

## Curriculum Vitae

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**Place and Date of Birth:** Bridgeport, CT  
February 23, 1982

### Education

2004	Sc.B.	Brown University	Neuroscience <i>with Honors</i>
2009	M.P.P.	Harvard University	JFK School of Government
2009	M.D.	Brown Medical School	

### Postdoctoral Training

2009-2010	Intern	Obstetrics/Gynecology	Brigham & Women's Hospital (BWH) and Massachusetts General Hospital (MGH)
2010-2013	Resident	Obstetrics/Gynecology	BWH / MGH

### Faculty Academic Appointments

2009-2013	Clinical Fellow	Obstetrics/Gynecology	Harvard Medical School (HMS)
2013-2013-	Assistant Professor Core Faculty	Obstetrics/Gynecology	HMS

2013-	Affiliated Faculty	Ariadne Labs / Health Policy and Management Health Law Policy	Harvard School of Public Health (HSPH) Petrie-Flom Center, Harvard Law School
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**Appointments at Hospitals/Affiliated Institutions**

2013-	Associate Physician	Obstetrics/Gynecology	Harvard Medical Faculty Physicians at BIDMC
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**Other Professional Positions**

2005	Summer Research Assistant		Harvard Interfaculty Program for Health Systems Improvement
2008-2009	Consultant		Health Information Security and Privacy Collaboration, US Department of Health and Human Services

**Major Administrative Leadership Positions**

**Local**

2005-2007	President, Medical Student Senate	Brown Medical School
2008-2009	Chair, Health Policy Professional Interest Council	Harvard University
2016-	Director, Delivery Decisions Initiative	Ariadne Labs

**National and International**

2010	Founder / Chairman of Board	Costs of Care, Inc.
2014	Co-Chair, 26 <sup>th</sup> Annual Forum on Quality Improvement in Healthcare	Institute for Healthcare Improvement
2014-2015	Co-Chair, Maternal Child Health Track, Annual Research Meeting	AcademyHealth
2015-2016	Chair, Innovative Payment and Delivery Systems Working Group	National Partnership for Women and Families
2017-	Founder / Vice President	March for Moms Association

**Committee Service Regional**

2011-2013	Medical Debt Task Force	MA Joint Committee on Public Health
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**National and International**

2012-2013	Physician Network on Costs	Robert Wood Johnson Foundation
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2013	Educating and Training Systems-Thinking Physicians Work Group	Association of American Medical Colleges (AAMC)
2015-2017	Advisory Board	Square Roots, Inc.
2016-2019	Leadership Council	Healthcare Financial Management Association
2018-2019	National Partnership to Eliminate Preventable Maternal Mortality	Centers for Disease Control and Prevention
2018-2019	Expert Advisor	Health Resources and Services Administration, Pregnancy Innovation Challenge
2019-2020	Committee Member	National Academies of Science, Engineering and Medicine, Birth Settings
2019-2022	Advisory Board	National Institutes of Health, Office of Women's Health Research
2019-2020	Advisory Board	Institute for Healthcare Improvement, Maternal Health Network
2019-2020	Advisory Board	Planned Parenthood Federation of America
2020-	Advisory Board	Maven Clinic
2020-	Advisory Board	Oula Health
2020-	Advisory Board	Diana Health

### Professional Societies

2009-	American Medical Association	Member
2009-	American Congress of Ob/Gyn	Member

### Editorial Activities

#### **Ad hoc Reviewer**

JAMA  
 Health Affairs  
 Obstetrics & Gynecology  
 American Journal of Obstetrics and Gynecology  
 British Journal of Obstetrics and Gynecology  
 Academic Medicine  
 PLOSOne  
 Birth: Issues in Perinatal Care  
 Healthcare: The Journal of Delivery Science and Innovation

#### **Other Editorial Roles**

2013-2017	Series Editor, "Teachable Moments"	<i>JAMA Internal Medicine</i>
2013-	Editorial Board	<i>Brown Medicine Magazine</i>
2017-	Editorial Board	<i>Birth: Issues in Perinatal Care</i>

### Honors and Prizes

2000-2004	National Merit Scholar	National Merit Scholarship Corporation	
2002-2004	Rose Writing and Rhetoric Fellow	Brown University	
2004-	Member	Sigma Xi Scientific Honorary Society	
2004	Department of Neuroscience Honors	Brown University	Based on high GPA and completion of honors thesis
2007-2009	Merit Scholarship	Harvard Kennedy School	
2007-2008	Petrie-Flom Student Fellowship	Harvard Law School	Based on selective Harvard-wide application
2008-2009	Elliot Stone Fellowship	Massachusetts Health Data Consortium	Based on selective state-wide application
2009	Jack and Edna Saphier Prize	Brown University	Based on most outstanding original contribution to the field of Ob/Gyn
2011	Blue Ribbon Abstract	American Congress of Obstetrics and Gynecology (ACOG)	
2012	Emerging Entrepreneurs in Medical Education	Association of American Medical Colleges	
2010, 2011, 2012, 2013	Outstanding Resident Teacher Award	HMS/BWH/MGH	Awarded four years consecutively for highest evaluations from 3rd-year HMS students in BWH/MGH clerkships
2013	President's Prize for Value-Based Healthcare Delivery	Partners Healthcare	

2013	Ten Outstanding Leaders	Greater Boston Chamber of Commerce	Nominated by BWH public affairs for healthcare cost advocacy
2014	Cudmore Visiting Lectureship	Dalhousie University	Invited leader in medical education
2014	“40 Smartest People in Healthcare”	Becker’s Hospital Review	Independent editorial staff selection
2015, 2016	“40 Healthcare Innovators Under 40”	MedTech Boston	Independent editorial staff selection
2015	National Visiting Scholar	Stanford Clinical Excellence Research Center	Invited leader in delivery system innovation
2016	William H. Pearse MD Lecturer	Association of Professors of Obstetrics and Gynecology	Invited leader in medical education
2016	Premiere Speaker	American College of Nurse-Midwives	Invited leader in childbirth
2017	D’Amico Lecturer	American College of Obstetricians and Gynecologists Annual Clinical Meeting	President’s Program Keynote
2017	Book of the Year – Maternal Child Health	American Journal of Nursing	Co-author, Freestanding Birth Centers: Innovation, Evidence, Outcomes
2018	14 Public Health All-Stars	Politico Magazine	Independent editorial staff selection
2018	Irvin M. Cushner Memorial Lecture	American College of Obstetricians and Gynecologists Annual Clinical Meeting	Debate –format colloquia against Baha Sibai
2019	Ken Noller Lecture	Society of Academic Specialists in General Obstetrics and Gynecology	Invited leader in academic Ob/Gyn
2019	Green Armytage Lecture and Opening Plenary	Royal College of Obstetrics and Gynecology World Congress	Invited leader in global women’s health
2019	Early Achievement Award	Brown Medical School Alumni Association	Graduate within last 15 years in recognition of impact
2020	Health Data for Action	Robert Wood Johnson Foundation	Competitive award to use private sector data to advance health care

## **Report of Funded and Unfunded Projects**

### **Funding Information**

#### **Past**

2011-2012	Teaching Value Project: Putting the Physician Charter into Practice American Board of Internal Medicine Foundation PI (\$20,000)
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The goal of this project was to develop online video modules that demonstrate core concepts of value-based clinical decision-making.

