns.” Peer reviewed, platform presentation and panel discussion. AcademyHealth Annual Research Meeting. Orlando, Florida.
- 05/2014 **Patrick SW,** Dudley J, Cooper WO. “Higher Dose and Duration of Maternal Prescription Opioid Use Increases Risk of Neonatal Abstinence Syndrome.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Vancouver, British Columbia.
- 4/2015 **Patrick SW,** Davis MM, Lehmann CU, Cooper WO. “Increasing Incidence and Geographic Distribution of Neonatal Abstinence Syndrome: United States 2009-2012.” Peer reviewed, platform

- presentation. Pediatric Academic Societies Annual Meeting. San Diego, California.
- 4/2015 **Patrick SW**, Warner KE, Pordes E, Davis MM. “Increases in Cigarette Taxes Are Associated With Decreases in Infant Mortality.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. San Diego, California.
- 11/2015 **Patrick SW**, Fry CE, Jones TF, Buntin MB. “Prescription Drug Monitoring Programs and Opioid-Related Overdose Deaths.” Peer Reviewed, platform presentation. Robert Wood Johnson Foundation Clinical Scholars Program Annual Meeting. Seattle, Washington.
- 5/2016 **Patrick SW**, Bauer A, Warren MD, Jones TF, Wester C. “Prevalence of Hepatitis C Among Pregnant Women.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Baltimore, Maryland.
- 5/2016 **Patrick SW**, Scott T, Reese JJ. “Patent Ductus Arteriosus Surgical Ligations in the US, 2000 to 2012: Less Frequent, Higher Risk Infants.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Baltimore, Maryland.
- 5/2017 Maalouf FI, Cooper WO, Slaughter C, Dudley J, **Patrick SW**. “Outpatient Treatment of Neonatal Abstinence Syndrome Associated with Longer Treatment and Higher Rates of Healthcare Utilization”. Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. San Francisco, California.
- 6/2017 Maalouf FI, Cooper WO, Slaughter C, Dudley J, **Patrick SW**. “Outpatient Treatment of Neonatal Abstinence Syndrome Associated with Longer Treatment and Higher Rates of Healthcare Utilization”. Peer reviewed, platform presentation. Child Health Services Research Interest Group Meeting. AcademyHealth. New Orleans, Louisiana.
- 6/2017 Sanlorenzo LA, Cooper WO, Dudley JA, Stratton S, Maalouf FI, **Patrick SW**. “Identifying Risk of Severe Neonatal Abstinence Syndrome Among Poly-substance Exposed Infants.” Peer reviewed, platform presentation. AcademyHealth. New Orleans, Louisiana.
- 5/2018 **Patrick SW**, Faherty LJ, Dick A, Scott TA, Dudley J, Stein BD. “Economic Downturns Associated with Increases in Neonatal Abstinence Syndrome.” Peer reviewed, platform presentation, American Academy of Pediatrics Presidential Plenary. Pediatric Academic Societies Annual Meeting. Toronto, Ontario. Canada.
- 5/2018 **Patrick SW**, Slaughter C, Harrell F, Hartmann K, Martin P, Dudley J, Stratton S, Cooper WO. “Development and Validation of a Clinical Prediction Tool for Neonatal Abstinence Syndrome.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Toronto, Ontario. Canada.

- 4/2019 Goyal N, Rohde JF, Chung EK, Short V, **Patrick SW**. “Well Child Care Use After Intrauterine Opioid Exposure in the First 18 Months of Life.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Baltimore, Maryland.
- 4/2019 Brown C, Williams DJ, Hall M, Freundlich K, Johnson DP, Lind C, Rehm K, Frost P, Doupnik SK, Ibrahim D, **Patrick SW**, Sartori L, Howard L, Gay J. “Trends in Length of Stay and Readmissions in Children's Hospitals.” Peer reviewed, platform presentation. Pediatric Academic Societies Annual Meeting. Baltimore, Maryland.

