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Assistant Professor of Pediatrics and Health Policy, Division of Neonatology
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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-present 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

7/2013-present Assistant Professor of Pediatrics and Health Policy
 Division of Neonatology
 Center for Health Services Research
 Vanderbilt University
 Nashville, TN

GOVERNMENT SERVICE

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-present Advisor, Division of Family Health and Wellness, Tennessee
 Department of Health, Nashville, Tennessee

6/2015-present 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, Washington, D.C.

7/2015-present Advisory Board Member, Multi-State Plan Program Advisory
 Board, National Healthcare Operations, Healthcare & Insurance
 Division, U.S. Office of Personnel Management, Washington, D.C.

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*

Testimony

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.
[http://energycommerce.house.gov/hearing/examining-public-
health-legislation-hr-2820-hr-1344-and-hr-1462](http://energycommerce.house.gov/hearing/examining-public-health-legislation-hr-2820-hr-1344-and-hr-1462)

PROFESSIONAL ASSOCIATIONS

2003-present American Academy of Pediatrics, Section on Perinatal Pediatrics,
 Section on Young Physicians

2014-present AcademyHealth

2015-present Society for Pediatric Research

SCIENTIFIC REVIEWER FOR PEER-REVIEWED JOURNALS

2011-present Peer Reviewer, *Journal of Health Care for the Poor and
 Underserved*

2012-present	Peer Reviewer, <i>American Journal of Preventive Medicine</i>
2012-present	Peer Reviewer, <i>Pediatrics</i>
2013-present	Peer Reviewer, <i>American Journal of Public Health</i>
2013-present	Peer Reviewer, <i>The Journal of the American Medical Association</i>
2014-present	Peer Reviewer, <i>Maternal and Child Health Journal</i>
2014-present	Peer Reviewer, <i>Journal of Perinatology</i>
2014-present	Peer Reviewer, <i>Pediatric Drugs</i>
2015-present	Peer Reviewer, <i>American Journal of Perinatology</i>
2015-present	Peer Reviewer, <i>Academic Pediatrics</i>
2015-present	Peer Reviewer, <i>The Joint Commission Journal on Quality and Patient Safety</i>
2015-present	Peer Reviewer, <i>The Journal of Pediatrics</i>
2015-present	Peer Reviewer, <i>Child Maltreatment</i>
2015-present	Peer Reviewer, <i>The New England Journal of Medicine</i>

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
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ORGANIZING ROLES IN NATIONAL MEETINGS

4/2015	Pediatric Academic Societies Annual Meeting, San Diego, CA - Abstract Peer Reviewer, Neonatology Health Services Research and Epidemiology - 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”
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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 Abuse

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-present Member, Advocacy and Government Affairs Committee

SELECTED COMMUNITY SERVICE

1999-2002 Collegiates Helping As Mentors in Public Schools (CHAMPS), Gainesville, FL

2004 AMA-MSS National Service Project, Atlanta, GA

2004 Special Olympics, Tallahassee, FL

2009 Habitat For Humanity, Ann Arbor, MI

2009 Alpha House Shelter, Ann Arbor, MI

2009 Hope Clinic International, Esteli, Nicaragua

2014-present	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 <i>Year in Research</i> poll (Neonatal Abstinence Syndrome and Associated Healthcare Expenditures – United States, 2000-2009)
2013	National Finalist – White House Fellows Program
2013	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)

TEACHING ACTIVITIES

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

RESEARCH SUPERVISION

Research Mentor for Medical Students

2014-present M. Katherine Charles, MS4
Project title: Infant Sex and Risk of Neonatal Abstinence Syndrome

Research Mentor for Pediatric Fellows

2015-present Faouzi Issam Maalouf, MD
Project title: Efficacy of Outpatient Treatment and Management for Neonatal Abstinence Syndrome

GRANTS

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)

Current Research Support:

Source: National Institute on Drug Abuse, National Institutes of Health 1K23DA038720-01
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)