- 2012-2013     Assessing Knowledge and Attitudes of American Medical Students on Cost-Conscious Medical Care  
Medical Education Research Grant, Partners Graduate Medical Education Center of Expertise  
PI (\$3,000)  
The goal of this project was to develop and administer a survey to assess knowledge and attitudes of American medical students on cost-conscious medical care.
- 2012-2016     Teaching Value & Choosing Wisely® Challenge  
Teaching Stewardship, American Board of Internal Medicine Foundation  
Co-PI (\$150,000) - with Dr. Vineet Arora at University of Chicago and Dr. Christopher Moriates at University of California, San Francisco  
The goal of this project was to develop and administer a crowdsourcing mechanism to solicit implemented projects and bright ideas for curricula and practice innovations that encourage resource stewardship in clinical learning environments.
- 2014-2016     An Enterprise Decision-Support Tool for Mitigating the Risk of Cesarean Deliveries  
CRICO/Risk Management Foundation  
PI (\$200,000)  
The goal of the collaborative project with scientists at Harvard Business School and the Massachusetts Institute of Technology was to use dynamic scheduling to alleviate capacity constraints on labor and delivery units by optimizing allocation of staff, beds, and other critical resources.
- 2013-2016     The Impact of Modifiable System Factors on the Global Cesarean Epidemic  
SPARK Grant, Ariadne Labs for Health Systems Innovation  
PI (\$200,000)  
The goal of this project was to identify the degree of unexplained variation in facility level cesarean rates globally.
- 2014-2016     Choosing Wisely® Implementation  
American Board of Internal Medicine Foundation  
Co-PI (\$150,000) - with Dr. Vineet Arora at University of Chicago and Dr. Christopher Moriates at University of California, San Francisco  
The goal of this project was to develop online video modules that support implementation of Choosing Wisely® Campaign recommendations.
- 2015-2016     The Impact of Design on Clinical Care in Childbirth  
Robert Wood Johnson Foundation  
PI (\$250,0000)  
The goal of this project was to identify quantifiable design factors of American childbirth facilities that may influence outcomes and explore associations between these factors and outcomes.
- 2014-2017

- Understanding Management of Labor and Delivery Units  
 Rx Foundation  
 PI (\$750,000)  
 The goal of this three year project was to measure the independent effect of labor and delivery unit management on childbirth outcomes among 220,000 deliveries at fifty three hospitals.
- 2016-2019
- Helping Mothers Navigate Pregnancy Decisions  
 Square Roots  
 PI (\$250,000)  
 The goal of this project was to demonstrate the utility of optimally timed and framed messages to help patients use objective healthcare quality data in selecting hospitals.
- Current**
- 2016-2020 Using Change Management to Improve the Safety, Affordability and Experience of Childbirth  
 Peterson Center on Healthcare  
 PI (\$2,400,000)  
 The goal of this project is to design and test a scalable solution that safely decreases cesarean delivery rates in the United States.
- 2018-2020 Defining the Role of Nurses in Influencing Outcomes  
 Rx Foundation  
 PI (\$250,000)  
 The goal of this project is to design attribution methodology for analyzing practice pattern variation among nurses.
- 2019-2021 Making Safe, Supportive Empowering Childbirth Care the Norm in the United States  
 Yellow Chair Foundation  
 PI (\$700,000)  
 The goal of this project is to develop and drive a strategic public narrative on the opportunities to improve childbirth care in the United States.
- 2020-2023 Assessing the Impact of Nurses on Improving Outcomes  
 Rita and Alex Hillman Foundation  
 PI (\$600,000)  
 The goal of this project is to explore how data audit and feedback among nurses can be used to improve childbirth outcomes.
- 2019-2021 Gap-Analysis of Community-Based Organizations in Boston  
 Boston Foundation  
 Co-PI with Ana Langer, Professor, Harvard School of Public health (\$300,000)  
 The goal of this project is to assess how community-based organizations can address inequities in maternal health outcomes in Boston.
- 2019-2021 Safe Childbirth Cities  
 Merck for Mothers

PI (\$1,000,000)

The goal of this project is to develop a set of indicators to assess the performance of cities in addressing the needs of people in the period spanning pregnancy through parenting an infant.

### **Unfunded Projects**

- 2009-2011 Co-PI, Hysterectomy Costs and Outcomes. The goal of this project was to compare outcomes and costs of hysterectomy at BWH/MGH for abdominal, vaginal, laparoscopic, and robotic hysterectomies during a time of rapid increase in minimally invasive surgery.
- 2010-2012 Co-PI, Cost Analysis of Gestational Trophoblastic Neoplasia Treatment. The goal of this project was to conduct a rigorous cost-analysis of the three most common first-line treatment strategies used for gestational trophoblastic neoplasia in the United States.
- 2011-2012 Co-PI, Variation in Labor and Delivery Resource Utilization. The goal of this project was to measure unwarranted variation in labor and delivery resource utilization on the BWH labor floor and illustrate the use of hospital beds as a process metric for improving childbirth value.

## **Report of Local Teaching and Training**

### **Teaching of Students in Courses**

2002	Anthropology Seminar/Teaching Assistant Undergraduate students	Brown University 1 hr/wk, 10 wks
2003	Intro to Neuroscience/Teaching Assistant Undergraduate students	Brown University 1 hr/wk, 10 wks
2004	Writing & Rhetoric/Teaching Fellow Undergraduate and graduate students	Brown University 1 hr/wk, 10 wks
2005	Intro to Medicine/Teaching Assistant High school students	Brown University 10 hrs/wk, 4 wks
2012-2015	Health Policy Medical students	Brown University 1-hr lecture
2012-2016	HC 750: Intro to Health Policy Medical students	HMS 1-hr lecture
2014-	BIDMC Principle Clinical Experience: Value-Added Care	HMS 3-hr lecture
2017-	Essentials of the Profession, Health Policy	HMS 6 hrs/wk, 4 wks
2017-	DOCS Clinic	BIDMC 0.5 hr/wk, 12 mos/yr

### **Clinical Supervisory and Training Responsibilities**

2012-2013	Chief Resident, BWH/MGH Supervised medical students, interns, junior and senior residents on labor floor and gynecology ward services.	Approx. 80 hrs/wk, 6 mos/yr
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2013- Faculty Physician, BIDMC Approx. 12 hrs/wk, 12 mos/yr  
 Supervise medical students, interns, junior  
 and senior residents on labor floor and  
 gynecology ward services. Preceptor for  
 resident clinic.

## **Report of Local, Regional, National and International Invited Teaching and Presentations**

### **Invited Presentations and Courses**

Activities sponsored by outside entities are noted and the sponsors are identified.

#### **Local**

- 2010 A Primer on Social Media to Improve Women’s Health / Grand Rounds  
BWH OB/GYN, Boston, MA
- 2011 The Ethics of Considering Costs While Caring for Patients / Rounds  
BWH Center for Bioethics, Boston, MA
- 2011 How Can We Deflate Medical Bills? / invited talk  
BWH Center for Patients and Families, Boston, MA
- 2012 Teaching Systems-Based Practice in an Era of Cost-containment / invited talk  
Partners Healthcare GME Program Directors Workshop, Boston, MA
- 2013 House Staff Orientation, BIDMC, Boston, MA / invited lecture
- 2013 The Globalization of Healthcare / Panelist  
Harvard Law School Petrie-Flom Center, Cambridge, MA
- 2013 Opportunities to Improve Value in Pediatrics / Keynote  
Boston Combined Residency in Pediatrics Retreat, Boston, MA
- 2013 Opportunities to Improve Value in Graduate Medical Education / ?  
Partners Healthcare GME House Staff Retreat, Boston, MA
- 2013 System Complexity and the Cesarean Epidemic / Grand Rounds  
BIDMC Ob/Gyn, Boston, MA
- 2014 Navigating the Challenges of Considering Costs While Caring for Patients / Lecture  
Partners Healthcare Center of Expertise Health Policy, Boston, MA
- 2014 System Complexity and the Cesarean Epidemic / Grand Rounds
  - BWH Ob/Gyn, Boston, MA
  - MGH Ob/Gyn, Boston, MA
  - Ariadne Labs / HSPH, Boston, MA
- 2014 Health Care Financing / BWH Division of General Medicine Primary Care Residency Program
- 2015 System Complexity and the Cesarean Epidemic, Harvard Neonatology Lecture
- 2015 System Complexity and the Cesarean Epidemic, BIDMC General Medicine Grand Rounds
- 2016 Costs of Care, Harvard Urology Grand Rounds
- 2017 Innovation in Obstetrics, Harvard Neonatology Lecture
- 2017 Innovation in Obstetrics, BWH Ob/Gyn Grand Rounds
- 2018 Growing a Family with Dignity, BIDMC Ob/Gyn Grand Rounds
- 2019 Growing a Family with Dignity, MGH Ob/Gyn Grand Rounds
- 2019 Growing a Family with Dignity, Harvard Program in Global Surgery Lecture