Abstracts, Poster Presentations at National Meetings

- 5/2011 **Patrick SW**, Schumacher RE, Schachinger S, Davis MM. “Regional Variation in Lumbar Punctures for Early Onset Neonatal Sepsis.” Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Denver, Colorado.
- 10/2011 **Patrick SW**, Davis MM, Schumacher RE. “Implications of Neonatal Abstinence Syndrome for Health Care Utilization and Expenditures.” Peer reviewed, poster presentation. American Academy of Pediatrics National Conference and Exhibition. Boston, Massachusetts.
- 11/2011 **Patrick SW**, Davis MM, Schumacher RE. “Implications of Neonatal Abstinence Syndrome for Health Care Utilization and Expenditures.” Peer reviewed, poster presentation. Robert Wood Johnson Foundation Clinical Scholars Program National Meeting. Washington, D.C.
- 11/2011 **Patrick SW**, Choi H, Davis MM. “The Effect of Federal Financing on Medicaid Enrollment for Children.” Peer reviewed, poster presentation. Robert Wood Johnson Foundation Clinical Scholars Program National Meeting. Washington, D.C.
- 04/2012 **Patrick SW**, Davis, MM, Meddings JA, Hieber S, Lee GM, Stillwell TL, Chenoweth, CE, Espinosa C, Schumacher RE. “Lack of Accuracy of Hospital Administrative Data in Reporting Central-Line Associated Bloodstream Infections in Newborns.” Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Boston, Massachusetts.
- 04/2012 **Patrick SW**, Schumacher RE, Benneyworth BD, Krans EE, McAllister JM, Davis MM. “Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009.” Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Boston, Massachusetts.
- 05/2013 **Patrick SW**, Benneyworth BD, Schumacher RE, Davis MM. “Variation in Hospital Type in Treatment of Neonatal Abstinence Syndrome in the United States.” Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Washington, D.C.

- 05/2013 **Patrick SW**, Kaplan H, Passarella M, Davis MM, Lorch SA. "Variation in Treatment of Neonatal Abstinence Syndrome in US Children's Hospitals." Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Washington, D.C.
- 05/2013 **Patrick SW**, Tse A, Jin R, Gay C, Kassler W, Lee GM. "Trends in Pediatric Hospital Acquired Infections, 2007-2011." Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Washington, D.C.
- 10/2013 **Patrick SW**, Kaplan H, Passarella M, Davis MM, Lorch SA. "Variation in Treatment of Neonatal Abstinence Syndrome in US Children's Hospitals." Peer reviewed, poster presentation. Vermont Oxford Network Annual Meeting. Chicago, Illinois.
- 05/2014 **Patrick SW**, Burke J, Cooper WO. "Risk of Hospital Readmission Among New York Infants With Neonatal Abstinence Syndrome." Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Vancouver, British Columbia.
- 05/2014 Buus-Frank ME, Ferrelli K, Morrow K, Edwards E, **Patrick SW**, Schumacher RE, Horbar JD, Soll RF. "VON Day Quality Audit / Neonatal Abstinence Syndrome." Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Vancouver, British Columbia.
- 4/2015 **Patrick SW**, Dudley J, Martin PR, Harrell FE, Warren MD, Hartmann KE, Ely EW, Grijalva GC, Cooper WO. "Higher Dose and Duration of Maternal Prescription Opioid Use Increases Risk of Neonatal Abstinence Syndrome." Peer reviewed, poster presentation. Translational Science 2015. Washington, D.C.
- 4/2015 **Patrick SW**, Schumacher RE, Horbar J, Buus-Frank M, Edwards E, Morrow K, Ferrelli K, Soll R. "Improving Care for Infants with Neonatal Abstinence Syndrome: Results of a Large Multicenter Collaborative." Peer reviewed, poster symposium. Pediatric Academic Societies Annual Meeting. San Diego, California.
- 6/2015 **Patrick SW**, Fry CE, Jones TF, Buntin MB. "Prescription Drug Monitoring Programs and Opioid-Related Overdose Deaths." Peer reviewed, poster presentation. AcademyHealth Annual Research Meeting. Minneapolis, Minnesota.
- 5/2016 Charles MK, Cooper WO, Jansson LJ, Dudley J, Slaughter J, **Patrick SW**. Infant Sex and Risk of Neonatal Abstinence Syndrome. Peer reviewed, poster presentation. Pediatric Academic Societies Annual Meeting. Baltimore, Maryland.
- 5/2017 Hatch LD, Scott TA, Walsh WF, Blakely ML, **Patrick SW**. "National and Regional Trends in Gastrostomy and Fundoplication in Very Low Birth Weight Infants in the US: 2000-2012." Peer reviewed, poster symposium. Pediatric Academic Societies. San Francisco, California.
- 5/2017 Sanlorenzo LA, Cooper WO, Dudley JA, Stratton S, Maalouf FI, **Patrick SW**. "Identifying Risk of Severe Neonatal Abstinence Syndrome Among Poly-substance Exposed Infants." Peer

