

**JOSEPH M. MILLER, MD, MPH**  
**Curriculum Vitae**

**Chronology of Education**

1978	BSE	Case Western Reserve University, Cleveland, OH Major: Biomedical Engineering
1978	BS	Case Western Reserve University, Cleveland, OH Major: Health Sciences/Anesthesia
1981	MSE	Case Western Reserve University, Cleveland, OH Major: Biomedical Engineering Thesis: "Determination of Cardiovascular Indices from the Brachial Oscillometric Pulse" Advisor: Howard P. Apple, PhD
1985	MD	Northeastern Ohio Universities College of Medicine, Rootstown, OH
2001	MPH	University of Arizona College of Public Health, Tucson, AZ

***Internship***

1985-1986 Akron City Hospital Transitional Program, Akron, OH

***Postdoctoral Fellowship***

1986-1987 Yale University Department of Ophthalmology and Visual Science, New Haven, CT

***Residency***

1987-1990 Ophthalmology, Yale-New Haven Hospital, Yale University School of Medicine, New Haven, CT

***Clinical Fellowship***

1990-1991 Pediatric Ophthalmology and Strabismus, Wilmer Ophthalmological Institute, The Johns Hopkins Hospital, Baltimore, MD

2000-2001 Refractive Surgery, University of Arizona, Tucson, AZ

***Certification:*** American Board of Ophthalmology, 1991

**Chronology of Employment**

1990-1991 Assistant, Wilmer Ophthalmological Institute  
The Johns Hopkins Hospital, Baltimore, MD

1991-1996 Assistant Professor, Department of Ophthalmology  
University of Arizona

1993-1996	Assistant Professor, Optical Sciences, Optical Sciences Center University of Arizona
1996-2000	Associate Professor, Department of Ophthalmology University of Arizona
1996-2000	Associate Professor, Optical Sciences, Optical Sciences Center University of Arizona
1998-2004	Vice Department Head, Department of Ophthalmology University of Arizona
2000-Present	Professor, Department of Ophthalmology University of Arizona
2000-Present	Professor, Optical Sciences, Optical Sciences Center University of Arizona
2002-Present	Professor, Division of Epidemiology and Biostatistics, Mel and Enid Zuckerman Arizona College of Public Health, University of Arizona
2003-2004	Director, Clinical and Surgical Affairs, Department of Ophthalmology, University Physicians Inc.
2004-Present	Head, Department of Ophthalmology University of Arizona
2012-Present	Honorary Professor of Northern Hospital, Shenyang, China

### **Honors and Awards**

- S.N. and Ada Ford Foundation Scholarship, 1974-76  
Mansfield, OH
- William H. Falor Summer Fellow, 1982  
Department of Medical Engineering, Akron City Hospital
- Melvin E. Jones Eye Bank Scholarship Award, 1984  
Northeastern Ohio Universities College of Medicine
- Upjohn Foundation Award for Service to the Community, 1985  
Northeastern Ohio Universities College of Medicine
- Fellowship, Yale-New Haven Hospital, 1986-1987  
New Haven, CT. NIH training grant #5-T32-07000-10
- Resident Research Award, 1989, 1990  
Yale Alumni in Ophthalmology, New Haven, CT
- ARVO Travel Grant Award, 1990  
National Eye Institute, Bethesda, MD

Certificate of Appreciation, State of Arizona Department of Child Protective Services, for support of the "Never Shake a Baby" program, 1992

Osler Institute Teaching Award, 1994

Listed in *The Best Doctors in America: Pacific Region (1996-1997, 1997-1998, 2003-2004, 2005-2006, 2009-2010, 2011-2012, 2015-2016)*

Honor Award, Academy of Ophthalmology, November 1998

Deans' Teaching Scholars, University of Arizona, 1998

Life Member of *National Registry of Who's Who*, published in the 2001 edition

Honor Award, American Association for Pediatric Ophthalmology and Strabismus, March 21, 2002

Named one of Tucson's Best Doctors in Specialty of Ophthalmology, 2003-2004

Listed in *Phoenix Magazine's* 2005 "Top Docs"

Murray & Clara Walker Memorial Endowed Chair in Ophthalmology, 2012

Listed in "America's Top Doctors," 2013-2014

## **Service/Outreach**

### ***Local/State Outreach***

#### **Local**

1991-Present	Volunteer Provider, St. Elizabeth's of Hungary Clinic, Tucson, AZ
1991-Present	Volunteer Provider, Lions Sight and Hearing Foundation Evaluation and Treatment Program, University of Arizona
1998-Present	Consultant, Indian Health Service, Sells Service Unit

#### **State**

1991-Present	Volunteer Provider, "Operation See," Nogales Lions Club and St. Joseph's Hospital, Nogales, AZ. Surgery for Mexican Nationals
1992-2003	Board of Directors and Volunteer Provider, Arizona Medical Eye Unit
1996	Member, Arizona Council for Graduate Medical Education

### ***National/International Outreach***

#### **National**

1999-Present	Editorial Board, <i>Survey of Ophthalmology</i>
2000-Present	Associate Board Examiner, American Board of Ophthalmology
2003-2004	LCDR, US Naval Medical Corps
2003-Present	National Director, The Amblyopia Foundation of America
2006-Present	Editorial Board, <i>Journal of Pediatric Ophthalmology and Strabismus</i>

2000 Guest Editorial Board Member, *Investigative Ophthalmology and Visual Science*

2003 Member, American Academy of Ophthalmology Task Force on Pediatric Vision Screening

2005-2007 CDR, US Naval Medical Corps

2008 Contribution to Encyclopedia Britannica, Inc.

2012 Discussant, "Can the PlusoptiX replace the Need for a Cycloplegic Examination in Select Pediatric Ophthalmology Patients?" [JAAPOS Abstract 030], Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, San Antonio, March 24-28.

2011-Present Medical Director, Save The Cord Foundation

2014 Ad Hoc Editor, *Journal of Ocular Pharmacology and Therapeutics*

2016 Member, "Eyes on Learning" Advisory Board, Virginia G. Piper Charitable Trust

### **International**

1998-Present Director, International Fellows Program, University of Arizona and Oftalmólogos Asociados, Nogales, Sonora, Mexico

2000-Present International Affiliate, Surgical Eye Expeditions (SEE) International

2009, 2010 Medical Mission to Honduras

### **Editorial Reviewer**

1988, 1991-2003, 2006, 2010 *Ophthalmology*

1989, 1996-1999, 2001-2002 *American Journal of Ophthalmology*

1990-1993, 2000, 2003 *Archives of Ophthalmology*

1991, 1996-2000, 2009-2010 *Investigative Ophthalmology and Visual Science*

1996, 2003, 2009 *Optometry and Vision Science*

1996 *Eye*

1997, 2007 *Ophthalmic Epidemiology*

1998, 2000, 2002-2004 *Journal of American Association for Pediatric Ophthalmology and Strabismus*

2000 *Journal of Refractive Surgery*

2005 *Journal of Telemedicine and Telecare*

2006 *Journal of Cataract and Refractive Surgery*

### **Ad hoc Reviewer**

2002 SPIE *Journal of Biological Optics*

2003, 2013 *Optometry and Vision Science*

### **Active Membership in Professional Organizations**

American Academy of Ophthalmology (Fellow)

American Academy of Pediatrics (Fellow)

American Association for Pediatric Ophthalmology and Strabismus (Member)

American Ophthalmological Society (Member)

American Public Health Association (Member)

Association for Research in Vision and Ophthalmology (Fellow)

Optical Society of America (Member)

Pima County Medical Society (Member)

Tucson Ophthalmological Society (Member)

### ***Department Committees***

1998-Present	Lions Advisory Board
2004-Present	Ambulatory Surgery Center Committee
2004-Present	Oversight Committee
1991-2005	Director, Pediatric Ophthalmology and Strabismus
2001-2004	Promotion and Tenure Committee
1991-1998	Residency Program Director

### ***College Committees***

1991-Present	Student Appeals Committee, University of Arizona, College of Medicine
1991-Present	Admissions Committee, Alternate Interviewer, University of Arizona, College of Medicine
1992-Present	Continuing Medical Education Committee Consultant, University of Arizona, College of Medicine
1996-Present	Student Advising Committee, University of Arizona, College of Medicine
1996-Present	Ambulatory Information Management Leadership Team Meeting, University Medical Center
1996-Present	Clinical Science Departments Subcommittee for LCME Self-Study, University of Arizona, College of Medicine
1998-Present	Medical Staff Appeals Committee, University Medical Center
1998-2004	Peer Review Committee, University Medical Center
1998-2000	Curriculum Committee, University of Arizona, College of Medicine
1991-1994	Credentials Committee, University Medical Center
2004-Present	Medical Executive Committee, University Medical Center
2004-Present	Council of Clinical Department Heads, University of Arizona, College of Medicine
2004-Present	Department Head Council, University of Arizona College of Medicine,
2006-Present	Medical Executive Committee, University of Arizona Medical Center-South Campus
2006-2010	Graduate Medical Education Committee, University of Arizona Medical Center-South Campus
2007-2010	Graduate Medical Education Task Force Committee, University of Arizona Medical Center-South Campus (Chair, Scholarly Activity and Acknowledgement of Successes Subcommittee, 2009-2010)
2013-Present	AHSC Neuroscience Advisory Council Meeting
2014	Department of Physiology Chair Search

### ***University Committees***

1994-2007	Credentials/Peer Review Committee, University Physicians
1994-1997	Board of Directors, University Physicians
2009-Present	Electronic Medical Records Committee, University Physicians

### ***Other Committees***

1993-1996, 2002, 2006	Vision Screening Committee, American Association for Pediatric Ophthalmology and Strabismus
1997-Present	Medical Executive Committee, Children's Clinics for Rehabilitative Services, Tucson, AZ
1997-2008	Pediatric Advisory Committee, Prevent Blindness America
2000-2001	Membership and Credentials Committee, and Nominating Committee American Association for Pediatric Ophthalmology and Strabismus

2001-Present	Amblyopia Treatment Study (ATS1) Writing Committee, Jaeb Center for Clinical Research
2002-Present 2010	Pirenzepine (PIR-205) Writing Committee, Valley Forge Pharmaceuticals, Inc. National Expert Panel, National Universal Vision Screening for Young Children Coordinating Center, Prevent Blindness America
2013	Member, Spring Ad Hoc Committee, Research to Prevent Blindness, 3/11/2013

### **Federal Government Public Advisory Committees**

1996, 1999, 2000, 2002-2003	Reviewer, Special Emphasis Panel, National Eye Institute, National Institutes of Health
2000-Present	Member, Early Treatment of Retinopathy of Prematurity (ET-ROP) Data Safety and Monitoring Committee, appointed by the National Institutes of Health
2000-2004	Member, Myopia Family Study Advisory Committee, appointed by National Institutes of Health
2001	Reviewer, Advanced Technology Development Program (ATD2001), US DOE Office of Science
2003-Present	Member, Joint Scientific Advisory Committee for Multiethnic Pediatric Eye Survey (MEPEDS) and Baltimore Pediatric Eye Survey (BPES), appointed by National Institutes of Health
2004	Member, Special Emphasis Panel, National Center for Complementary and Alternative Medicine ZAT1 JH(03), JH-3 Clinical Science
2004-2008	Consultant, Medical Devices Advisory Committee and Center for Devices and Radiological Health, Food and Drug Administration
2009	Chair, Special Emphasis Panel ZEY1 VSN 02, R34, U10 Grant Reviews, National Eye Institute, National Institutes of Health, 5/13/2009

### **Publications/Creative Activity**

#### ***Scholarly Books***

1. Miller JM: *Determination of cardiovascular indices from the brachial oscillometric pulse*. M.S. (Biomedical Engineering) Thesis, Case Western Reserve University, January 1981.
2. Guyton DL, West CE, Miller JM, Wisnicki HJ: *Ophthalmic optics and clinical refraction*. Prism Press, Baltimore, 1997.

#### ***Chapters in Scholarly Books***

1. Miller JM, Fannin SW, Steiner PR, Kraus JM, Falor WF, Taylor BC: Instrumentation for the automatic recording and analysis of esophageal pH. In: DeMeester TR, Skinner DB, *Esophageal Disorders: Pathophysiology and Therapy*, Raven Press, New York, 1985.
2. Falor WH, Miller JM, Kraus JM, Fannin S, Greczanik V, Taylor B: Twenty-four-hour four-channel esophagopharyngeal pH monitored via satellite esophageal pH laboratories or by a small autonomous system. In: Siewart JR, Holscher AH, *Diseases of the Esophagus*, Springer-Verlag Press, New York, 1988, pp. 792-796.
3. Contributor to section on Diabetic Retinopathy in Children: Diabetes Mellitus in the Child and Adolescent. In: Kappy MS, Blizzard RM, Migeon CJ, *The Diagnosis and Treatment of Endocrine Disorders in Childhood and Adolescence*, Charles C. Thomas, 1994, pp. 1006-1007.