## Regional

- 2008 Can We Resolve the Health Information Technology Privacy Conundrum? The Massachusetts Experience / invited talk  
Massachusetts Health Data Consortium Annual Meeting, Waltham, MA
- 2008 The Impact of Legal Challenges Posed by Health Information Technology on Medical Practice / invited talk  
Harvard Law School Health Law Policy Workshop, Cambridge, MA
- 2009 An Economic Perspective on Early Pregnancy Failure / invited talk  
MGH Ob/Gyn Resident Lecture, Boston, MA
- 2010 Confronting Healthcare Costs in Ob/Gyn / invited talk  
Massachusetts ACOG Annual Section Meeting, Waltham, MA
- 2013 The Challenge of Considering Costs While Caring For Patients / Grand Rounds  
Women & Infants Hospital, Providence, RI
- 2013 Practicing in an Era of Payment Reform / Seminar  
Fenway Health, Boston, MA
- 2013 Combining a Career in Ob/Gyn with Health Policy / ?  
ACOG Junior Fellows, Waltham, MA
- 2014 Improving Quality Measures in Childbirth /  
Massachusetts Perinatal Quality Collaborative, Waltham, MA
- 2015 Cesarean Pandemic, Northern New England Perinatal Quality Improvement Network,  
Lebanon, NH
- 2016 Costs of Care, New England Association of Gynecological Oncology, Brewster, MA
- 2016 Addressing Affordability at the Point of Service, New England Healthcare Financial  
Management Association, Mohegan Sun, CT
- 2017 Cesarean Pandemic, Partners in Perinatal Health, Norwood, MA
- 2017 Nursing Influence on Cesarean Rates, Association of Women's Health, Obstetric, and  
Neonatal Nurses, Falmouth, MA
- 2018 Nursing Impact on Quality of Care, Association of Women's Health, Obstetric, and  
Neonatal Nurses, Bretton Woods, NH
- 2019 Growing a Family with Dignity, Partners in Perinatal Health, Norwood, MA

## National

- 2011 Variation in the Use of Labor and Delivery Resources by Practice Structure / oral  
poster presentation – *Blue Ribbon Abstract*  
ACOG Annual Clinical Meeting, Washington, DC
- 2012 The Effect of a Paradigm Shift towards Minimally Invasive Surgery on Hospitalization  
Costs of Hysterectomy for Endometrial Cancer (National Plenary) / ?  
Society for Gynecologic Oncology Annual Meeting on Women's Cancer, Austin, TX
- 2012 Emerging Entrepreneurs in Medical Education / Exhibition  
Association of American Medical Colleges, San Francisco, CA
- 2012 "Can We Spend Less?" / Panel Discussion (sponsored by West Health Institute)  
mHealth Summit, Washington, D.C.
- 2013 High Value Care Workshop / Panel Discussion  
American College of Physicians, San Francisco, CA

- 2013 The Challenge of Considering Costs While Caring for Patients / invited talk  
 - National Physicians Alliance Annual Meeting, Washington, D.C.  
 - Shapiro Institute/AAMC Millennium Conference, Boston, MA  
 - Committee on Residents and Interns Convention, Boston, MA  
 - Robert Wood Johnson Foundation, Princeton, NJ  
 - American Academy of Physicians Assistants, Washington, D.C.
- 2013 Teaching Value-Added Care / ?  
 Association of American Medical Colleges Board of Directors, Washington, D.C.
- 2013 The Role of Obstetricians in Controlling the Costs of Care / ?  
 Society of Obstetrics and Gynecology Hospitalists Annual Clinical Meeting, Denver, CO
- 2013 Finding the Love Between Physicians and Financial Managers / ?  
 Strata Decision Technology Summit, Chicago, IL
- 2013 Teaching Value & Choosing Wisely ® Challenge / ?  
 - American Board of Internal Medicine Foundation, Philadelphia, PA  
 - Association of American Medical Colleges Annual Meeting, Philadelphia, PA
- 2013 Competencies for Choosing Wisely ® / ?  
 American Board of Internal Medicine Foundation, Philadelphia PA
- 2013 Faculty Development in Teaching Value-Added Care / ?  
 Drexel University School of Medicine, Philadelphia PA
- 2013 Health System Innovation in Obstetrics / ?  
 Johns Hopkins University School of Medicine – Center for Innovative Medicine Rounds,  
 Baltimore, MD
- 2013 The Role of Medical Education in Controlling Health Care Costs / ?  
 Grove Foundation Seminar, Palo Alto, CA
- 2013 Barriers to Transparency and How to Overcome Them / ?  
 National Summit on Healthcare Transparency, Robert Wood Johnson Foundation,  
 Washington, D.C.
- 2013 Physician Price and Quality Transparency / ?  
 National Summit on Healthcare Transparency, Robert Wood Johnson Foundation,  
 Washington, D.C.
- 2014 What is Your QI IQ? Teaching Cost-Conscious Care / ?  
 Committee of Interns and Residents Policy Education Initiative, New York, NY
- 2014 What are the Competencies of Resource Stewardship? / ?  
 American Board of Internal Medicine Winter Retreat, Scottsdale, AZ
- 2014 Involving Clinicians in Payment and Delivery System Reform / ?  
 Brookings Institution, Washington, D.C.
- 2014 Teaching Value-Added Care in Graduate Medical Education / ?  
 ACGME National Meeting, National Harbor, MD
- 2014 Teaching Value-Added Care in Obstetrics and Gynecology / ?  
 Association of Professors of Obstetrics and Gynecology, Atlanta, GA
- 2014 Enhancing Quality through Payment Reform / Princeton Conference  
 Council on Healthcare Economics and Policy, Princeton, NJ
- 2014 Graduate Medical Education Quality and Safety Day / Keynote  
 Banner Good Samaritan Health System, Phoenix, AZ
- 2014 High Value Care in Obstetrics and Gynecology / Grand Rounds  
 University of California, San Francisco
- 2014 Maine Health Management Association Annual Symposium / Keynote  
 Portland, ME

- 2014 The Future of Revenue Cycle Management / Panelist  
Healthcare Financial Management Association MAP Event, Las Vegas, NV
- 2014 Designing High Impact Improvement Projects / Keynote  
IHI 26<sup>th</sup> Annual National Forum, Orlando, FL
- 2015 Defining Healthcare Value in 2015/ Keynote  
MIT Redefining Value Conference, Cambridge, MA
- 2015 Physicians and Patients, New Models of Communication / Panelist  
Robert Wood Johnson Foundation Healthcare Transparency Summit, Washington, D.C.
- 2015 Fostering Clinical Engagement in Systems-Based Practice / Panelist  
Association of Professors of Ob/Gyn, San Antonio, TX
- 2015 Scholarship of Systems Improvement,  
Society of Specialists in General Obstetrics and Gynecology, San Francisco, CA
- 2015 Adding Treatment Intensity to the Quality Agenda,  
Council on Health Economics and Policy, Princeton, NJ
- 2015 The Challenge of Considering Costs while Caring for Patients / Keynote  
Committee on Interns and Residents, Washington, D.C.  
Healthcare Financial Management Association Annual Meeting / Featured Speaker  
Orlando, FL
- 2015 Costs of Care, Opening Keynote: ABIM Foundation Advancing Cost Conversations  
Meeting  
Philadelphia, PA
- 2015 Value-Based Care in Obstetrics, Keynote (William H. Pearse MD Lecture), Association of  
Professors of Obstetrics and Gynecology Annual Meeting  
New Orleans, LA
- 2016 System Complexity and the Cesarean Epidemic, Premiere Lecture, 61<sup>st</sup> Annual Meeting of  
the American College of Nurse Midwives  
Albuquerque, NM
- 2016 System Complexity and the Cesarean Epidemic, Keynote Address: Society for Obstetric  
Anesthesiology and Perinatology  
Boston, MA
- 2016 System Complexity and the Cesarean Epidemic, Grand Rounds, Emory University School  
of Medicine
- 2016 System Complexity and the Cesarean Epidemic, Grand Rounds, Columbia University –  
College of Physicians and Surgeons
- 2016 Value Based Care in Obstetrics, Keynote, Northern New England Perinatal Quality  
Improvement Network
- 2016 Costs of Care, Keynote, The Leapfrog Group Top Hospital Awards
- 2016 System Complexity and the Cesarean Epidemic, Visiting Professor/Grand Rounds,  
University of Hawaii
- 2016 System Complexity and the Cesarean Epidemic, Grand Rounds, University of South  
Florida
- 2017 System Complexity and the Cesarean Epidemic, Grand Rounds, Maine Medical Center
- 2017 Costs of Care, Panelist, South by Southwest, Austin, TX
- 2017 System Complexity and the Cesarean Epidemic, Grand Rounds, Vanderbilt University
- 2017 Growing a Family with Dignity, Keynote/Grand Rounds, Institute for Family Centered  
Childbirth, University of Rochester
- 2017 Growing a Family with Dignity, Keynote, Partners in Perinatal Health
- 2017 Supporting Every Mom, Everywhere, Featured Speaker, Every Mother Counts