- reviewed, poster symposium. Pediatric Academic Societies. San Francisco, California.
- 5/2017 Maalouf FI, Cooper WO, Stratton S, Dudley J, Ko J, Mukherjee A, **Patrick SW**. “Validation and Development of Algorithms to Identify Neonatal Abstinence Syndrome in Public Health Systems.” Peer reviewed, poster symposium. Pediatric Academic Societies. San Francisco, California.
- 4/2019 Hatch LD, Scott TA, Slaughter J, Xu M, Smith A, Stark AR, **Patrick SW**, Ely EW. “Unplanned Extubations in Preterm Infants Prolong Mechanical Ventilation and Increase Hospital Costs.” Peer reviewed, poster symposium. Pediatric Academic Societies. Baltimore, Maryland.
- 4/2019 Lopata SM, Wester C, Cooper WO, Carlucci JG, Espinosa C, Dudley JA, McNeer E, **Patrick SW**. “Disparities in Testing of Hepatitis C Exposed Infants.” Peer reviewed, poster symposium. Pediatric Academic Societies. Baltimore, Maryland.

Academic Institutions

- 10/2012 **Patrick SW**. “Policy to Practice: Health Services Research in Neonatology.” Invited speaker, research seminar. Cincinnati Children’s Hospital Medical Center. Cincinnati, Ohio.
- 11/2012 **Patrick SW**. “Policy to Practice: Health Services Research in Neonatology.” Invited speaker, research seminar. Vanderbilt University (prior to faculty appointment). Nashville, Tennessee.
- 12/2012 **Patrick SW**. “Policy to Practice: Health Services Research in Neonatology.” Invited speaker, research seminar. University of Florida. Gainesville, Florida.
- 04/2013 **Patrick SW**. “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Grand Rounds. Beaumont Children’s Hospital. Royal Oak, Michigan.
- 03/2014 **Patrick SW**. “NAS: Epidemiology, Economics and Management.” Invited speaker, NeoFest 2014. Cincinnati Children’s Hospital Medical Center. Cincinnati, Ohio.
- 12/2015 **Patrick SW**. “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker. Dartmouth University Geisel School of Medicine, Department of Pediatrics, Grand Rounds. Hanover, New Hampshire.
- 12/2015 **Patrick SW**. “How to Have an Academic Career with Impact.” Invited speaker. Dartmouth University Geisel School of Medicine, Department of Pediatrics, Resident Noon Conference. Hanover, New Hampshire.
- 3/2016 **Patrick SW**. “Neonatal Abstinence Syndrome - A Public Health Approach.” Neonatal Grand Rounds Speaker, Tufts University. Boston, Massachusetts.

