

**CURRICULUM VITAE**  
**Suzann Pershing**

January 2017

**Specialty**

**Comprehensive Ophthalmology**

Board-certified

**Academic Appointments**

**Assistant Professor of Ophthalmology**  
**Stanford University Medical Center**  
Palo Alto, CA

June 2014 – present

**Chief, Ophthalmology and Eye Care Services**  
**Veterans Affairs Palo Alto Health Care System**  
Palo Alto, CA

July 2013 – present

**Clinical Instructor**  
**Stanford University Medical Center**  
Palo Alto, CA

September 2010 – June 2014

**Licensure**

**Physician and Surgeon, state of California**

August 2007

**Education and Postdoctoral Training**

**AHRQ Fellowship in Health Care Research and Health Policy**  
Stanford University  
Palo Alto, CA

June 2013

**Master of Science, Health Research and Policy**  
Stanford University  
Palo Alto, CA

June 2013

**Ophthalmology Residency**  
Stanford University  
Palo Alto, CA

June 2010

**Transitional (Rotating) Internship**  
Scripps Mercy Hospital  
San Diego, CA

June 2007

**Doctor of Medicine (M.D.)**  
Medical University of South Carolina (MUSC)  
Charleston, SC.

May 2006

**Bachelor of Arts: Chemistry**  
Summa Cum Laude  
Sonoma State University  
Rohnert Park, CA

May 2002

**Leadership**

Member, American Academy of Ophthalmology (AAO) Task Force on IRIS Registry Analytics and Research, 2014-present

Member, American Academy of Ophthalmology (AAO) Clinical Data Registry Workgroup, 2012-2014

AAO Representative, International Consortium for Health Outcomes Measurement (ICHOM), 2013-present  
 Coordinator and Director, Residency Initiatives, AΩA National Medical Honor Society, 2009-present  
 Board of Directors, Alpha Omega Alpha (AΩA) National Medical Honor Society, 2009-present  
 President, Peninsula Eye Society, 2015-present  
 Vice President, Peninsula Eye Society, 2014-2015  
 Secretary, Peninsula Eye Society, 2013-2014  
 Member-in-Training Councilor, California Association of Eye Physicians and Surgeons, 2009-2010  
     Elected to one-year term on Board of Councilors of California section of American Academy of Ophthalmology  
 Advocacy Ambassador to American Academy of Ophthalmology Mid-Year Forum, April 2009  
     Sponsored by Women in Ophthalmology  
 Admissions Panel, Stanford University School of Medicine, 2012-present  
     Review of medical school applications and serving as interviewer/rater for Multiple Mini Interviews (MMI)  
 Chief Resident, Department of Ophthalmology, Stanford University, 2009-2010  
     Administrative management, education of junior residents and medical students, conference and lecture scheduling  
 Committee Member, Infection Control Committee, Stanford University Medical Center, 2011-2013  
 Committee Member, Criterion-Based Evaluation Initiative Development, Stanford School of Medicine  
     2009-2010. Medical Knowledge and Practice Based Learning Working Group. Involved in formulating  
     guidelines for the development of new Criterion-Based medical student Evaluation Initiative  
 President, Alpha Chapter of AΩA Medical Honor Society, South Carolina, 2005-2006  
     <http://www.musc.edu/aoa>. Initiated a program during presidency to recruit talented and motivated students from  
     South Carolina colleges to the MUSC College of Medicine (M.D. program) and Medical Scientist Training  
     Program (M.D./Ph.D. program), via annual information/recruitment session as well as funded scholarships.  
 Chair, Grant Writing Division, Finance Committee  
     Medical Student Ophthalmology Society, MUSC, 2004-2005  
 Chair, Epidemiology/Population Health Committee, Public Health Interest Group, MUSC, 2004-2005  
 Chair, Faculty Excellence Awards Committee, MUSC, 2003-2004  
 Leader, Gift Program Study Skills Workshop, MUSC, 2004  
 MUSC College of Medicine Student Council member, 2003-2004, 2005-2006  
 Member, Careers in Medicine Committee, MUSC, 2005-2006

## Teaching and Structured Mentorship

Co-Director, Medical Student 300A Ophthalmology Clerkship, Stanford University, 2012-present  
 Director, Medical Student 301A Ophthalmology Clerkship, Stanford University, 2016-present  
 Ophthalmology Residency Program Clinical Competency Committee Ophthalmology Milestone Project,  
     2013-present  
 Ophthalmology Residency Selection Committee, 2013-present  
 Advisor and Research Mentor, Stanford MedScholars Program Scholarly Concentration, 2016-present  
     Mentored gap year research experience for a medical student at Stanford University (Stephanie Chen),  
     sponsored for Summer 2016-Summer 2017  
 Advisor and Research Mentor, Stanford MedScholars Program Scholarly Concentration, 2016-present  
     Mentored research experience for a medical student at Stanford University (Elaine My Tien Tran), sponsored  
     for Summer 2016-Winter 2017  
 Advisor and Research Mentor, Stanford MedScholars Program Scholarly Concentration, 2014-present  
     Mentored research experience for a medical student at Stanford University (Cole Rojas), sponsored for  
     Summer 2014-present  
 Co-Instructor, HRP 222A: Advising Congress on Health Policy, Stanford University, 2013-2014  
     Multidisciplinary policy lab in collaboration between School of Medicine, School of Law, and Graduate  
     School of Business. Working directly with MedPAC (Medicare Payment Advisory Commission) to address  
     issues identified as timely.

Mentor, HB-REX Stanford University summer program, 2014  
Mentored research experience with a sophomore undergraduate Human Biology major at Stanford University (Lauren Wedekind), sponsored for Summer 2014

PI Mentor, Stanford Institute of Medicine Summer Research Program, 2014  
Sponsored a high school student to work in a lab with an independent project under the supervision of a graduate student (Ananya Nandy, directly mentored by Greg Gaskin)

Mentor, Albert Schweitzer Fellowship, 2013-present  
Medical student initiative to develop a community preschool vision screening program in collaboration with Prevent Blindness Northern California (Karen Hong)

Teaching Assistant, Health Policy, Finance, and Regulation course (HRP 391/LAW 348), Stanford University, Winter quarter 2013

Mentor, Stanford Immersion in Medicine Series, 2008-present  
Sponsored Stanford premedical students interested in medicine for shadowing and counseling.

