

# EXHIBIT L

UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

COMMONWEALTH OF  
PENNSYLVANIA,

Plaintiff,

v.

DONALD J. TRUMP, *et al.*,

Defendants.

No. 2:17-cv-04540-WB

**DECLARATION OF CYNTHIA H. CHUANG, M.D., MSc<sup>1</sup>**

I, Cynthia H. Chuang, hereby submit this declaration in support of the Motion for Preliminary Injunction filed by the Commonwealth of Pennsylvania in the above-captioned matter and, in support thereof, I state as follows:

**I. My Background and Experience**

1. I am a practicing general internist, primary care provider, professor, and health services researcher, with a principal research interest in unintended pregnancy prevention and contraceptive decision-making in adult women.

***A. My Job, Educational Training and Academic Practice***

2. I work as a Professor of Medicine, Public Health Services, and Obstetrics and Gynecology in the Departments of Medicine, Public Health Sciences, and Obstetrics and Gynecology at the Pennsylvania State University College of Medicine, where I also serve as the Chief of the Division of General Internal Medicine, a division of over 70 physicians with clinical practice in primary care medicine, hospital medicine, palliative care, and post-acute care.

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<sup>1</sup> I attach a true and correct copy of my curriculum vitae hereto as Exhibit 1.

3. I am also the Research Director of the Penn State K12 BIRCWH (Building Interdisciplinary Research Careers in Women's Health) Program.

4. I have been on faculty at the Penn State College of Medicine since 2004.

5. I earned a Bachelor of Science degree from the University of Michigan in 1992 and earned my Medical Degree from the New York University School of Medicine in 1997.

6. Thereafter, I completed my residency and chief residency in Internal Medicine at Temple University Hospital, in Philadelphia, Pennsylvania, in 2001.

7. I earned a Masters of Science in Epidemiology (MSc) from the Boston University School of Public Health in 2003 and completed my General Internal Medicine fellowship and residency in Preventive Medicine at Boston University School of Medicine, in 2004.

8. During my training, some of my most formative experiences were when I worked with patients in the areas of pregnancy prevention and contraceptive care at a family planning clinic in rural California; a primary care clinic at Temple University in North Philadelphia, Pennsylvania; and a women's health clinic at Boston Medical Center in Boston, Massachusetts.

9. Throughout my career, I have been an investigator on a number of studies and projects regarding contraception and reproductive health. For example, I was the Principal Investigator of a Patient-Centered Outcomes Research Institute (PCORI) contract to design and evaluate interventions aimed at assisting women with personalized contraceptive choices that best meet their individual needs (CD-1304-6117), and recipient of a National Institutes of Health (NIH) K23 career development award to study unintended pregnancy in women with chronic medical conditions. I am the Penn State site Principal Investigator for the PCORNet PaTH Clinical Data Research Network, a multi-institutional integrated research network in partnership with the University of Pittsburgh/University of Pittsburgh Medical Center, Temple University Health

System, Johns Hopkins University Health System, Geisinger Health System, and the University of Utah Health System.

10. I have authored over 70 scholarly publications, a significant portion of which focus on women's healthcare and preventive services. Among other topics, I have written about: reducing unintended pregnancies through reproductive planning and contraceptive action planning, contraceptive decision-making in women with and without chronic medical conditions, and the meaning of pregnancy intention.

11. Some of my recent articles include:

- a. Snyder A, Weisman CS, Liu G, Leslie D, Chuang CH. The impact of the Affordable Care Act on contraceptive use and costs among privately insured women. *Women's Health Issues* 2018, 28(3): 219-223.
- b. "Measuring Oral Contraceptive Adherence Using Self-Report Versus Pharmacy Claims Data," *Contraception*, 2017 Sep 04, Nelson HN, Borrero S, Lehman E, Velott DL, Chuang CH;
- c. "How Do Pregnancy Intentions Affect Contraceptive Choices When Cost Is Not a Factor? A Study of Privately Insured Women," *Contraception*, 2015 Nov; 92(5):501-7, Weisman CS, Lehman EB, Legro RS, Velott DL, Chuang CH; and
- d. "Making the Most of the Affordable Care Act's Contraceptive Coverage Mandate for Privately-Insured Women," *Women's Health Issues*, 2014 Sep-Oct; 24(5):465-8, Weisman CS, Chuang CH.

12. I have received multiple awards and recognitions for my academic work including delivering the 2017 Spring Dean's Lecture (Contraceptive Use: Before, During and After the Affordable Care Act). I received the Dean's Award for Innovation in Team Science in 2014, the

Department of Medicine Excellence in Mentoring Award in 2014 and the Junior Faculty Award for Excellence in Research in 2008. I have also received the Dean's Award for Excellence in Teaching in 2010 and 2014, and the Special Recognition for Education Leadership and Service Award on 2005.

**B. *My Medical Practice***

13. In addition to my academic work, I am also a clinician and maintain an active adult primary care practice in Hershey, Pennsylvania, in which a portion of my patients are women of child-bearing age.

14. My practice is focused on preventive medicine and chronic disease management.

15. For my female patients of child-bearing age, preventive medicine includes reproductive life planning, including the use of contraceptives.

16. For medical reasons, the ideal "spacing" between pregnancies is eighteen months, because there is a greater risk of poor birth outcomes, like low birthweight and preterm birth, if pregnancies are not properly spaced.

17. I routinely have conversations with my patients about spacing out their pregnancies due to their medical health and educational, work and economic goals. Indeed, the Centers for Disease Control and Prevention (CDC) recommends that doctors counsel their patients about issues of "reproductive life planning," including their life, financial and job goals.

18. These conversations routinely result in changes to patients' contraceptive care. Indeed, I have found that it is important to be flexible with respect to contraceptive care because patients' changing life situations will frequently call for changes in their contraceptive method choice.

19. Through my medical practice, I have found that the most important thing about

providing preventive contraceptive care is to counsel my patients to use the method of contraception that is best suited for their individual needs at their particular place in life.

20. My patients are generally highly insured and mostly white.

21. Some live in highly rural areas and drive long distances to see me.

22. I direct low-income patients without insurance to the Medicaid program (if eligible). I direct other uninsured or underinsured women without contraceptive coverage to seek care through Planned Parenthood, or another Federally Qualified Health Center (FQHC), where they may qualify for contraceptive coverage under Title X.

23. Some of my patients also work for and receive their health insurance through Catholic Schools and other institutions which might seek to eliminate contraceptive coverage through their employer-sponsored plans under the new religious and moral exemptions.

## **II. My Opinion on the Final Religious Exemption Rule and Final Moral Exemption Rule**

24. I have reviewed both the final Religious Exemption Rule and the final Moral Exemption Rule (together, the “Final Exemption Rules”), as well as the amended Complaint filed by the Commonwealth of Pennsylvania in the above-captioned matter that challenges them.

25. Based upon my knowledge, education, training and experience, it is my professional opinion that the Final Exemption Rules will cause immediate and irreversible harm because they will cause women to lose preventive contraceptive care under their employer group health plans.

### ***A. Cost is a Barrier to Contraceptive Access***

26. It is my understanding, and it has been my experience, that cost is a barrier to access to contraceptives. This has been corroborated in research studies.

27. Prior to passage of the Affordable Care Act (the “Affordable Care Act” or “ACA”),

before preventive contraceptive care was provided at no out-of-pocket cost under the ACA's contraceptive mandate, I regularly counseled my patients about the cost related to their recommended contraceptive choices.

28. At that time, it was not unusual for my patients to reject the specific contraceptive I had recommended due to its cost; instead, they would request that I prescribe a less effective, but cheaper, method of contraception. Or they would forego use of contraception altogether.

29. Such requests were most frequent when I had recommended intrauterine Devices (IUDs) or contraceptive implants. IUDs and implants carried heavy cost-sharing responsibilities and, therefore, were most expensive to patients pre-ACA. But they are also a much more effective method of contraceptive care (<1% failure rate) than birth control pills (9% failure rate).

30. After the ACA passed and the contraceptive mandate was instituted, however, I saw that my patients were free to make contraceptive choices on the basis of their medical and personal needs and concerns, alone, without the burden of having to weigh the cost of the preferred medical choice. Put otherwise, post-ACA, the only concern has become what is best for the patient.

31. Since the ACA passed, no patient has contacted me to ask for a different, cheaper method of contraception than the one I had prescribed due to the cost under private insurance plans.

32. Furthermore, as a result of the ACA's contraceptive mandate, I have seen patients switch from a cheaper, less effective method to a more effective, expensive method that was better for their medical health and personal needs.

***B. Because Patients Will Lose Contraceptive Coverage under the New Final Exemption Rules, They Will Make Less Medically Sound Contraceptive Choices and, Therefore, Will Be Harmed***

33. It is apparent, however, that under the new Final Exemption Rules this post-ACA focus on what is best for the patient will change.

34. This is so because, as a result of the Final Exemption Rules, some women will lose insurance coverage for preventive contraceptive care.

35. As a result, their costs for contraceptive care will rise.

36. Based upon my own experience and existing scientific and empirical information that I have reviewed and am aware of, under the new Final Exemption Rules, cost will, again, become a barrier to women's access to and use of the contraceptive that is medically recommended for them.

37. Many of these women who will no longer receive contraceptive coverage will not only face financial harm, but will also face medical harm.

38. This harm will manifest itself in the disruption of these patients' medical treatment, whether by substituting a less effective but cheaper method of contraception or by being forced to stop using contraceptives at all, due to financial reasons.

39. Some of these women will face unintended pregnancy and other adverse medical consequences.

***C. The New Final Exemption Rules Are Not Based Upon Sound Scientific or Empirical Evidence***

40. It is also my opinion that the new Final Exemption Rules are not based upon sound scientific or empirical evidence.

41. The Final Exemption Rules indicate, among other things, that contraceptives are not effective in preventing unintended pregnancy. This is false.



42. This claim in the Final Exemption Rules is inconsistent with the weight of scientific and empirical authority.

43. Indeed, well-established research indicates that contraceptives are, in fact, effective preventing unintended pregnancy. To be sure, while various methods of contraception can be effective at preventing unintended pregnancy, some are more effective than others.

44. Several other statements in the Final Exemption Rules are also not scientifically credible.

45. The Final Exemption Rules state that some commenters criticized the 2011 IOM Report for citing studies that assert associative relationship between contraceptive use and decreases in unintended pregnancy, and not causal relationships. Establishing a causal relationship would be unethical and unrealistic. Studies of association have shown that women using specific contraceptive methods are less likely to become pregnant than women not using those methods. A causal relationship could only be established if a study were conducted where women were randomly assigned to receive a specific contraceptive method and compared with women who were randomly assigned to use no contraceptive method. Studies of association have provided the rationale for the knowledge that smoking causes lung cancer, HIV causes AIDS, and Pap smears reduce cervical cancer.