4. Guyton DL, Miller JM, West CE: Optical pearls and pitfalls, tricks and traps in strabismus. In: Wright KW, *Pediatric Ophthalmology and Strabismus*, Mosby-Year Book, Inc., 1995, pp. 243-248.
5. Reviewer to section on Optics, Refraction, Contact Lens, and Visual Rehabilitation. In: Lane SS, Skuta GL (eds.), *Series 3, ProVision, Preferred Responses in Ophthalmology: A Self-Assessment Program*, Vol. I (Questions), American Academy of Ophthalmology, 1999, pp. 165-180.
6. Reviewer to section on Optics, Refraction, Contact Lens, and Visual Rehabilitation. In: Lane SS, Skuta GL (eds.), *Series 3, ProVision, Preferred Responses in Ophthalmology: A Self-Assessment Program*, Vol. II (Discussions), American Academy of Ophthalmology, 1999, pp. 165-180.
7. Miller JM. Pediatric ocular trauma. In: Wright KW, Strube YJ, eds., *Pediatric Ophthalmology and Strabismus*, 3<sup>rd</sup> ed., Oxford University Press, New York, NY, 2012.
8. Miller JM. Foreword. In: Wang, M, ed., *Eye Diseases Associated with Sleep Disorders*, New York, Nova Science Publishers, 2015.

### **Refereed Journal Articles**

1. Miller JM, Cascorbi HF: Yet another vaporizer hazard. *Anesth Anal* 1981; 60:121. PMID: 7191661.
2. Falor WH, Miller JM, Kraus J, et al.: Outpatient computer-based 32-hour esophageal pH studies teletransmitted to a central esophageal laboratory. *Arch Intern Med* 1985;145:1617-1619. PMID: 4026492.
3. Falor WH, Miller JM, Kraus J, et al: Twenty-four-hour monitoring of esophagopharyngeal pH in outpatients: Use of four-channel pH probe and computerized system. *J Thorac Cardiovasc Surg* 1986;91:716-722. PMID: 3084877.
4. Caprioli J, Miller JM, Sears ML: Quantitative evaluation of the optic nerve head in patients with unilateral field loss from primary open angle glaucoma. *Ophthalmology* 1987;94:1484-1487. PMID: 3684222.
5. Caprioli J, Miller JM: Optic disc rim area is related to disc size in normal subjects. *Arch Ophthalmol* 1987;105:1683-1685. PMID: 3689192.
6. Caprioli J, Sears M, Miller JM: Patterns of early visual field loss in open-angle glaucoma. *Am J Ophthalmol* 1987;103:512-517. PMID: 3605297.
7. Miller JM, Thompson JT, Caprioli J: Computerized database to identify patient populations for clinical research. *Ophthalmology, Instrument and Book Supplement*, 1988:6-10.
8. Hufnagel TJ, Kim JH, Lesser R, Miller JM, Abrahams JJ, Piepmier J, Manuelidis EE: Malignant glioma of the optic chiasm eight years after radiotherapy for prolactinoma. *Arch Ophthalmol* 1988;106:1701-1705. PMID: 3196211.
9. Caprioli J, Miller JM: Videographic measurements of optic nerve topography in glaucoma. *Invest Ophthalmol Vis Sci* 1988;29:1294-1298. PMID: 3417413.
10. Caprioli J, Miller JM: Measurement of optic nerve blood flow with Iodoantipyrine: limitations caused by diffusion from the choroid. *Exp Eye Res* 1988;47:641-52. PMID: 3181336.
11. Caprioli J, Miller JM: Correlation of structure and function in glaucoma: Quantitative measurements of disc and field. *Ophthalmology* 1988;95:723-727. PMID: 3211472.
12. Miller JM, Caprioli J: Videographic quantification of optic disc pallor. *Invest Ophthalmol Vis Sci* 1988;29:320-323. PMID: 3338889.
13. Caprioli J, Miller JM, Sears M: Image analysis of the optic nerve head in patients with unilateral visual field loss associated with open angle glaucoma. *Ann Inst Barraquer* 1988-89;20:57-62.
14. Caprioli J, Miller JM: Measurement of relative nerve fiber layer surface height in glaucoma. *Ophthalmology* 1989;96:633-639. PMID: 2748121.
15. Caprioli J, Ortiz-Colberg R, Miller JM, Tressler CT: Measurement of peripapillary nerve fiber layer contour in glaucoma. *Am J Ophthalmol* 1989;108:404-413. PMID: 2679110.

16. Miller JM, Caprioli J: An optimal reference plane to detect glaucomatous nerve fiber layer abnormalities with computerized image analysis. *Graefe's Arch Exp Ophthalmol* 1992;230:124-128. PMID: 1577291.
17. Miller JM, Mellinger M, Greivenkamp J, Hunter D, Simons K: Video remote keratometer for the screening of corneal astigmatism, in *Ophthalmic and Visual Optics/Noninvasive Assessment of the Visual System*, Technical Digest, 1993 (Optical Society of America, Washington DC, 1993), Vol. 3, pp. 150-153. (Program committee reviewed publication.)
18. Greivenkamp JE, Mellinger MD, Snyder RW, Miller JM, Bechara SJ, Waring GO: Measurement of toric reference surfaces with the computed anatomy TMS-1, in *Ophthalmic and Visual Optics/Noninvasive Assessment of the Visual System*, Technical Digest, 1993 (Optical Society of America, Washington DC, 1993), Vol. 3, pp. 150-153. (Program committee reviewed publication.)
19. Miller JM, Mellinger M, Greivenkamp J, Simons K: Videographic Hirschberg measurement of simulated strabismic deviations. *Invest Ophthalmol Vis Sci* 1993;34(11):3220-3229. PMID: 8407230.
20. Greivenkamp JE, Schwiegerling, Miller JM: Evaluation of optical systems for optical implantation of intraocular lenses, in *Vision Science and Its Applications*, 1994 Technical Digest Series (Optical Society of America, Washington DC, 1994), Vol. 2, p. 171. (Program committee reviewed publication.)
21. Hall HL, Miller JM, Greivenkamp JE: Binocular pupil brightness changes in the presence of strabismus: Predictions from computer modeling, in *Vision Science and Its Applications*, 1995 Technical Digest Series (Optical Society of America, Washington DC, 1995), Vol. 1, pp. 92-95. (Program committee reviewed publication.)
22. Schwiegerling J, Greivenkamp JE, Miller JM: Zernike polynomial representations of videokeratoscope height data, in *Vision Science and Its Applications*, 1995 Technical Digest Series (Optical Society of America, Washington DC, 1995), Vol. 1, p. 192. (Program committee reviewed publication.)
23. Miller JM, Hall HL, Greivenkamp JE, Guyton DL: Quantification of the Brückner test for strabismus. *Invest Ophthalmol Vis Sci* 1995;36:897-905. PMID: 7706038.
24. Greivenkamp JE, Schwiegerling J, Miller JM, Mellinger MD: Visual acuity modeling using optical raytracing of schematic eyes. *Am J Ophthalmol* 1995;120:227-240. PMID: 7639307.
25. Harvey EM, Miller JM, Dobson VD: Reproducibility of corneal astigmatism measurements with a hand-held keratometer in preschool children. *Br J Ophthalmol* 1995;79:983-990. PMID: 8534668.
26. Schwiegerling J, Greivenkamp JE, Miller JM: Representation of videokeratoscopic height data with Zernike polynomials. *J Opt Soc Am* 1995;12(10):2105-2113. PMID: 7500201.
27. Greivenkamp JE, Mellinger MS, Snyder RW, Schwiegerling JT, Lowman AE, Miller JM: Comparison of three videokeratoscopes in measurement of toric test surfaces. *J Refract Corneal Surg* 1996;12(2):229-239. PMID: 8653525.
28. Miller JM, Mellinger MD, Greivenkamp JE: A hand-held video keratoscope for the measurement of corneal astigmatism in infants and young children, in *Vision Science and Its Applications*, 1996 Technical Digest Series (Optical Society of America, Washington DC, 1996), Vol. 1, pp. 260-263. (Program committee reviewed publication.)
29. Schwiegerling J, Greivenkamp JE, Miller JM, Snyder RW, Palmer ML: The effects of radial keratotomy on the asphericity of the cornea, in *Vision Science and Its Applications*, 1996 Technical Digest Series (Optical Society of America, Washington DC, 1996), Vol. 1, pp. 208-211. (Program committee reviewed publication.)
30. Dobson V, Tyszko RM, Miller JM, Harvey EM: Astigmatism, amblyopia, and visual disability among a Native American population, in *Vision Science and Its Applications*, 1996 Technical Digest Series (Optical Society of America, Washington DC, 1996), Vol. 1, pp. 139-142. (Program committee reviewed publication.)

31. Miller JM: The computer-based ophthalmic recordkeeping (COR) system. *J Pediatr Ophthalmol Strabismus* 1996;33(1):55-58. PMID: 8965227.
32. Schwiegerling J, Greivenkamp JE, Miller JM, Snyder RW, Palmer ML: Optical modeling of radial keratotomy incision patterns. *Am J Ophthalmol* 1996;12:808-817. PMID: 8956635.
33. Harvey EM, Miller JM, Wagner LK, Dobson V: Reproducibility and accuracy of measurements with a hand-held autorefractor in children. *Br J Ophthalmol* 1997;81:941-948. PMID: 9505815.
34. Kramer TR, Noecker RJ, Miller JM, Clark LC: Langerhans cell histiocytoses with orbital involvement. *Am J Ophthalmol* 1997;124(6):814-824. PMID: 9402828.
35. Miller JM, Schwiegerling J, Hall H, Harvey EM, Dobson V, Mansueto LA: Neural network-assisted interpretation of digitized MTI photoscreening images, in *Vision Science and Its Applications*, Technical Digest Series (Optical Society of America, Washington DC, 1998), Vol. 1, pp. 166-169.
36. Miller JM, Schwiegerling J: A videokeratoscope using a distorted checkboard target, in *Vision Science and Its Applications*, Technical Digest Series (Optical Society of America, Washington DC, 1998), Vol. 1, pp. 227-230.
37. Miller JM, Harvey EM: Spectacle prescribing recommendations of AAPOS members. *J Pediatr Ophthalmol Strabismus* 1998;35(1):51-52. PMID: 9503319.
38. Kramer TR, Watanabe T, Miller J, Ober RR: Unilateral sporadic retinoblastoma presenting as acute angle closure glaucoma with intraocular inflammation. *Ophthalmic Practice* 1999;17(1):20-25.
39. Miller JM, Harvey E, Dobson V: Visual acuity screening versus non-cycloplegic autorefraction screening of Native American preschool children. *J AAPOS* 1999;3:160-165. PMID: 10428590.
40. Dobson V, Miller JM, Harvey EM: Corneal and refractive astigmatism in a sample of 3- to 5-year-olds with a high prevalence of astigmatism. *Optom Vis Sci* 1999;76:855-860. PMID: 10612408.
41. Dobson V, Miller JM, Harvey EM, Sherrill DL: Prevalence of astigmatism, astigmatic anisometropia, and glasses wearing among preschool- and school-age Native American children, in *Vision Science and Its Applications*, Technical Digest Series (Optical Society of America, Washington DC, 1999), Vol. 1, pp. 177-180.
42. Miller JM, Harvey EM, Dobson V: Prescribing spectacles by confirmed autorefraction, in *Vision Science and Its Applications*, Technical Digest Series (Optical Society of America, Washington DC, 2000), Vol. 1, pp. 185-188.
43. Harvey EM, Miller JM, Dobson V, Tyszko R, Davis AL: Measurement of refractive error in Native American preschoolers: validity and reproducibility of autorefraction vs. retinoscopy. *Optom Vis Sci* 2000;77:140-149. PMID: 10772231.
44. Miller JM, Dobson V, Harvey EM, Sherrill DL: Astigmatism and amblyopia among Native American children (AANAC): design and methods. *Ophthalmic Epidemiol* 2000;7:187-207. PMID: 11035554.
45. Mohan KM, Miller JM, Dobson V, Harvey EM, Sherrill DL: Inter-rater and intra-rater reliability in the interpretation of MTI Photoscreener™ photographs of Native American preschool children. *Optom Vis Sci* 2000;77:473-482. PMID: 11014674.
46. Dobson V, Miller JM, Harvey EM, Sherrill DL: A screening protocol for preschool children who are members of a population with a high prevalence of astigmatism, in *Vision Science and Its Applications*, OSA Technical Digest (Optical Society of America, Washington, DC, 2001), pp. 154-157.
47. Miller JM, Teodoro MR, Lane L, Schwiegerling J: Detection of Sloan Crowded Single Letters (SCSL) in the presence of induced refractive error, in *Vision Science and Its Applications*, OSA Technical Digest (Optical Society of America, Washington, DC, 2001), pp. 47-50.
48. Miller JM, Schwiegerling J, Leising-Hall H, Surachatkumtonekul T: Detection of improper fixation in MTI photoscreening images. *J AAPOS* 2001;5(1):35-43. PMID: 11182671.