Resident education and mentorship, 2010-present  
Clinical and surgical teaching in OR, clinic, and on wards (staffing inpatient consults at Stanford Hospital), and via lectures and small-group sessions

Medical student and undergrad career and research mentorship  
Mentored students individually for research projects and career guidance

## **Grants and Awards**

Stanford Faculty Teaching Award, Department of Ophthalmology, 2014

Stanford Society of Physician Scholars Collaborative Research Grant, 2013  
Collaborating with and mentoring a medical student on a database research project (Michael Hurley)

Stanford Society of Physician Scholars Collaborative Research Grant, 2012  
Collaborating and mentoring medical student on a cost-effectiveness research project (Brian Matesic)

Scripps Mercy Excellence in Patient Care Award, 2007

MUSC President's Clinical Science Award, 2006

Merck Award for Academic Excellence, 2006

American Medical Women's Association Glasgow-Rubin Certificate of Commendation for Academic Achievement, 2006

MUSC Provost Scholarship, 2005

Collegiate All-American Scholar Award, United States Achievement Academy, 2006

National Collegiate Physical Sciences Award, United States Achievement Academy, 2006

## **Honors**

Stanford Medicine Leadership Academy, 2016-present

Stanford Society of Physician Scholars, 2011-2014

Alpha Omega Alpha Medical Honor Society (ΑΩΑ), elected as junior, 2004-present

Honors, Ophthalmology Clerkship, 2005

Honors, Senior Otolaryngology/Head and Neck Surgery Clerkship, 2005

Honors, Senior Psychiatry Clerkship, 2006

Honors, Neurology Clerkship, 2005

Honors, Surgery Clerkship, 2005

Honors, Internal Medicine Clerkship, 2005

Honors, Psychiatry Clerkship, 2005

Honors, Pediatrics Clerkship, 2004

Honors, Obstetrics and Gynecology Clerkship, 2004

Nominee, Gold Humanism in Medicine Honor Society, 2005

Honor grade, Medical Physiology, 2003

Honor grade, Medical Neuroscience, 2003

Honors, Essentials of Scientific Practice III, 2003

## Peer-Reviewed Publications (\* denotes corresponding author)

1. Pershing S, Stein JD.\* **There's No Place Like Home: Determining the Value of Home Monitoring of Patients with Age-Related Macular Degeneration.** Accepted as an invited commentary to *JAMA Ophthalmology*.
2. Pershing S, Morrison DE, Hernandez-Boussard T.\* **Cataract Surgery Complications and Revisit Rates among 3 States.** *American Journal of Ophthalmology*. 2016 Nov;171:130-138.
3. Oetting T,\* Alfonso E, Arnold A, Cantor L, Carter K, Cruz OA, Feldon S, Mondino B, Parke D, Pershing S, Uhler T, Volpe N. **Integrating the Internship into Ophthalmology Residency Programs: AUPO AAO White Paper.** *Ophthalmology*. 2016 Sep;123(9):2037-41
4. Baisiwala S, Bundorf KM, Pershing S.\* **Physician Utilization Patterns for Specific VEGF-Inhibitor Drugs in the 2012 US Medicare Population.** *OSLI Retina* 2016 June 1;47(6):555-62
5. ICHOM Macular Degeneration Working Group: Ian A. Rodrigues, Sara M. Sprinkhuizen, Daniel Barthelmes, Mark Blumenkranz, Gemmy Cheung, Julia Haller, Robert Johnston, Ramasamy Kim, Caroline Klaver, Martin McKibbin, Nor Fariza Ngah, Suzann Pershing, Dato Shankar Hiroshi Tamura, Adnan Tufail, Christina Y. Weng, Inger Westborg, Catherine Yelf, Nagahisa Yoshimura, Mark C. Gillies.\* **Defining a Minimum Set of Standardized Patient-centered Outcome Measures for Macular Degeneration.** *American Journal of Ophthalmology*. 2016 Aug;168:1-12
6. Wedekind L, Sainani K, Pershing S.\* **Supply and Perceived Demand for Teleophthalmology in Triage and Consultations: Survey of California Emergency Departments.** *JAMA Ophthalmology*. 2016 March 24 [Epub ahead of print]
7. Gaskin GL, Pershing S,\* Cole T, Shah NH. **Predictive Modeling of Risk Factors and Complications of Cataract Surgery.** *European Journal of Ophthalmology*. 2016 Jun 10;26(4):328-37.
8. ICHOM Cataract Surgery Working Group: Imran Mahmud,\* HariPriya Aravind, Anders Boman, Ingrid Kossler, Mats Lundstrom, Nigel Morlet, Suzann Pershing, Konrad Pesudovs, Goh Pik Pin, John Sparrow. **Cataract Surgery: Defining a Standard Set of Outcome Measures.** *JAMA Ophthalmology*. 2015 Nov 1;133(11):1247-52
9. Pershing S,\* Vaziri K, Albin TA, Moshfeghi DM, Moshfeghi AA. **Reply to: Risk Factors Predictive of Endogenous Endophthalmitis among Hospitalized Patients with Hematogenous Infections in the United States.** *American Journal of Ophthalmology*. 2015 Aug;160(2):392
10. Pershing S, Pal Chee C, Asch SM, Baker LC, Boothroyd D, Wagner TH, Bundorf MK.\* **Treating age-related Macular Degeneration: Comparing the Use of Two Drugs Among Medicare and Veterans Affairs Populations.** *Health Affairs*. 2015 Feb;34(2):229-38
11. DeMarchis E, Pershing S,\* Moshfeghi DM. **Clinical-Pathologic Correlation: Vitrectomy with Epiretinal and Internal Limiting Membrane Peel.** *Ophthalmic Surgery, Lasers, and Imaging Retina*. 2014 May;45(3):218-21
12. Vaziri K, Pershing S,\* Albin TA, Moshfeghi DM, Moshfeghi AA. **Risk Factors Predictive of Endogenous Endophthalmitis among Hospitalized Patients with Hematogenous Infections in the United States.** *American Journal of Ophthalmology*. 2014 March;159(3):498-504