46. The Final Exemption Rules acknowledge commenters who report that hormonal contraceptives cause depression, citing one large study from Denmark. This report should not be evaluated in isolation, as other studies have found no consistent association between hormonal contraceptive use and depressive symptoms, while others have found hormonal contraception has reduced levels of depressive symptoms. These studies are difficult to conduct, since women who are receiving hormonal contraception must be enrolled in health care services, where they are more

likely to be screened and treated for depression.

47. The Final Exemption Rules acknowledge commenters who report that hormonal contraceptives may increase the risk of certain health conditions, such as venous thromboembolic disease (VTE) (i.e., deep venous thrombosis and pulmonary embolism). While it is true that the risk of VTE is increased with use of estrogen-containing hormonal contraception, pregnancy and the postpartum state increase VTE risk significantly more so. Thus, preventing unintended pregnancy is a more effective way to reduce risk of VTE than avoiding hormonal contraception.

48. Similarly, the Final Exemption Rules acknowledge commentators who expressed concern over the possible increased risk of certain cancers. There is conflicting evidence as to whether long-term hormonal contraceptive use may increase the risk of breast cancer, however there is strong evidence that hormonal contraception reduces the risk of ovarian and uterine cancer, and some evidence that it reduces the risk of colorectal cancer. The magnitude of the reductions in ovarian, uterine, and colorectal cancer greatly outweigh the potential increased risk in breast cancer.

49. For these reasons, I believe that an injunction of the Final Exemption Rules is necessary to prevent immediate and irreparable harm to women in Pennsylvania and around the Country, who will lose ongoing preventive care coverage under their group health plans due to the Final Exemption Rules.

I hereby affirm that the foregoing is true and correct based upon my knowledge, information and belief, and I make these statements subject to the penalty of perjury.

Date: 12/14/2018

By:   
CYNTHIA H. CHUANG, M.D., MSc

# EXHIBIT 1

**Cynthia H. Chuang, MD MSc**  
*Curriculum Vitae*

Penn State College of Medicine/Milton S. Hershey Medical Center  
500 University Drive, HO34  
Hershey, PA 17033  
Phone: (717) 531-8161  
Fax: (717) 531-7726  
Email: [cchuang@pennstatehealth.psu.edu](mailto:cchuang@pennstatehealth.psu.edu)

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**Current Positions:**

- 2016-present Chief, Division of General Internal Medicine  
Pennsylvania State University College of Medicine; Hershey, PA
- 2015-present Professor of Medicine, Public Health Sciences, and Obstetrics and Gynecology  
Pennsylvania State University College of Medicine; Hershey, PA  
(Appointment in Obstetrics and Gynecology added in 2018)
- 2012-present Research Director, Penn State University Building Interdisciplinary Research  
Careers in Women's Health (BIRCWH) K12 Program

**Previous Positions:**

- 2014-2017 Co-Lead, Community Engagement and Research Core, Penn State Clinical and  
Translational Science Institute
- 2009-2015 Associate Director of Research, Division of General Internal Medicine, Penn State  
College of Medicine
- 2009-2015 Associate Professor of Medicine and Public Health Sciences  
Pennsylvania State University College of Medicine; Hershey, PA
- 2004-2009 Assistant Professor of Medicine and Public Health Sciences  
Pennsylvania State University College of Medicine; Hershey, PA

**Education:**

- 2003 MSc, Epidemiology  
Boston University School of Public Health, Boston, MA
- 1997 MD, New York University School of Medicine  
New York, NY
- 1992 BS, Cellular and Molecular Biology  
Graduated *cum laude*, Honors Program  
University of Michigan, Ann Arbor, MI

**Post-Graduate Training:**

- 2001-2004 Fellow, General Internal Medicine  
Boston University School of Medicine, Boston, MA
- 2001-2003 Resident, Preventive Medicine  
Boston University School of Medicine, Boston, MA
- 2000-2001 Chief Resident, Internal Medicine

1997-2000 Temple University Hospital, Philadelphia, PA  
Resident, Internal Medicine  
Temple University Hospital, Philadelphia, PA

**Honors and Awards:**

2018 Recipient, Penn State Hershey Medical Center Winter 2018 Inspire Award for Excellence

2017 Fellow, American College of Physicians

2017 Spring 2017 Dean's Lecturer: Contraceptive Use—Before, During, and After the Affordable Care Act. Penn State College of Medicine

2016 Penn State Hershey Leadership Academy for Excellence in Academic Medicine

2016 Patient Satisfaction Award—CG CAHPS Dean's List  
*Awarded for scoring in the 99<sup>th</sup> percentile for patient satisfaction nationwide.*

2016 YWCA Tribute to Women of Excellence Award  
*The Tribute to Women of Excellence award honors women for their contributions to the workplace and community in Central Pennsylvania.*  
<http://www.harrisburgmagazine.com/March-2016/YWCA-Greater-Harrisburgs-Class-of-2016-Women-of-Excellence/>

2014 Dean's Award for Excellence in Teaching  
Penn State College of Medicine

2014 Excellence in Mentoring Award  
Department of Medicine, Penn State College of Medicine  
*This award recognizes a senior faculty member in the Department of Medicine for their work in encouraging and guiding the development of one of more junior faculty in their academic and clinical careers.*

2014 Innovation in Team Science Award  
Office of the Vice Dean for Research and Graduate Studies and Unified Campus Research Team, Penn State College of Medicine  
*This award recognizes scholarly inquiry and investigation related to education, educational processes, and dissemination and practical application of research results.*

2012 Patient Satisfaction Award—CG CAHPS Dean's List  
*Awarded for scoring in the 99<sup>th</sup> percentile for patient satisfaction nationwide.*

2010 Dean's Award for Excellence in Teaching  
Penn State College of Medicine

2010 Educational Recognition Award  
Department of Medicine, Penn State College of Medicine  
*This award honors the educational accomplishments of individual faculty within the Department based on consistent excellence in teaching*

*excellence in teaching.*

- 2009 White Coat Ceremony, Keynote Speaker  
Penn State College of Medicine
- 2008 Junior Faculty Award for Excellence in Research  
Department of Medicine, Penn State College of Medicine
- 2006 Alpha Omega Alpha, Pennsylvania Eta Chapter
- 2005 Special Recognition for Education Leadership and Service Award  
Department of Medicine, Penn State College of Medicine  
*This award honors an individual who has contributed to the advancement of the educational mission of the Department in an exemplary manner.*
- 2004-2005 Junior Faculty Development Program graduate  
Penn State College of Medicine

**Board Certification:**

- 2000-present American Board of Internal Medicine (recertification in 2010)
- 2004-2014 American Board of Preventive Medicine

**Medical Licensure:**

- 2000-present Commonwealth of Pennsylvania (MD071211L)

**Academic Appointments:**

- 2018-present Professor of Obstetrics and Gynecology  
Pennsylvania State College of Medicine, Hershey, PA
- 2015-present Professor of Medicine and Public Health Sciences  
Pennsylvania State College of Medicine, Hershey, PA
- 2009-2015 Associate Professor of Medicine and Public Health Sciences  
Pennsylvania State College of Medicine, Hershey, PA
- 2004-2009 Assistant Professor of Medicine and Public Health Sciences  
Pennsylvania State College of Medicine, Hershey, PA
- 2001-2004 Clinical Fellow in Medicine  
Boston University School of Medicine, Boston, MA
- 2000-2001 Instructor of Medicine  
Temple University Hospital, Philadelphia, PA

**Hospital Appointments:**

- 2004-present Medical Staff, Penn State Milton S. Hershey Medical Center, Hershey, PA
- 2001-2004 Medical Staff, Edith Nourse Rogers Veterans Memorial Hospital, Bedford, MA
- 2002-2003 Medical Staff, Boston Veterans Affairs Health System, Boston, MA
- 2000-2001 Medical Staff, Temple University Hospital, Philadelphia, PA

**Grant Review Committees and Study Sections:**

- June 2016, Mar 2017, Nov 2017, Mar 2018, Nov 2018 Special Emphasis Panel, Fellowships (F31, F32): Risk, Prevention, and Health Behavior; ZRG1 F16-L (20) L

May 2017	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion: Understanding Provision of Confidential Sexual Health Services to Adolescents DP17-005:SIP17-005
May 2016, April 2017	Society of Family Planning Interdisciplinary Innovations Planning Grant Review Committee
January 2016	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion: Pregnancy Risk Assessment Monitoring System (PRAMS), Component A, RFA-DP-16-001
April 2015	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion: Effectiveness of Teen Pregnancy Prevention Programs Designed Specifically for Young Males DP15-007
June 2010, June 2011, March 2012	Ad hoc Reviewer, Population Science Subcommittee, Eunice Kennedy Shriver National Institute of Child Health and Human Development
March 2011	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion: Pregnancy Risk Assessment Monitoring System (PRAMS)
January 2009	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion Health Promotion and Disease Prevention Research Centers (PRCs)
2007	Special Emphasis Panel, Centers for Disease Control and Prevention/Office of Public Health Research: Improving Public Health Practice through Translation Research
2005	Special Emphasis Panel, Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion: Reproductive Health Research

### **Leadership Positions:**

2018-present	Chair, Education Council, Department of Medicine
2016-present	Chief, Division of General Internal Medicine, Penn State College of Medicine
2015-present	Faculty Advisor, Penn State College of Medicine Medical Student for Choice (MSFC) Chapter
2012-present	Research Director, Penn State University Building Interdisciplinary Research Careers in Women's Health (BIRCWH) Program
2014-2017	Co-lead, Community Engagement and Research Core, Penn State Clinical and Translational Science Institute
2009-2015	Associate Director of Research, Division of General Internal Medicine, Penn State College of Medicine
2015	Meeting Co-Chair, 2 <sup>nd</sup> Annual Penn State Women's Health Research Day, Penn State College of Medicine, Hershey, PA on April 28, 2015
2015	Meeting Co-Chair, Society of General Internal Medicine, Mid-Atlantic Regional Meeting. Held at the Hershey Lodge and Convention Center, Hershey, PA on March 13, 2015