49. Miller JM, Dobson V, Harvey EM, Sherrill DL: Comparison of preschool vision screening methods in a population with a high prevalence of astigmatism. *Invest Ophthalmol Vis Sci* 2001;42:917-924. PMID: 11274067.
50. Moke PS, Turpin AH, Beck RW, Holmes JM, Repka MX, Birch EE, Hertle RW, Kraker RT, Miller JM, Johnson CA: Computerized method of visual acuity testing: adaptation of the Amblyopia Treatment Study visual acuity testing protocol. *Am J Ophthalmol* 2001;132(6):903-909. PMID: 11730656.
51. Miller JM, Anwaruddin R, Straub J, Schwiegerling J: Higher order aberrations in normal, dilated, intraocular lens, and laser *in situ* keratomileusis corneas. *J Refract Surg* 2002;18(5):S579-S583. PMID: 12361161.
52. Dobson V, Miller JM, Harvey EM, Mohan KM: Amblyopia in astigmatic preschool children. *Vision Res* 2003;43(9):1081-1090. PMID: 12676249.
53. Joish VN, Malone DC, Miller JM: Cost-benefit analysis of photoscreening. *J AAPOS* 2003;7(4):283-290. PMID: 12917617.
54. Miller JM, Dobson V, Harvey EM, Sherrill DL: Cost-effective vision screening for astigmatic Native American preschool children. *Invest Ophthalmol Vis Sci* 2003;44(9):3756-3763. PMID: 12939288.
55. Siatkowski RM, Cotter S, Miller JM, Scher CA, Crockett RS, Novack GD, for the US Pirenzepine Study Group: Safety and efficacy of 2% Pirenzepine Ophthalmic Gel in children with myopia: A 1-year, multicenter, double-masked, placebo-controlled parallel study. *Arch Ophthalmol* 2004;122(11):1667-1674. PMID: 15534128.
56. Harvey EM, Dobson V, Miller JM, Sherrill DL: Treatment of astigmatism-related amblyopia in 3- to 5-year-old children. *Vision Res* 2004;44(14):1623-1634. PMID: 15135999.
57. Miller JM: Vision in Preschoolers Study. *Ophthalmology* 2004;111(12):2313-2314. [Letter to the Editor.]
58. Miller JM: Comparison of preschool vision screening tests as administered by licensed eye care professionals in the Vision in Preschoolers Study. *Ophthalmology* 2004;111(12):2313-2314. [Letter to the Editor]
59. Harvey EM, Miller JM, Dobson V, Clifford C: Prescribing eyeglass correction for astigmatism in infancy and early childhood: a survey of AAPOS members. *J AAPOS*. 2005;9(2):189-191. PMID: 15838450.
60. Harvey EM, Dobson V, Miller JM: Prevalence of high astigmatism, eyeglass wear, and poor visual acuity among Native American grade school children. *Optom Vis Sci* 2006;83(4):206-212. PMID: 16614575.
61. Dobson V, Harvey EM, Miller JM: Spherical equivalent refractive error in preschool children from a population with a high prevalence of astigmatism. *Optom Vis Sci* 2007;84:124-130. PMID: 17299342.
62. Harvey EM, Dobson V, Miller JM, Clifford-Donaldson CE: Amblyopia in astigmatic children: patterns of deficit. *Vision Res* 2007;47(3):315-326. PMID: 17184807.
63. Miller JM: Designing a rational screening program. *Am Orthopt J*, 2006;56:30-34.
64. Harvey EM, Dobson V, Clifford-Donaldson CE, Miller JM: Optical treatment of amblyopia in astigmatic children: the sensitive period for successful treatment. *Ophthalmology* 2007;114(12):2293-2301. PMID: 18054643.
65. Harvey EM, Dobson V, Miller JM, Clifford-Donaldson CE: Amblyopia in astigmatic children: patterns of deficits. *Vision Res* 2007;47(3):315-326. PMID: 17184807.
66. Dobson V, Harvey EM, Miller JM: Spherical equivalent refractive error in preschool children from a population with a high prevalence of astigmatism. *Optom Vis Sci* 2007;84(2):124-130. PMID: 17299342.
67. Miller JM, Dobson V, Harvey EM, Sherrill DL. Astigmatism and amblyopia among Native American children (AANAC): Design and methods. *Ophthalmic Epidemiol* 2000;7:187-207. PMID: 11035554.

68. Siatkowski RM, Cotter SA, Crockett RS, Miller JM, Novack GD, Zadnik K; US Pirenzepine Study Group: Two-year multicenter, randomized, double-masked, placebo-controlled, parallel safety and efficacy study of 2% pirenzepine ophthalmic gel in children with amblyopia. *J AAPOS* 2008;12(4):332-339. Epub 2008 Mar 24. PMID: 18359651.
69. Harvey EM, Dobson V, Miller JM, Clifford-Donaldson CE: Changes in visual function following optical treatment of astigmatism-related amblyopia. *Vision Res* 2008;48(6):773-787. PMID: 18261760.
70. Dobson V, Harvey EM, Miller JM, Clifford-Donaldson CE: Anisometropia prevalence in a highly astigmatic school-aged population. *Optom Vis Sci* 2008;85(7):512-519. PMID: 18594336.
71. Dobson V, Miller JM, Clifford-Donaldson CE, Harvey EM: Associations between anisometropia, amblyopia, and reduced stereoacuity in a school-aged population with a high prevalence of astigmatism. *Invest Ophthalmol Vis Sci* 2008;49(10):4427-4436. PMID: 18539935.
72. Dobson V, Clifford-Donaldson CE, Green TK, Miller JM, Harvey EM: Optical treatment reduces amblyopia in astigmatic children who receive spectacles before kindergarten. *Ophthalmology* 2009;116(5):1002-1008. PMID: 19232733.
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### ***Electronic Article***

1. Miller JM: NIH study on kids' vision screenings draws mixed response. *Vision Monday: News Analysis Now*, August 4, 2005. Retrieved from <http://www.visionmonday.com>.

### **Other Publications**

#### ***Computer Programs***

1. Computerized Ophthalmic Recordkeeping System: A program for the storage, retrieval, and printing of the pediatric ophthalmology exam. This program was described in *Journal of Pediatric Ophthalmology and Strabismus* 1996;33(1):55-58.
2. Resident Program Evaluation: This program allows residents to provide timely feedback to the faculty members regarding quality of their education. It was demonstrated and distributed at the Annual Meeting of the American Academy of Ophthalmology.
3. Screening Database: As principal investigator on our ongoing NIH-funded research, I was responsible for developing a statistical method for keeping track of thousands of patient encounters. What is unique about this database is that it is designed for in-field data collection entry.
4. ATSTAT: Amblyopia Treatment Study Threshold Acuity Test.

### **Work in Progress**

Four active areas of research are ongoing.

1. ***The effect of early spectacle wear on visual development.*** This work, in partnership with my colleague, Erin M. Harvey, PhD, is the outgrowth of our earlier work on visual development performed in partnership with the Tohono O'odham Nation, continuously funded by the National Eye Institute since 1997. Our work with the Tribe is complete, and now we are addressing broader questions regarding the optimum timing of spectacle wear for astigmatism. Our team first recognized the value of instrument-based vision screening in Phase 1 of work with the Tohono O'odham. We now are addressing a critical public health question: if children are identified at one year of age as having high refractive error, does starting spectacles before three years of age provide them any visual or developmental benefits at three years of age, where current standard of care first implements vision screening and introduces eyeglasses to children?
2. ***The statistical analysis of refractive error.*** Refractive error can arise from any of the four refracting surfaces of the eye (front and back of the cornea, front and back of the lens). We are currently developing mathematical models of the origin of astigmatic refractive error based upon extremely high resolution measurements of the eye obtained with a corneal tomographer in children. We hope to develop a theory that explains the development of corneal astigmatism in terms of eye development.
3. ***The development of hand-held instrumentation to improve ophthalmic telemedicine.*** Ophthalmic diagnostic instruments continue to become more affordable as mechanical components involving mounting and moving lenses are replaced by electro-optical devices. In partnership with Breault Research and the College of Electrical and Computer Engineering faculty member, Wolfgang Fink, we are participating in an NSF-funded program project, "Smart Ophthalmics."

4. **Affordable cataract surgery.** Many patients cannot afford to receive cataract surgery in the US, but throughout the rest of the world, advances in manual surgery methods have reduced cataract surgery to a 5-minute, \$15 surgical procedure. We are studying the economics of this surgical method, Manual Small Incision Cataract Surgery, through introduction of a \$500 cataract surgery (where the conventional price point is \$3500).

## Media

### *Shows/News*

- 7/92 KOLD Channel 13, Tucson: News segment informing the public about the levels of ultraviolet sunlight protection offered by sunglasses, and the risks associated with ultraviolet light in the pediatric age group.
- 7/19/92 KVOA Channel 4, Tucson: Arizona Health Watch appearance informing the public about the dangers of child abuse.
- 3/14/93 KVOA Channel 4, Tucson: Kristin Smith, news segment regarding "Operation See," volunteer ophthalmic surgery for indigent Mexican Nationals.
- 4/1/93 *Tucson Citizen*: "Shaken Babies," cited source in article by Julie Szekely, informing the public of the risks associated with shaking babies.
- 4/11/93 Research to Prevent Blindness Annual Science Writers Seminar: "Advances in amblyopia detection and treatment," Universal City, CA.
- 4/29/93 KVOA Channel 4, Tucson: Kristin Smith, news segment informing public of the Hirschberg Automated Screening System, demonstrating its use, and announcing the inclusion of the device in a federally funded clinical trial being conducted at Johns Hopkins Hospital.
- 6/21/93 *US News and World Report*: "Still in diapers, and off to the eye doctor," article by Rita Rubin to increase public awareness of visual problems in children at an early age; features a photograph of a prototype instrument.
- 7/31/93 KGUN 9 Evening News, Tucson: "Operation See," video interview describing the need for vision care in the pediatric population and the consequences when it is not available.
- 6/94 "Vision screening--Too little, too late?" *Clinical Research News for Arizona Physicians*, University of Arizona, Tucson, 1994, vol. 5, no. 6.
- 1/96 Selected by peers to be included in the first edition of *The Best Doctors in America: Pacific Region* (1996-97, 1997-98)
- 9/97 Research to Prevent Blindness Science Writers Seminar: "Heading off amblyopia in Native Americans," Universal City, CA.
- 12/29/97 KOLD Channel 13 News, Tucson: "Astigmatism and amblyopia among Native American children," live interview regarding the Tohono O'Odham Vision Screening Program.
- 5/2/99 *Arizona Daily Star*, "Eye on the Children: Ophthalmologists Focusing on Tohono O'Odham," article by Bonnie Henry regarding the Tohono O'Odham Vision Screening Program.
- 4/24/00 *Arizona Daily Wildcat*: "UA Professor Develops Software to Test Eye Problems in Children," in article by Rachael Myer regarding a computer software program that will determine if young children have amblyopia.
- 5/18/00 KPHO Channel 5 News, Phoenix: "Tohono O'Odham Vision Screening Program," live interview.
- 7/15/00 *Ocular Surgery News*: "Software allows faster pediatric vision tests," in article by Ryan DuBosar, informing the public of the new ATSTAT computer program developed during amblyopia trials.
- 12/22/00 *Tucson Citizen*: "Restoring Sight: Dr. Miguel Alvarez, a Sonoran doctor, can perform the much-needed cornea transplant, thanks to a UA program," article by Kristen Hoggatt.