- 2017 Public Policies to Support Mothers, Featured Speaker, March for Moms, Washington D.C.
- 2017 Value-Based Obstetrics, Keynote, New Jersey Healthcare Quality Institute
- 2017 Growing a Family with Dignity, Keynote (William H. Pearse Lecature), American College of Obstetricians & Gynecologists Annual Clinical Meeting, San Diego, CA
- 2017 System Complexity, Keynote, Washington State Hospital Association, Seattle, WA
- 2017 Growing a Family with Dignity, Keynote, Childbirth and Postpartum Professional Association Conference, Portland, MA
- 2017 Growing a Family with Dignity, Keynote, American Association of Birth Centers, Anchorage, AK
- 2017 Costs of Care, Grand Rounds, Transforming Healthcare Series – Yale School of Medicine
- 2017 Choosing Wisely, Panelist, Health Affairs: Choosing Wisely 5<sup>th</sup> Anniversary Event, Washington D.C.
- 2017 Growing a Family with Dignity, Grand Rounds, Dartmouth Medical School, Hanover, NH
- 2017 Implementing Improvement at Scale, Keynote, National Network of Perinatal Quality Collaboratives (Centers for Disease Control and Prevention), Atlanta, GA
- 2017 TeamBirth Project, Institute for Healthcare Improvement National Forum, Orlando, FL
- 2017 Growing a Family with Dignity, Grand Rounds, Albert Einstein Medical School/Montefiore Hospital, New York, NY
- 2017 Growing a Family with Dignity, Grand Rounds, University of Vermont, Burlington, VT
- 2018 Growing a Family with Dignity, Grand Rounds, Northwestern Feinberg School of Medicine, Chicago, IL
- 2018 Technology to Improve Price Transparency, Panelist, South by Southwest, Austin, TX
- 2018 Growing a Family with Dignity, 50<sup>th</sup> Matthew Weiss Symposium, Mercy Health System, St Louis, MO
- 2018 Growing a Family with Dignity, Andrew Fenton Lectureship, Northwell Health System, New York, NY
- 2018 Cesarean Epidemic, Florida Perinatal Quality Collaborative, Tampa, FL
- 2018 Cesareans Too High or Too Low? Featured Debate, American College of Obstetricians and Gynecologists, Austin, TX
- 2018 Growing a Family with Dignity, Keynote, American College of Nurse Midwives, Savannah, GA
- 2018 Growing a Family with Dignity, Grand Rounds, Stanford Medical School, Palo Alto, CA
- 2018 Growing a Family with Dignity, Grand Rounds + Visiting Prof, University of California, San Francisco, San Francisco, CA
- 2018 Growing a Family with Dignity, Keynote, American College of Nurse Midwives, Savannah, GA
- 2018 Growing a Family with Dignity, Keynote, DONA International, Ft Lauderdale, FL
- 2018 Nudging Health, Panelist, Health Law Policy, Yale Law School, New Haven, CT
- 2018 Growing a Family with Dignity, Keynote, Oklahoma Perinatal Quality Collaborative, Oklahoma City, OK
- 2018 Growing a Family with Dignity, Keynote, Washington State Obstetric Association, Seattle, WA
- 2018 Cesarean Epidemic, Keynote, Perinatal Quality Collaborative of North Carolina, Raleigh, NC
- 2019 Growing a Family with Dignity, Grand Rounds, University of North Carolina, Chapel Hill, Chapel Hill, NC
- 2019 Maternal Health and Racial Disparities, Speaker, North Carolina Medical Society, Raleigh, NC

- 2019 Growing a Family with Dignity, Grand Rounds, New York University, New York, NY
- 2019 Growing a Family with Dignity, Keynote, Tennessee Perinatal Quality Collaborative
- 2019 Growing a Family with Dignity, Grand Rounds, University of Chicago, Chicago, IL
- 2019 Maternal Mortality, Atlantic Magazine Pulse Festival, Panelists, Boston, MA
- 2019 Racism in Obstetrics, Potter Lecture, American College of Obstetricians and Gynecologists, Nashville, TN
- 2019 Growing a Family with Dignity, Noller Lecture/Keynote, Society of Academic Specialists in Obstetrics and Gynecology, Nashville, TN
- 2019 Growing a Family with Dignity, Angelini Lectureship, Brown University / Women & Infants Hospital, Providence, RI
- 2020 Birth Settings, Public Release, National Academies of Medicine Birth Settings Report, Washington, DC
- 2020 *Nursing Impact on Childbirth, Keynote Address, Association of Women's Health, Obstetric, and Neonatal Nursing National Convention [cancelled due to COVID19]*

**International**

- 2011 A Cost Analysis of First-Line Chemotherapy for Low-Risk Gestational Trophoblastic Neoplasia / Plenary  
World Congress on Gestational Trophoblastic Disease, Budapest, Hungary
- 2014 Integrating Value into Systems Based Practice  
Cudmore Memorial Visiting Lectureship, Dalhousie University, Nova Scotia, Canada
- 2014 Keynote Address on Leadership for Health System Improvement  
Quality Leadership Academy, Institute for Healthcare Improvement, Boston, MA
- 2015 Best Practices for Improving Healthcare Value, IHI International Summit on Community Practice, Dallas, TX

- 2016 Costs of Care, Institute for Healthcare Improvement Middle East Forum, Doha, Qatar
- 2016 Cesarean Epidemic, Women Deliver Conference, featured speaker, Copenhagen, Denmark
- 2016 Cesarean Epidemic, Keynote Address: International Conference on Normal Labour, Sydney, Australia
- 2016 Cesarean Epidemic, Keynote Address: DONA International, Seattle, WA
- 2017 Justice and Maternal Health, Keynote Address: Human Rights in Childbirth, Mumbai, India
- 2017 Value-Based Obstetrics, Keynote Address: BORN Ontario, Ontario, Canada
- 2017 Cesarean Pandemic, Keynote, Lamaze International, Washington, D.C.
- 2018 TeamBirth Project, Keynote, International Normal Labor and Birth Conference, Ann Arbor, MI
- 2018 Growing a Family with Dignity, Keynote, DONA International, Tampa, FL
- 2018 Global Maternal Health, Featured Speaker, FIGO, Rio de Janeiro, Brazil
- 2018 Cesarean Pandemic, Keynote, Royal Society of Dutch Midwives, Amsterdam, Netherlands
- 2019 Growing a Family with Dignity, Keynote, Annual International Medical Students Conference, Lisbon, Portugal
- 2019 Growing a Family with Dignity, Opening Plenary / Armytage Lecture, Royal College of Obstetricians Gynecologists World Congress, London, UK
- 2019 Cesarean Pandemic / Consumerism in Childbirth, Keynote, Central Association of Obstetricians and Gynecologists, Cancun, Mexico
- 2019 TeamBirth Project, Keynote, International Maternity Expo, London, UK
- 2020 *Growing a Family with Dignity, Keynote, International Confederation of Midwives Triennial Congress, Bali, Indonesia* [cancelled due to COVID19]
- 2020 COVID19: Magnifying the World's Inequities / Virtual Wilson Center, Washington, D.C.

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification**

- 2013- Massachusetts Medical License
- 2013- American Board of Obstetrics & Gynecology, eligible
- 2016- American Board of Obstetrics & Gynecology, certified (Fellow of the American College of Obstetricians & Gynecologists)

## Practice Activities

2013-	Faculty Physician	BIDMC Department of Obstetrics & Gynecology	Two sessions combined obstetrics and gynecology clinic per week, three 24 hour labor and delivery calls per month, one week as gynecology teaching attending per year
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## Report of Teaching and Education Innovations

2015	I am the senior author of the best-selling textbook <i>Understanding Value-Based Care</i> published by McGraw-Hill and now in its third printing. This book is used in medical school curricula across the country and also serves as a primer to health system leaders to advance safe and affordable care.
2017	I am the co-founder and Vice President of the March for Moms Association, a professionally-led non-profit coalition of more than forty leading organizations that advocate for greater investment in the wellbeing of American mothers by leading national maternal health week and rallies across the United States.