2014-2015 PCORnet Patient & Consumer Engagement Task Force  
 2014 Co-Leader, Society of Family Planning Patient-Centered Research Priority Setting  
 2014 Meeting Chair, Inaugural Penn State Women's Health Research Day, Penn State College of Medicine, Hershey, PA on April 8, 2015  
 2004-2014 Faculty Advisor, Resident Research Forum  
 Internal Medicine Residency Program, Penn State College of Medicine  
 2005-2013 Key Clinical Faculty, Internal Medicine Residency Program  
 Penn State College of Medicine  
 2009-2010 Treasurer/Secretary, Society of General Internal Medicine, Mid-Atlantic Region  
 2008-2009 Membership Coordinator and Treasurer/Secretary Elect, Society of General Internal Medicine, Mid-Atlantic Region  
 2006 Meeting Chair, Society of General Internal Medicine, Mid-Atlantic Regional Meeting. Held at Penn State College of Medicine on March 10, 2006

**Committee Service:***Penn State College of Medicine/Hershey Medical Center:*

2018-present Department of Medicine Education Council (Chair), Penn State College of Medicine  
 2018-present Department of Medicine Executive Committee  
 2017-present Support for Education Task Force, Penn State College of Medicine  
 2017-present Population Health (PHX) Steering Committee, Penn State Health  
 2016-present Department of Medicine Promotion and Tenure Committee  
 2018 Internal Medicine Residency Program Director Search Committee  
 2018 Search Committee Member: Associate Dean for Faculty and Professional Development  
 2017-2018 Funds Flow Advisory Committee, Penn State College of Medicine  
 2014-2017 Penn State Scientific Review Committee:  
 • CTSI KL2 Scholar Applications 2017  
 • Small Grants for Qualitative Research Applications 2014, 2015  
 • CTSI Bridges to Translation 2015  
 • CTSI Novel Methodologies 2014  
 2016 Search Committee Member: Associate Dean for Faculty and Professional Development  
 2016 Internal Review Committee, Department of Medicine  
 2016 Penn State Hershey Physician Wellness Committee  
 2015 ACP East Region Abstract Competition Review Committee  
 2014 Search Committee Member: Associate Dean for Research Innovation  
 2014 Search Committee Member: Chair, Department of Psychiatry  
 2011-2012 Outpatient Quality Project: Improving Osteoporosis Screening in Ambulatory Care  
 2007-present Division of General Internal Medicine Executive Committee  
 2005-2014 Internal Medicine Residency Selection Committee

2005-2014 Internal Medicine Residency Competency Committee  
 2005-2011 Medical Student Research Committee  
 2005-2010 Medical Student Candidate Interviewer  
 2010 Centers for Disease Control and Prevention Preconception Health & Health Care Initiative, Clinical Workgroup  
 2010 Search Committee Member: Associate Dean for Continuing Medical Education  
 2008-2010 Search Committee Member: Clinical Ethicist, Department of Humanities  
 2008-2009 Search Committee Chair, Behavioral Scientist, Div. of General Internal Medicine  
 2005-2006 Physician Satisfaction Task Force  
 2005-2006 Search Committee: Division Chief, General Internal Medicine  
 2005-2006 Planning Committee for Penn State College of Medicine's 8<sup>th</sup> Annual Women's Health: Ages & Stages Conference, April 2006  
 2005-2006 Task Force for Physician, Patient, and Society Course  
 2005 PACE (Patient Access & Care Efficiency) Processes of Care Committee

*Fellowship:*

2003-2004 Family Planning External Working Group  
 Family Planning Program, Massachusetts Department of Public Health  
 2003-2004 Steering Committee, Massachusetts Emergency Contraception Network  
 Massachusetts Department of Public Health  
 2001-2004 Chair, Subcommittee on Provider Education  
 Massachusetts Emergency Contraception Network  
 Massachusetts Department of Public Health

*Residency/Chief Residency:*

1999-2001 Internal Medicine Resident Admissions Committee  
 Temple University Hospital, Philadelphia, PA  
 2000-2001 Internal Medicine Resident Review Committee  
 Temple University Hospital, Philadelphia, PA

*Medical School:*

1996-1997 Regional coordinator for NY/NJ, Medical Students for Choice  
 2001-2004 Class representative, Student Council, NYU School of Medicine, New York, NY  
 2002-2003 Co-founder and co-president of Medical Students for Choice, NYU Chapter  
 2000-2001 Co-president of American Medical Women's Association, NYU student chapter  
 1994-1995 Secretary, Asian Students Union, NYU Chapter

**Professional Societies:**

2016-present Association of Chiefs and Leaders in General Internal Medicine (ACLGIM)  
 2001-present American College of Physicians (Fellow since 2017)  
 2001-present Society of General Internal Medicine  
 2004-2007 American College of Preventive Medicine  
 2001-2004 Massachusetts Medical Society

**Editorial Board**

2009-2018 Women's Health Issues, Editorial Board

**Ad-hoc Journal Peer Review**

2004-present Women's Health Issues (Editorial Board member since 2009)  
 2004-present Journal of General Internal Medicine  
 2018 JAMA  
 2016 American Journal of Preventive Medicine  
 2015 Archives of Women's Mental Health  
 2014 BMC Pregnancy and Childbirth  
 2014 BMC Medical Informatics and Decision Making  
 2009-2013 Maternal and Child Health Journal  
 2013 Annals of Epidemiology  
 2012 Paediatric and Perinatal Epidemiology  
 2011, 2012 Diabetes Care  
 2012 Preventive Medicine  
 2010 Journal of Hospital Medicine  
 2010 Women and Health  
 2008 American Journal of Obstetrics and Gynecology  
 2008 Obstetrics and Gynecology  
 2008 Contraception  
 2007 Perspectives on Sexual and Reproductive Health  
 2005 Violence Against Women  
 2005 Journal of Pediatric and Adolescent Gynecology  
 2004 AIDS and Behavior  
 2004 Journal of American Medical Women's Association  
 2001 Annals of Internal Medicine

**Teaching Activities:***Penn State Hershey Medical Center:*

Fall 2017, 2018 Lecturer: Contraceptive Use Before, During, and After the Affordable Care Act  
 PHS 531 Public Health Perspectives on Women's Health (Course Director:  
 Jennifer McCall-Hosenfeld, MD, MSc)

Fall 2016, 2017 Lecturer: Intervention Studies in Health Services Research  
 PHS 530: Introduction to Health Services Research (Course Co-Directors: Carol  
 Weisman, PhD and Sara Baker, MSW, MPH)

2015, 2016, 2017, Co-Lecturer: Clinical Informatics and Big Data (with Tom Abendroth, MD)  
 2018 MS1 Course: Science of Health Systems (Course Director: Jed Gonzalo, MD,  
 MS)

2011-2012, 2015- Mentor, Junior Faculty Development Program  
 2016 The Junior Faculty Development Program provides a foundation for the success  
 of junior faculty in the Penn State College of Medicine/Hershey Medical Center

Fall 2005-2013 Instructor: Clinical Breast Examination  
 Internal Medicine Intern Course: Basic Clinical Skills

Fall 2012, 2013, Lecturer: Health Services Research  
 2014, 2015, 2016 MPH Course: PHS 519 Introduction to Patient-Oriented Research (Course  
 Director: Tom Lloyd, PhD)

Spring 2014,  
Spring 2017      Recurring Seminar: Contraception  
Internal Medicine Residency Ambulatory Academic Half Day (Course Director:  
Andreas Achilleos, MD)

2004-2014      Preceptor, Internal Medicine Residents' Clinic (1-3 sessions/week)  
University Physicians Group, Penn State Hershey Medical Center

2005-2013      Facilitator, Problem Based Learning  
Endocrinology (ENDO 731 PBL), 2<sup>nd</sup> year medical students (Spring 2005, Spring  
2009)  
Gastroenterology Section, 2<sup>nd</sup> year medical students (Nov-Dec 2005)  
Renal Section, 2<sup>nd</sup> year medical students (October 2007)  
CMBMP 712 PBL, 1<sup>st</sup> year medical students (January 2008, January 2013)  
Reproductive Medicine (REP 730 PBL), 2<sup>nd</sup> year medical students (Spring 2010)  
Evidence-Based Medicine (EBM I 713 PBL), 1<sup>st</sup> year medical students (February  
2008, August 2012, Spring 2013)  
Evidence-Based Medicine (EBM II 723 PBL), 2<sup>nd</sup> year medical students (Fall  
2010, Fall 2011, Fall 2012, Fall 2013)

Fall 2011, 2012      Lecture: Health in Rural America.  
MPH Course: PHS 571 Introduction to U.S. Health Services Organization and  
Delivery (Course Director: Wenke Hwang, PhD)

Fall 2010-2012      Lecture: Female Breast & Pelvic Examination  
Foundations of Clinical Medicine (FCM II 723)  
Course Director: Peter Lewis, MD

2004-2006      In-Patient Ward/Teaching Attending, 6 months  
Penn State Hershey Medical Center

*Fellowship:*

2002-2004      Instructor, Integrative Problems, 2<sup>nd</sup> year medical students  
Boston University School of Medicine, Boston, MA

2002-2003      Preceptor, Internal Medicine Residents' Clinic  
Women's Health Clinic, Department of Veterans Affairs, Jamaica Plain, MA

2001-2002      Instructor, Introduction to Clinical Medicine  
Physical Examination Skills, 2<sup>nd</sup> year medical students  
Boston University School of Medicine, Boston, MA

*Chief Residency:*

2000-2001      In-Patient Ward/Teaching Attending, 6 months  
Preceptor, Internal Medicine Residents' Clinic  
Temple University School of Medicine, Philadelphia, PA

2000      Instructor, Fundamentals of Clinical Care 201  
History Taking, 2<sup>nd</sup> year medical students  
Temple University School of Medicine, Philadelphia, PA

2001      Instructor, Fundamentals of Clinical Care 202  
Physical Examination Skills, 2<sup>nd</sup> year medical students  
Temple University School of Medicine, Philadelphia, PA

2000-2001      Instructor, Introduction to Clinical Medicine  
History Taking and Physical Examination Skills  
Temple University School of Podiatry, Philadelphia, PA

**Clinical Activities:*****Penn State Hershey Medical Center:***

2010-present Primary Care Physician (1 session/week)

2004-2014 Preceptor, Internal Medicine Residents' Clinic (1-3 sessions/week)

2004-2006 In-Patient Ward/Teaching Attending

2016

- 2004-2006: six months per year
- 2016: 3 weeks per year

***Fellowship:***

2001-2004 Primary Care Clinician (1 session/week)  
Ambulatory Care Clinic, Edith Nourse Rogers Memorial Veterans Hospital,  
Bedford, MA

2001-2004 Clinical Fellow (1 session/week)  
Women's Health Group, Boston Medical Center, Boston, MA