13. Pershing S,\* Matesic B, Enns E, Owens DK, Goldhaber-Fiebert JD. **Cost-Effectiveness of Treatment for Diabetic Macular Edema: Ranibizumab, Triamcinolone, and Laser Therapies.** *Annals of Internal Medicine.* 2014 Jan;160(1):18-30
14. Pershing S,\* Fuchs VR. **Restructuring Medical Education to Meet Current and Future Health Care Needs.** *Academic Medicine.* 2013 Dec;88(12):1798-801.
15. Pershing S, Bakri S,\* Moshfeghi DM. **Ocular Hypertension and Intraocular Pressure Asymmetry after Intravitreal Injection of Anti-Vascular Endothelial Growth Factor Agents.** *Ophthalmic Surgery, Lasers, and Imaging Retina* 2013 Sep-Oct;44(5):460-4
16. Amato M,\* Pershing S, Walvick M, Tanaka S. **Trends in Ophthalmic Manifestations of Methicillin Resistant Staph Aureus (MRSA) in a Northern California Pediatric Population.** *Journal of American Association for Pediatric Ophthalmology and Strabismus.* 2013 Jun;17(3):243-7
17. Fijalkowski N, Pershing S, Moshfeghi DM.\* **The Importance of Keeping a Broad Differential in Retina Clinic: The Spectrum of Ophthalmic Disease Seen by Retinal Specialists in a Tertiary Outpatient Clinic Setting.** *Ophthalmic Surgery, Lasers, and Imaging Retina.* 2013; 44(2):133-9
18. Pershing S,\* Kumar A. **Phacoemulsification versus Extracapsular Cataract Extraction: Where Do We Stand?** *Current Opinion in Ophthalmology.* 2011; 22(1):37-42.
19. Pershing S, Dunn, J, Khan, A, Liao, YJ.\* **Cytomegalovirus Infection with MRI Signal Abnormalities Affecting the Optic Nerves, Optic Chiasm, and Optic Tracts.** *Journal of Neuroophthalmology.* 2009; 29(3):223-6
20. Wilson Jr ME,\* Trivedi RH, Bartholomew L, Pershing S. **Comparison of anterior vitrectorhexis and continuous curvilinear capsulorhexis in pediatric cataract and intraocular lens implantation surgery: a 10-year analysis.** *Journal of American Association for Pediatric Ophthalmology and Strabismus.* 2007; 11(5):443-6.

### Manuscripts Submitted/in Preparation

1. Han E, Baisiwala S, Jain A, Bundorf MK, Pershing S.\* **An Analysis of Medicare Reimbursement to Ophthalmologists: Years 2012-2013.** Under revision for *American Journal of Ophthalmology.*
2. Schuman AD, Andrews CA, Pershing S, Newman-Casey PA, Stein JD.\* **Does Type of Health Insurance Coverage Affect How Patients Who Are Newly Diagnosed With Open Angle Glaucoma Are Initially Treated?** Submitted to *Ophthalmology.*
3. Chen SP, Pershing S.\* **Vision Loss and Cognitive Impairment in the Elderly US Population.** Submitted to *Ophthalmology.*
4. Albin T, Callaway NF, Pershing S, Wang SK, Moshfeghi AA, Moshfeghi DM.\* **Trends in Hospitalization and Incidence Rate for Syphilitic Uveitis in the United States from 1998-2009.** Submitted to *American Journal of Ophthalmology*
5. Tran E, Bhattacharya J, Pershing S.\* **Self-Reported Receipt of Dilated Fundus Exams among Patients with Diabetes: Medicare Expenditure Panel Survey, 2000-2013.** Submitted to *American Journal of Ophthalmology.*

6. Vaziri K, Pershing S, Moshfeghi DM, Moshfeghi AA.\* **Cystoid Macular Edema among Patients Treated with Topical Prostaglandin Agonists.** Submitted to *OSLI Retina*
7. Lee R, Pershing S.\* **Health Insurance Coverage and Utilization of Eye Care Services in the United States: Medicare Expenditure Panel Survey, 2008-2012.** In preparation for resubmission
8. Wood EH, Pershing S, Moshfeghi DM, Bakri S. **Elevated Intraocular Pressure after Intravitreal Injection of anti-Vascular Endothelial Growth Factor Agents is Real and Clinically Relevant.** In preparation as an invited perspective to *American Journal of Ophthalmology*.

## Book Chapters

1. Pershing S and Alcorn DM. Pediatric Ophthalmology. In *Pediatrics for Medical Students*, edited by Bernstein D and Shelov SP. 3<sup>rd</sup> edition. Lippincott Williams and Wilkins. July 29, 2011

## Non-Peer Reviewed Publications

1. Al-Aswad L, Green LK, Kao SA, Mamalis N, Pershing S, Tipperman R. Scattered Blue Deposits after Cataract Surgery. *Cataract and Refractive Surgery Today*. October 2011, p 45-48. Available at [http://bmctoday.net/crstoday/pdfs/CRST1011\\_catcomp.pdf](http://bmctoday.net/crstoday/pdfs/CRST1011_catcomp.pdf) (last accessed 2/5/2014)
2. Pershing S. Putting Outcomes Analyses to Practical Use in Cataract and Refractive Surgery. *Cataract and Refractive Surgery Today Europe*. February 2015.

## Research Presentations

1. Tran E, Goldberg JL, Pershing S. **Systemic Predictors of Diabetic Eye Disease Development and Severity.** Submitted for presentation at the Association for Research in Vision and Ophthalmology 2017 Annual Meeting
2. Armenti S, .... **Have the CATT Trial Results and Introduction of Aflibercept to the Marketplace Influenced Utilization of Bevacizumab and Ranibizumab for Retinal Diseases?** Submitted for presentation at the Association for Research in Vision and Ophthalmology 2017 Annual Meeting
3. Sales CS, Terry MA, Straiko MD, Pershing S. **Comparative Lifetime Cost-Effectiveness Analysis of Descemet Membrane Endothelial Keratoplasty vs. Descemet-Stripping Automated Endothelial Keratoplasty in the United States.** Presented at the American Academy of Ophthalmology 2016 Annual Meeting.
4. Pershing, S. **Cost-effectiveness and Value-Based Purchasing.** Ophthalmic Informatics 2016 Annual Meeting (inaugural annual meeting, held at Oregon Health Sciences University)
5. Elkin Z, Baisiwala S, Binder S, Beyer J, Pershing S. **Value of Vision: Simulations for Measuring the Utility Lost with Presbyopia.** Presented at the American Society of Cataract and Refractive Surgery 2016 Annual Meeting
6. Wang K, Krishnan G, Pershing S. **Factors Associated with Endogenous Endophthalmitis and Ophthalmology Consults in an Inpatient Setting.** Presented at the Association for Research in Vision and Ophthalmology 2016 Annual Meeting