- 12/26/00 *Arizona Daily Star*: UA Gets Vision Study Grant: \$1.7M to help O'Odham children get tested, treated for astigmatism," article by Carmen Duarte.
- 1/01 *University Healthcare Today*: "Ophthalmologists perform surgeries across the border."
- 1/01 *University Healthcare Today*: "Ophthalmology grant to serve Tohono O'Odham pediatric patients."
- 1/04 *Arizona Daily Star*: "Vision with a future: 3 UA pros' camera looks inside the eye," article by David Wichner.
- 11/22/04 KSAZ 580 AM Radio, Tucson: Cele Peterson's "Star of the Day," live interview.
- 3/4/10 KGUN9 News, Eye Brigade to Honduras - January 2010.

### ***Videotapes***

- 8/98 *Seeing to the Future*: A program for parents of children in the Tohono O'Odham Vision Screening Program. This videotape program was produced and edited by the staff of the Vision Screening Program under my direction. I was responsible for videotaping and editing this program, and the reason for its production was to assist in informing parents of the nature of the examination and obtaining appropriate informed consent.
- 8/99 *The Tohono O'Odham Vision Screening Program*: A program for parents of children in the Tohono O'Odham Vision Screening Program. This videotape program was produced and edited by the staff of the Vision Screening Program under my direction.

## **Scholarly Presentations**

### ***Invited Lectures and Symposia***

1. Pallor Measurements of the Optic Nerve, Yale Alumni in Ophthalmology Annual Meeting, New Haven CT, June 10, 1988.
2. Ophthalmological Problems in the First 6 Months of Life and Update on ROP, Neonatal Nurse Practitioners Subspecialty Update, Casa Grande, AZ, May 21, 1992.
3. Congenital Malformations of the Eye, Embryology Year I Medical Students, Department of Anatomy, University of Arizona, September 1992.
4. Strabismus and Vision Screening, Department of Pediatrics Specialty Conference, University of Arizona, January 7, 1993.
5. Retinopathy of Prematurity, Neonatal Intensive Care Unit Staff, Tucson Medical Center, February 12, 1993.
6. Strabismus and Amblyopia, Children's Clinics for Rehabilitative Services, Tucson, March 10, 1993.
7. Automated Screening of Amblyogenic Factors, Wilmer Residents Association Annual Meeting, Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore, MD, April 1993.
8. Congenital Malformations of the Eye, Department of Anatomy, University of Arizona, September 10, 1993.
9. Strabismus and Vision Screening, University of Arizona, Department of Pediatrics Grand Rounds, September 30, 1993.
10. Congenital Cataracts, Pediatrics Housestaff, University of Arizona, October 8, 1993.
11. "What did I miss?" A Trauma Workshop for School Nurses, Pima Community College and Sahuarita School District, February 5, 1994.
12. Clinical Correlations with Embryology: Congenital Malformations of the Eye, Clinical Medicine, College of Medicine, University of Arizona, September 19, 1994.
13. Ophthalmic Pediatric Eye Exam, Family Practice, University of Arizona, October 6, 1994.
14. Vision Screening Workshop, Pima Community College Continuing Education, Tucson, October 19, 1994.

15. Cost/Benefit Analysis of Pediatric Vision Screening, University of Arizona, Department of Pediatrics Grand Rounds, December 20, 1994.
16. Vision Screening, Pediatrics, Kino Community Hospital, Tucson, January 11, 1995.
17. Pediatric Ophthalmology, Sells Hospital, Sells, AZ, June 8, 1995.
18. Strabismus, 3rd Year Medical Students, College of Medicine, University of Arizona, August 9, 1995.
19. Amblyopia and Astigmatism among the Tohono O'Odham, University of Arizona, Epidemiology, September 11, 1995.
20. Eye Injuries, Arizona School for the Deaf and Blind, Tucson, October 9, 1995.
21. Retinopathy of Prematurity, Section of Neonatology and Developmental Biology, Department of Pediatrics, University of Arizona, October 19, 1995.
22. Infant Keratometry, Department of Ophthalmology Research Symposium, University of Arizona, October 20, 1995.
23. CIGNA Pediatricians In-Service, October 23, 1995.
24. Eye Trauma, Pediatric Residents, Tucson Medical Center, October 26, 1995.
25. Visual Development, Pediatrics Housestaff, University of Arizona, October 27, 1995.
26. CIGNA Pediatricians In-Service, November 13, 1995.
27. Esotropia/Exotropia, Pediatrics Housestaff, University of Arizona, January 26, 1996.
28. Eye Prosthesis: Care and How To Put In, Arizona School for the Deaf and Blind, Tucson, March 4, 1996.
29. Vision Screening, Pediatrics Housestaff, University of Arizona, March 29, 1996.
30. Retinopathy of Prematurity (ROP) Lecture, Pediatrics Pulmonary Staff, University of Arizona, April 12, 1996.
31. Visual Disability among Tohono O'Odham, Research among Native Americans Symposium, Center for Native American Health, Arizona Prevention Center, June 4, 1996; and Moderator for Chronic Disease for Symposium.
32. Astigmatism Screening, Section Meeting, Department of Pediatrics, University of Arizona, August 6, 1996.
33. Ophthalmologic Emergencies, Grand Rounds, Emergency Medicine, University of Arizona, August 13, 1996.
34. Pediatric Ophthalmic Instrumentation, Nikon Factory Engineers, Yokahama, Japan, August 15-16, 1996.
35. Pediatric Ophthalmology, Ophthalmological Society of Thailand, Bangkok, August 21-23, 1996.
36. Normal and Abnormal Visual Development, Grand Rounds Teleconference, Department of Pediatrics, University of Arizona, November 26, 1996.
37. Introduction to Medical Specialty Elective, Medical Students, University of Arizona, February 17, 1997.
38. Congenital Nasolacrimal Duct Obstruction, GHMA Pediatrics, March 11, 1997.
39. Common Eye Medications, Arizona School for the Deaf and Blind, Tucson, March 31, 1997.
40. Strabismus and Vision Screening, Department of Pediatrics, University of Arizona, April 17, 1997.
41. Retinopathy of Prematurity (ROP): Diagnosis, Treatment, and Outcome, Nursing In-Service, Tucson Medical Center, June 23, 1997.
42. What's New in Pediatric Ophthalmology, Philippine Academy of Ophthalmology, August 7, 1997.
43. Pediatric Ophthalmology, 3rd Year Medical Students, College of Medicine, University of Arizona, August 13, 1997.
44. Acquired Diseases of the Eye, Department of Pediatrics, University of Arizona, January 15, 1998.
45. Optics and Refraction, KUMC, Kansas City, KS, March 21, 1998.
46. Screening Lecture, Department of Pediatrics, University of Arizona, April 24, 1998.

47. What's New in Pediatric Ophthalmology, Indian Health Service Biennial Eye Care Meeting, San Francisco, CA, May 7, 1998.
48. Visual Development, Beijing Medical University First Medical Hospital, Beijing, China, May 28, 1998.
49. Retinopathy of Prematurity (ROP): Diagnosis, Treatment, and Outcome, Neonatal Intensive Care Unit In-Service, Tucson Medical Center, June 24, 1998.
50. Retinopathy of Prematurity (ROP), Papilledema, and Strabismus, Department of Pediatrics, University of Arizona, August 26, 1998.
51. Pupils and Extraocular Motility, 3rd Year Medical Students, College of Medicine, University of Arizona, August 19 and 26, 1998.
52. Visual Development, Keynote Speaker for 17th Congress of the Asia Pacific Academy of Ophthalmology, Manila, Philippines, March 9, 1999.
53. Pediatric Cataract. Presentation at the Nogales Sonora Ophthalmology Society Symposium, Nogales, Sonora, Mexico, June 19, 1999.
54. Visual Development. Presentation at the Nogales Sonora Ophthalmology Society Symposium, Nogales, Sonora, Mexico, June 19, 1999.
55. Strabismus and Other Vision Problems in Newborns, Teaching Day, Family Medicine Section, Family and Community Medicine, University of Arizona, September 16, 1999.
56. Ocular Signs of Child Abuse, Arizona Optometric Society, October 5, 1999.
57. Automated Vision Screening—No More Eye Charts? Department of Pediatrics, University of Arizona, December 2, 1999.
58. Optics and Refraction, KUMC, Kansas City, KS, February 19, 2000.
59. Management of Intermittent Exotropia, Arizona Optometric Society, March 7, 2000.
60. Seeing What Your Patient is Seeing: Acuity and Contrast Sensitivity. Symposium on Refractions in the Excimer Laser Era, Svo Paulo, Brazil, March 18, 2000.
61. Refractive Surgery: How Much Better Can It Get? The Limits to Human Visual Acuity. Symposium on Refractions in the Excimer Laser Era, Svo Paulo, Brazil, March 18, 2000.
62. Vision Screening of Native American Children. Yale Spring Symposium 2000, June 23, 2000.
63. Low Vision Eye Examination. Low Vision and Vision Functioning Course (SERP 520), Department of Special Education, Rehabilitation and School Psychology (SERP), University of Arizona, September 21, 2000.
64. Duane's Syndrome, Department of Ophthalmology, Tufts University, June 18, 2001.
65. Advances in Screening for Vision Problems, "Pediatrics in the Desert" Conference, Department of Pediatrics, University of Arizona, September 29, 2001.
66. Why Can't I See At Night? Department of Ophthalmology, University of San Diego Shiley Eye Center, November 30, 2001.
67. Looking for Trouble Looking, Family Practice Residents, University of Arizona, January 10, 2002.
68. Discussant of "The Array Multifocal Intraocular Lens in Pediatric Cataract Surgery," 28th Annual Meeting of the Association for Pediatric Ophthalmology and Strabismus, Seattle, WA, March 20-24, 2002.
69. Night Vision Anomalies in Refractive Surgery Patients, Residents, Navy Medical Center, San Diego, CA, March 25, 2002.
70. Statistical Analysis of Refractive Error, Residents, Navy Medical Center, San Diego, CA, March 25, 2002.
71. Optics and Refraction, University of Miami School of Medicine, March 29, 2002.
72. The Tohono O'Odham Vision Screening Program, Southern Arizona Veterans Administration Healthcare System, Tucson, April 4, 2002.
73. Retinopathy of Prematurity (ROP), Southern Arizona Association of Neonatal Nurses, Tucson, August 26, 2002.

74. RK and Night Blindness, University of Arizona, Public Health in Epidemiology and Biostatistics, September 26, 2002.
75. Vision Screening–What's New: Emphasis on the Native American and Preschool Child, Arizona Optometric Association, Scottsdale, November 17, 2002.
76. Vision Problems of Native American Children, Arizona Optometric Association, Scottsdale, November 17, 2002.
77. The Amblyopia Treatment Study–Alternative to the Patch, Arizona Optometric Association, Scottsdale, November 17, 2002.
78. Optics and Refraction, University of Miami School of Medicine, Miami, FL, March 14, 2003.
79. Tohono O'Odham Vision Screening Program, Smith-Kettlewell Eye Research Institute, San Francisco, CA, July 17, 2003.
80. Clinical Diagnosis of Amblyopia, 2003 Annual Meeting of the American Academy of Ophthalmology, Pediatric Ophthalmology Subspecialty Day, November 17, 2003.
81. Discussant for Scientific Paper, "An Internal Amblyopia Screening Test" (Paysse EA), 2003 Annual Meeting of the American Academy of Ophthalmology, November 28, 2003.
82. Error Reduction in Medicine and the Root Cause Analysis Method. University of Arizona, College of Medicine, Interdisciplinary Seminar, April 23, 2004.
83. Eye Research Update: Diseases of the Aging Eye, Lions Fall Cabinet Meeting, District 21C, Mesa, August 22, 2004.
84. Seeing Into the Eye. University of Arizona, College of Medicine, Translational Seminar, November 23, 2004.
85. Project Timeline, University of Arizona, Arizona Clinical Research Training Program, January 7, 2005.
86. Error Reduction in Medicine and the Root Cause Analysis Method, University of Arizona, College of Medicine, Interdisciplinary Seminar, January 21, 2005.
87. Potential Peril of Practicing by Prediction, University of Arizona, College of Public Health, March 31, 2005.
88. Infectious Diseases of the Eye, University of Arizona, College of Public Health, Infectious Disease Epidemiology, March 31, 2005.
89. Optics and Refraction. Residents, Navy Medical Center, San Diego, CA, April 1, 2006.
90. Low Vision Eye Examination. Low Vision and Vision Functioning Course, Department of Special Education, Rehabilitation and School Psychology, University of Arizona, September 19, 2006.
91. Optics and refraction. Residents, Navy Medical Center, San Diego, CA, March 29, 2007.
92. Low Vision Eye Examination. Low Vision and Vision Functioning Course, Department of Special Education, Rehabilitation and School Psychology, University of Arizona, September 13, 2007.
93. Optics and Refraction. Residents, Navy Medical Center, San Diego, CA, April 10, 2008.
94. Low Vision Eye Examination. Low Vision and Vision Functioning Course, Department of Special Education, Rehabilitation and School Psychology, University of Arizona, September 18, 2008.
95. Optics and Refraction. Residents, Navy Medical Center, San Diego, CA, April 2, 2009.
96. Clinical Application of Power Vectors. Research Day, Navy Medical Center, San Diego, CA, May 16, 2009.
97. Amblyopia. Presentation for the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) 37<sup>th</sup> Annual Continuing Education Program at the Annual Meeting of the American Academy of Ophthalmology, San Francisco, CA, October 24-27, 2009.
98. Pediatric Vision Screening Limitations. Presentation for SUNY Upstate Medical University 60<sup>th</sup> Annual Postgraduate Review Course, Syracuse, NY, December 4-5, 2009.
99. Comparing Vision Screening Programs. Presentation for SUNY Upstate Medical University 60<sup>th</sup> Annual Postgraduate Review Course, Syracuse, NY, December 4-5, 2009.