***Chief Residency:***

2000-2001 In-patient Ward/Teaching Attending, 6 months  
Temple University Hospital, Philadelphia, PA

**Research Advisor/Mentorship Experience**

<b>Name</b> Position and dates during mentorship	<b>Project/Product</b>	<b>Current Position</b>
Laura Shank, MD Medical student, PSCOM '05 2004-2006	Availability of emergency contraception at rural and urban pharmacies in Pennsylvania. <i>Contraception</i> 2006; 73(4): 382-385. --Selected as top medical student research project for presentation at 2005 Penn State College of Medicine Medical Student Research Symposium	Pediatrician, Wellspan Medical Group, York, PA
Jed Gonzalo, MD, MS Medical student, PSCOM '06 2004-present	Attending rounds and bedside case presentations: Medical student and medicine resident experiences and attitudes. <i>Teaching and Learning in Medicine</i> 2009;21(2):105-110	Associate Professor of Medicine and Public Health Sciences, Associate Dean for Health Systems Education, Penn State College of Medicine
Saima Zubair, MD Medical student, PSCOM '07 2005-2006	Determinants of reproductive counseling among women with chronic medical conditions. Best scientist abstract by a trainee award at 2006 Mid-Atlantic SGIM	Emergency Medicine physician, Methodist Hospital of Southern California
Gregory Pinkowsky, MD Medical student, PSCOM '08 2006-2010	Medicine versus Orthopaedic service for hospital management of hip fractures. <i>Clinical Orthopaedics and Related Research</i> 2010, 468(8): 2218-2223.	Orthopedic surgeon, Summit Medical Group, West Orange, NJ
Melissa (Goldstein) Accordino, MD, MS Medical student, PSCOM '09 2007-2010	Does medical student knowledge of anticoagulation differ by future intended practice? <i>Medical Teacher</i> 2010, 32(10): 857-859.	Assistant Professor of Medicine (hematology/oncology), Columbia University
Amanda Cattoi, MD Medical Student, PSCOM '11 2009-2012	Longitudinal association of intimate partner violence and depressive symptoms. <i>Mental Health in Family Medicine</i> 2012, 9(2): 107-114. Winner of the 2009 ACP Medical Student Abstract Competition	Family medicine physician, Altoona, PA

Kolapo Dasilva, MD Medical student, PSCOM '10 2008-2010	Effect of standardized electronic discharge instructions on post-discharge hospital utilization. <i>JGIM</i> 2011; 26(7): 718-723.	Emergency medicine physician, Charlottesville, VA
Hillary Darville Penn State undergraduate student (Biobehavioral Health) '11 Undergraduate thesis advisor 2010-2011	Honors Thesis: The right to emergency contraception: The reality behind knowledge, attitudes, and practices amongst college students in central Pennsylvania.	Product Development Associate, B Lab, Philadelphia, PA
Lara (Rosenwasser) Newman, MD Medical student, PSCOM '13 2009-2013	Barriers to colorectal cancer screening among women in rural Central Pennsylvania: primary care providers' perspective. <i>Rural and Remote Health</i> 2013, 13:2504.	Ophthalmologist, Hershey, PA
Michael Stengel Medical student, PSCOM '14 2010-2014	"What My Doctor Didn't Tell Me": Examining Health Care Provider Advice to Overweight and Obese Pregnant Women on Gestational Weight Gain and Physical Activity. <i>Women's Health Issues</i> 2012, 22(6): e535-e540. --Selected as top medical student research project for presentation at 2014 Penn State College of Medicine Medical Student Research Symposium	Emergency Medicine physician, WellSpan Health, Lancaster, PA
John Showalter, MD, MSIS Internal Medicine/Medical Informatics resident '11 2008-2011	Effect of standardized electronic discharge instructions on post-discharge hospital utilization. <i>JGIM</i> 2011; 26(7): 718-723.	Chief Medical Information Officer and Assistant Professor of Medicine, University of Mississippi Medical Center
Shahed Abbasi, MD Internal Medicine resident '15 2011-2012	Unintended pregnancy and postpartum depression among first time mothers. <i>Journal of Women's Health</i> 2013, 22: 412-416.	Internal Medicine physician, Rutgers New Jersey Medical School Faculty Practice, Newark, NJ
Michael MaCauley, MD Internal Medicine resident '12 2010-2012	The effect of a provider-enhanced clinical decision support tool for guiding venous thromboembolism pharmacoprophylaxis in 'low-risk' patients. <i>Hospital Practice</i> 2012, 40(3): 7-12.	Staff Physician, Lebanon VA, Lebanon, PA
Melissa Martenis, DO Internal Medicine resident '10 2008-2012	Contraception and abortion coverage: What do primary care physicians think? <i>Contraception</i> 2012; 86: 153-156.	Internal Medicine physician, Lancaster General Health, Lancaster, PA
Daphne Hernandez, PhD Assistant Professor of Human Development and Family Studies Penn State K12 BIRCWH Scholar 2010-2012	BIRCWH topic: Maternal health and healthy pregnancy behaviors, public assistance programs, and weight status in adult women	Associate Professor of Health and Human Performance, University of Houston
Jennifer Kraschnewski, MD, MPH Assistant Professor of Medicine Penn State KL2 CTSI Scholar 2012-2014	Kraschnewski J, Chuang CH, Poole ES, Peyton T, Blubaugh I, Pauli J, Feher A, Reddy M. Paging "Dr. Google": Does technology fill the gap created by the prenatal care visit structure? <i>Journal of Medical Internet Research</i> , 2014, 16(6):e147.  Kraschnewski JL, Chuang CH, Downs DS, Weisman CS, McCamant EL, Baptiste-Roberts K, Zhu J, Kjerulff K. Association of prenatal physical activity and gestational weight gain: Results from the First Baby Study, <i>Women's Health Issues</i> , 2013, 23-4, 233-e238.	Associate Professor of Medicine and Public Health Sciences; Executive Director of Penn State PRO Wellness, Penn State College of Medicine, Hershey, PA
Esther Bowie, MD Assistant Professor of Ophthalmology Junior Faculty Development Program Mentee 2011-2012	Hereditary hemochromatosis (HFE) polymorphisms as risk factors for age-related macular degeneration <ul style="list-style-type: none"> <li>Funded award: 2011 Frontiers in Eye and Vision Research Award</li> </ul>	Associate Professor of Ophthalmology
Jennifer Parkes Tinloy, MD Internal Medicine resident '13 2010-2013	Exercise during pregnancy and risk of late preterm birth, cesarean delivery, and hospitalizations. <i>Women's Health Issues</i> 2013.	Hospitalist, Kaiser Permanente, San Leandro, CA
Aminat Oluyemi, MD Gastroenterology fellow '13	Oluyemi AO, Welch AR, Yoo LJ, Lehman EB, McGarrity TJ, Chuang CH. Colorectal cancer screening in high-	Gastroenterologist, Carroll Health Group, Westminster,

2011-2013	risk groups in increasing, although current smokers fall behind. Cancer, 2014, 120(4): 2106-2113.	MD
Lisa Yoo, DO Internal Medicine resident '14 2011-2015	Yoo L, Oluyemi A, Welch A, Chuang C, Dye C, Moyer M, Ouyang A, Matthew A. Risk Factors for Aspiration Pneumonia in Ambulatory Endoscopy Patients. In AMERICAN JOURNAL OF GASTROENTEROLOGY, vol. 108, pp. S572-S572. --Winner of 2015 ACG Presidential Poster Award	Gastroenterologist, Lancaster General Health, Lancaster, PA
Poonam Mathur, DO, MPH Internal Medicine resident '14 2012-2015	Does doxycycline reduce the risk of Clostridium difficile infection in patients with cellulitis? <ul style="list-style-type: none"> <li>• Top oral presentation at the Penn State College of Medicine Resident Research Day, May 2013</li> <li>• Poster presentation at the Society of Medical Decision Making Meeting 2013</li> </ul>	Assistant Professor of Medicine (Infectious Disease), University of Maryland, Baltimore, MD
Joslyn S. Kirby, MD Assistant Professor of Dermatology 2014-present	Co-Mentor AHRQ K08: Collaborative care clinics for hidradenitis supprativa management	Associate Professor of Dermatology, Penn State College of Medicine
Lauren J. Van Scoy, MD Assistant Professor of Medicine 2014-present	Co-Mentor, Parker B. Francis Fellow in Pulmonary Research Career Development Award  Van Scoy LJ, Green MJ, Reading JM, Scott AM, Chuang CH, Levi BH. Can playing an end-of-life conversation game motivate people to engage in advance care planning? American Journal of Hospice & Palliative Medicine; 2016, DOI: 10.1177/1049909116656353.  Van Scoy LJ, Reading J, Scott A, Green M, Chuang CH, Levi B. Exploring the topics discussed during a conversation card game about death and dying: a content analysis. Journal of Pain and Symptom Management 2016, DOI: 10.1016/j.jpainsymman.2016.03.021.	same
Lisa Callegari, MD, MPH Assistant Professor of Obstetrics and Gynecology, University of Washington	Steering Committee Member and Co-Mentor, VA Career Development Program	same
Timothy Deimling, MD Assistant Professor of Obstetrics and Gynecology Junior Faculty Development Program Mentee 2015-2016	Mentor, Penn State Hershey Junior Faculty Development Program  Primary mentor for K23 award (pending)	same
Anne Dimmock, MPH Candidate	Thesis advisor: Development of a computable phenotype for idiopathic pulmonary fibrosis	Research Associate, Penn State College of Medicine
Ashley Snyder, MD, MS Fellow, General Internal Medicine 2015-2017	Snyder AH, Weisman CS, Liu G, Leslie D, Chuang CH. The impact of the Affordable Care Act on contraceptive use and costs among privately insured women. Contraception, 2017 – in press.  Snyder AH, Zhang C, Liu G, Chuang CH, Sobota M. Internists underperform in provision of first line contraception. Oral presentation at the 2017 Society of General Internal Medicine Annual Meeting in Washington, DC	Assistant Professor of Medicine, Penn State College of Medicine
Julianne Lauring, MD Fellow, Maternal and Fetal Medicine 2015-2016	Lauring JR, Lehman EB, Deimling TA, Legro RS, Chuang CH. Combined hormonal contraception use in reproductive age women with contraindications to estrogen use. American Journal of Obstetrics and Gynecology, 2016.	Assistant Professor of Obstetrics and Gynecology, University of Massachusetts Medical School

Hallie Nelson Medical Student, PSCOM '19 2015-2019	Nelson HN, Borrero S, Lehman E, Velott DL, Chuang CH. Measuring oral contraceptive adherence using self-report versus pharmacy claims data. Contraception 2017.	same
Odessa Hamidi, MD Resident, Obstetrics & Gynecology 2016-2018	Hamidi O, Deimling T, Lehman E, Chuang CH. High self-efficacy is associated with prescription contraceptive use. Women's Health Issues 2018.	same
Joseph Needleman Medical Student, PSCOM '19 2016-2019	How do medical student attitudes about abortion differ by state?	same
Celeste Bailey, Laura Leuenberger, Elizabeth Thayer-- PSCOM '18	Coverage Awareness and Contraceptive Choice: Factors Associated with New LARC Use in Privately Insured Women. Under review.	same
Dara Babinski, PhD Assistant Professor of Psychiatry BIRCWH Scholar 2015-2018	Contraceptive behavior among adult women with ADHD symptoms	same
Jennifer Jacobs, MD Resident, Internal Medicine 2017-present	Depression and contraceptive use	same

**Research Support (on-going):**

1 UL1 TR002014-01 (Sinoway) 09/01/2016-05/31/2021  
NIH/NCATS

The Penn State Clinical and Translational Science Institute

In 2007 the Penn State CTSI was established. Over the past decade the Institute has developed into an active and visible entity within our University and the institutional home for clinical and translational research.