## Report of Technological and Other Scientific Innovations

2018-2020	I am currently leading a federally registered trial of a care process innovation called “Team Birth” that aims to improve safety and dignity in childbirth, involving hundreds of clinicians and tens of thousands of families across the United States.
2017	I led an RWJF-funded study of how variation in the design of childbirth facilities can help or hinder care that has led to a planned revision of the Facility Guidelines Institute standards for all healthcare facilities where babies are born in the United States.
2014-2017	I led a 53-hospital collaboration to measure the independent impact of hospital management on clinical performance in childbirth that resulted in a method of benchmarking management practices across the country and multiple publications, including in <i>Obstetrics &amp; Gynecology</i> .
2014-2017	I led a collaboration between the Massachusetts Institute of Technology, Beth Israel Deaconess Medical Center, and Harvard T.H. Chan School of Public Health to develop a computer “flight simulator” for labor and delivery units in order to measure the impact of busyness on patient safety and train clinicians to allocate resources more optimally. This resulted in multiple publications in engineering and clinical journals, including in <i>Obstetrics &amp; Gynecology</i> .



2015- I am leading a collaboration between Boston College School of Nursing, Beth Israel Deaconess Medical Center, and the Harvard T.H. Chan School of Public Health to demonstrate large, unexplained variation in cesarean rates by nurse.

## **Report of Education of Patients and Service to the Community**

### **Educational Material for Patients and the Lay Community**

#### **Books, monographs, articles and presentations in other media**

2010-	<a href="http://www.CostsOfCare.org">www.CostsOfCare.org</a>	Costs of Care, Inc.	Led development of nonprofit website with resources for patients and caregivers on opportunities to improve value of care delivery
2012-	<a href="http://www.TeachingValue.org">www.TeachingValue.org</a>	Costs Of Care, Inc.	Led development of web teaching tools for educators on value-based care
2017-	<a href="http://www.MarchforMoms.org">www.MarchforMoms.org</a>	March for Moms	Led a coalition of 40 organizations in maternal health to organize citizen rallies across the country timed with Mother's Day
2019-	<a href="http://www.ExpectingMore.com">www.ExpectingMore.com</a>	Ariadne Labs	Campaign to drive progress in the expectations of society from growing families

### **Recognition**

2010	“Teaching Physicians the Price of Care.”	<i>New York Times</i>
2010	“What Can You Do For Healthcare this Weekend? Fix it.”	<i>National Public Radio</i>
2010	“Fixing the Costs of Care.”	<i>Radio Boston (90.9 FM WBUR)</i>
2011	Profiled in article, “Priceless Passion”	<i>Modern Healthcare</i>
2011	WCVB “CityLine.”	<i>ABC Television</i>
	Feature segment on Costs of Care, Inc. Interview with Dr. Tim Johnson, Chief Medical Correspondent of ABC News.	
2011	“Price Lists Could Be a Radical Tool.”	<i>National Public Radio</i>

2011	“\$1000 Prize for Tales of Healthcare Costs – Or Savings.”	<i>Radio Boston (90.9 FM WBUR)</i>
2011	“Getting Doctors, Patients Thinking About Healthcare Costs.”	<i>Los Angeles Times</i>
2012	Profiled in, “Getting Doctors to Think About Costs”	<i>New York Times</i>
2012	“Hello, How Much Will My Healthcare Cost?”	<i>Radio Boston (90.9 FM WBUR)</i>
2012	“Your Doctor’s Mind – Should I worry about what it costs?”	<i>Boston Magazine</i>
2012	“Essay Winners Talk of Struggle to Give Care, Get Care with Costs in Mind.”	<i>Boston Globe</i>
2012	“If Hotels Billed Like Hospitals.”	<i>Washington Post</i>
2012	“Here’s Hoping You Never Get a Hotel Bill Like This One”.	<i>National Public Radio</i>
2012	Profiled in cover story, “The Cost of Healthcare is Sinking the System: Does this Young Doc Have the Paddle?”	<i>Brown Medicine Magazine</i>
2012	“Cents and Sensitivity: Teaching Physicians to Think About Costs.”	<i>New England Journal of Medicine</i>
2012	“Doctors urged to be More Mindful of Costs of Procedures they Order.”	<i>Chicago Tribune</i>
2012	“No Savings with Less Invasive Hysterectomy.” Online video interview	<i>Medpage Today</i>
2012	“Soliciting Stories about Costs of Care.” Online video with editor-at-large George Lundberg	<i>Medpage Today</i>
2012	“Doctor Bill Confusion? Here’s How to Heal Thyself.”	<i>Associated Press</i>
2013	Profiled in cover story, “Raising Cost Awareness Among Physicians”	<i>Leadership Magazine</i>
2013	“Make Cost Part of the Conversation with Patients”	<i>American Medical News</i>

2013	“Will Doctors Knowing the Price Really Cut Medical Costs?”	<i>American Medical News</i>
2013	“How Will the Affordable Care Act Impact Hospitals?”	<i>Consider This, Al Jazeera America Television</i>
2013	“Why Physicians and Financial Executives Need to Work Together”	<i>Becker’s Hospital Review</i>
2013	“Young Leaders Honored by Chamber”	<i>Boston Globe</i>
2014	“Strategies for Safer Hospital Medicine Also Cut Costs”	<i>Health Leaders Media</i>
2014	“Why Boston Area Hospitals have a Big Range in C-section Rates”	<i>National Public Radio (Morning Edition)</i>
2014	“Choosing the Best Hospital to Give Birth”	<i>Radio Boston (90.9 FM WBUR)</i>
2014	“The Top Ten Healthcare Buzzwords for 2014”	<i>Health Leaders Media</i>
2014	“40 of the Smartest People in Healthcare”	<i>Becker’s Hospital Review</i>
2014	“How to Prevent Medical Bill Sticker Shock”	<i>Radio Boston (90.9 FM WBUR)</i>
2014	“Guidelines, Online Training Aim to Teach Physicians to Weight the Costs of Care”	<i>JAMA</i>
2014	“Price Transparency in the Emergency Department: Rising Costs Put Pressure for Price Lists”	<i>Annals of Emergency Medicine</i>
2014	“An Unnecessary Cut”	<i>New Yorker Magazine</i>
2014	“Why Our Expectations of Childbirth are Changing”	<i>New York Times</i>
2014	“Robots to Learn from Nurses”	<i>Boston Herald</i>
2014	“The Rise of the Cesarean Delivery”	<i>Minnesota Public Radio</i>
2014	“Dr. Neel Shah – Costs of Care”	<i>WCSH6 / NBC Television (Maine)</i>
2015	“Sticker Shock: Secrets of Hospital Billing Revealed”	<i>KRQE13/ CBS Television (New Mexico)</i>
2015	“Preoperative Testing is Still Too Frequent”	<i>Medscape</i>
2015	“These Doctors Commit to Doing No Financial Harm”	<i>Southern California Public Radio (89.3 FM KPCC)</i>
2015	“Ten Things Hospitals Won’t Tell You”	<i>MarketWatch / Wall Street Journal</i>
2015	“Should More Women Give Birth Outside the Hospital?”	<i>National Public Radio/Morning Edition</i>
2015	“New Support for Home Births”	<i>Wall Street Journal</i>
2015	“Healthcare Year in Review”	<i>WBUR 90.9 FM</i>
2015	“How Doctors are Experimenting with Cutting Healthcare Costs”	<i>The Atlantic Magazine</i>
2016	“The Data Detective: One Doctor’s Quest to Fix C-Sections”	<i>CNN’s Great Big Story</i>
2016	“Huge Healthcare Price Differences Even within Same Area”	<i>USA Today</i>