7. Schuman AD, Andrews CA, Newman-Casey PA, Pershing S, Stein JD. **Does Type of Health Insurance Coverage Affect How Patients Newly Diagnosed with Open-angle Glaucoma are Managed?** Presented at the Association for Research in Vision and Ophthalmology 2016 Annual Meeting
8. He L, Myung D, Pershing S, Chang R. **iPhone Photography of Eye Pathology for Remote Triage.** Presented at the Association for Research in Vision and Ophthalmology 2014 Annual Meeting
9. Vaziri K, Pershing S, Albin T, Moshfeghi DM, Moshfeghi AA. **Risk Factors Associated with Developing Endogenous Endophthalmitis.** Presented at the Association for Research in Vision and Ophthalmology 2014 Annual Meeting
10. Choi D, Chang R, Vaziri K, Moshfeghi D, Moshfeghi A, Pershing S. **Increasing Incidence of Conjunctival Lesion Excisions After Popularization of Prostaglandin Analogs.** Presented at the American Society of Cataract and Refractive Surgery 2014 annual meeting.
11. Hernandez-Boussard T, Morrison D, Pershing S. **Procedure-related Readmissions following Cataract Surgery.** Presented at the 30<sup>th</sup> International Conference of the International Society for Quality in Health Care (October 2013)
12. Pershing S, Matesic B, Enns E, Owens DK, Goldhaber-Fiebert JD. **Cost-Effectiveness of Treatment Options for Diabetic Macular Edema.** Presented as a poster at the 34<sup>th</sup> annual meeting of the Society for Medical Decision Making (October 2012)
13. Enns EA, Pershing S, Wang Y, Goldhaber-Fiebert JD. **Calibration Methods for Inferring Transition Probabilities from Cross-sectional Studies.** Presented as a paper at the 34<sup>th</sup> annual meeting of the Society for Medical Decision Making (October 2012)
14. Fijalkowski N, Pershing S, Moshfeghi DM. **The Incidence and Spectrum of Ophthalmic Disease Among New Patients Treated by Retinal Specialists in a Tertiary Outpatient Clinic Setting.** Presented as a poster at the 2012 American Academy of Ophthalmology Annual Meeting (November 2012).
15. Hernandez-Boussard T, Curtin C, Pershing S, McDonald KM. **Quality of Health Care Delivery in US Ambulatory Surgical Centers.** Presented at the 29<sup>th</sup> International Conference of the International Society for Quality in Health Care (October 2012)
16. Moshfeghi DM, Fijalkowski N, Pershing S. **The Incidence and Spectrum of Ophthalmic Disease Among New Patients Treated by Retinal Specialists in a Tertiary Outpatient Clinic Setting.** Presented as a poster at the 30<sup>th</sup> annual meeting of the American Society of Retina Specialists (August 2012)
17. Alcorn, DM, Fredrick, D, Pershing, S. **Prospective study of Endogenous Endophthalmitis in a Pediatric Population from a Tertiary Care Children's Hospital.** Presented as a paper at 2<sup>nd</sup> World Congress of Paediatric Ophthalmology (September 2012).
18. Amato M, Walvick M, Pershing S, Tanaka, S. **Trends in Ophthalmic Manifestations of Methicillin-resistant Staphylococcus Aureus in a Pediatric Population.** Presented as a paper at the 2009 Scientific Symposium of the American Society of Ophthalmic Plastic and Reconstructive Surgeons, San Francisco, CA.

19. Walvick M, Amato M, Pershing S. **Ophthalmic Methicillin-Resistant Staphylococcus aureus Infections: Sensitivity and Resistance Profile of 234 Specimens**. Presented as a poster at the 2009 Scientific Symposium of the Academy of Ophthalmology, San Francisco, CA.
20. Pershing, S, Charalel, RA, Banaei, N, Liao, YJ, Shrivastava, A. **In Vitro Activity of Antibiotic-Permeated Intraocular Lenses**. Presented as a poster at Association for Research in Vision and Ophthalmology 2009 Annual Meeting. Ft. Lauderdale, FL.
21. Bababegy, SR, Pershing, S, Manche, EE. **Visual Outcome of Wavefront-guided PRK in Eyes with High Myopia and Compound Astigmatism**. Presented as a paper at the American Society of Cataract and Refractive Surgery 2009 Symposium, Chicago, IL.
22. Pershing, S, Bababegy, SR, Manche, EE. **Photorefractive Keratectomy for Low-Moderate and High Myopia**. Presented as a paper at American Society of Cataract and Refractive Surgery 2008 Symposium.
23. Wilson Jr ME,\* Trivedi RH, Bartholomew L, Pershing S. **Anterior Capsulotomy: Intraoperative Performance and Tear Rate During Pediatric Cataract Surgery**. *Journal of American Association for Pediatric Ophthalmology and Strabismus*. 2006; 10(1): 70. Presented as a paper at American Academy for Pediatric Ophthalmology and Strabismus 2006 annual meeting

## Meeting Courses and Podium Presentations

American Academy of Ophthalmology (AAO) Annual Meeting

Senior Instructor

Breakfast with the Experts: **Applying Big Data Outcomes Analysis Techniques to Individual Practice**

Chicago, IL

October 2, 2016

American Academy of Ophthalmology (AAO) Annual Meeting

Instructor (Senior Instructor: Anu Khanna, MD)

Instruction Course: **Eye Simulations for Resident, Medical Student, and Patient Education: Experience Firsthand and Learn How to Integrate**

Chicago, IL

October 2, 2016

Association of periOperative Registered Nurses Fall Workshop

Course Lecture: **Overview and Advances in Modern Cataract Surgery**

Kaiser San Jose

November 12, 2016

Bay Area American Society of Ophthalmic Registered Nurses (ASORN) Annual Meeting

Course Lecture: **Learning from Outcomes – The Value of Big Data**

UCSF Medical Center

June 25, 2016

American Academy of Ophthalmology (AAO) Annual Meeting

Panel member (Course Chair: Kimberly Cockerham, MD)