Role: Co-Investigator/Community Engagement Research Core

CDA 14-412 (Callegari) 08/01/2015-07/31/2020

VA Health Services Research & Development Career Development Program

Reproductive Planning for Women Veterans

Role: Steering Committee Member and Co-Mentor

CDRN-1306-04912 (McTigue, Hess) Phase 1: 03/15/2014-09/14/2015

Patient Centered Outcomes Research Institute (PCORI) Phase 2: 09/14/2015-03/12/2019

A PaTH Towards a Learning Health System in the Mid-Atlantic Region

The PCORI Clinical Data Research Networks (CDRNs) will develop the capacity to conduct randomized comparative effectiveness studies using data from clinical practice in a large, defined population. The PaTH network includes University of Pittsburgh Medical Center, Penn State College of Medicine, Temple University Hospital, and the Johns Hopkins University Health System. The University of Utah Health System and Geisinger Health System were newly added to the PaTH CDRN in Phase 2.

Role: Penn State Site Principal Investigator

**Research Support (completed):**

CD-1304-6117 (Chuang) 10/01/2013-08/31/2018

Patient Centered Outcomes Research Institute (PCORI)

Reducing Unintended Pregnancies through Reproductive Life Planning and Contraceptive Action Planning



The objective of this randomized controlled trial is to determine whether reproductive life planning, with or without contraceptive action planning, can help women formulate and achieve their reproductive goals compared with an information-only control group.

Role: Principal Investigator

2 K12 HD055882 (Weisman) 09/01/2012-07/31/2017 (NCE until 08/31/2018)

NIH/NICHD

Career Development Program in Women's Health Research at Penn State

The purpose of the Penn State BIRCWH program is to provide mentored research career development for junior faculty members, known as BIRCWH Scholars, who are conducting interdisciplinary research in women's health or on sex/gender differences in health.

Role: Co-Investigator/Research Director

No Number Assigned (Van Scoy) 07/01/2015-06/30/2018

Parker B. Francis Fellowship

Evaluating the impact of a conversation game on advance care planning activities

Role: Co-Mentor

0049450 (711300-3) (McTique) 4/1/2016-9/30/2017

PCORI

PCORnet Bariatric Study

The main goal of this PCORnet observational research study is to provide accurate estimates of the 1, 3, and 5 year benefits and risks of the three main surgical treatment options for severe obesity – Roux-en-y gastric bypass (RYGB), adjustable gastric banding (AGB), and vertical sleeve gastrectomy (VSG) – with a focus on the outcomes that have been shown to be most important to adults and adolescents with severe obesity – weight loss, improvement in diabetes, and risk of adverse events.

Role: Penn State Site Principal Investigator

No Grant # (Chuang) 6/1/2016 – 06/30/2017

PSU Pathway to Partnerships (P3) Stage 2

Neighborhood Effects on Health in Pennsylvania (2 projects)

We propose 2 Projects using the integrated EHR-contextual data source to better understand the influence of community and environmental factors on health: Project 1) Obesity and its Role in the Asthma Epidemic (Project Lead: Jennifer Kraschnewski, MD, MPH); and 2) Rural versus Urban Differences in Prevalence and Predictors of High-Risk Opioid Prescribing for Young Adult Patients (Project Lead: Shannon Monnat, PhD).

Role: Principal Investigator

1 U54 RR026071-01A2 (Sinoway) 6/1/2011-2/29/2016

NIH

The Penn State Clinical and Translational Science Institute

The goal of the Penn State CTSI is an engaged and responsive health science research and education enterprise that delivers on the promise of improved health.

Role: Community Engagement and Research Core Co-Leader

No Number Assigned (Chuang/Yapa) 05/26/2015-11/1/2015

Penn State College of Medicine Pathway to Partnership Stage One

Micro-geography of food and fitness for management and prevention of Type II diabetes

Role: Co-Principal Investigator

\$5,000

No Number Assigned (Chuang/Chi) 05/26/2015-11/1/2015

Penn State College of Medicine Pathway to Partnership Stage One

Population Health Research in the Era of Big Data

Role: Co-Principal Investigator

\$5,000

No Number Assigned (Chuang) 01/01/2013-12/31/2013; NCE until 08/31/2014

Penn State Clinical and Translational Science Institute/Community Engagement Research Core

Development of a Smartphone Intervention to Prevent Excessive Gestational Weight Gain

The purpose of this community-engaged project is to conduct focus groups with pregnant women in order to develop a smartphone intervention to prevent excessive gestational weight gain.

Role: Principal Investigator

No Number Assigned (Chuang & Weisman)

12/1/2009-11/30/2012

Rural Women's Health Care Project

Penn State Clinical and Translational Science Institute (CTSI) Pilot Project Grant

This project will involve semi-structured interviews with rural health providers in Central Pennsylvania to study barriers to preventive women's health care, as well as establish the Rural Women's Health Care Network.

Role: Co-Principal Investigator

5 K23 HD51634 (Chuang)

9/1/06-8/31/11

NIH/NICHD

No Cost Extension until 8/31/12

Unintended Pregnancy in Women with Chronic Medical Conditions

This 5-year Mentored Patient-Oriented Career Development Award involves study of pregnancy intention, contraceptive use, and unintended pregnancy among women with the chronic conditions of diabetes, hypertension, and obesity using population-based samples and a focus-group study.

Role: Principal Investigator

No Number Assigned (Chuang & Kraschnewski)

07/1/11-06/30/12

Investigating Gestational Weight Gain

Association of Faculty and Friends

This qualitative study investigates the beliefs, attitudes, and habits of women who gained appropriate and excess weight during pregnancy.

Role: Co-Principal Investigator

Dean's Feasibility Grant (Chuang)

7/1/05-6/30/06

Penn State College of Medicine

Family Planning Behavior in Women with Chronic Medical Conditions

This 1-year project allows secondary database analysis of the 2004 Behavioral Risk Factor Surveillance System to examine childbearing intentions and contraceptive use in women with chronic medical conditions.

Role: Principal Investigator

No Number Assigned (Weisman)

6/1/04-5/31/08

Pennsylvania Department of Health

Central Pennsylvania Center of Excellence for Research on Pregnancy Outcomes

This 4-year project establishes a multi-institutional center of excellence in Central Pennsylvania to reduce disparities in adverse pregnancy outcomes through observational research and intervention research on women's preconceptional health. The project has a special emphasis on rural areas.

Role: Co-Investigator

**Publications/Presentations:*****Peer-Reviewed Publications:***

1. Hamidi OP, Deimling T, Lehman E, Weisman C, Chuang C. High self-efficacy is associated with prescription contraceptive use. *Women's Health Issues*, 2018. <https://doi.org/10.1016/j.whi.2018.04.006>.
2. Snyder A, Weisman CS, Liu G, Leslie D, Chuang CH. The impact of the Affordable Care Act on contraceptive use and costs among privately insured women. *Women's Health Issues* 2018, 28(3): 219-223.
3. Toh S, Rasmussen-Torvik LJ, Harmata EE, Pardee R, Saizan R, Malanga E, Sturtevant JL, Horgan CE, Anau J, Janning CD, Wellman RD, Coley RY, Cook AJ, Courcoulas AP, Coleman KJ, Williams NA, McTigue KM, Arterburn D, and McClay J for the PCORnet Bariatric Study Collaborative. The National Patient-Centered Clinical Research Network (PCORnet) Bariatric Study Cohort: Rationale, Methods, and Baseline Characteristics. *JMIR Res Protoc* 2017;6(12):e222. PMID: 29208590
4. McTigue KM, Hartelius EJ, Anderson TS, Allsup AP, Alston T, Chuang CH, Dillon S, Ford DE, Gunturi N, Hess R, Kirchner HL, Larson SL, Leon-Jhong AB, McCoy DR, Paranjape A, Uhrig JR, Waheed AA, Mitchell GR. Using a deliberative forum for engaging health system and health plan leaders to prioritize research topics. *European Journal for Person Centered Healthcare* 2018;6(2).
5. Nelson HN, Borrero S, Lehman E, Velott DL, Chuang CH. Measuring oral contraceptive adherence using self-report versus pharmacy claims data. *Contraception* 2017, 96: 453-459.
6. Scanlon DP, Wolf LJ, Chuang CH, Kraschnewski J, Lengerich EJ, McHale SM, Paul IM, Penrod J. A model for academic institution support for community-engaged research. *Journal of Clinical and Translational Science* 2017, doi:10.1017/cts.2017.295.
7. Van Scoy LJ, Scott AM, Reading J, Chuang CH, Chinchilli VM, Levi BL, Green MJ. From Theory to Practice: measuring end-of-life communication quality using multiple goals theory. *Patient Education and Counseling* 2017;100(5):909-918.
8. Schieffer KM, Chuang CH, Connor J, Pawelczyk JA, Sekhar DL. Association of iron deficiency anemia with hearing loss in US adults. *JAMA Otolaryngology-Head & Neck Surgery* 2017, 143(4): 350-354. doi:10.1001/jamaoto.2016.3631. <http://health.usnews.com/health-care/articles/2016-12-29/could-anemia-cause-hearing-loss>
9. Sekhar DL, Kunselman AR, Chuang CH, Paul IM. Optimizing hemoglobin thresholds for detection of iron deficiency among reproductive age women in the United States. *Translational Research* 2017; 180:68-76.
10. Bhuva K, Kraschnewski JS, Lehman E, Chuang CH. Does body mass index or weight perception affect contraceptive use? *Contraception* 2017;95(1):59-64.
11. Van Scoy LJ, Green MJ, Reading JM, Scott AM, Chuang CH, Levi BH. Can playing an end-of-life conversation game motivate people to engage in advance care planning? *American Journal of Hospice & Palliative Medicine*; 2016, DOI: 10.1177/1049909116656353.