2016	“Your biggest C-section Risk May Be Your Hospital”	<i>Consumer Reports</i>
2016	“Struggling Rural Hospitals Close Labor and Delivery Units”	<i>PBS News Hour</i>
2016	“For Doctors in Training, a Dose of Health Policy...”	<i>National Public Radio</i>
2016	“\$39.95 to Hold Your Baby After Birth?”	<i>Marketwatch</i>
2016	“A ‘National Embarrassment’: Maternal Mortality Rises in the U.S.”	<i>WBUR 90.9 FM</i>
2016	“New Tool Searches Health Prices by Doctor”	<i>USA Today</i>
2016	“Robot Helps Nurses Schedule Tasks on Labor Floor”	<i>CNN Money, CBS Television</i>
2017	“‘Choosing Wisely’ Praised for Changing Healthcare Culture”	<i>MedPage TOday</i>
2017	“The Push for Clinicians to Talk More about Costs”	<i>Modern Healthcare</i>
2017	“American Hospitals with Fewer Unnecessary C-sections Have One Thing in Common: Better Design”	<i>Quartz</i>
2017	“How a Hospital’s Design Can Affect Your Chance of Getting a C-section”	<i>Slate</i>
2017	“C-Section Stats Seem Not to Matter to Women when Choosing Where to Give Birth”	<i>STAT</i>
2017	“Women’s Health, Access to Care Focus of ACOG 2017”	<i>Medscape</i>
2017	“C-sections Are Still Too Common”	<i>Consumer Reports</i>
2017	“The Push for Clinicians to Talk More About Health Costs”	<i>Modern Healthcare</i>
2017	“Her doctor’s visit co-pay jumped from \$40 to \$114”	<i>New Orleans Times-Picayune</i>
2017	“Three Big Health Care Takeaways from SXSW”	<i>Hospitals and Health Networks</i>
2017	“Doctors’ Declaration of Independence”	<i>Forbes</i>
2017	“5 Signs Your Hospital May Give You a C-section”	<i>Readers Digest</i>
2017	“The next hospital reform? Stop focusing on beds”	<i>Becker’s Hospital Review</i>
2017	“The Unexpected Factor That Could Determine If You’ll Have a C-section”	<i>Huffington Post</i>
2017	“To Reduce C-sections, Change the Culture of the Labor Ward”	<i>Wall Street Journal</i>
2017	“New study links C-sections with hysterectomy complications”	<i>Good Morning America (ABC)</i>
2018	“14 Public Health All-Stars Offer Their Top Ideas”	<i>Politico</i>

2018	“A larger role for midwives could improve deficient US Care for Mothers and Babies”	<i>ProPublica</i>
2018	“Changing the System” (Cover Story)	<i>International Doula Magazine</i>
2018	“How Empowering Midwives Can Help Improve Care for Mothers”	<i>WBUR 90.9FM Boston</i>
2018	“Maternal Deaths Keep Rising in the U.S”	<i>The Hill</i>
2018	“Why C-Section Rates are Crazy High”	<i>Cosmopolitan Magazine</i>
2018	“Eroding Access of Maternal Healthcare in Rural America”	<i>CBS Sunday Morning</i>
2018	“Racial Inequities in Maternal Health”	<i>PBS NewsHour</i>
2018	“Dying to Deliver”	<i>ABC Nightline, The View, Good Morning America, World News</i>
2018	“Maternal Mortality, An American Crisis”	<i>CBS Sunday Morning with Jane Pauley</i>
2018	“Black Women, Massachusetts and Dangerous Deliveries”	<i>WCVB Chronicle</i>
2018	“Maternal Death Rates are a Key Indicator of the State of Female Health”	<i>Quartz</i>
2018	“US Women Today are 50% more Likely to Die Due to Pregnancy than Own Parents”	<i>Atlanta Journal Constitution</i>
2018	“How the Architecture of Hospitals Affects Health Outcomes”	<i>Harvard Business Review</i>
2018	“Twins Difficult Birth Put a Project Designed to Reduce C-sections to the Test”	<i>National Public Radio</i>
2018	“Why So Little is Done to Help New Mums Cope”	<i>The Economist</i>
2018	“The troubling epidemic of unnecessary c-sections around the world”	<i>Vox</i>
2018	“Atul Gawande named to head cost-cutting healthcare venture”	<i>Washington Post</i>
2019	“Promoting Safe, Dignified Childbirth Care Across the World”	<i>Harvard University News</i>
2019	“Study Finds Campaign to Educate Women on Hospital C-section Rates Does Not Change Choice of Hospital	<i>American Journal Managed Care</i>
2019	“Dying to Deliver” (part 2)	<i>ABC Nightline</i>
2019	“America is Failing its Black Mothers”	<i>Harvard Public Health Magazine</i>
2019	“American Women are Dying Giving Birth”	<i>WCVB-TV</i>
2019	“Black Mothers Face Higher Risk of Pregnancy-Related Death than White Mothers”	<i>Fortune Magazine</i>
2019	“Reducing Maternal Mortality”	<i>New York Times</i>

2019	“One Hospital’s Plan to Reduce C-sections: Communicate”	<i>New York Times</i>
2019	“What is a Doula?”	<i>New York Times Parenting</i>
2019	“Sweden Finds a Simple Way to Improve New Mothers Health. It Involves Fathers”	<i>New York Times UpShot</i>
2019	“US Pregnancy Deaths Are Up, Especially Among Minorities”	<i>Associated Press</i>
2019	“Women Today Are More Likely to Die than their Mothers in Childbirth”	<i>The Hill</i>
2019	“With More Women Dying in Childbirth There is More Focus on Hearts—and Marching for Moms”	<i>National Public Radio</i>
2019	“Female Lawmakers Launch 1 <sup>st</sup> Black Maternal Health Caucus”	<i>Good Morning America</i>
2019	“Can Racial Disparities in Maternal Deaths be Reduced”	<i>National Public Radio</i>
2019	“Black Mothers Face Higher Rate of Pregnancy-related Death than White Mothers”	<i>Fortune Magazine</i>
2020	“Mother’s Day #WithoutMom Campaign”	<i>CBS News</i>
2020	“Black Mothers Are Dying at Alarming Rates: Lauren Underwood Wants to Do Something About It”	<i>Elle Magazine</i>
2020	“What was going wrong with my pregnancy?”	<i>Wall Street Journal</i>
2020	“The U.S. Has a Maternal Mortality Rate Again. Here’s Why That Matters”	<i>U.S. News and World Report</i>
2020	“The extraordinary danger of being pregnant and uninsured in Texas”	<i>Vox</i>
2020	“A Midwife in the North Country”	<i>The New Yorker</i>
2020	“Harvard Medical School Professor Advances Healthcare Innovation”	<i>Health Leaders Magazine</i>
2020	“Harvard Ob/Gyn: In a fast-changing landscape, much to learn about COVID19 and pregnancy”	<i>NPR: Morning Edition</i>
2020	“New York State Will Allow Birthing Partners in Rooms Despite Coronavirus Concerns”	<i>WNYC</i>
2020	“A Chaotic Week for Pregnancy Women in NYC”	<i>The New Yorker</i>
2020	“Yang and Sanders Use Maternal Mortality to Talk About Race”	<i>Kaiser Health News</i>
2020	“President Trump Just Addressed the Concerns of Pregnant People”	<i>Motherly</i>

2020	“What Coronavirus Means for Pregnant People”	<i>ProPublica</i>
2020	“CDC Released a New Estimate of Maternal Mortality: It’s Still Terrible”	<i>Vox</i>
2020	“COVID-19 is Reshaping Hospital Architecture and Design”	<i>PBS NewsHour</i>
2020	“The Fourth Trimester and the Plight of New Mothers During the Pandemic”	<i>Boston Globe Magazine</i>