- 5/2016 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Marie McCormick Lectureship in Neonatal Health Services Research and Epidemiology, Harvard Medical School, Beth Israel Deaconess Medical Center, Department of Neonatology. Boston, Massachusetts.
- 5/2016 **Patrick SW.** “Improving Care for Neonatal Abstinence Syndrome.” Newborn Medicine Research Seminar Series, Boston Children’s Hospital, Division of Neonatology. Boston, Massachusetts.
- 5/2016 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, PedsPLACE. University of Arkansas for Medical Sciences. Little Rock, Arkansas.
- 10/2016 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker. Neonatal Abstinence Syndrome Workgroup, East Tennessee State University, Department of Pediatrics. Johnson City, Tennessee.
- 2/2017 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker. University of Michigan, Department of Pediatrics, Grand Rounds. Ann Arbor, Michigan.
- 4/2017 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, The Wanda L. Jones-Phillips Memorial Lecture, Neonatology 2017, Emory University Department of Pediatrics. Atlanta, Georgia.
- 4/2017 **Patrick SW.** “Long-Term Outcomes for Neonatal Abstinence Syndrome: What We Know and What We Don’t.” Invited speaker, Neonatology 2017, Emory University Department of Pediatrics. Atlanta, Georgia.
- 5/2017 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, Children’s National Medical Center Grand Rounds. Washington, D.C.
- 10/2017 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, The Children’s Hospital of Philadelphia Neonatology Research Seminar, The Children’s Hospital of Philadelphia. Philadelphia, Pennsylvania.
- 5/2017 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker, University of Louisville, Department of Pediatrics Grand Rounds. Louisville, Kentucky.
- 6/2018 **Patrick SW,** Warren M, Remley K, Bharel M. “Understanding & Responding to the Lifelong Effects of Opioid Exposure for Infants, Children & Families.” Invited speaker and panelist, Association of States and Territorial Officials in association with The Forum at the Harvard T.H. Chan School of Public Health. Boston, Massachusetts.
<https://theforum.sph.harvard.edu/state-health-leadership-understanding-responding-to-the-lifelong-effects-of-opioid-exposure-for-infants-children-families/>

- 4/2019 **Patrick SW.** “Improving Outcomes for Opioid-Exposed Infants.” Invited speaker, Infants' Aid Endowment Fund Lecture Northwestern University Feinberg School of Medicine, Department of Pediatrics. Chicago, Illinois.
- 5/2019 **Patrick SW.** “Optimizing Outcomes for Pregnant Women and Infants Affected by the Opioid Crisis.” Invited speaker, Richard A. Ehrenkranz Symposium: Nutrition, Neurodevelopment, and Outcomes. Yale University Department of Pediatrics. New Haven, Connecticut.
- 9/2019 **Patrick SW.** “The Opioid Crisis and Maternal Child Health: Research to Inform Policy and Practice.” Invited speaker, Children’s Hospital of Los Angeles/University of Southern California, Division of Neonatology Grand Rounds.
- 12/2019 **Patrick SW.** “The Science and Politics of Neonatal Abstinence Syndrome.” Invited speaker, John Hopkins Bloomberg School of Public Health.

State Quality Improvement Meetings

- 02/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Tennessee Initiative for Perinatal Quality Care Annual Meeting. Franklin, Tennessee.
- 01/2014 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker and panelist, Perinatal Quality Collaborative of North Carolina Annual Meeting. Durham, North Carolina.
- 12/2015 **Patrick SW.** “Improving the Care of NAS from the Bedside to Capitol Hill.” Invited speaker, Caring for Newborns Born to Women with Perinatal Opioid Exposure, Neonatal Abstinence Syndrome Project of the Neonatal Quality Improvement Collaborative of Massachusetts (NeoQIC) and the Northern New England Perinatal Quality Improvement Network (NNEPQIN) Fall Meeting. Westborough, Massachusetts.
- 12/2015 **Patrick SW,** Tilley P, Record K. “Advocating for Policy Change Locally, Regionally, and Statewide: What Each of Us Can Do.” Panelist. Caring for Newborns Born to Women with Perinatal Opioid Exposure, Neonatal Abstinence Syndrome Project of the Neonatal Quality Improvement Collaborative of Massachusetts (NeoQIC) and the Northern New England Perinatal Quality Improvement Network (NNEPQIN) Fall Meeting. Westborough, Massachusetts.
- 1/2016 **Patrick SW.** “Improving the Care of NAS from the Bedside to the Capitol.” Invited speaker, Perinatal Quality Collaborative of North Carolina. Raleigh, North Carolina.
- 3/2016 **Patrick SW.** “Improving the Care of NAS from the Bedside to the Capitol.” Invited speaker, Tennessee Initiative to Improve Perinatal Quality Care. Franklin, Tennessee.