Symposium: **Telehealth is Your Future**

Chicago, IL

October 20, 2014



Bay Area American Society of Ophthalmic Registered Nurses (ASORN) Annual Meeting  
Course Lecture: **Big Data: In Pursuit of Better Outcomes**  
Palo Alto VA Medical Center  
September 14, 2013

Bay Area American Society of Ophthalmic Registered Nurses (ASORN) Annual Meeting  
Course Lecture: **Cornea: The First Defense**  
Palo Alto VA Medical Center  
May 25, 2010

## **Selected Research**

### **Current**

#### **The Impact of Eye Disease and Visual Function of Women's Health: Defining a Women's Health Initiative (WHI) Population for Study**

Stanford University WSDM (Women and Sex Differences in Medicine) Seed Grant  
January 2017 – present

This project is intended to initiate study of Women's Health Initiative clinical and health care data for research in women's visual health, functional impact of eye disease and visual impairment, and responses to interventions. Within the context of this seed grant, we will define the population of interest, obtain preliminary data, and determine population size and project feasibility for extramural grant support.

Role: PI

Collaborators: Mark Hlatky MD, Marcia Stefanick PhD

#### **Visual Sensory Impairment and Progression following Mild Traumatic Brain Injury**

VA Consortium grant, *DoD/VA Chronic Effects of Neurotrauma*. Site PI: Glenn Cockerham  
January 2016 – present

Multicenter consortium grant, partnering VA Palo Alto Health Care System with VA Vision Center of Excellence at University of Iowa, and Minneapolis Brain Injury Center. Intent to use existing cohort of blast and traumatic brain injury patients at VA Palo Alto Health Care System to longitudinally evaluate long-term neurosensory effects of neurotrauma on vision over 4 years, as well as to enroll new subjects.

Role: Investigator, site lead

Collaborators: Glenn Cockerham MD (VA), Kimberly Cockerham MD (VA), Catherine Glynn-Milley RN (VA), Gloria W Wang MD (VA), Loh-Shan Bryan Leung MD (VA), Odette Harris MD MPH (VA), Sonne Lemke PhD (VA), Randy Carlton (Iowa VA)

#### **Medicare Data: Impact of Varicella Zoster Vaccination on Incidence of Herpetic Eye Disease**

June 2015 – present

The goal of this project is to evaluate for differences in the incidence of herpetic eye disease before and after availability of the varicella zoster vaccination, and to evaluate for differences in the incidence of herpetic eye disease among patients who received and those who did not receive the varicella zoster vaccination.

Role: co- investigator

Collaborators: Cole Rojas (Stanford), Charles Lin MD (Stanford), Kaidi Wang MD (Stanford), Jay Bhattacharya MD PhD (Stanford)

### **Medicare and VA Data: Drug utilization for wet Age-Related Macular Degeneration**

March 2012 – present

This is a multifaceted project evaluating both Medicare claims data and VA health system data. We are evaluating practice trends and utilization behavior for Vascular Endothelial Growth Factor inhibitors (ranibizumab and bevacizumab); institutional, physician and patient factors and incentives that influence practice behavior; relative rates of adverse events in a large multi-year nationally representative data set; and physician networks as a model and driver of practice.

Role: primary investigator

Collaborators: Kate Bundorf PhD (Stanford), Jay Bhattacharya MD PhD (Stanford), Loren Baker PhD (Stanford), Todd Wagner PhD (VA), Derek Boothroyd PhD (Stanford), Steve Asch MD (VA, Stanford), Christine Chee (VA), Wei Yu (VA), Shivani Baisiwala (Stanford), Cole Rojas (Stanford). Funded in part through Stanford Medscholars program.

### **VA Data: Treatment Patterns for Patients with Incident Open Angle Glaucoma**

November 2015 – present.

The goal of this project is to evaluate frequency of treatment among patients with newly-diagnosed glaucoma, treatment with medications vs. surgery, and choice of specific medication among patients classified by insurance type (commercial, Medicaid, VA)

Role: co-investigator

Collaborators: Josh Stein MD (Michigan)

### **EMR-based Predictive Analysis of Endogenous Endophthalmitis Consultations**

May 2015 – present.

The goal of this project is to evaluate patient and practice factors associated with ophthalmology consultation to evaluate for endogenous endophthalmitis and develop predictive criteria for warranted ophthalmology consultation on patients with suspicion for systemic bacterial or fungal infection. The project utilizes Stanford STRIDE resources.

Role: primary investigator

Collaborators: Kaidi Wang MD (Stanford), Gomathi Krishnan PhD (Stanford)

### **Cost-effectiveness and quality of life analyses**

March 2013 – present

The goal of these projects is to evaluate relative cost-effectiveness of ophthalmic interventions, including: cataract surgery techniques and treatment of proliferative diabetic retinopathy, and also to analyze the effect of quantifying visual function beyond best-corrected visual acuity (including contrast sensitivity, astigmatism, and near and distance vision).

Role: primary investigator

Collaborators: Christopher Sales MD (Cornell), Zachary Elkin MD (Stanford)

### **Medicare Expenditure Panel Survey (MEPS) data: Patterns in Delivery of Eye Care Services**

May 2015 – present

The goal of these projects is to evaluate utilization of eye care services based on US household survey data, evaluated according to insurance status, care delivery setting, adherence to national care guidelines, and the association between self-reported visual impairment and medical costs (eye-related and non-eye-related). Specifically, we are evaluating the impact of patient sociodemographic and economic factors on eye care utilization, the impact of low vision on total reported medical expenditures (insurance and out-of-pocket), and influence of patient sociodemographic and economic factors on self-reported receipt of diabetic screening eye exams.

Role: primary investigator

Collaborators: Rachel Lee MD (Stanford), Van Nguyen (Stanford/Louisiana State University), Elaine My Tien Tran (Stanford)

### **National Health and Nutrition Examination Survey: Neurosensory Impairment and Cognitive Decline**

June 2016 – present

The goal of this project is to evaluate the impact of comorbid neurosensory impairment (e.g., vision and hearing loss) and physical limitations (e.g., impaired mobility) on measured cognitive function and activity in the workforce. A similar project is planned utilizing Health and Retirement Survey and Womens' Health Initiative data.