## **Report of Scholarship**

### **Peer Reviewed Research Investigations**

1. **Shah NT**, Yeung LC, Cooper LN, Cai Y, Shouval HZ. A Biophysical Basis for the Inter-spike Interaction of Spike-timing-dependent Plasticity. *Biological Cybernetics*. 2006 Aug 1;95(2):113-21.
2. **Shah NT**, Dizon D. New Generation Platinum Agents in Solid Tumors. *Future Oncology*. 2009 Feb;5(1):33-42.
3. Jonsdottir GM, Jorgensen S, Cohen SL, Wright KN, **Shah NT**, Chavan N, Einarsson JI. Increasing Minimally Invasive Hysterectomy: Effect on Cost and Complications. *Obstetrics and Gynecology*. 2011 May;117(5):1142-9.
4. **Shah NT**, Wright KN, Jonsdottir GM, Jorgensen S, Einarsson JI, Muto MG. The Feasibility of Societal Cost Equivalence between Robotic Hysterectomy and Alternate Hysterectomy Methods for Endometrial Cancer. *Obstetrics and Gynecology International*. 2011:570464.
5. **Shah NT**, Barroilhet L, Berkowitz RS, Goldstein DP, Horowitz N. A Cost Analysis of First-Line Chemotherapy for Low-Risk Gestational Trophoblastic Neoplasia. *Journal of Reproductive Medicine*. 2012;57(5-6):211-8.
6. Wright KN, Jonsdottir GM, Jorgensen S, **Shah NT**, Einarsson JI. Costs and outcomes of abdominal, vaginal, laparoscopic, and robotic hysterectomies. *Journal of the Society of Laparoendoscopic Surgeons*. 2012 Oct;16(4):519-24.
7. Clapp MA, Melamed A, Robinson JN, **Shah NT**, Little SE. Obstetrician Volume as a Potentially Modifiable Risk Factor for Cesarean Delivery. *Obstetrics & Gynecology*. 2014 Oct 1;124(4):697-703.
8. Molina G, Esquivel MM, Uribe-Leitz T, Lipsitz SR, Azad T, **Shah N**, Semrau K, Berry WR, Gawande AA, Weiser TG, Haynes AB. Avoidable maternal and neonatal deaths associated with improving access to caesarean delivery in countries with low caesarean delivery rates: an ecological modeling analysis. *The Lancet*. 2015 April 27;385:S33
9. \*Molina G, Weiser TG, Lipsitz SR, Esquivel MM, Uribe-Leitz T, Azad T, **Shah N**, Semrau K, Berry WR, Gawande AA, Haynes AB. Relationship Between Cesarean Delivery Rate and Maternal and Neonatal Mortality. *JAMA*. 2015 Dec 1;314(21):2263-70.
10. Kozhimannil K, Karaca-Mandic P, Blauer-Peterson C, **Shah N**, Snowden J. Uptake and Utilization of Practice Guidelines in Hospitals in the United States: the Case of Routine Episiotomy. *The Joint Commission Journal on Quality and Patient Safety*. 2017 Jan 1;43(1):41-8.
11. \*Warner AS, **Shah N**, Morse A, Lehmann EY, Maurer R, Moyer Z, Soleymani Lehmann L. Patient and Physician Attitudes Toward Low-Value Diagnostic Tests. *JAMA Intern Med*. 2016 Aug 1;176(8):1219-21.
12. O'Brien K, Shainker SA, Modest AM, Spiel MH, Resetskova N, **Shah NT**, Hacker MR. Cost Analysis of Following Up Incomplete Low-Risk Fetal Anatomy Ultrasounds. *Birth*. 2017 Mar; 44(1):35-40.
13. Vadnais MA, Hacker MR, **Shah NT**, Jordan JA, Modest AM, Siegel M, Golen TH. Quality Improvement Initiatives Lead to Reduction in Nulliparous Term Singleton Vertex Cesarean Delivery Rate. *The Joint Commission Journal on Quality and Patient Safety*. 2017 Feb 1;43(2):53-61.
14. Kumar R, Farnan JM, **Shah NT**, Levy A, Saathoff M, Arora VM. GOTMeDS?: Development and Evaluation of an Interactive Module for Trainees on Reducing Patient's Drug Costs. *The American Journal of Medicine*. 2016 Dec 1;129 (12):1338-1342.



15. \*Gombolay M, Golen T, **Shah N**, Shah J. Queueing theoretic analysis of labor and delivery: Understanding management styles and C-section rates. *Health Care Manag Sci*. 2019 Mar 15;22(1):16-33.
16. Gupta R, **Shah NT**, Moriates C, Wallingford S, Arora VM. Disseminating Innovations in Teaching Value-Based Care Through an Online Learning Network. *J Grad Med Educ*. 2017 Aug;9(4):509-13.
17. \*Lindquist SAI, **Shah N**, Overgaard C, Torp-Pedersen C, Glavind K, Larsen T, Plough A, Galvin G, Knudsen A. Association of Previous Cesarean Delivery with Surgical Complications After a Hysterectomy Later in Life. *JAMA Surg*. 2017 Dec 1;152(12):1148-55.
18. \*Wakeham E, \*Molina G, **Shah N**, Lipsitz SR, Chang DC, Gawande AA, Haynes AB. Variation in the cost of 5 common operations in the United States. *Surgery*. 2017 Sep 1;162(3):592-604.
19. \*Plough AC, Galvin G, Li Z, Aldina S, Henrich NJ, Hirschhorn LR, Berry WR, Gawande AA, Peter D, McDonald R, Caldwell DL, Muri JH, Caughey AB, Declercq ER, **Shah NT**. Relationship Between Labor and Delivery Management Practices and Maternal Outcomes. *Obstet Gynecol*. 2017 Aug 1;130(2):358-65.
20. \*Gourevitch RA, Mehrotra A, \*Galvin G, Karp M, \*Plough A, **Shah NT**. How do pregnant women use quality measures when choosing their obstetric provider?. *Birth* 2017 Jun;44(2):120-7..
21. Edmonds JK, O'Hara M, Clarke SP, **Shah NT**. Variation in Cesarean Birth Rates by Labor and Delivery Nurses. *J Obstet Gynecol Neonatal Nurs*. 2017 Jul 1;46(4):486-93.
22. \*Molina RL, \*Gombolay M, \*Jonas J, Modest AM, Shah J, Golen T, **Shah NT**. Association between labor and delivery census and delays in patient management: Findings from a simulation game. *Obstetrics and Gynecology* 2018 Mar 1;131(3):545-52.
23. \*Plough A, Henrich N, \*Galvin G, **Shah NT**. Common Challenges Managing Staff and Bed Availability on Labor and Delivery Units in the United States: A Qualitative Analysis. *Birth*. 2018 Sep;45(3):303-10.
24. Edmonds JK, Miley K, Angelini K, **Shah NT**. Decision-Making About Hospital Arrival Among Low-Risk Nulliparous Women After Spontaneous Labor at Home. *J Midwifery Womens Health*. 2018 Jul;63(4):455-61..
25. Chee M, Zhang JX, Ngooi S, Moriates C, **Shah N**, Arora VM. Generic Substitution Rates of Oral Contraceptives and Associated Out-of-Pocket Cost Savings. *JAMA Int Med*. 2018 Apr 1;178(4):561-3.
26. Kozhimannil KB, Graves AJ, Ecklund AM, **Shah NT**, Aggarwal R, Snowden JM. Cesarean Delivery Rates and Costs of Childbirth in a State Medicaid Program After Implementation of a Blended Payment Policy. *Med Care*. 2018 Aug 1;56(8):658-64.
27. \*Gourevitch RA, Mehrotra A, \*Galvin G, Karp M, \*Plough A, **Shah NT**. Does Comparing Cesarean Rates Influence Women's Choice of Obstetric Hospital?—an Randomized Control Trial. *Am J Manag Care*. 2019 Feb 1;25(2):e33.
28. \*Plough A, Rosenberg D, \*Galvin G, Shao A, Sullivan B, Henrich N, **Shah NT**. Assessing the Feasibility of Measuring Variation in Facility Design Among American Childbirth Facilities. *HERD* 2019 Apr;12(2):30-43.
29. \*Plough A, Rosenberg D, \*Galvin G, Shao A, Sullivan B, Henrich N, **Shah NT**. An Exploratory Study of the Relationship Between Facility Design and Provision of Childbirth Care. *J Midwifery Womens Health* 2019 Jan;64(1):12-7.
30. Chee M, Lenti G, Farnan J, Cook M, Weissman A, Wallingford S, Moriates C, **Shah NT**, Lynch S, Stebbins M, Ngooi S, Norenberg A, Millard S, Samarth A, Zhang JX, Meltzer DO, Tracy C, Arora VM. Development and testing of a module to promote generic oral contraceptive prescribing among nurse practitioners. *J Am Assoc Nurse Pract*. 2020 Jan;32(1):24-34.
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- Frost M, Arora VM. Development and testing of a web module to IMPROVE generic prescribing of oral contraceptives among primary care physicians. *J Clin Pharm Ther.* 2019 Aug;44(4):579-587.
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  33. Uribe-Leitz T, Barrero-Castillero A, Cervantes-Trejo A, Santos JM, de la Rosa-Rabago A, Lipsitz SR, Basavilvazo-Rodriguez MA, **Shah NT**, Molina RL. Trends of caesarean delivery from 2008 to 2017, Mexico. *Bull World Health Organ.* 2019 Jul 1;97(7):502-512.
  34. \*Gourevitch RA, Mehrotra A, \*Galvin G, \*Plough C, **Shah, NT**. Does Comparing Cesarean Delivery Rates Influence Women’s Choice of Obstetric Hospital? *Am J Managed Care.* 2019 Feb 1;25(2):e33.
  35. \*Donato KE, \*Plough A, Cohen J, McConnel M, Cutler DM, **Shah NT**. The Busyness Effect—The Impact of Simultaneously Laboring Women on Risks in Childbirth. (under review)