Pending:

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 (1/2016-12/2016)

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**, Kershaw DB, Attar MA. Multiple Organ Dysfunction Following Aspiration of Maternal Blood. *The Internet Journal of Pediatrics and Neonatology*. 2012 Volume 14 Number 1. DOI: 10.5580/2be9
4. **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.
5. **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. DOI: 10.1186/1471-2431-12-134
6. **Patrick SW**, Freed GL. Intergenerational Enrollment and Expenditure Changes in Medicaid: Trends from 1991 to 2005. *BMC Health Services Research*. 2012, 12:327. DOI: 10.1186/1472-6963-12-327.
7. **Patrick SW**, Davis MM. Reformulating the Federal Match as a Key to the Sustainability of Medicaid. *JAMA Pediatrics*. 2013-03-01;167:218-20.
8. **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.
9. **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.
10. 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. doi:10.1001/jamaoto.2013.1821.
11. 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.

12. 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. doi: 10.1111/acem.12236.
13. 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. doi: 10.1542/hpeds.2013-0048
14. Auger KA, **Patrick SW**, Davis MM. Infant Hospitalizations for Pertussis Before and After Tdap Recommendations For Adolescents. *Pediatrics*, 2013 Nov;132(5):e1149-55. doi: 10.1542/peds.2013-1747. Epub 2013 Oct 21.
15. **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. doi: 10.1038/jp.2014.114. Epub 2014 Jun 12.
16. **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. doi: 10.1542/peds.2014-0613. Epub 2014 Sep 8.
17. 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.
18. **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. doi: 10.1542/peds.2014-3299. Epub 2015 April 13.
19. 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. doi: 10.1056/NEJMsal500439. Epub 2015 Apr 26.
20. **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. doi: 10.1038/jp.2015.36. Epub 2015 Apr 30.
21. **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. doi: 10.1002/bdra.23409. Epub 2015 Jul 8.
22. **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. doi: 10.1542/hpeds.2015-0024.
23. **Patrick SW**. The Triple Aim for Neonatal Abstinence Syndrome. *The Journal of Pediatrics*. 2015 Dec;167(6):1189-91. doi: 10.1016/j.jpeds.2015.09.047. Epub 2015 Oct 9.
24. **Patrick SW**, Warner KE, Pordes E, Davis MM. Cigarette Tax Increase and Infant Mortality. *Pediatrics*. 2015 Dec 1. pii: peds.2015-2901. [Epub ahead of print]

25. **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: A Multicenter Prospective Quality Improvement Collaborative. *Provisional acceptance, Pediatrics*.

PUBLICATIONS UNDER REVIEW

26. **Patrick SW**, Fry CE, Jones TF, Buntin MB. Prescription Drug Monitoring Programs and Opioid-Related Overdose Deaths. *Under review*.

BOOK CHAPTERS

27. 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.
28. **Patrick SW**. *Chapter 12: Maternal Drug Use, Infant Exposure and Neonatal Abstinence Syndrome*. Manual of Neonatal Care, 8th Edition. Cloherty JP, et al. 2015, Philadelphia, PA: Lippincott, Williams & Wilkins.

NON PEER-REVIEWED PUBLICATIONS

Review Articles

29. **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.

Invited Articles

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

Editorials

32. **Patrick S**. The Tragedy of the Underinsured. *USA Today*. Op-Ed. September 23, 2009.
33. **Patrick S**. Docs Are Not Props in Health Reform Debate. Guest Column. *Ann Arbor.com*. October 11, 2009.
34. **Patrick S**. Underinsured and Fighting for Life in a Broken System. Op-Ed. *Daytona Beach News Journal*. March 21, 2010.
35. **Patrick S**. Healthcare Reform Law Benefits All Americans. Guest Column. *Ann Arbor.com*. March 28, 2010.
36. Clark K, **Patrick SW**. Congress should act on treatment for drug-dependent newborns. *The Boston Globe*. May 5, 2015.