100. Automated Vision Screening of Children. Presentation for SUNY Upstate Medical University 60<sup>th</sup> Annual Postgraduate Review Course, Syracuse, NY, December 4-5, 2009.
101. Spectacle Prescribing Recommendations for Children. Presentation for SUNY Upstate Medical University 60<sup>th</sup> Annual Postgraduate Review Course, Syracuse, NY, December 4-5, 2009.
102. Lower and Higher Order Aberrations of Native American Children, and Their Relation to Accommodation and Astigmatism. Presentation for the 46<sup>th</sup> Annual Meeting of Japanese Society of Ophthalmic Optics, Yokohama, Japan, September 4-5, 2010.
103. Preschool Vision Screening: Current Concepts. Presentation for the Children's Hospital and Medical Center in Omaha, NE, February 11, 2011.
104. Optics and Refraction. Residents, Navy Medical Center, San Diego, CA, March 31, 2011.
105. Accommodation and Astigmatism. Martha Leffler Lincoln Memorial Lectureship in Ophthalmology, Wilmer Ophthalmological Institute, Johns Hopkins University School of Medicine, Baltimore, MD, December 9, 2011.
106. Pediatric Ophthalmology: Current Concepts. Yale Ophthalmology Spring Symposium/Alumni Day, New Haven, CT, June 22, 2012.
107. What This Country Needs is a Good \$500 Cataract Surgery, Lions Mid-Year Leadership Conference, Prescott, AZ, November 2, 2013.
108. Medical Tourism: What Can We Learn From India? University of Arizona Medical Center Friends, Tucson, AZ, October 15, 2014.

#### ***Invited Seminars***

1. Photoscreening: Finding Causes of Preventable Vision Loss Through Image Analysis, Electrical and Computer Engineering/Biomedical Engineering Seminar, University of Arizona, October 16, 1998.
2. Research to Prevent Blindness Annual Science Writers' Seminar: Advances in detection and treatment of amblyopia, Universal City, CA, April 1993.
3. Heading Off Amblyopia in Native Americans, Research to Prevent Blindness's 14th National Science Writers Seminar, Universal City, CA, September 21-24, 1997.
4. Seeing into the Eye, College of Medicine Translational Seminar, University of Arizona, Tucson, November 23, 2004.
5. Error Reduction in Medicine and the Root Cause Analysis Method, Error Reduction in Medicine Interdisciplinary Seminar, College of Medicine, January 21, 2005.

#### ***Conferences [Published Abstracts]***

1. Caprioli J, Miller JM: Topographic measurements of the optic nerve head in glaucoma. Presentation at the 1987 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 4-8, 1987. [*Invest Ophthalmol Vis Sci* 1987;28:188. Abstract #9.]
2. Miller JM, Caprioli J: Videographic measurements of optic disc pallor. Presentation at the 1987 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 4-8, 1987. [*Invest Ophthalmol Vis Sci* 1987;28:189. Abstract #12.]
3. Caprioli J, Miller JM: Correlation of structure and function in glaucoma: quantitative measures of disc and field. Oral presentation at the American Academy of Ophthalmology Annual Meeting, 1987, Dallas, TX.
4. Miller JM, Caprioli J: Variability of optic nerve head depth measurements is decreased by image plane registration. Oral presentation at the 1988 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1988. [*Invest Ophthalmol Vis Sci* 1988;29:421. Abstract #2.]

5. Caprioli J, Miller JM: Pattern of visual field improvement with acute reduction in intraocular pressure. Oral presentation at the 1988 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1988. [*Invest Ophthalmol Vis Sci* 1988;29:422. Abstract #8.]
6. Miller JM, Tressler C, Caprioli J: Nerve fiber layer photography and quantitative measurements of peripapillary topography in normal and glaucomatous eyes. Oral presentation at the 1989 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 30-May 5, 1989. [*Invest Ophthalmol Vis Sci* 1989;30:430. Abstract #12.]
7. Caprioli J, Miller JM, Ortiz-Colberg R, Tressler C: Profiles of the peripapillary nerve fiber layer in glaucoma. Oral presentation at the 1989 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 30-May 5, 1989. [*Invest Ophthalmol Vis Sci* 1989;30:430. Abstract #11.]
8. Tressler C, Caprioli J, Miller JM: Long term fluctuation of visual field thresholds in glaucoma. Oral presentation at the 1989 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 30-May 5, 1989. [*Invest Ophthalmol Vis Sci* 1989;30:57. Abstract #13.]
9. Caprioli J, Miller JM, Tressler CS: Measurements of peripapillary nerve fiber layer contour in glaucoma. Oral presentation at the 1989 Annual Meeting of the American Academy of Ophthalmology, New Orleans, LA.
10. Silverstone DE, Hufnagel T, Miller JM: Effect of carbachol and acetylcholine on the corneal endothelium and IOP in cataract surgery. Oral presentation at the 1989 Annual Meeting of the American Academy of Ophthalmology, New Orleans, LA.
11. Miller E, Miller JM, Hoffman D, Caprioli J: Spatial and temporal variations of fundus depth measurements. Poster presented at the 1990 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 29-May 4, 1990. [*Invest Ophthalmol Vis Sci* 1990;31:459. Abstract #2257.]
12. Miller JM, Caprioli J: An optimal retinal reference plane for measurement of peripapillary surface contour. Oral presentation at the 1990 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 29-May 4, 1990. [*Invest Ophthalmol Vis Sci* 1990;31:566. Abstract #2776.]
13. Miller JM: Measurement of small strabismic deviations with a video camera, The Residents Association of the Wilmer Ophthalmological Institute 50th Anniversary Meeting, Baltimore, MD, April 26, 1991.
14. Miller JM, Simons K: Sub-pixel imaging permits automated Hirschberg test measurement of small strabismic deviations with a standard video camera. Poster presented at the 1991 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, April 28-May 3, 1991. [*Invest Ophthalmol Vis Sci* 1991;32:713. Abstract #106.]
15. Miller JM, Simons K: Videographic Hirschberg measurement of small strabismic deviations. Oral presentation at the 1991 Meeting of American Association for Pediatric Ophthalmology and Strabismus, Montreal, Quebec, Canada, May 15-19, 1991.
16. Guyton DL, Conner TB, Repka MX, West CE, Miller JM, D'Anna, SA: The adjustable globe: a novel technique for adjustable strabismus surgery. Oral presentation at the 1991 Meeting of American Association for Pediatric Ophthalmology and Strabismus, Montreal, Quebec, Canada, May 15-19, 1991.
17. Miller JM: Computerized data base for the recording of the orthoptic examination. Poster presented at the 1992 Meeting of the Association for Pediatric Ophthalmology and Strabismus, Maui, HI, February 11, 1992.
18. Miller JM, Mellinger MD, Palmer ML, Greivenkamp JE, Simons K: Video remote keratometry (VRK) using image processing for the pediatric population. Poster presented at the 1992 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 3-8, 1992. [*Invest Ophthalmol Vis Sci* 1992;33:713. Abstract #106.]

19. Miller JM: Video remote keratometer for the screening of corneal astigmatism, Ophthalmic and Visual Optics, Topical meeting sponsored by Optical Society of America, Monterey, CA, February 20, 1993.
20. Mellinger MD, Greivenkamp JE, Snyder RW, Bechara S, Schwiegerling JT, Lowman AE, Miller JM, Palmer ML: Toric service measurement comparison of the computed anatomy and EyeSys Laboratories videokeratoscopes. Poster presented at the 1993 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 2-7, 1993. [*Invest Ophthalmol Vis Sci* 1993;34:1252. Abstract #2703.]
21. Miller JM, Mellinger MD, Elhatton K, Greivenkamp JE, Hunter DG, Simons K: A non-threatening system for automated screening of strabismus and corneal astigmatism. Poster presented at the 1993 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 2-7, 1993. [*Invest Ophthalmol Vis Sci* 1993;34:861. Abstract #794.]
22. Greivenkamp JE, Schwiegerling J, Miller JM: Modeling the eye as an optical system. Optical Science of American Annual Meeting, Dallas, TX, February 2-7, 1994.
23. Guyton D, Simons K, Miller J, Hunter D: Update on remote examining and screening techniques. Residents Association of the Wilmer Ophthalmological Institute 53rd Clinical Meeting, April 21-23, 1994.
24. Schwiegerling JT, Greivenkamp JE, Miller JM, Mellinger MD: Visual acuity prediction from optical raytraces of schematic eye models. Poster presented at the 1994 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1994. [*Invest Ophthalmol Vis Sci* 1994;35:2196. Abstract #4358.]
25. Miller JM, Emerson S, Liu L, Mellinger MD: Decreasing variability of corneal topographic measurement through computationally-intensive statistical analysis. Poster presented at the 1994 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1994. [*Invest Ophthalmol Vis Sci* 1994;35:2194. Abstract #4350.]
26. Leising H, Miller JM, Greivenkamp JE, McCarley K, Rodriguez JJ, Guyton, DL: Quantification of the Brückner test for strabismus. Poster presented at the 1994 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1994. [*Invest Ophthalmol Vis Sci* 1994;35:2202. Abstract #4390.]
27. Mellinger MD, Greivenkamp JE, Snyder RW, Miller JM, Nordan L, Schwiegerling JT: Toric reference surface measurement using the Visioptic EH-270 Videokeratoscope. Poster presented at the 1994 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 1-6, 1994. [*Invest Ophthalmol Vis Sci* 1994;35:2194. Abstract #4348.]
28. Kramer TR, Miller JM, Hoyme HE, Reid TK, Sato SE: Ocular findings in Langer-Giedion, Syndrome. American Association for Pediatric Ophthalmology and Strabismus, Vancouver, BC, Canada, June 18-24, 1994.
29. Miller JM: An inexpensive method to construct stationary grating and vernier stimuli. Poster presented at 21st Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, April 5-9, 1995.
30. Hall HL, Miller JM, Greivenkamp JE: Optical assessment of the pediatric crystalline lens. Poster presented at the 1995 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 14-19, 1995. [*Invest Ophthalmol Vis Sci* 1995;36:S797. Abstract #3689.]
31. Schwiegerling JT, Greivenkamp JE, Miller JM, Snyder RW, Palmer ML: Decentration of radial keratotomy incision patterns: optical modeling. Poster presented at the 1995 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 14-19, 1995. [*Invest Ophthalmol Vis Sci* 1995;36:S582. Abstract #2700.]