Role: primary investigator

Collaborators: Stephanie Chen (Stanford)

### **Lens and Lens Capsule Tensile Strength and Biologic Composition: Correlation with Systemic Health**

January 2016 – present

The goal of this project is to quantify differences in lens capsule tensile strength among patients with and without systemic conditions (e.g., diabetes) and to quantify changes in tensile strength from capsule staining with trypan blue dye, as well as evaluate differences in lens protein composition by mass spectrometry.

Role: primary investigator

Collaborators: Irma Muhic (Stanford), Dave Myung MD PhD (Stanford/VA), Dan Feng PhD (Stanford)

### **Ophthalmology Consultation Patterns**

June 2014 – present

This is a two-part project: 1) retrospective descriptive analysis of ophthalmology service consultations across four hospitals (affiliated with the Stanford ophthalmology residency program) over a one-year period, and 2) electronic health record text extraction and code-based analysis to determine diagnosis, management, consultation, and followup patterns based on the treating physician specialty, for patients presenting to the Stanford emergency department with an eye-related complaint/diagnosis.

Role: primary investigator

Collaborators: Allison Beers (Vanderbilt), Greg Gaskin (Stanford), Ananya Nandy. Funded in part through Stanford Institute of Medicine summer research program

### **Time-Driven Activity Based Costing (TDABC) Process Analysis and Directed Improvement for Cataract Surgery in the VA System**

December 2015 – present

In collaboration with the Stanford Clinical Excellence Research Center and the Indiana VA, the goal of this project is to identify and share process improvements to increase efficiency and/or decrease costs in cataract surgery, with improvement (or at least no decrease) in quality of care. The project will utilize TDABC methods.

Role: co-investigator

Collaborators: Elizabeth Malcolm MD (Stanford), Roya Saffary (Stanford), Feryal Erhun (Stanford/Cambridge), Shravanti Achaen MD (Indiana VA)

### **Marketscan Data: analysis for diagnosis, treatment, and practice patterns.**

July 2013 – present.

The goal of this project is to evaluate diagnosis incidence and relative risk factors, practice variation over time and by provider/location, and impact of employment/demographic and insurance factors on provision of service for a spectrum of ophthalmic conditions (including endogenous endophthalmitis, syphilis uveitis, prostaglandins agonists and cystoid macular edema, and conjunctival pigmentation)

Role: co-investigator

Collaborators: Andrew Moshfeghi MD MBA (Project Lead; Bascom Palmer Eye Institute), Darius Moshfeghi MD (Stanford), Thomas Albini MD (Bascom Palmer Eye Institute), Kam Vaziri (Bascom Palmer Eye Institute)

### **Impact of Structured Patient Education Sessions on Patient Satisfaction and Clinical Efficiency**

June 2014 – present

The goal of this project is to implement nurse-led structured patient education sessions (initially for cataract surgery, with later expansion to other conditions), and assess effect on patient satisfaction (via pre- and post- intervention patient surveys and quality of life questionnaires) and clinical efficiency (wait times in clinic and volume of patients seen each day by physicians).

Role: primary investigator

Collaborators: Catherine Glynn-Milley RN (VA)

### **Portable, Remote Visual Field Screening Using a Virtual Reality Headset**

March 2014 – present

The goal of this project is to develop, test, and implement a visual field screening device to for remote, higher-frequency testing, screening, and service in remote clinics—integrated with a comprehensive suite of testing through the Digisight platform

Role: co-investigator

Collaborators: Alexander Morgan PhD (Stanford), Jonathan Mortensen (Stanford), Mark Blumenkranz MD MS (Stanford), Doug Foster (Digisight), Gloria Wang MD (Stanford, Palo Alto VA)

### **Use of free medication samples in ophthalmology**

February 2013 – present

The goal of this project is to analyze temporal trends, physician characteristics, and patient characteristics in use of free medication samples, using the National Disease and Therapeutic Index database.

Ophthalmology is unique as a specialty with increasing use of sample medications over the past decade.

Role: co-investigator

Collaborator: Michael Hurley MS (Stanford; medical student). Funded through Stanford Society of Physician Scholars collaborative research grant

### **HCUP.net Nationwide Inpatient Sample database analysis for diagnosis incidence and associations**

August 2012 – present.

The goal of this project is to determine ophthalmic disease incidence, prevalence, and risk factors in an inpatient setting using a representative nationwide sample. Current focus has been on syphilis uveitis (manuscript submitted); next areas of analysis will include fungal endophthalmitis, corneal abrasion, and orbital fracture management.

Role: co-investigator

Collaborators: Darius Moshfeghi MD (Stanford), Andrew Moshfeghi MD MBA (Bascom Palmer Eye Institute), Thomas Albin MD (Bascom Palmer Eye Institute), Natalia Fijalkowski BA (Stanford)

### **Visual outcomes following vitrectomy with epiretinal membrane/internal limiting membrane peeling**

July 2013 – present

The goal of this project is to determine visual outcomes using electronic text extraction from electronic medical record visit notes. We aim to compare results using different surgical techniques.

Role: co-investigator

Collaborators: Gomathi Krishnan PhD, Darius Moshfeghi MD, Irma Muhic MD (all Stanford)

### **Pediatric endogenous endophthalmitis study**

June 2009 – present

The goal of this prospective study is to investigate rates of infectious endophthalmitis in adult patients with systemic infection

Role: co-investigator

Collaborators: Deborah Alcorn MD (Stanford), Doug Fredrick MD (Stanford), Peter Chang MD (Bascom Palmer Eye Institute)

## **Pending**

### **Comparative Effectiveness in Cataract Surgery Outcomes: Conventional vs. “Premium” Approaches**

Status: Submission to PCORI

The goal of this project will be a prospective comparative evaluation of cataract surgery outcomes, comparing “standard” to “premium” cataract surgery among patients undergoing cataract surgery in both eyes. Outcomes will be evaluated through a combination of objective clinical measures (including visual acuity and contrast sensitivity), and patient-reported outcomes (obtained via structured surveys).