- 3/2017 **Patrick SW.** “Targets to Reduce Morbidity.” Invited speaker and panelist, Tennessee Initiative to Improve Perinatal Quality Care. Franklin, Tennessee.
- 9/2017 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker. Oklahoma Perinatal Quality Improvement Collaborative Summit. Oklahoma City, Oklahoma.
- 3/2019 Borders A, **Patrick SW**, Devoe M, Young, J. “Opioid Exposed Newborns (OEN)/Opioid Use Disorder (OUD) Panel Discussion.” Invited panelist, Tennessee Initiative for Perinatal Quality Care Annual Meeting. Franklin, Tennessee.
- Webinars*
- 01/2013 **Patrick SW.** “Opiates and Infants: Neonatal Abstinence Syndrome, Epidemiology and Scope.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 05/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Presentation and Typical Course.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 05/2014 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited presentation, webinar. Association for Community Affiliated Plans. Washington, D.C.
- 2/2015 **Patrick SW.** “Neonatal Abstinence Syndrome: Continued Increase and Geographic Variation.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 6/2015 **Patrick SW.** “The National Landscape – Trends Toward Legalization of Marijuana.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 9/2016 **Patrick SW**, Write T, Mittal LP, Hersey ML. “The Emerging Crisis of Opioid Addiction – Implications for Home Visiting.” Invited speaker and panelist, U.S. Department of Health and Human Services, Health Resources and Services Administration, HV-Impact. Rockville, Maryland.
- 8/2017 **Patrick SW.** “Understanding Neonatal Abstinence Syndrome for the General Pediatrician.” Invited speaker, The American Academy of Pediatrics. Elk Grove Village, Illinois.
- 12/2017 Page K, **Patrick SW**, Sanders K, Schillie S. “Hepatitis C Virus Among Pregnant Women.” Invited speaker, National Viral Hepatitis Roundtable. Washington, D.C.
- 3/2019 Kasehagen K, **Patrick SW**, John C. “NAS Policy and Practice.” Invited speaker, OMNI Learning Community ASTHOconnects #3 webinar.
- 8/2019 **Patrick SW.** “Improving Outcomes for Families Affected by Opioids.” Invited speaker, Office of Head Start. National Webinars on Opioid Misuse and Substance Use Disorders.

State Government and Local Communities

- 8/2012 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited speaker, Iosco County Department of Human Services. Conference entitled, “Substance Abuse and Families.” Hale, Michigan.
- 11/2012 **Patrick SW.** “Opiates and Infants: Neonatal Abstinence Syndrome.” Invited speaker, 12th Annual Multidisciplinary Child Abuse Conference Prosecuting Attorney’s Association of Michigan. Bay City, Michigan.
- 04/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, 21st Annual Conference of the Southeastern Michigan Association of Neonatal Nurses. Frankenmuth, Michigan.
- 09/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Tennessee Public Health Association Annual Meeting. Franklin, Tennessee.
- 03/2014 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited Speaker, 2014 Early Intervention Conference, Building Best Practice: Partnering, Coaching, Leading. Tennessee Early Intervention Services. Murfreesboro, Tennessee.
- 11/2014 **Patrick SW.** “Neonatal Abstinence Syndrome: Current Issues in Tennessee and Beyond.” Invited speaker, Learning for Babies - A Conference to Benefit the March of Dimes. Franklin, Tennessee.
- 9/2015 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome - A Public Health Approach.” Invited Speaker, Tennessee Annual Pediatric Conference, Tennessee Chapter of the American Academy of Pediatrics. Franklin, Tennessee.
- 12/2015 **Patrick SW.** “Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker. New Hampshire Governor’s Task Force on Perinatal Substance Exposure. Concord, New Hampshire.
- 1/2016 **Patrick SW.** “Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker. Neonatal Abstinence Syndrome Community Collaborative. Nashville, Tennessee.
- 7/2016 **Patrick SW.** “Neonatal Abstinence Syndrome - A Public Health Approach.” Invited speaker. Tennessee Hospital Association Annual Meeting. Miramar Beach, Florida
- 2/2017 **Patrick SW.** “The Prescription Opioid Epidemic and Neonatal Abstinence Syndrome.” Keynote speaker. Orange County Drug Abuse Summit, Winnie Palmer Hospital for Women & Babies. Orlando, Florida.
- 11/2017 **Patrick SW.** “The Opioid Epidemic and Neonatal Abstinence Syndrome.” Invited speaker. Mid-Cumberland Council on Children and Youth. Franklin, Tennessee.