32. Harvey EM, Miller JM, Dobson V: Reproducibility of corneal astigmatism measurements with a portable automated keratometer in preschool children. Poster presented at the 1995 Annual Meeting of the Association for Research in Vision and Ophthalmology, Sarasota, FL, May 14-19, 1995. [*Invest Ophthalmol Vis Sci* 1995;36:S1005. Abstract #4657.]
33. Miller JM: A hand-held video keratoscope for the measurement of corneal astigmatism in infants and young children. Presented at Vision Science and Its Applications, Optical Society of America, February 1-5, 1996.
34. Miller JM, Dobson V, Harvey EM: Preferential looking to vernier stimuli does not measure hyperacuity in children less than 24 months of age. Poster presented at the 1996 Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Snowbird, UT, March 13-17, 1996.
35. Miller JM, Harvey EM: Accuracy and repeatability of a hand-held video keratoscope in a population with a high prevalence of astigmatism. Poster presented at the 1996 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, April 21-26, 1996. [*Invest Ophthalmol Vis Sci* 1996;37:S704. Abstract #3218.]
36. Wagner LK, Miller JM, Wilson MC, Harvey EM: Accuracy of a hand-held autorefractor in a pediatric population. Poster presented at the 1996 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, April 21-26, 1996. [*Invest Ophthalmol Vis Sci* 1996;37:S729. Abstract #3334.]
37. Schwiegerling JT, Greivenkamp JE, Miller JM: Keratoconus detection from videokeratoscopic height data. Poster presented at the 1996 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, April 21-26, 1996. [*Invest Ophthalmol Vis Sci* 1996;37:S558. Abstract #2554.]
38. Hall HL, Miller JM, Greivenkamp JE, Schwiegerling JT: Prediction of identification difficulty of Sloan letters based on spatial frequency content. Poster presented at the 1996 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, April 21-26, 1996. [*Invest Ophthalmol Vis Sci* 1996;37:S1076. Abstract #4947.]
39. Miller JM: Accuracy and repeatability of a hand-held video keratoscope in a population with a high prevalence of astigmatism, The Whitaker Foundation Biomedical Engineering Research Conference, Snowbird, UT, August 8-10, 1996.
40. Miller JM, Dobson V, Harvey E: Astigmatism and visual acuity in a Native American preschool population. Poster presented at the 1997 Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Charleston, SC, April 2-6, 1997.
41. Miller JM, Dobson V, Harvey E: Refractive amblyopia in a Native American preschool population with a high prevalence of astigmatism. Poster presented at the 1997 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11-16, 1997. [*Invest Ophthalmol Vis Sci* 1997;38:S109. Abstract #526.]
42. Mansueto LA, Harvey EM, Miller JM, Dobson V: Sensitivity and specificity of the MTI Photoscreener in a preschool population with a high prevalence of astigmatism. Poster presented at the 1997 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11-16, 1997. [*Invest Ophthalmol Vis Sci* 1997;38:S109. Abstract #529.]
43. Noecker R, Miller JM, Rodriguez J, Seal K: Increased incidence of potentially amblyogenic astigmatism in a pediatric population in a Mexican border region. Poster presented at the 1997 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11-16, 1997. [*Invest Ophthalmol Vis Sci* 1997;38:S109. Abstract #527.]
44. Hall H, Miller JM, Schwiegerling JT, Harvey EM: Comparison of sensitivity and specificity of the MTI Photoscreener when scored from a video screen and original photos. Poster presented at the 1997 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11-16, 1997. [*Invest Ophthalmol Vis Sci* 1997;38:S1069. Abstract #4992.]

45. Harvey EM, Miller JM, Dobson V: Effectiveness of screening for refractive errors with a hand-held autorefractor in a preschool population with a high prevalence of astigmatism. Poster presented at the 1997 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11-16, 1997. [*Invest Ophthalmol Vis Sci* 1997;38:S977. Abstract #4529.]
46. Miller JM, Dobson V, Harvey E: Yield of vision screening in Native American Head Start Children. Poster presented at the 1997 Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Palm Springs, CA, April 4-8, 1998.
47. Miller JM, Harvey EM, Dobson V, Tyszkowski RM, Funk JL, Lopez FM, Lopez CA: Keratometry screening is superior to visual acuity screening in a preschool population of Native American children. Poster presented at the 1998 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 10-15, 1998. [*Invest Ophthalmol Vis Sci* 1998;39:S944. Abstract #4352.]
48. Harvey EM, Miller JM, Dobson V, Lopez CA, Lopez FM: A comparison of ETDRS (letter) acuity and LEA (symbol) acuity in a first grade population with a high prevalence of astigmatism. Poster presented at the 1998 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 10-15, 1998. [*Invest Ophthalmol Vis Sci* 1998;39:S947. Abstract #4369.]
49. Dobson V, Miller JM, Harvey EM, Tyszkowski RM: The relation between corneal and refractive astigmatism in a preschool population with a high prevalence of astigmatism. Poster presented at the 1998 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 10-15, 1998. [*Invest Ophthalmol Vis Sci* 1998;39:S281. Abstract #1283.]
50. Tyszkowski RM, Dobson V, Miller JM, Harvey EM: Characteristics of astigmatism prevalent in a preschool population of Native American children. Poster presented at the 1998 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 10-15, 1998. [*Invest Ophthalmol Vis Sci* 1998;39:S281. Abstract #1284.]
51. Broyles P, Dobson V, Miller JM, Harvey EM, Tyszkowski RM: Success rates for screening for astigmatism in preschoolers: a comparison of three instruments. Poster presented at the 1998 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 10-15, 1998. [*Invest Ophthalmol Vis Sci* 1998;39:S944. Abstract #4353.]
52. Miller JM, Palanca-Capistrano AM, Gilbert J, Schwiegerling J, Sherrill DL: Asymmetric optic nerve morphology is associated with astigmatism in Native American preschool children. Presented at Vision Science and Its Applications, Optical Society of America, Santa Fe, NM, February 19-22, 1999.
53. Dobson V, Miller JM, Harvey EM, Sherrill DL: Prevalence of astigmatism, astigmatic anisometropia, and glasses wearing among preschool- and school-age Native American children. Presented at Vision Science and Its Applications, Optical Society of America, Santa Fe, NM, February 19-22, 1999.
54. Miller JM: Management of infantile aphakia. Presentation at the 17th Congress of the Asia Pacific Academy of Ophthalmology, Manila, Philippines, March 7-12, 1999.
55. Miller JM, Surachatkumtonekul T: Detection and improper fixation in MTI photoscreening images. Presentation at the 1999 Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Toronto, Ontario, Canada, April 15-18, 1999.
56. Miller JM, Schwiegerling JM, Hall HL, Surachatkumtonekul T: Detection and consequences of improper fixation in MTI photoscreening images. Poster presented at the 1999 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 9-14, 1999. [*Invest Ophthalmol Vis Sci* 1999;40:S430. Abstract #299.]

57. Mohan KM, Miller JM, Dobson V, Harvey EM, Sherrill DL: Intra- and inter-rater agreement in the interpretation of photographs taken with the MTI photoscreener in Native American preschool children. Poster presented at the 1999 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 9-14, 1999. [*Invest Ophthalmol Vis Sci* 1999;40:S430. Abstract #2271.]
58. Miller JM, Harvey E, Dobson V: Use of the Welch-Allyn Pediatric Autorefractor to detect astigmatism in Native American preschool children. Presentation at the Child Vision Research Society Meeting, London, England, June 3-5, 1999.
59. Miller JM, Harvey EM, Dobson V: Prescribing spectacles by confirmed autorefraction. Presentation at Vision Science and Its Applications, Optical Society of America, Santa Fe, NM, February 11-14, 2000.
60. Miller JM: Recommended hypermetropia screening guidelines by pediatric eye care specialists. Presentation at the 2000 Annual Meeting of the American Association for Pediatric and Ophthalmology and Strabismus, Palm Springs, CA, April 12-15, 2000.
61. Miller JM, for the Pediatric Eye Screening Study Group: Hypermetropia screening recommendations of pediatric eye specialists. Poster presented at the 2000 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 5, 2000. [*Invest Ophthalmol Vis Sci* 2000;41:S302. Abstract #1595.]
62. Hall HL, Greivenkamp JE, Schwiegerling J, Miller JM: Modeling Purkinje images in ray-trace code for the assessment of pediatric lenticular astigmatism. Poster presented at the 2000 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 5, 2000. [*Invest Ophthalmol Vis Sci* 2000;41:S4. Abstract #21.]
63. Atodaria NJ, Harvey EM, Miller JM, Dobson V: Preschool vision screening using a new photoscreener: effectiveness in a population with a high prevalence of astigmatism. Poster presented at the 2000 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 5, 2000. [*Invest Ophthalmol Vis Sci* 2000;41:S302. Abstract #1593.]
64. Harvey EM, Miller JM, Dobson V: Preschool vision screening with a new portable vision screener: effectiveness in a population with a high prevalence of astigmatism. Poster presented at the 2000 Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 5, 2000. [*Invest Ophthalmol Vis Sci* 2000;41:S302. Abstract #1594.]
65. Miller JM, Harvey EM, Dobson V: Confirmed autorefraction component differences in a population of astigmatic Native American preschool children. Presentation at the VIII International Conference on Myopia, Boston, MA, July 7-9, 2000.
66. Miller JM, Harvey EM, Dobson V: Isoametropic amblyopia in astigmatic Native American preschool children. Presentation at the International Society for Eye Research XIV International Congress of Eye Research Meeting, Santa Fe, NM, October 15-20, 2000.
67. Miller JM, Harvey EM, Dobson V, Sherrill D: The prevalence of high corneal astigmatism among Tohono O'odham preschool children. Presentation at the International Society for Eye Research XIV International Congress of Eye Research Meeting, Santa Fe, NM, October 15-20, 2000.
68. Miller JM, Holmes JM, Beck RW, Harvey EM, Dobson V: Computerized visual acuity measurement using the Amblyopia Treatment Study Threshold Acuity Test [ATSTAT]. Poster presented at the Annual Meeting of the American Academy of Ophthalmology, Dallas, TX, October 22-25, 2000.
69. Miller JM, Harvey EM, Dobson V, Sherrill D: Screening for astigmatism is affected by the disease positive threshold. Poster presented at the 2001 Annual Meeting of the American Association for Pediatric and Ophthalmology and Strabismus, Orlando, FL, March 21-25, 2001.

70. Harvey EM, Dobson V, Miller JM: Factors associated with the development of amblyopia in astigmatic children. Presentation at the 2001 Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN, April 19-22, 2001.
71. Miller JM, Harvey EM, Sherrill DL, Funk-Weyant J, Dobson V: Lea Symbols® and computerized crowded HOTV letters provide equivalent acuities in Native American preschool children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 29-May 4, 2001. [*Invest Ophthalmol Vis Sci* 2001;42:S385. Abstract #2077.]
72. Beck RW, Moke PS, Turpin AH, Holmes JM, Repka MX, Birch EE, Miller JM, Johnson CA: Measuring visual acuity in children with a PC-based version of the Amblyopia Treatment Study visual acuity testing protocol. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 29-May 4, 2001. [*Invest Ophthalmol Vis Sci* 2001;42:S384. Abstract #2069.]
73. Miller JM, Anwaruddin R, Straub J, Schwiegerling J: Spherical aberration in normal, dilated, IOL and LASIK patients. Poster presented at the 3rd International Congress of Wavefront Sensing and Aberration-Free Refractive Correction, Interlaken, Switzerland, February 15-17, 2002.
74. Straub J, Schwiegerling J, Gupta A, Miller J, Anwaruddin R: Spherical aberrations in human eyes: Comparison of normal, post-LASIK and post-IOL eyes. Poster presented at the 3rd International Congress of Wavefront Sensing and Aberration-Free Refractive Correction, Interlaken, Switzerland, February 15-17, 2002.
75. Joish VN, Miller JM, Malone DC: An economic evaluation of visual acuity screening and photoscreening for young children. Poster presented at the 28th Annual Meeting of the American Association for Pediatric and Ophthalmology and Strabismus, Seattle, WA, March 20-24, 2002.
76. Miller JM, Harvey EM, Dobson V: Use of the enhanced Bruckner Test to screen for refractive error. Poster presented at the 28th Annual Meeting of the American Association for Pediatric and Ophthalmology and Strabismus, Seattle, WA, March 20-24, 2002.
77. Dobson V, Miller JM, Harvey EM, Mohan KM: Meridional amblyopia in 3- to 5-year-old Native American children with astigmatism  $\geq 1.50$  diopters. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2002. [*Invest Ophthalmol Vis Sci* 2002;43:E-Abstract 3939]
78. Harvey EM, Dobson V, Miller JM: Below normal best-corrected grating acuity across stimulus orientation in children with high astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2002. [*Invest Ophthalmol Vis Sci* 2002;43:E-Abstract 4692]
79. Miller JM, Harvey EM, Dobson V: A practical method for testing vernier acuity in children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2002. [*Invest Ophthalmol Vis Sci* 2002;43:E-Abstract 2665]
80. Mohan KM, Miller JM, Harvey EM, Dobson V: Vision problems among Native American Head Start children. Poster presented at Head Start's 6<sup>th</sup> National Research Conference, Washington, DC, June 26-29, 2002.
81. Adams I, Lopez F, Harvey EM, Miller JM: Head Start vision screening: Identifying and targeting population specific vision problems. Poster presented at Head Start's 6<sup>th</sup> National Research Conference, Washington, DC, June 26-29, 2002.
82. Miller JM, Sherrill DL, Harvey EM, Dobson V: The stability of astigmatism in Native American preschool children. Poster presented at Fall Vision Meeting, San Francisco, CA, October 24-27, 2002.
83. Dobson V, Miller JM, Harvey EM, Mohan KM: Amblyopia in astigmatic preschool children. Poster presented at Fall Vision Meeting, San Francisco, CA, October 24-27, 2002.