12. Van Scoy LJ, Reading J, Scott A, Green M, Chuang CH, Levi B. Exploring the topics discussed during a conversation card game about death and dying: a content analysis. *Journal of Pain and Symptom Management* 2016, DOI: 10.1016/j.jpainsymman.2016.03.021.
13. Phelan AL, Kunselman AR, Chuang CH, Raja-Khan NT, Legro RS. Exclusion of women of childbearing potential in clinical trials of type 2 diabetes medications: A review of protocol-based barriers to enrollment. *Diabetes Care* 2016 (April), dc152723.
14. Crites JS, Chuang C, Dimmock A, Hwang W, Johannes B, Paranjape A, Wu A. PROs in the Balance: Ethical Implications of Collecting Patient Reported Outcome Measures in the Electronic Health Record. *The American Journal of Bioethics*, Mar 11 2016 (online) Apr 1 2016 (print), in press.
15. Lauring JR, Lehman EB, Deimling TA, Legro RS, Chuang CH. Combined hormonal contraception use in reproductive age women with contraindications to estrogen use. *American Journal of Obstetrics and Gynecology*, 2016 Sep 1;215(3):330-e1.
16. Chuang CH, Mitchell JL, Velott DL, Legro RS, Lehman EB, Confer LN, Weisman CS. Women's awareness of their contraceptive benefits after the Patient Protection and Affordable Care Act. *American Journal of Public Health*, 2015 (November), 105:S713-S715. doi:10.2105/AJPH.2015.302829.
17. Chuang CH, Velott DL, Weisman CS, Sciamanna CN, Legro RS, Chinchilli VM, Moos M-K, Francis EB, Confer LN, Lehman EB, Armitage CJ. Reducing unintended pregnancies through web-based reproductive life planning and contraceptive action planning among privately insured women: Study protocol for the MyNewOptions randomized controlled trial. *Women's Health Issues*, 2015 (November-December), 92:501-507. <http://dx.doi.org/10.1016/j.whi.2015.06.010>.
18. Weisman CS, Lehman EB, Legro RS, Velott DL, Chuang CH. How do pregnancy intentions affect contraceptive choices when cost is not a factor? A study of privately-insured women. *Contraception*, 2015 (November), 92: 501-507.
19. Gonzalo JD, Kuperman EF, Chuang CH, Lehman EB, Glasser F, Abendroth T. Impact of an overnight internal medicine academic hospitalist program on patient outcomes. *Journal of General Internal Medicine*, 2015 (December), 30(12):1795-802. doi: 10.1007/s11606-015-3389-0. Epub 2015 May 20.
20. Sciamanna CN, Patel VA, Kraschnewski JL, Rovniak LS, Messina DA, Stuckey HL, Curry WJ, Chuang CH, Sherwood LL, Hess SL. A strength training program for primary care patients, central Pennsylvania, 2012. *Preventing Chronic Disease*, 2014, 11:130403.
21. Weisman CS, Chuang CH. Making the Most of the Affordable Care Act's Contraceptive Coverage Mandate for Privately-Insured Women. *Women's Health Issues*, 2014 (Sept-Oct); 24(5): 465-468.
22. Peyton T, Poole E, Reddy M, Kraschnewski J, Chuang C. "Every pregnancy is different": Designing mHealth interventions for the pregnancy ecology. Health & Community, DIS 2014, Vancouver, BC, Canada. <http://dx.doi.org/10.1145/2598510.2598572>
23. Kraschnewski J, Chuang CH, Poole ES, Peyton T, Blubaugh I, Pauli J, Feher A, Reddy M. Paging "Dr. Google": Does technology fill the gap created by the prenatal care visit structure? *Journal of Medical Internet Research*, 2014, 16(6):e147.

24. Kraschnewski JL, Chuang CH. "Eating for two": Excessive gestational weight gain and the need to change social norms. *Women's Health Issues*, 2014 (May-June); 24(3): e257-e259.
25. Amin W, Tsui F, Borromeo C, Chuang CH, Espino J, Ford D, Hwang W, Kapoor W, Lehmann H, Martich GD, Morton S, Paranjape A, Shirey W, Sorenson A, Becich M, Hess R and the PaTH network team. PaTH: Towards a learning health system in the Mid-Atlantic region. *Journal of the American Medical Informatics Association*, 2014, 21(4), 633-636. doi:10.1136/amiajnl-2014-002759.
26. Oluyemi AO, Welch AR, Yoo LJ, Lehman EB, McGarrity TJ, Chuang CH. Colorectal cancer screening in high-risk groups is increasing, although current smokers fall behind. *Cancer*, 2014, 120(4): 2106-2113.
27. Gonzalo JD, Wolpaw DR, Lehman E, Chuang CH. Patient-centered interprofessional collaborative care: Factors associated with bedside interprofessional rounds. *Journal of General Internal Medicine*, 2014, 29(7), 1040-1047. DOI: 10.1007/s11606-014-2817-x.
28. Chuang CH, Stengel MR, Hwang SW, Velott D, Kjerulff KH, Kraschnewski JL. Behaviors of overweight and obese women during pregnancy who achieve and exceed recommended gestational weight gain. *Obesity Research & Clinical Practice*, 2014, 1871. DOI: 10.1016/j.orcp.2013.12.254
29. Tinloy J,\* Chuang CH, Zhu J, Pauli J, Kraschnewski JL, Kjerulff KH. Exercise during pregnancy and risk of late preterm birth, cesarean delivery, and hospitalizations. *Women's Health Issues*, 2014, 24(1): e99-e104. PMID: PMC3913372.  
*Among Women's Health Issues' top 5 downloaded articles in 2014*
30. McCall-Hosenfeld JS, Weisman CS, Perry AN, Hillemeier MM, Chuang CH. "I just keep my antennae out" - How Rural Primary Care Physicians (PCPs) Respond to Intimate Partner Violence (IPV). *Journal of Interpersonal Violence*, 2014, epub ahead of print: DOI: 10.1177/0886260513517299.
31. Colon-Gonzalez MC, McCall-Hosenfeld JS, Weisman CS, Hillemeier MM, Perry AN, Chuang CH "Someone's got to do it" – Primary care providers (PCPs) describe caring for rural women with mental health problems. *Mental Health in Family Medicine*, 2013, 10(4):191-202.
32. Maag R\* and Chuang CH. Uncommon complications of heparin induced thrombocytopenia. *American Journal of Medicine*, 2013, 126(11):e5-6. .
33. Rosenwasser LA,\* McCall-Hosenfeld JS, Weisman CS, Hillemeier MM, Perry AN, Chuang CH. Barriers to colorectal cancer screening among women in rural central Pennsylvania: Primary care physicians' perspective. *Rural and Remote Health*, 2013, 13: 2504. PMID: PMC4050077.
34. Kraschnewski JL, Chuang CH, Downs DS, Weisman CS, McCamant EL, Baptiste-Roberts K, Zhu J, Kjerulff K. Association of prenatal physical activity and gestational weight gain: Results from the First Baby Study, *Women's Health Issues*, 2013, 23-4, 233-e238. PMID: PMC3742311.
35. Abbasi S,\* Chuang CH, Dagher R, Zhu J, Kjerulff K. Unintended pregnancy and postpartum depression among first time mothers. *Journal of Women's Health* 2013, 22(5): 412-416.

36. McCall-Hosenfeld JS, Chuang CH, Weisman CS. Prospective association of intimate partner violence (IPV) with receipt of clinical preventive services in women of reproductive age, *Women's Health Issues*, 2013; 23-2, e109-e116. PMID: PMC3770472.
37. Kjerulff KH, Velott DL, Zhu J, Chuang CH, Hillemeier MM, Paul IM, Repke JT. Mode of first delivery and women's intentions for subsequent childbearing: Findings from the First Baby Study. *Paediatric and Perinatal Epidemiology* 2013, 27(1): 62-71.
38. Kraschnewski JL, Sciamanna CN, Stuckey HL, Chuang CH, Lehman EB, Hwang KO, Sherwood LL, Nembhard HB. A Silent Response to the Obesity Epidemic: Decline in U.S. Physician Weight Counseling. *Medical Care* 2013, 51(2):186-92. PMID: 23047128 (PMCID: In Progress)
39. Stengel MR,\* Kraschnewski JL, Hwang SW, Kjerulff KH, Chuang CH. "What My Doctor Didn't Tell Me": Examining Health Care Provider Advice to Overweight and Obese Pregnant Women on Gestational Weight Gain and Physical Activity. *Women's Health Issues* 2012, 22(6): e535-e540. PMID: PMC3490197  
Most cited Women's Health Issues article on Scopus in 2014.
40. MaCauley M,\* Showalter JW, Beck M, Chuang CH. The effect of a provider-enhanced clinical decision support tool for guiding venous thromboembolism pharmacoprophylaxis in 'low-risk' patients. *Hospital Practice* 2012, 40(3): 7-12. PMID: PMC3761945.
41. Chuang CH, Cattoi AL,\* McCall-Hosenfeld JS, Camacho F, Dyer AM, Weisman CS. Longitudinal association of intimate partner violence and depressive symptoms. *Mental Health in Family Medicine* 2012, 9(2): 107-114.
42. McCall-Hosenfeld JS, Weisman CS, Camacho F, Hillemeier MM, Chuang CH. Multi-Level Analysis of the Determinants of Receipt of Clinical Preventive Services Among Reproductive-Age Women, *Women's Health Issues* 2012; 22(3): e243-e251. PMID: PMC3345071
43. Chuang CH, Martenis ME,\* Parisi SM, Delano RE, Sobota M, Nothnagle M, Schwarz EB. Contraception and abortion coverage: What do primary care physicians think? *Contraception* 2012; 86: 153-156. PMID: PMC3328663
44. Chuang CH, Hwang SW, McCall-Hosenfeld JS, Rosenwasser L, Hillemeier MM, Weisman CS. Primary care physicians' perceptions of barriers to preventive reproductive health care in rural communities. *Perspectives on Sexual and Reproductive Health* 2012; 44(2): 78-83. PMID: PMC3706998
45. Parisi SM, Zikovich S, Chuang CH, Sobota M, Nothnagle M, Schwarz EB. Primary care physicians' perceptions of rates of unintended pregnancy. *Contraception* 2012; 86: 48-54. PMID: PMC3708967
46. Domino SE, Bodurtha J, Nagel JD, and the BIRCWH Program Leadership. Interdisciplinary Research Career Development: Building Interdisciplinary Research Careers in Women's Health Program Best Practices. *Journal of Women's Health* 2011; 20(11): 1587-1601. PMID: PMC3216063
47. Chuang CH, Hillemeier MM, Dyer AM, Weisman CS. The relationship between pregnancy intention and preconception health behaviors. *Preventive Medicine* 2011; 53: 85-88. PMID: PMC3143280

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75. Chuang CH and Liebschutz JM. Screening for intimate partner violence in the primary care setting: a critical review. *Journal of Clinical Outcomes Management* 2002; 9(10): 565-571.
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**Peer-Reviewed Conference Papers:**

1. Peyton T\*, Poole E, Reddy M, Kraschnewski J, Chuang C. (Accepted) "Every Pregnancy is different": Designing mHealth for the pregnancy ecology. In Proc. Of ACM Conf. on Designing Interactive Systems 2014 (DIS 2014). Vancouver, Canada. June 21-25, 2014.