Role: potential clinical site PI

PI: Paul Lichter (University of Michigan)

### **Impact and Outcomes of Cataract Surgery among Patients with Alzheimer’s Disease**

Status: Submitted as R03 GEMSSTAR grant proposal through National Institute on Aging

The goal of this project will be to use longitudinal Medicare claims data to investigate cataract surgery rates, complications, and downstream effects, comparing patients with Alzheimer’s disease to a similar matched population of patients without dementia

Role: PI

Collaborators: Mary Goldstein, MD, MS (Stanford), Victor Henderson, MD, MS (Stanford); M. Kate Bundorf, PhD (Stanford); Ying Lu, PhD (Stanford); Joshua Stein, MD, MS (University of Michigan)

## **Completed**

### **Cataract surgical complication and quality analysis using AHRQ statewide datasets**

February 2012 – 2014

The goal of this project is to identify rates and demographic characteristics of cataract surgery complications necessitating return to OR within 30 days.

Role: co-investigator.

Collaborators: Tina Hernandez-Boussard, PhD

### **Current State of Ophthalmologist Supply and Potential Demand for Tele-ophthalmology Consultation in California Emergency Departments**

July 2014 – 2015

Structured telephone and email survey of nurse managers and physician representatives for every registered emergency department in California, to determine current and unmet need for ophthalmology coverage, interest in telemedicine consultation for ophthalmology patients, and evaluate responses in context of emergency department characteristics.

Role: primary investigator

Collaborators: Lauren Wedekind. Funded in part through Stanford HB-REX program

### **Predicting individualized complication risk with cataract surgery**

May 2013 – 2015.

The goal of this project is to comprehensively evaluate risk factors for specific complications during and after cataract surgery—including interactions among risk factors and complications—using free text extraction and natural language processing of electronic visit notes, ultimately to create a predictive risk calculator.

Role: co-investigator/project lead

Collaborators: Nigam Shah MBBS PhD (co-project lead; Stanford), Tyler Cole (Stanford), Greg Gaskin (Stanford). Funded in part through Stanford Medscholars program.

### **Cost-effectiveness analysis of diabetic macular edema**

September 2011 – April 2013

The goal of this project was to determine relative cost-effectiveness of treatment for diabetic macular edema, via a lifetime-horizon Markov model, from a societal perspective.

Role: primary investigator

Collaborators: Doug Owens MD MS (Stanford), Jeremy Goldhaber-Fiebert PhD (Stanford), Eva Enns PhD (University of Minnesota), Brian Matesic BS (Stanford)

### **Clinicopathologic correlation of epiretinal membrane and internal limiting membrane specimens**

June 2012 – 2013

The goal of this project is to determine accuracy of surgeon intraoperative diagnosis from vitrectomy with membrane peeling.

Role: co-investigator

Collaborators: Darius Moshfeghi MD (Stanford), Emilia DeMarchis BA (Stanford; medical student)

### **Intraocular Pressure Elevation after VEGF Inhibitor Intravitreal Injection**

March 2009 – 2011

The goal of this project was to evaluate cases of ocular hypertension/glaucoma occurring after intravitreal injection of bevacizumab or ranibizumab, via retrospective review of charts from two medical centers (Stanford University and Mayo Clinic).

Role: co-investigator

Collaborators: Darius Moshfeghi MD (Stanford), Sophie Bakri MD (Mayo Clinic)

### **Intraocular Succinate Levels as a Correlate to Ocular Ischemia**

August 2009 – 2010

The goal of this project was to analyze and compare intraocular succinate concentrations in ischemic diabetic eyes pre- and post- laser photocoagulation (clinical regression of ischemic neovascularization), to evaluate for a relationship in humans that was suggested by animal models.

Role: resident co-investigator

Collaborators (Mentor): Ray Gariano MD PhD (Stanford/Santa Clara Valley Medical Center)

### **Trends in Periorbital/Ocular MRSA**

October 2008 – December 2009

The goal of this retrospective chart review was to characterize periocular pediatric MRSA infections in the Northern California Kaiser Permanente healthcare system over the past ten years.

Role: resident co-investigator

Collaborators: Malena Amato MD (Kaiser Permanente), Matthew Walvick DO (Touro University College of Osteopathic Medicine), Stephen Tanaka MD (Kaiser Permanente)

### **Ethylene Vinyl Acetate Polymer coupled to Intraocular Lenses as a potential method for Drug Release**

December 2008 – June 2009

The goal of this project was to investigate the ability of synthetic ethylene vinyl acetate to contain and release medications commonly administered to/in the eyes, with intent to anneal the polymers to intraocular lenses and use for extended drug release after cataract surgery. Demonstrated detectable release of commonly-used antibacterial and anti-inflammatory compounds from the polymer.

Role: resident investigator

### **In Vitro Antibacterial Activity of Antibiotic-Permeated Intraocular Lenses**

January 2008 – June 2009

The goal of this project was to investigate the ability of intraocular lenses to serve as a passive reservoir for antibiotic uptake and release, with potential application for infection prophylaxis in cataract

surgery. Demonstrated time- and concentration-dependent release of fluoroquinolones from hydrophobic acrylic intraocular lenses.

Role: resident investigator

### **Photorefractive Keratectomy Outcomes in Variable Levels of Myopia**

September 2007 – May 2009

The goal of this project was to retrospectively evaluate the efficacy, predictability, and safety of custom photorefractive keratectomy (PRK) for the treatment of low to moderate versus high myopia and myopic astigmatism.

Role: resident co-investigator

Collaborators (Mentor): Edward Manche MD (Stanford)

### **Proteomics of Rhodopsin and Retinal Membrane Proteins:**

May – July 2003

This project was an introduction to protein sequencing and identification using tandem mass spectrometry, applied to rhodopsin and other retinal membrane proteins.

Role: medical student research assistant

Mentor: Daniel Knapp PhD (Pharmacology Dept., Medical University of South Carolina)

### **Anterior Capsulotomy Techniques for Pediatric Cataract Surgery**

April 2005 – December 2005

The goal of this project was to determine relative rates of tear with different anterior capsulotomy techniques in pediatric cataract surgery, via retrospective review of clinic visit notes and operative dictations.