84. Miller JM: A digital camera fundus lens for documenting retinal hemorrhages. Poster presented at the Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Waikoloa, HI, April 23-27, 2003.
85. Harvey EM, Dobson V, Miller JM, Clifford C: Accommodation in uncorrected astigmatic children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 2727]
86. Clifford C, Harvey EM, Dobson V, Miller JM: Accuracy of the Grand Seiko Autorefractor in children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 2793]
87. Apple HP, Hartmann EE, Miller JM, Apple DC: Automated cover/uncover test: Evaluation of two prototypes. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 4835]
88. Dobson V, Miller JM, Sherrill DL, Harvey EM: Stability of astigmatism in Native American preschool children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 4773]
89. Miller JM, Sherrill DL, Dobson V, Harvey EM: Stability of spherical equivalent refraction in Native American preschool children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 4774]
90. Siatkowski R, Cotter S, Miller J, Scher C, Crockett RS, Novack GD, for the US Pirenzepine Study Group: *In Vivo* Transscleral delivery of FITC-conjugated molecules to the rabbit choroid and retina. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 4-9, 2003. [*Invest Ophthalmol Vis Sci* 2003;44:E-Abstract 4778]
91. Miller JM: Higher-order aberrations in Native American children. Oral presentation at the Mopane 2003: International Conference on Astigmatism, Aberrations, and Vision, Mopani Camp, Kruger National Park, South Africa, August 2-5, 2003. [Invited]
92. Miller JM: Clinical diagnosis of amblyopia. Oral presentation at the 2003 Annual Meeting of the American Academy of Ophthalmology, Anaheim, CA, November 15-18, 2003. [Invited]
93. Apple HP, Hartmann EE, Miller JM, Nevitt MP: Human factors testing of a new preschool vision screening device. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 25-29, 2004. [*Invest Ophthalmol Vis Sci* 2004;45:E-Abstract 4312]
94. Harvey EM, Dobson V, Miller JM: Treatment of astigmatism-related amblyopia: Evidence for a sensitive period that extends beyond early childhood. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 25-29, 2004. [*Invest Ophthalmol Vis Sci* 2004;45:E-Abstract 2580]
95. Siatkowski RM, Cotter SA, Miller JM, Scher CA, Crockett RS, Novack GD, for the US Pirenzepine Study Group: Pirenzepine 2% Ophthalmic Gel retards myopic progression in 8-12 year old children over two years. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 25-29, 2004. [*Invest Ophthalmol Vis Sci* 2004;45:E-Abstract 2733]
96. Dobson V, Miller JM, Harvey EM, Clifford C, Haynes B, Mohan K: A compact computer-based stimulus display for use in preferential looking assessment of infant vision. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 25-29, 2004. [*Invest Ophthalmol Vis Sci* 2004;45:E-Abstract 4310]

97. Miller JM, Harvey EM, Dobson V: Use of the Dimensions Technology Autostereoscopic Monitor for monocular and binocular testing. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 25-29, 2004. [*Invest Ophthalmol Vis Sci* 2004;45:E-Abstract 4311]
98. Clifford CE, Miller JM, Harvey EM, Dobson V: Impact of a population-based vision screening program on spectacle wear among Native American children. Presented at the 132nd Annual Meeting of the American Public Health Association, Washington, DC, November 6-10, 2004.
99. Miller JM, Harvey EM, Clifford C, Dobson V: Reduced-contrast computerized acuity test (CAT) of grating acuity. Poster presented at the Annual Meeting of the American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 9-13, 2005.
100. Clifford CE, Miller JM, Harvey EM, Dobson V: Impact of a population-based vision screening program on spectacle wear among Native American children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-6, 2005. [*Invest Ophthalmol Vis Sci* 2005;46:E-Abstract 688]
101. Schwiegerling JT, Jain P, Harvey EM, Dobson V, Miller JM: Measurement of cylinder error in a Native American population with a Shack-Hartmann sensor. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-6, 2005. [*Invest Ophthalmol Vis Sci* 2005;46:E-Abstract 5619]
102. Harvey EM, Dobson V, Miller JM, Clifford CE, Lopez F, Adams I: Prevalence of high corneal astigmatism in Native American infants and toddlers. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-6, 2005. [*Invest Ophthalmol Vis Sci* 2005;46:E-Abstract 5620]
103. Miller JM, Harvey EM, Schwiegerling J: Design and evaluation of an infant keratometer incorporating infrared imaging and a telecentric telephoto lens. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-6, 2005. [*Invest Ophthalmol Vis Sci* 2005;46:E-Abstract 5625]
104. Shelton JB, Harvey EM, Dobson V, Miller JM, Clifford CE: Performance of children with astigmatism-related amblyopia on the "Pelli-Levi Dual Acuity Chart." Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-6, 2005. [*Invest Ophthalmol Vis Sci* 2005;46:E-Abstract 5644]
105. Miller JM, Dobson V, Harvey EM, Clifford CE: TACSim: An acuity card procedure simulator. Poster presented at the Annual Meeting of the American Academy of Ophthalmology, Chicago, IL, October 15-18, 2005.
106. Harvey EM, Dobson V, Miller JM, Clifford CE: Amblyopia in astigmatic children: Development and treatment. *J Vision* 2005;5(12):38a. [<http://journalofvision.org/5/12/38>, doi:10.1167/5.12.38]
107. Harvey EM, Dobson V, Miller JM, Clifford CE: Effectiveness of recommended visual acuity screening referral criteria in a population with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 4, 2006. [*Invest Ophthalmol Vis Sci* 2006;47:E-Abstract 691]
108. Miller JM, Harvey EM, Dobson V, Clifford CE: Improved method for SureSight Autorefractor astigmatism measurement. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 4, 2006. [*Invest Ophthalmol Vis Sci* 2006;47:E-Abstract 697]
109. Clifford CE, Harvey EM, Miller JM: Determining factors associated with eyeglass wearing compliance in school-age children: A pilot survey. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 4, 2006. [*Invest Ophthalmol Vis Sci* 2006;47:E-Abstract 719]

110. Dobson V, Harvey EM, Clifford CE, Miller JM: Anisometropia and anisometropia amblyopia in a population of children with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 4, 2006. [*Invest Ophthalmol Vis Sci* 2006;47:E-Abstract 2455]
111. Apple HP, Miller JM, Harvey EM, Apple DC: Child response to an electronic vision occluder for acuity testing. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 30-May 4, 2006. [*Invest Ophthalmol Vis Sci* 2006;47:E-Abstract 3161]
112. Miller JM, Kawamorita T, Dobson V, Harvey EM: The SureSight™ Autorefractor: the difference between sphere readings in "adult" and "child" modes. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2007. [*Invest Ophthalmol Vis Sci* 2007;48:E-Abstract 995]
113. Garvey KA, Harvey EM, Dobson V, Clifford-Donaldson CE, Miller JM: Non-cycloplegic refractive error measured with the SureSight™ Autorefractor: does age or astigmatism have an effect on accuracy? Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2007. [*Invest Ophthalmol Vis Sci* 2007;48:E-Abstract 996]
114. Donaldson CC, Schwiegerling J, Miller JM, Harvey EM: Evaluation of a hand-held keratometer in a population of children with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2007. [*Invest Ophthalmol Vis Sci* 2007;48:E-Abstract 997]
115. Harvey EM, Dobson V, Clifford-Donaldson CE, Miller JM: Effects of eyeglass treatment on best-corrected grating acuity in school-age children with high astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2007. [*Invest Ophthalmol Vis Sci* 2007;48:E-Abstract 5509]
116. Dobson V, Harvey EM, Clifford-Donaldson CE, Miller JM: Best-corrected Lea symbols acuity versus best-corrected ETDRS letter acuity in a population of children with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5-10, 2007. [*Invest Ophthalmol Vis Sci* 2007;48:E-Abstract 5510]
117. Miller JM, Dobson V, Clifford-Donaldson CE, Harvey EM: Predictors of amblyopia subtypes in a population of children with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 26-May 1, 2008. [*Invest Ophthalmol Vis Sci* 2008;49:E-Abstract 1425]
118. Harvey EM, Clifford-Donaldson CE, Green TK, Miller JM, Dobson V: Prevalence of astigmatism in Native American children 6 months to 8 years of age. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 26-May 1, 2008. [*Invest Ophthalmol Vis Sci* 2008;49:E-Abstract 1422]
119. Garvey KA, Miller JM, Dobson V, Harvey EM: Prevalence of strabismus and heterophoria in a population of Native American children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 26-May 1, 2008. [*Invest Ophthalmol Vis Sci* 2008;49:E-Abstract 1423]
120. Dobson V, Miller JM, Clifford-Donaldson CE, Harvey EM: The relation between magnitude of anisometropia (spherical equivalent and astigmatic) and amblyopia in a population of children with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 26-May 1, 2008. [*Invest Ophthalmol Vis Sci* 2008;49:E-Abstract 1424]

121. DeHoog EA, Clifford-Donaldson CE, Harvey EM, Miller JM, Dobson V, Schwiegerling J: Astigmatism and higher-order aberrations measured with a handheld aberrometer in Native American children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, April 26-May 1, 2008. [*Invest Ophthalmol Vis Sci* 2008;49:E-Abstract 1426]
122. Miller JM, Schwiegerling J, DeHoog E, Dobson V, Clifford-Donaldson CE, Harvey EM: Open-field keratometer for infant vision research. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 3-7, 2009 [*Invest Ophthalmol Vis Sci* 2009;50:E-Abstract 3987]
123. Messer DH, Miller JM, Dobson V, Harvey EM: Relation between level of astigmatism and changes in refractive and corneal astigmatism over a period of 2 years. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 3-7, 2009. [*Invest Ophthalmol Vis Sci* 2009;50:E-Abstract 3969]
124. Donaldson CE, Adams I, Green TK, Dobson V, Miller JM, Messer DH, Harvey EM: Rate of spectacle wear and compliance with spectacle wear among preschool children from a population with a high prevalence of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 3-7, 2009. [*Invest Ophthalmol Vis Sci* 2009;50:E-Abstract 3968]
125. Green TK, Clifford-Donaldson CE, Dobson V, Miller JM, Harvey EM: The effects of new retention strategies on the follow-up rate of Native American toddlers enrolled in a longitudinal study of visual development. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 3-7, 2009. [*Invest Ophthalmol Vis Sci* 2009;50:E-Abstract 3814]
126. Harvey EM, Clifford-Donaldson CE, Green TK, Dobson V, Miller JM: Perception of global form in children with astigmatism-related amblyopia: a pilot study. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 3-7, 2009. [*Invest Ophthalmol Vis Sci* 2009;50:E-Abstract 3818]
127. Miller JM, Harvey EM, Dobson V. Infant keratoscopy ring keratoscope error analysis. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 2-6, 2010. [*Invest Ophthalmol Vis Sci* 2010;51:E-Abstract 5280]
128. Apple HP, Miller JM, Harvey EM, Clifford-Donaldson CE, Green TK. Simplified laptop testing protocol for radial hyperacuity. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 2-6, 2010. [*Invest Ophthalmol Vis Sci* 2010; 51:E-Abstract 5281]
129. Donaldson CE, Green TK, Dobson V, Miller JM, Messer DH, Harvey EM: Radial hyperacuity in astigmatic children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 2-6, 2010. [*Invest Ophthalmol Vis Sci* 2010;51: E-Abstract 5279]
130. Green TK, Clifford-Donaldson CE, Messer CH, Dobson V, Miller JM, Harvey EM. Parent eyeglass wear compliance questionnaire pilot study: results from a mailed survey. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 2-6, 2010. [*Invest Ophthalmol Vis Sci* 2010;51: E-Abstract 5290]
131. Harvey EM, Schwiegerling J, Clifford-Donaldson C, Dobson V, Messer CH, Green TK, Miller JM. Measurement of change in accommodation in young children using the Pediatric Wavefront Evaluator. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 2-6, 2010. [*Invest Ophthalmol Vis Sci* 2010;51: E-Abstract 5284]
132. Miller JM, Seltzer RG, Sherrill DI, Harvey EM, Twelker JD, Messer DH. Stability of refractive astigmatism in a large longitudinal sample of Tohono O'odham children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 2830]