**Non-Peer-Reviewed Publications:**

1. Kern LM, Chuang C, Berlin C, Ward L. Institutional champions for General Internal Medicine. *SGIM Forum* 2010, 33(10): 1, 13-14.
2. Chuang CH, Weisman CS. Pregnancy intention and health behaviors: The Central Pennsylvania Women's Health Study Cohort. IFAVA: The Scientific Newsletter. May 2010, No. 45.

**Book Chapters:**

1. Sherwood L\* and Chuang CH. Osteoporosis. In Williams R, Kahan S, Eds., *In a Page Ambulatory Medicine*: Lippincott Williams and Wilkins, 2007.
2. Sherwood L\* and Chuang CH. Hirsutism. In Williams R, Kahan S, Eds., *In a Page Ambulatory Medicine*: Lippincott Williams and Wilkins, 2007.
3. Shah P\* and Chuang CH. Cancer Screening. In Williams R, Kahan S, Eds., *In a Page Ambulatory Medicine*: Lippincott Williams and Wilkins, 2007.
4. Mohammed S\* and Chuang CH. Screening and Prevention of Coronary Artery Disease. In Williams R, Kahan S, Eds., *In a Page Ambulatory Medicine*: Lippincott Williams and Wilkins, 2007.
5. Chuang CH, Emergency Contraception. In: Carr PL, Ricciotti HA, Freund KM, Kahan S, Eds. *In a Page OB/GYN and Women's Health*: Blackwell Publishing, 2004.
6. Chuang CH, Domestic Violence. In: Carr PL, Ricciotti HA, Freund KM, Kahan S, Eds. *In a Page OB/GYN and Women's Health*: Blackwell Publishing, 2004.

\*Indicates trainee

**Master's Thesis:**

Chuang CH. Association of physical and sexual abuse with high-risk sexual behavior in HIV-infected persons with alcohol problems. May 2003

***Peer-Reviewed Abstracts Presented at National Meetings (from past 5 years):***

Nelson HN, Borrero S, Lehman E, Velott DL, Chuang CH. Measuring oral contraceptive adherence using self-report versus pharmacy claims data. Poster presentation by Ms. Nelson at the 2017 Annual Congress on Women's Health in Washington, DC in April 2017.

Bailey CV, Leuenberger LA, Thayer EG, Lehman EB, Chuang CH. Coverage Awareness and Contraceptive Choice: Factors Associated with New LARC Use in Privately Insured Women. Poster presentation by Ms. Bailey, Leuenberger, and Thayer at the 2017 Annual Congress on Women's Health in Washington, DC in April 2017.

Chuang CH, Weisman CS, Velott D, Lehman D, Moos MK, Sciamanna C, Legro RS, Armitage C, Chinchilli V. Main findings from the MyNewOptions Study: A randomized controlled trial of a web-based reproductive life planning intervention. Poster presented at the 2017 Society of General Internal Medicine Annual Meeting in Washington, D.C. in April 2017.

Snyder AH, Zhang C, Liu G, Chuang CH, Sobota M. Internists underperform in provision of first line contraception. Oral presentation by Dr. Snyder at the 2017 Society of General Internal Medicine Annual Meeting in Washington, DC

Hamidi O, Deimling T, Weisman C, Lehman E, Chuang CH. High self-efficacy correlates with use of long-acting reversible contraceptives. ePoster presentation by Dr. Hamidi at the 2017 American Congress of Obstetrics and Gynecology (ACOG) Annual Clinical and Scientific Meeting in San Diego, CA in May 2017.

Confer K, Garber J, McCullough J, Chuang CH, McTigue K, Kraschnewski J. You've got mail: Using e-mail to recruit a representative cohort for a healthy lifestyles research study. Poster presentation by Ms. Confer at the American Public Health Association Annual Meeting in Denver, CO in November 2016.

Dimmock AEF, Danoff SK, Lindell KO, Cordova FC, Gibson KF, Lehmann H, Chuang CH, Bascom R. Impact of IPF on Executive functioning: A cross-sectional analysis. Poster presentation by Ms. Dimmock at the International Colloquium on Lung and Airway Fibrosis (ICLAF) in Dublin, Ireland in September 2016.

Dimmock AEF, Green MJ, Cordova FC, Danoff SK, Gibson KF, Lehmann H, Chuang CH, Bascom R, Lindell KO. Variable advance care planning in patients in the PaTH IPF cohort. Poster presentation by Ms. Dimmock at the International Colloquium on Lung and Airway Fibrosis (ICLAF) in Dublin, Ireland in September 2016.

Snyder A, Weisman CS, Liu G, Leslie D, Chuang CH. Effect of the contraceptive mandate of the Affordable Care Act on insertion rates and out-of-pocket cost for the intrauterine device. Poster presentation at the Penn State Department of Medicine and Public Health Sciences Research Day in April 2016 and the 2016 Society of General Internal Medicine Annual Meeting in Hollywood, FL in April 2016.

Lauring JR, Lehman EB, Deimling TA, Legro RS, Chuang CH. Use of estrogen-containing contraception among reproductive age women with medical contraindications. Oral presentation at the 2016 Society of General Internal Medicine Annual Meeting in Hollywood, FL in April 2016.

Paranjape A, McTigue KM, Becich M, Bennett WL, Chuang CH, Clark JM, Ford DE, Herring SJ, Kraschnewski J, Sciamanna C, Hess R. Can secure electronic messaging serve as an efficient participant recruitment tool? The PaTH experience. Poster presentation by Dr. Paranjape at the 2016 Society of General Internal Medicine Annual Meeting in Hollywood, FL in April 2016.

Van Scoy LJ, Reading J, Scott AM, Chuang CH, Levi BH, Green MJ. Towards the best end-of-life conversation possible: Describing a data-driven approach to maximizing conversation quality and content during a conversation game. Submitted to the 2016 American Thoracic Society Meeting.

Dimmock AEF, Bascom R, Cordova F, Lindell KO, Gibson K, Chuang C, Danoff SK. Using a Clinical Data Research Network-Derived Idiopathic Pulmonary Fibrosis Cohort to Estimate Recruitment Bias in Clinical Pharmaceutical Trials. Submitted to the 2016 American Thoracic Society Meeting.

Dimmock AEF, Johannes BL, Danoff SK, Lindell KO, Gibson K, McCullough J, Cordova F, Dobi CD, Gauvey-Kern ME, Mahler B, Uhrig J, Carns JE, Chuang C, Bascom R. A multi-platform recruitment approach to establishing an idiopathic pulmonary fibrosis cohort for patient-centered research. Poster presentation (by Ms. Dimmock) at the 2016 American Thoracic Society Meeting in San Diego, CA, May 2016.

Ahmad TA, Liu G, Alagona P, Chuang C, Foy AJ, Bokhari SM, Leslie D. Association between statin exposure and diabetes incidence in a nationwide claims database. Oral abstract presentation (by Dr. Ahmad) at the American Heart Association Scientific Session in Orlando, FL, November 2015. *Circulation* 2015; 132:A16008.

Yoo L, Welch Am, McGarrity T, Mathew A, Chuang C, Liu G, Leslie D. Risk factors for aspiration pneumonia in ambulatory endoscopy patients utilizing Marketscan data. Poster presentation (by Dr. Yoo) at the American College of Gastroenterology's 80<sup>th</sup> Annual Meeting, in Honolulu, HI, October 2015. Winner of the 2015 ACG Presidential Poster Award.

Chuang CH, Mitchell J, Velott D, Sciamanna CN, Legro RS, Lehman E, Confer L, Weisman CS. Women's awareness of their contraceptive benefits after the Affordable Care Act. Oral presentation at the Society of General Internal Medicine Annual Meeting in Toronto, Canada in April 2015 and poster presentation at the Society of General Internal Medicine Mid-Atlantic Regional Meeting in Hershey, PA in March 2015 (Winner, Best Faculty Research Poster) and North American Forum on Family Planning in November 2015 in Chicago, IL.

Gonzalo JD, Kuperman EF, Chuang CH, Glasser F, Lehman EB, Abendroth T. Impact of an Overnight Internal Medicine Academic Hospitalist Program on Patient Outcomes. Poster presentation (by Dr. Gonzalo) at the Society of General Internal Medicine Annual Meeting in Toronto, Canada, April 2015.

Dimmock AEF, Chuang CH, Bhattacharjee S, Meck DS, Bascom R. Evaluation of a Computable Phenotype for Identification of Patients with Idiopathic Pulmonary Fibrosis. *Am J Resp Crit Care Med* 2015. Poster presentation at the 2015 American Thoracic Society (ATS) Annual Meeting in Denver, CO, May 2015.

Peyton T, Poole E, Kraschnewski J, Reddy M, Chuang CH. Information, sharing and support in pregnancy: Addressing needs for mHealth design. Poster presentation (by Ms. Peyton) at the 17<sup>th</sup> Association for Computing Machinery (ACM) Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2014) conference in Baltimore, MD, February 2014.