Role: medical student research assistant

Mentor: M. Edward Wilson MD (Storm Eye Institute, Medical University of South Carolina)

## **Peer-Review Activities**

### **Journal Invited Reviewer**

*Ophthalmology*, 2014-present

*JAMA Ophthalmology*, 2016-present

*American Journal of Ophthalmology*, 2016-present

### **Grant Reviewer**

Chair, Alpha Omega Alpha Medical Honor Society Postgraduate Award Review Committee, 2013-present

Application Reviewer, Alpha Omega Alpha Student Research Fellowship Awards, 2009-present

## **Invited Lectures**

Presenter, Bay Area Ophthalmology Course (BAOC)

Physics and Pearls of Cataract Surgery: Phacodynamics, Fluidics, Phaco Platforms, and Practical Applications

Stanford University Medical Center

July 8, 2016

Visiting Professor, Alpha Omega Alpha Keynote Speaker, Medical University of South Carolina

On Continuity in Medicine

March 17, 2016

Guest Speaker, Dermatology Grand Rounds, Stanford University School of Medicine

Oculodermal Mélange – A Visual Tour

September 11, 2014

Guest Speaker, Public Health 196: Global Perspectives on Vision

UC Berkeley School of Public Health

February 13, 2014

Speaker, Byers Eye Institute Grand Rounds, Stanford Department of Ophthalmology  
A Dearth of Data: The Quality Conundrum and Health Care Reform  
November 1, 2012

Research Presentation, Byers Eye Institute 6<sup>th</sup> Annual Stanford Ophthalmology Day  
Cost-Effectiveness of Treatment Options for Diabetic Macular Edema  
June 23, 2012

General Ophthalmology Lecture to Stanford Internal Medicine Residents  
August 20, 2009, January 21, 2010, and June 10, 2010

Lecture to Stanford Ophthalmic Technicians in preparation for certification exam  
May 25, 2010

Lecture to Stanford Microbiology Lab  
Clinical Perspectives on Ocular Microbiology  
June 8, 2010

## **Employment**

### **Staff Surgeon and Chief, Ophthalmology Section and Eye Care Services**

Veterans Affairs Palo Alto Health Care System  
July 2013-present

### **Assistant Professor of Ophthalmology, Medical Center Line**

Stanford University School of Medicine  
June 2014-present

### **Clinical Instructor**

Stanford University School of Medicine  
July 2010-2013

### **Ophthalmology Resident**

Stanford University  
Stanford University Hospital and Clinics, Lucile Packard Children's Hospital, Palo Alto Veterans Administration Hospital, and Santa Clara Valley Medical Center  
July 2007 – June 2010

### **Medical Intern (Transitional/Rotating)**

Scripps Mercy Hospital  
Scripps Mercy Hospital and Naval Medical Center San Diego  
June 2006 – June 2007

### **Medical School Supplemental Instructor**

MUSC Center for Academic Excellence  
Tutored small group of fellow classmates for pathology (Mechanisms of Disease II course)  
Spring 2004

### **University Tutor**

Sonoma State University Tutorial Center  
Tutored students for general biology, chemistry, and physics courses.  
2001-2002

## **Volunteer Activities**

Stanford Pacific Free Clinic, volunteer attending ophthalmologist, 2011-present  
Stanford Vision and Ophthalmology Interest Group, Spring 2008 – 2010  
Taught examination and microscopic surgical techniques to medical students interested in ophthalmology at twice-yearly skills sessions.



Ward Tips for the Medical School Clerkship Year, April 19, 2005

Served as member of student-directed question-and-answer advice panel for students entering their clerkship year

Fight for Sight, 2004-2005

Screened patients for eye diseases at monthly clinics for underserved patients in the Charleston area

AOA Cares Project, 2005-2006

Coordinated and arranged member donation of canned goods and other household items for local charities and shelters at monthly AOA meetings

Each One Reach One, 2004-2005

Volunteered at monthly activities for children who had experienced the death of a family member

Habitat for Humanity, February 18, 2006

Volunteered to move, clean, and organize store inventory at the Charleston Habitat for Humanity outlet store with other College of Medicine Student Council and AOA members

Moultrie Middle School Panel for Girls: Careers in the Health Professions, March 27, 2006

Served as panel speaker to motivate young girls toward careers in health professions

Yul Brynner Cancer Awareness Week, April 11, 2003

Assisted with free head and neck cancer screenings

Belle Hall Elementary School Career Fair, February 27, 2003

Worked at medical career booth

Race for the Cure, October 26, 2002

Volunteered as race staff

MUSC Treelighting Ceremony, 2002-2003

Baked cookies for and attended annual childrens' event

Ronald McDonald House, 2002-2003

Baked and delivered pastries to patients and families, weekly and for holidays

## **Other Honors/Awards**

Summa Cum Laude, Chemistry, Sonoma State University, 2002

Youth National Verbal Award, Johns Hopkins University, 2000

Dean's Honor List, Sonoma State University, 1998-2001

Lela M. Emad Scholarship, Sonoma State University, 1999

Summit State Bank Scholarship, Sonoma State University, 1999

Ernest L. and Ruth W. Finley Foundation Scholarship, Sonoma State University

## **Organizations**

American Academy of Ophthalmology, 2008-present

Women in Ophthalmology, 2009-present

American Medical Association, 2002-present

American Medical Women's Association, 2003-present

American College of Physicians, 2003-present

Alpha Omega Alpha Medical Honor Society, 2004-present

California Association of Eye Physicians and Surgeons, 2008-present

Pan-American Association of Ophthalmology, 2010-present

American Society of Cataract and Refractive Surgery, 2007-present

Association for Research in Vision and Ophthalmology, 2008-present

Cross-disciplinary Healthcare Innovation Partnership at Stanford, 2009-2010

Stanford Health Care Business Club, 2008-2010

Peninsula Eye Society, 2007-present

## **Courses, Workshops, and Think tanks**

Stanford University Fresh Thinking 2.0 Workshop – Medical Education: It’s Time for a Change

Invited to participate in workshop coordinated by Dr. Victor Fuchs. November 8-9, 2012

Stanford University Health Policy, Finance, and Economics Course, 2009-2010

Nominated by Stanford ophthalmology department to attend; selected to participate from among pool of applicants

American Academy of Ophthalmology Mid-Year Forum, Washington, DC, April 22-25, 2009

Harvard Intensive Cataract Surgical Training Conference, Boston, MA, May 30-31, 2009

Course on Ophthalmic Advanced Surgical Techniques, San Francisco, CA, March 7-8, 2009

Course on Ophthalmic Advanced Surgical Techniques, San Francisco, CA, May 15-16, 2010