

CURRICULUM VITAE

DAVID STEVEN FRIEDMAN, MD, MPH, PhD

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CURRENT APPOINTMENTS

Professor, Wilmer Eye Institute
Johns Hopkins University School of Medicine, Baltimore, Maryland

Professor, Department of International Health
Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Core Faculty, The Dana Center for Preventive Ophthalmology
Johns Hopkins University School of Medicine, Baltimore, Maryland

PERSONAL DATA

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EDUCATION AND TRAINING

BA, 1985 *Yale University, East Asian Studies, New Haven, CT*
MD, 1992 *Harvard Medical School, Boston, MA*
Intern 1992-3 *Internal Medicine, New England Deaconess Hospital, Boston, MA*
Resident 1993-1996 *Ophthalmology, Wills Eye Hospital, Philadelphia, PA*
Fellow 1996 - 1999 *Glaucoma, Dr. Harry Quigley, Baltimore, MD*
MPH, 1997 *Johns Hopkins University School of Hygiene and Public Health*
PhD, 2007 *Johns Hopkins University Department of Epidemiology*

Languages: Mandarin Chinese (fluent), Spanish, Indonesian (some spoken and reading knowledge)

PROFESSIONAL EXPERIENCE

1990-1991 Vitamin A Researcher, *Cicendo Eye Hospital, Bandung, Indonesia.*
1996-2001 Assistant Professor of Ophthalmology, *Wilmer Eye Institute, Baltimore, MD*

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2002-2008 Associate Professor of Ophthalmology, *Wilmer Eye Institute*, Associate Professor of International Health, *Johns Hopkins Bloomberg School of Public Health*, Baltimore, MD

PUBLICATIONS

Peer-Reviewed Original Research Articles

1. Humphrey JH, Natadisastra G, Muhilal, **Friedman DS**, Tielsch JM, West KP Jr, Sommer A. 210- μ mol vitamin A provides more prolonged impact on vitamin A status than 105 μ mol among preschool children. *J Nutr* 1994;124:1172-1178.
2. Agoestina T, Humphrey JH, Taylor GA, Usman A, Subardja D, Hidayat S, Nurachim, Wu L, **Friedman DS**, West KP Jr, Sommer A. Safety of one (52 μ mol) 50,000 IU oral dose of vitamin A administered to neonates. *Bull WHO* 1994;72(6):859-868.
3. **Friedman DS**, Terebuh AK. Argyrosis in a patient with glaucoma. *Ophthalmic Surgery* 1995;26:274-275.
4. Congdon N, Sommer A, Severns M, Humphrey JH, **Friedman DS**, Clement LI, Wu L, Natadisastra G. Pupillary and visual thresholds in young children as an index of population vitamin A status. *Am J Clin Nutr* 1995;61(5):1076-1082.
5. **Friedman DS**, Katz LJ, Augsburger JA, Lean M. Holmium laser sclerostomy in glaucomatous eyes with prior surgery: 24-month results. *Ophthalmic Surg Lasers* 1998;29:17-22.
6. Katz J, Congdon N, **Friedman DS**. Methodological variations in estimating apparent progressive visual field loss in clinical trials of glaucoma treatment. *Arch. Ophthalmol.* 1999;117:1137-1142.
7. **Friedman DS**, Duncan D, Munoz B, West S, Schein O. Digital image capture and automated analysis of posterior capsular opacification. *Invest Ophthalmol Vis Sci.* 1999;40:1715 - 1726.
8. **Friedman DS**, Katz J, Bressler NM, Rahmani B, Tielsch JM. Racial differences in the prevalence of age-related macular degeneration: The Baltimore Eye Survey. *Ophthalmology* 1999;106: 1049-1055.
9. Patel S, **Friedman DS**, Varadkar P, Robin AL. A new algorithm for interpreting the results of the frequency doubling perimetry. *Am J Ophthalmol* 2000 Mar; 129(3):323-7.
10. Vitale S, Smith SD, Quigley H, Kerrigan-Baumrind LA, Pease ME, Varma R, **Friedman DS**, Katz J, Tielsch JM. Screening performance of functional and structural measurements of neural damage in open angle glaucoma: a case-control study from the Baltimore Eye Survey. *J Glaucoma* 2000, 9:346-356.
11. Jampel HD, Quigley HA, Melia M, **Friedman DS**, Kerrigan L, Barron Y, and the Glaucoma Surgical Outcomes Study Investigators, "Risk Factors for Late-Onset Infections Following Glaucoma Filtration Surgery" *Arch Ophthalmol.* 2001 Jul;119(7):1001-8.
12. Paczka JA, **Friedman DS**, Quigley HA, Barron Y, Vitale S, "Diagnostic Capabilities of Frequency-Doubling Technology, Scanning Laser Polarimetry, and Nerve Fiber Layer Photographs to Distinguish Glaucomatous Damage". *American Journal of Ophthalmology* 2001; 131:188-197.