Chuang CH, Kraschnewski J, Stengel M, Hwang S, Velott D, Kjerulff K. Behaviors of pregnant women who achieve and exceed recommended gestational weight gain. Poster presentation at the Women's Health 2013: The 21<sup>st</sup> Annual Congress in Washington, DC in March 2013 and the Society of General Internal Medicine Annual Meeting in Denver, CO, April 2013

Chuang CH, Zhu J, Kjerulff K. Pregnancy intention and ambivalence in obese and non-obese women. Poster presentation at the Women's Health 2013: The 21<sup>st</sup> Annual Congress in Washington, DC in March 2013 and the Society of General Internal Medicine Annual Meeting in Denver, CO, April 2013

Colon-Gonzalez M, McCall-Hosenfeld JS, Chuang CH, Hillemeier MM, Weisman CS. "Someone's got to do it": Primary care providers (PCPs) describe caring for rural women with mental health problems. Poster presentation (by Dr. Colon-Gonzalez) at the Society of General Internal Medicine Mid-Atlantic Regional Meeting in Philadelphia, PA, March 2013 and Society of Teachers of Family Medicine Annual Spring Conference in Baltimore, MD, May 2013

**Lectures/Workshops:**

- December 2017 Panel Presentation: *Leaning In... Addressing Women's Leadership Growth within General Internal Medicine*  
2017 Association of Chiefs and Leaders in General Internal Medicine (ACLGIM) Annual Summit, Paradise Valley, AZ
- December 2017 Panel Presentation: *Exploring Critical Contributions to Access beyond Provision*  
Medical Students for Choice, Philadelphia, PA
- May 2017 Panel Presentation: *Translational research use cases for Integrative Analyses of EHR data with behavioral, socio-demographic, environmental and other types of data*  
Penn State CTSI Informatics Panel, Penn State College of Medicine, Hershey, PA
- May 2017 2017 Spring Dean's Lecture: *Contraceptive Use: Before, During and After the Affordable Care Act*  
Penn State College of Medicine, Hershey, PA
- April 2017 Workshop: *How to "Do" Patient-Centered Family Planning Counseling: New Approaches to Assessing Pregnancy Intention and Conducting Contraceptive Counseling*  
Co-Faculty: Sonya Borrero, MD (University of Pittsburgh), Lisa Callegari, MD (University of Washington)  
2017 Society of General Internal Medicine Annual Meeting, Washington, D.C.
- December 2016 Panel Presentation: *Engaging Special Populations in the Research Process*  
Moderator  
Penn State CTSI Bench to Bedside and Beyond (B3) Seminar Series
- December 2016 Lecture: *The MyNewOptions Study*  
Health Services and Behavioral Research Seminar Series  
Penn State College of Medicine, Hershey, PA

- November 2016 Panel Presentation: *Stop, collaborate and listen: learning how to engage patients in reproductive health care improvement efforts*  
North American Forum on Family Planning, Denver, CO
- October 2016 Keynote Presentation: *A Journey through the Career of a Primary Care Provider*  
Primary Care Day  
Penn State College of Medicine, Hershey, PA
- May 2016 Medical Grand Rounds: *Clinical Updates in General Internal Medicine*  
Penn State Hershey Medical Center, Hershey, PA
- November 2015 Panel Presentation: *Patient-Centered Outcomes Research*  
Society of Family Planning Career Development Seminar  
North American Forum on Family Planning, Chicago, IL
- October 2015 Panel Presentation: *Reproductive Health and Patient-Centered Outcomes Research*  
Planned Parenthood Associates: Patient-Centered Outcomes Research & Reproductive Health Summit, New York, NY
- October 2015 Panel Presentation: *Reproductive Health and Patient-Centered Outcomes Research*  
2015 Patient-Centered Outcomes Research Institute: Progress in Building a Patient-Centered Comparative Clinical Effectiveness Research Community; Washington, D.C.
- May 2015 Panel Discussion: *Pragmatic and Patient-Centered: Clinical Trials Done Differently*  
Society of General Internal Medicine 38<sup>th</sup> Annual Meeting, Toronto, ON
- March 2015 Panel Discussion (Moderator): *PCORnet in the Mid-Atlantic Region: The PaTH and NYC Clinical Data Research Networks*  
2015 Mid Atlantic Regional Society of General Internal Medicine Meeting: Building the SGIM Neighborhood: Communication, Collaboration and Creativity to Enhance the Future of Generalism
- February 2015 Panel Presentation: *Voices of Experience*  
Getting to Know PCORI: From Application to Closeout  
Atlanta, GA
- May 2014 Presentation: *PCORI, PCORnet, and the PaTH Mid-Atlantic Clinical Data Research Network*  
Penn State College of Medicine Departments of Medicine & Surgery Research Day, Hershey, PA
- April 2014 Lecture: *Applying for PCORI Funding*  
Health Services Research Colloquium, Department of Health Policy and Administration  
Penn State University, University Park, PA
- April 2014 Lecture: *Osteoporosis Update: Prevention, Screening, and Treatment*

National Public Health Week Lecture Series  
Penn State College of Medicine Mini-Medical School, Hershey, PA

March 2014      Lecture: *Osteoporosis Update: Prevention, Screening, and Treatment*  
Penn State College of Medicine Mini-Medical School, Hershey, PA

March 2014      Workshop: *Jumpstart Your Research: Identifying Opportunities with Secondary  
Dataset Analyses*  
Mid-Atlantic Society of General Internal Medicine Meeting, New York, NY  
Co-Faculty: Dr. Jennifer Kraschnewski

February 2014      Lecture: *Applying for PCORI Funding*  
Penn State College of Medicine Department of Public Health Sciences Seminar  
Series, Hershey, PA

January 2014      Seminar: *Applying for PCORI Funding*  
Penn State College of Medicine K Seminar Series, Hershey, PA

March 2013      Seminar: *How to Write a Successful K Award Application*  
Penn State College of Medicine K Seminar Series, Hershey, PA

August 2011      Medical Grand Rounds: *Update in Women's Health*  
Penn State Hershey Medical Center, Hershey, PA

March 2010      Medical Grand Rounds: *The Mammography Controversy*  
Temple University Hospital, Philadelphia, PA

March 2010      Lecture: *Update in Pap Smear Guidelines*  
General Internal Medicine conference  
Temple University Hospital, Philadelphia, PA

May 2009      Workshop: *Contraception in Women with Chronic Medical Conditions*  
Society of General Internal Medicine Annual Meeting, Miami, FL  
Co-Faculty: Dr. Bimla Schwarz, Dr. Mindy Sobota, Dr. Sara Levin

October 2008      Seminar: *How to Write a Successful K Award Application*  
Penn State College of Medicine K Seminar Series, Hershey, PA

May 2006      Medical Grand Rounds: *Update in Contraception/Reproductive Health*  
Penn State Hershey Medical Center, Hershey, PA

April 2005      Lecture: *Emergency Contraception*  
Penn State College of Medicine's 7<sup>th</sup> Annual Women's Health: Ages & Stages  
Conference, Grantville, PA

May 2004      Lecture: *Emergency Contraception*  
Springfield SouthWest Health Center, Springfield, MA

April 2004      Lecture: *Emergency Contraception*  
Lowell Community Health Center, Lowell, MA

April 2004           Lecture: *Emergency Contraception*  
Greater New Bedford Community Health Center, New Bedford, MA

April 2004           Lecture: *Emergency Contraception*  
Martha Eliot Health Center, Jamaica Plain, MA

December 2003       Lecture: *Emergency Contraception*  
Chelsea Health Center, Chelsea, MA

October 2003        Lecture/Discussion: *Emergency Contraception*  
Medical Students for Choice Regional Conference  
Boston University School of Medicine, Boston, MA

July 2003            CE lecture: *Emergency Contraception*  
Northeastern University School of Pharmacy, Boston, MA

June 2003           Lecture: *Emergency Contraception*  
Brookside Health Center, Jamaica Plain, MA

June 2003           Lecture: *Emergency Contraception*  
Southern Jamaica Plain Health Center, Jamaica Plain, MA

March 2003          Discussion: *Current Clinical Guidelines for Emergency Contraception*  
At the Massachusetts Emergency Contraception Network and Health Care of  
Southeastern Massachusetts, Inc. conference: Emergency Contraception: A  
Multidisciplinary Approach to Improving Access. Brockton, MA

December 2002       Family Medicine Grand Rounds: *Emergency Contraception*  
Boston Medical Center, Boston, MA

December 2002       Medical Grand Rounds: *Emergency Contraception*  
Lowell General Hospital, Lowell, MA

December 2002       CME lecture: *Emergency Contraception*  
Neighborhood Health Plan, Boston, MA

November 2002       General Internal Medicine Grand Rounds: *Emergency Contraception*  
Boston Medical Center, Boston, MA

November 2002       Discussion: *Current Clinical Guidelines for Emergency Contraception*  
At the Massachusetts Emergency Contraception Network and Massachusetts  
Public Health Association conference: Emergency Contraception: A  
Multidisciplinary Approach to Improving Access  
Boston, MA

November 2002       *Preventing Unintended Pregnancy: Emergency Contraception*  
At the Reproductive Options Education Consortium for Nursing conference:  
Caring for the Woman with an Unintended Pregnancy: Teaching What Nurses  
Need to Know, Charlestown, MA

November 2002      *Emergency Contraception and New Contraceptive Methods*  
Medical Students for Choice Regional Conference  
Harvard Medical School, Boston, MA

October 2002      Medical Grand Rounds: *Emergency Contraception*  
Quincy Medical Center, Quincy, MA

October 2002      CME lecture: *Emergency Contraception*  
Harrington Memorial Hospital, Harrington, MA

August 2002      Medical Grand Rounds: *Emergency Contraception*  
Cambridge Hospital, Cambridge, MA

April 2002      Workshop Co-Moderator: *Domestic Violence*  
American College of Physicians Annual Session, Philadelphia, PA

**Legislative and Other Testimony:**

December 2017      Testimony as expert witness in Commonwealth of Pennsylvania vs. Donald Trump (No. 2:17-cv-04540-WB) in U.S. District Court for the Eastern District of Pennsylvania: Declaration in support of the Motion for Preliminary Injunction filed by the Commonwealth of Pennsylvania to prevent execution of the Religious Exemption Rule and Morale Exemption Rule intended to limit contraceptive coverage as mandated by the Affordable Care Act.

October 2016      Statement before the Pennsylvania Medical Society (Reference Committee D) in support of Resolution 16-404: Comprehensive Women's Reproductive Health Care

May 2007      Testimony before the Health and Human Services Committee, Pennsylvania House of Representatives: Mandating availability of Emergency Contraception in Pennsylvania Emergency Departments

December 2005      Statement for Press Conference in support of House Bill 2217: The Access to Legal Pharmaceuticals Bill

June 2003      Testimony before the Health Care Committee, Massachusetts State House: Mandating availability of Emergency Contraception in Massachusetts Emergency Departments

March 2003      Briefing of Massachusetts State House Legislators on bill for emergency contraception use in emergency departments and collective pharmacy agreements