133. Green TK, Miller JM, Apple HP, Harvey EM, Messer DH, Twelker JD. Evaluation of the Grand Seiko WAM and Apple Micro-display for the study of accommodative response to near stimuli. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 835]
134. Apple HP, Miller JM, Harvey EM, Green TK, Messer DH, Twelker JD. Accommodative lag changes in uncorrected astigmatic and non-astigmatic students while attempting to read small and large letters. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 838]
135. Harvey EM, Miller JM, Belin M, Messer DH, Twelker JD. Agreement between Retinomax K+ and Pentacam measurements of anterior corneal astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 2830]
136. Adams I, Green TK, Messer DH, Twelker JD, Miller JM, Harvey EM. Use of a modified version of the Pediatric Refractive Error Profile (PREP) to identify factors associated with eyeglass wearing compliance. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 2827]
137. Twelker JD, Robine M, Mohler J, De Castro, DK, Miller JM. Evaluating the performance of a lay visual health worker in rural Honduras. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 1-5, 2011. [*Invest Ophthalmol Vis Sci* 2011;52: E-Abstract 2510]
138. Miller JM, Schwiegerling J, Harvey EM, Sherrill DL, Messer DH, Twelker JD. Data reduction strategies for aberration measurements in Tohono O'odham infants and children. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6-10, 2012. [*Invest Ophthalmol Vis Sci* 2012;53:E-Abstract 3592]
139. Harvey EM, Miller JM, Schwiegerling J, Sherrill D, Messer DH, Twelker JD. Longitudinal change in corneal astigmatism in Tohono O'odham Infants and toddlers. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6-10, 2012. [*Invest Ophthalmol Vis Sci* 2012;53:E-Abstract 154]
140. Green TK, Adams IA, Crescioni M, Messer DH, Twelker JD, Miller JM, Harvey EM. Type of refractive error and grade as predictors of spectacle wear in 1st-12th grade students. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6-10, 2012. [*Invest Ophthalmol Vis Sci* 2012;53:E-Abstract 4461]
141. Adams I, Crescioni M, Messer DH, Green TK, Twelker JD, Miller JM, Harvey EM. Test-retest agreement on the student refractive error and eyeglass questionnaire (SREEQ). Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6-10, 2012. [*Invest Ophthalmol Vis Sci* 2012;53:E-Abstract 4433]
142. Crescioni M, Messer DH, Harvey EM, Twelker JD, Miller JM. Construct validation of the student refractive error and eyeglass questionnaire. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6-10, 2012. [*Invest Ophthalmol Vis Sci* 2012;53:E-Abstract 4432]
143. Miller JM, Harvey EM, Schwiegerling J Change in coma and spherical aberration with accommodation in Native American children of a tribe having elevated levels of corneal astigmatism. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 5-9, 2013. [*Invest Ophthalmol Vis Sci* 2013;54:ARVO E-Abstract 2334.]

144. Twelker JD, Miller JM, Messer DH, Harvey EM. The magnitude and symmetry of corneal and refractive astigmatism in children. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 5-9, 2013. [*Invest Ophthalmol Vis Sci* 2013;54:ARVO E-Abstract 5962.]
145. Crescioni M, Twelker JD, Miller JM, Green TK, Campus I, Harvey EM. Relation between grade and gender and reasons for spectacle non-compliance among school aged children. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 5-9, 2013. [*Invest Ophthalmol Vis Sci* 2013;54:ARVO E-Abstract 5680.]
146. Harvey EM, Twelker JD, Miller JM. Relation between refractive astigmatism and change in spherical equivalent with age in a sample of Native American children age 3 to 18 years of age. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 5-9, 2013. [*Invest Ophthalmol Vis Sci* 2013;54:ARVO E-Abstract 2333.]
147. Campus I, Crescioni M, Green TK, Twelker JD, Miller JM, Harvey EM. Effects of eyeglass correction on oral reading fluency in elementary and middle school children. Presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 5-9, 2013. [*Invest Ophthalmol Vis Sci* 2013;54:ARVO E-Abstract 2331.]
148. Miller JM, Ober C, Leonard-Green T, Twelker JD, Kramer TR, Miller H, Mercer D, Harvey EM. Comparison of objective measures of visual acuity for assessing potential change in vision following cord blood transplant in preverbal children. Presented at the 11<sup>th</sup> Annual Meeting of the International Cord Blood Symposium, San Francisco, CA, June 6-8, 2013. [*11<sup>th</sup> Annual International Cord Blood Symposium Abstracts* 2013:63.]
149. Twelker JD, Miller JM, Harvey EM. Native American schoolchildren tend to emmetropize to the spherical equivalent, regardless of level of astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 2744.]
150. Harvey EM, Miller JM, Apple HP, Parashar P, Apple D, Twelker JD, Crescioni M, Leonard-Green TK, Davis AL. Accommodation patterns in astigmatic children during visual task performance. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 2741.]
151. Miller JM, Harvey EM, Twelker JD, Belin MW, Sherrill D. Posterior corneal curvature conforms to anterior cornea curvature in astigmatic Tohono O'odham Native American schoolchildren. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 2743.]
152. Altenbernd TW, Miller JM. The effect of repeated intra-visit measurements on the variability of nerve fiber layer thickness using the Spectralis spectral domain ocular coherence tomography (OCT). Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 4734.]
153. Apple HP, Leonard-Green TK, Harvey EM, Miller JM, Apple D. Suitability of computer generated grating acuity stimuli for assessment of grating acuity in children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 2738.]
154. Davis AL, Twelker JD, Miller JM, Harvey EM. Inter-observer and intra-observer reliability of measurements of the obliquity of palpebral fissures. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014:55:ARVO E-Abstract 2739.]

155. Leonard-Green TK, Apple HP, Apple D, Crescioni M, Miller JM, Twelker JD, Davis AL, Campus I, Harvey EM. Meridional amblyopia in astigmatic students documented with computer generated stimuli on commercial displays. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014;55;ARVO E-Abstract 2740.]
156. Crescioni M, Warholak TL, Twelker JD, Miller JM, Davis AL, Harvey EM. Rasch analysis of the Convergence Insufficiency Symptoms Survey (CISS) used to assess symptom reduction with spectacle correction among students. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Orlando, FL, May 4-8, 2014. [*Invest Ophthalmol Vis Sci* 2014;55;ARVO E-Abstract 4492.]
157. Miller JM, Harvey EM. Decreased initial best spectacle-corrected acuity is associated with elevated spherical aberration while viewing a near image. Oral and poster presentation at the XII International Strabismological Association Meeting, Kyoto, Japan, December 1-4, 2014.
158. Miller JM, Apple HP, Green TK, Apple D, Harvey EM. The Dobson Card: an electronic display for forced-choice preferential looking (FPL) assessment of infant and toddler visual acuity. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract D0020.]
159. Davis A, Twelker JD, Miller JM, Harvey EM. The relation between convergence insufficiency and astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract A0264.]
160. Green TK, Davis A, Crescioni M, Campus I, Mohan K, Twelker JD, Miller JM, Harvey EM. Comparison of best-corrected vs. uncorrected performance on the Beery VMI Developmental Test of Visual perception in astigmatic children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract A0265.]
161. Crescioni M, Warholak TL, Harvey EM, Green TK, Campus I, Twelker JD, Miller JM. Validation of self-reported spectacle compliance among school aged children and parents using Rasch analysis. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract A0038.]
162. Campus I, Gerhart K, Smith JM, Davis A, Miller JM, Harvey EM. Identification of young children for participation in studies of spectacle correction through pediatric primary care clinics: a pilot study. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract B0057.]
163. Harvey EM, Crescioni M, Campus I, Green TK, Miller JM. Performance of the SPOT and PlusoptiX photoscreeners in a highly astigmatic population. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Denver, CO, May 3-7, 2015. [*Invest Ophthalmol Vis Sci* 2015;56;ARVO E-Abstract D0078.]
164. Harvey EM, Green TK, Mohan KM, Kulp MT, Davis A, Miller JM, Twelker JD, Campus I. Inter-scoring and test-retest reliability of the Beery-Buktenica Development Test of Visual-Motor Integration in school-age children. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 1-5, 2016.
165. Miller JM, Belin MW, Harvey EM. Posterior corneal shape following gain or loss of keratometric astigmatism. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Seattle, WA, May 1-5, 2016.

### ***Invited Course Instructor***

1. The Use of Computer Database Software in Clinical Research Co-instructor: Thompson JR. American Academy of Ophthalmology Annual Meeting: Dallas (1987), Las Vegas (1988), New Orleans (1989), Atlanta (1990), Anaheim (1991).
2. The Lancaster Course in Ophthalmology, Colby College, Maine. Optics and Refraction. July 1992-Present, Instructor. Director: Frederick A. Jakobiec.
3. The Stanford Basic Science in Ophthalmology Course, Stanford College, Palo Alto, California. Optics and Refraction. August 1992-Present, Instructor. Director: Peter R. Egbert.
4. Pediatric Ophthalmology Computerized Database Management. Invited workshop at the American Association for Pediatric Ophthalmology and Strabismus Annual Meeting, Palm Springs. April 1993.
5. Pediatric Ophthalmology Computerized Database Management. Invited workshop at the American Association for Pediatric Ophthalmology and Strabismus Annual Meeting, Palm Springs. April 1993.

### **Grants and Contracts**

**(% effort, role, source, amount)**

#### ***Federal***

**1987:** 100% effort, Recipient, National Institutes of Health #5 T32 EY07000-10: Postdoctoral Training. \$12,000

**1993:** 5% effort, Principal Investigator, National Institutes of Health #BRSR 2S07RRO5675-24: Bootstrap Analysis of Corneal Topography. \$5,000

**1997-2003:** 40% effort, Principal Investigator, National Eye Institute, National Institutes of Health #1 U10 EY11155-01A2: Astigmatism and Amblyopia Among Native American Children. \$1,738,070

**1998:** 2% effort, Principal Investigator, National Institutes of Health #U10 EY111751-01: Congenital Esotropia Observational Study; and 5% effort, Planning Committee Member, National Institutes of Health #U10 EY12359-01: Amblyopia Treatment Study. Clinical Trials in Strabismus and Pediatric Ophthalmology. \$5,000

**2003-2010:** 20% effort, Co-Investigator, National Institutes of Health #U10 EY13153-01: Amblyopia in Astigmatic Children—Development and Treatment. \$1,531,212

**2001-2006:** 10% effort, Co-Investigator, National Institutes of Health #U10 EY08893-12: Collaborative Longitudinal Evaluation of Ethnicity and Refractive Error (CLEERE). \$2,801,690

**2003-2010:** 10% effort, Co-Director, National Institutes of Health: Arizona Clinical Research Training Program (AzCRTP). \$1,347,588

**2005-2010:** 20% effort, Co-Investigator, National Institutes of Health #U10 EY13153-01: Amblyopia in Astigmatic Children—Development and Treatment II. \$2,801,690

***Industry***

**1992:** 15% effort, Principal Investigator, Fox Software, Incorporated: Pediatric Ophthalmology Database for the Recording the Orthoptic Examination. \$1,500

***Private Foundation***

**1993-1996:** 20% effort, Principal Investigator, The Whitaker Foundation for Biomedical Engineering Research: Videographic Measurement of Ocular Position. \$179,977

**2003-2004:** 9% effort, Principal Investigator, Research to Prevent Blindness: Challenge Grant. \$55,000

**2004:** 7% effort, Principal Investigator, Wavetec Vision Screening Systems, Inc.: Ocular Biometry in Vision Screening. \$32,500

**2004:** 5% effort, Principal Investigator, Research to Prevent Blindness, Walt and Lilly Disney Award for Amblyopia Research. \$25,000

**2004-2016:** 9% effort, Principal Investigator, Research to Prevent Blindness: Unrestricted Grant. \$110,000 year

**2016-2018:** Co-Investigator, Virginia G. Piper Charitable Trust: Vision and Early Childhood Development Study Group. \$230,000

Revised 2/16/2017