### Other Peer Reviewed Publications

1. **Shah NT**. A Role for Physicians: An Observation on Costs. *American Journal of Preventive Medicine.* 2013 Jan;44 (1-1):S19-S21.
2. **Shah NT**. Physicians’ role in protecting patients’ financial well-being. *AMA Journal of Ethics.* 2013 Feb 1;15(2):162-6.
3. Moriates C, **Shah NT**, Levy A, Lin M, Fogerty R, Arora V. The Teaching Value Workshop. *MedEdPORTAL.* 2014 Jul 28;10.
4. Levy A, **Shah NT**, Moriates C, Arora V. Fostering Value in Clinical Practice Among Future Physicians: Time to Consider COST. *Academic Medicine.* 2014 Nov 1;89(11):1440.
5. **Shah NT**, Levy A, Moriates C, Arora V. Wisdom of the Crowd: Bright Ideas and Innovations from the Teaching Value and Choosing Wisely Competition.” *Academic Medicine.* 2015 May 1;90(5):624-8.
6. Moriates C, **Shah NT**, Arora V. First, Do No (Financial) Harm. *JAMA.* 2013 Aug 14;310(6):577-8.
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9. **Shah NT**. A NICE Delivery? The Cross Atlantic Divide over Treatment Intensity in Childbirth. *NEJM.* 2015;372(23):2181-3.
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11. Arora V, Moriates C, **Shah N**. The Challenge of Understanding Health Care Costs and Charges. *AMA J Ethics.* 2015;17(11):1046-52.
12. Shaw D, Guise JM, **Shah NT**, Gemzell-Danielsson K, Joseph KS, Levy B, Wong F, Woodd S, Main EK. Drivers of Maternity Care in High Income Countries: Can Health Systems Support Women-Centred Care? *The Lancet.* 2016 Nov 5;388(10057):2282-95.
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14. **Shah, NT**. Look, then Leap: Quality and Improving Maternity Care. *BJOG.* 2018 Jun;125(7):866.
15. Nijigal M, **Shah NT**, Levin-Sherz J. Both Patients and Maternity Care Providers Can Benefit from Payment Reform: Four Steps to Prepare. *AJOG.* 2018 Apr 1;218(4):411-e1.
16. **Shah, NT**. Eroding Access and Quality of Childbirth Care in the Rural US Counties. *JAMA.* 2018 Mar 27;319(12):1203-4.

17. A Avery MD, Bell AD, Bingham D, Corry MP, Delbanco SF, Gullo SL, Ivory CH, Jennings JC, Kennedy HP, Kozhimannil KB, Leeman L, Lothian JA, Miller HD, Ogburn T, Romano A, Sakala C, **Shah NT**. Blueprint for Advancing High-Value Maternity Care Through Physiologic Childbearing. *J Perinat Educ*. 2018 Jun 1;27(3):130-4.
18. Sudhoff L and **Shah NT**. In Pursuit of Value-Based Maternity Care. *Obstet Gynecol*. 2019 Mar 1;133(3):541-51.
19. Scrimshaw SC, **Shah NT**, et al. *Birth Settings in America: Outcomes, Quality, Access, and Choice*. Washington (DC): National Academies Press (US); 2020 Feb 6..
20. Gourevitch R\*, Peahl AF, McConnell M, **Shah NT**. Understanding the Impact of Prenatal Care: Improving Metrics, Data and Evaluation. *Health Affairs Blog*. 2020 Feb 26.
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**[Non-peer reviewed scientific or medical publications/materials in print or other media](#)**

## Articles, and Presentations in Other Media

1. **Shah NT.** “Mandates are Sensible Medicine.” *Harvard Kennedy School Review*, VIII (2008).
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4. **Shah NT.** “Assuming Responsibility for Patient’s Pockets: the Doctor’s Role in Health Care Spending.” *Brown Medicine Magazine* (2010).
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20. Moriates C, Arora VA, **Shah NT.** *Understanding Value-Based Healthcare.* McGraw-Hill (2015).
21. Cohen IG et al. *Health Nudges: Health Law and Behavioral Economics.* Johns Hopkins University Press (2016). [chapter author]
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2. **Shah NT**, Golen T. The High Cost of Childbirth in the U.S. *New York Times*. July 8, 2013.
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3. \*Warner S, Lehmann L, Morse AN, **Shah, NT**. “Choosing Wisely: Do Physicians and Patients Agree on What Constitutes High Value Care?” Society for General Internal Medicine, 2014 [poster].
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7. Souter V, Painter I, Sitcov K, **Shah NT**. Changing trends in the management of spontaneous labour among nulliparous American women. *BJOG*. 2019 Jun 1;126:133-133.
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9. Gourevitch RA, Plough A, Donato K, **Shah NT**. Who Is Harmed When Labor Floors Are Busy? A Racial Disparities Analysis. *Obstetrics & Gynecology*. 2019 May 1;133:220S.
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11. Frost J, Declercq E, McCloskey L, Clark J, **Shah NT**, Marcelle E. How do publicly-insured women of color make the decision to utilize midwifery-led freestanding birth centers and what are their experiences with them? Findings from an embedded-unit case study. APHA's 2019 Annual Meeting and Expo, 2019.

## Narrative Report

As an obstetrician/gynecologist I am privileged to care for women at critical life moments, ranging from childbirth to menopause, and from wellness to serious illness. My patients ground and inspire my efforts to improve care by designing and testing solutions to widespread system failures. I devote 20% of my time to clinical care at Beth Israel Deaconess Medical Center, while my remaining effort is

allocated 60% to scientific investigation and 20% to advocacy, including education of colleagues and the broader public.

As a **clinical innovator**, I am Director of the Delivery Decisions Initiative, a core program of Ariadne Labs, a joint center for Health Systems Innovation at Brigham & Women's Hospital and the Harvard T.H. Chan School of Public Health that envisions a world in which every person can choose to grow their family with dignity. In this role, I am currently leading a federally registered prospective trial of TeamBirth, a care innovation that is designed to improve safety in childbirth by enhancing team communication, among hundreds of clinicians and tens of thousands of birthing families on both coasts and the heartland of the United States. Our research team has made novel contributions to the understanding of how the management and design of labor and delivery units can impact outcomes, drawing from epidemiology, economics, architecture, computer science, and other fields. We have established academic collaborations across the childbirth disciplines, including a longstanding partnership with the Boston College Connel School of Nursing, to measure the influence of nursing care on outcomes.

As an **educator**, I am a senior author of the textbook *Understanding Value-Based Healthcare* (McGraw-Hill). I previously served as a founding editor at *JAMA Internal Medicine* for "Less is More: Teachable Moments," a series for trainees seeking submissions that describe harms from unnecessary care. At Harvard Medical School, I lecture on health policy in the required "Essentials of the Profession" course for first-year students, and speak nationally and internationally on the role of clinicians in healthcare delivery reform.

As a **patient and community advocate**, I founded a global NGO called Costs of Care ([www.CostsOfCare.org](http://www.CostsOfCare.org)) whose work to curate value-improving clinical insights has been cited by the Institute of Medicine and other stakeholders. In 2017, I co-founded the March for Moms Association, a nonprofit coalition of more than 40 leading organizations, to increase public and private investment in the wellbeing of growing families. In 2018, this coalition helped pass Preventing Maternal Deaths Act, which provided the Centers for Disease Control and Prevention with funding to report maternal mortality and help establish maternal mortality review committees. In addition, I serve on the advisory boards of the Planned Parenthood Federation of America and the National Institutes of Health Office of Research on Women's Health, as well as on the consensus committee on Birth Settings for the National Academies of Science, Engineering and Medicine.

The goal of my professional activities is to bridge a gaping divide between our macroeconomic understanding of health system failures and our patient-level understanding of opportunities to deliver better care, both in the United States and around the world.