Reports

37. 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.

SELECTED PRESENTATIONS

Intramural

- 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.
- 08/2012 **Patrick SW**. “Neonatal Abstinence Syndrome.” Speaker, Resident Education Neonatal Intensive Care Unit Curriculum. Vanderbilt University, Nashville, Tennessee.
- 10/2013 **Patrick SW**. “Opiates and Infants: Understanding Neonatal Abstinence Syndrome.” Invited speaker, Pediatric Research Conference. Department of Pediatrics, Vanderbilt University, Nashville, Tennessee.
- 12/2013 **Patrick SW**. “Understanding Risk of Withdrawal Among Opioid Exposed Infants.” Speaker, Works in Progress, Vanderbilt Center for Health Services Research, Institute for Medicine and Public Health, Vanderbilt University, Nashville, Tennessee.
- 7/2014 **Patrick SW**. “Opioid Prescribing in Pregnancy and Neonatal Drug Withdrawal.” Speaker, Works in progress, Department of Health Policy, 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.
- Extramural**
- 6/2004 **Patrick SW.** “Covering the Uninsured.” Invited speaker. American Medical Association Annual Meeting. Atlanta, GA
- 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.
- 5/2011 **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.
- 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.
- 8/2012 **Patrick, SW**. “Neonatal Abstinence Syndrome.” Invited speaker, Iosco County Department of Human Services. Conference entitled, “Substance Abuse and Families.” Hale, Michigan.
- 8/2012 **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, Leadership Meeting on Maternal Addiction, Opioid Exposed Infants and Neonatal Abstinence Syndrome, Office of National Drug Control Policy, The White House. Washington, D.C.
- 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. Nashville, Tennessee.
- 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.
- 12/2012 **Patrick SW**. “Policy to Practice: Health Services Research in Neonatology.” Invited speaker, research seminar. University of Florida. Gainesville, Florida.
- 01/2013 **Patrick SW**. “The Impact of Opiate Pain Relievers.” Invited speaker, Stockbridge High School. Stockbridge, Michigan.
- 01/2013 **Patrick SW**. “Opiates and Infants: Neonatal Abstinence Syndrome, Epidemiology and Scope.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.

- 02/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Tennessee Initiative for Perinatal Quality Care Annual Meeting. Franklin, Tennessee.
- 04/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Grand Rounds. Beaumont Children’s Hospital. Royal Oak, 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.
- 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.
- 05/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Presentation and Typical Course.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 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.
- 09/2013 **Patrick SW.** “Neonatal Abstinence Syndrome: Scope and Evolving Issues.” Invited speaker, Tennessee Public Health Association Annual Meeting, Franklin, Tennessee.
- 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.
- 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.
- 03/2014 **Patrick SW.** “NAS: Epidemiology, Economics and Management.” Invited Speaker, NeoFest 2014. Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio.
- 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.
- 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.
- 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 **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.
- 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.
- 05/2014 **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.
- 05/2014 **Patrick SW.** “Neonatal Abstinence Syndrome.” Invited presentation, webinar. Association for Community Affiliated Plans. Washington, D.C.
- 06/2014 **Patrick SW.** “Best of Neonatal Abstinence Syndrome at the Pediatric Academic Societies Annual Meeting.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 10/2014 **Patrick SW** and Schumacher RE. “iNICQ NAS: Innovation in Action.” Moderator, panel discussion, Vermont Oxford Network Annual Quality Congress. Chicago, Illinois.
- 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.

- 2/2015 **Patrick SW.** “Neonatal Abstinence Syndrome: Continued Increase and Geographic Variation.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 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,** 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.
- 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.
- 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 an Large Multicenter Collaborative” Peer Reviewed, Poster Symposium. 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.
- 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.
- 6/2015 **Patrick SW.** “The National Landscape – Trends Toward Legalization of Marijuana.” Invited speaker and panelist, Vermont Oxford Network Webinar. Burlington, Vermont.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.