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13. **Friedman DS**, Bass EB, Lubomski LH, Fleisher LA, Kempen JH, Magaziner J, Sprintz M, Robinson K, Schein OD. Synthesis of the literature on the effectiveness of regional anesthesia for cataract surgery. *Ophthalmology* 2001;108:519-529.
14. **Friedman DS**, Bass EB, Lubomski LH, Fleisher LA, Kempen JH, Magaziner J, Sprintz M, Robinson K, Schein OD. The methodologic quality of clinical trials on regional anesthesia for cataract surgery. *Ophthalmology* 2001;108:530-541.
15. Gazzard G, **Friedman DS**, Devereux J, Seah S. Primary acute angle closure glaucoma associated with suprachoroidal fluid in three Chinese patients. *Eye* 2001 Jun;15(Pt 3):358-60.
16. Humphrey J, **Friedman D**, Natadisastra G, Muhilal. 24-hour history is more closely associated with vitamin A status and provides a better estimate of dietary vitamin A intake of deficient Indonesian preschool children than a food frequency method *J Am Diet Assoc* 2000 Dec;100(12):1501-10.
17. **Friedman DS**, Jampel HD, Lubomski LH, Kempen JH, Quigley H, Congdon N, Levkovitch-Verbin H, Robinson KA, Bass EB. Surgical strategies for coexisting glaucoma and cataract: an evidence-based update. *Ophthalmology*. 2002 Oct; 109(10): 1902 – 1913.
18. Jampel HD, **Friedman DS**, Lubomski LH, Kempen JH, Quigley H, Congdon N, Levkovitch-Verbin H, Robinson KA, Bass EB. Methodologic rigor of clinical trials on surgical management of eyes with coexisting cataract and glaucoma. *Ophthalmology*. 2002 Oct; 109(10): 1892-901.
19. Jampel HD, **Friedman DS**, Quigley H, Miller R.. Correlation of the binocular visual field with patient assessment of vision. *Invest Ophthalmol Vis Sci*. *Invest Ophthalmol Vis Sci*. 2002 Apr;43(4):1059-67.
20. **Friedman DS**, Tielsch JM, Vitale S, Bass EB, Schein OD, Steinberg EP. VF-14 Item-Specific Responses in Patients Undergoing First-Eye Cataract Surgery: Can the Length of the VF-14 be Reduced? *Br J Ophthalmol*. 2002 Aug;86(8):885-91.
21. **Friedman DS**, Munoz B, Massof RW, Bandeen-Roche K, West K. Grating visual acuity using the preferential looking method in elderly nursing home residents. *Invest Ophthalmol Vis Sci*. 2002;43:2572 – 2578.
22. Jampel HD, **Friedman DS**, Lubomski LH, Kempen JH, Quigley H, Congdon N, Levkovitch-Verbin H, Robinson KA, Bass EB. Effect of technique on intraocular pressure after combined cataract and glaucoma surgery: An evidence-based review. *Ophthalmology*. 2002 Dec; 109(12): 2215-24; quiz 2225, 2231.
23. Gazzard G, **Friedman DS**, Devereux J, Chew P, Seah S. A prospective ultrasound biomicroscopy evaluation of changes in anterior segment morphology after laser iridotomy in Asian eyes. *Ophthalmology* 2003;110:630-638.
24. West SK, **Friedman DS**, Munoz KB, Bandeen Roche K, Park W, Deremeik J, Massof R, Frick K, Broman A, McGill W, German P. A randomized trial of visual impairment interventions for nursing home residents: baseline characteristics and visual loss. *Ophthalmic Epidemiol*. 2003 Jul;10(3):193-209.
25. Krishnadas R, Nirmalan PK, Ramakrishnan R, Thulasiraj RD, Katz J, Tielsch JM, **Friedman DS**, Robin AL. Pseudoexfoliation in a rural population of southern India: The Aravind Comprehensive Eye Survey. *Am J Ophthalmol*. 2003 Jun;135(6):830-7.
26. Ramakrishnan R, Nirmalan PK, Krishnadas R, Thulasiraj RD, Tielsch JM, Katz J, **Friedman DS**, Robin AL. Glaucoma in a rural population of southern India: The Aravind Comprehensive Eye Survey. *Ophthalmology*. 2003 Aug;110(8):1484-90.

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27. Hylton, Congdon, **Friedman D**, Kempen J, Quigley H, Bass E, Jampel H.
Cataract after glaucoma filtration surgery. *Am J Ophthalmol* 2003;135:231-2, Review.
28. Saw S-M, Gazzard G, **Friedman D**, Foster P, Devereux JG, Wong M-L, Seah S.
Awareness and health beliefs of acute angle-closure glaucoma patients. *Br J Ophthalmol* 2003;87:446-449.
29. Quigley HA, **Friedman DS**, Congdon NG. Possible mechanisms of primary angle-closure and malignant glaucoma. *J Glaucoma*. 2003;12:167-80.
30. Congdon NG, **Friedman DS**. Angle-closure glaucoma: impact, etiology, diagnosis, and treatment. *Curr Opin Ophthalmol*. 2003;14:70-73.
31. **Friedman DS**, Gazzard G, Foster P, Devereux J, Broman A, Quigley H, Tielsch J, Seah S. Ultrasonographic biomicroscopy, Scheimpflug photography, and novel provocative tests in contralateral eyes of Chinese patients initially seen with acute angle closure. *Arch Ophthalmol*. 2003 May;121(5):633-42.
32. Saw SM, Gazzard G, **Friedman DS**. Interventions for angle-closure glaucoma: an evidence-based update. *Ophthalmology*. 2003 Oct; 110(10): 1869-78; quiz 1878-9, 1930.
33. Bressler NM, Bressler SB, Congdon NG, Ferris FL 3rd, **Friedman DS**, Klein R, Lindblad AS, Milton RC, Seddon JM. Age-Related Eye Disease Study Research Group Potential public health impact of Age-Related Eye Disease Study results: AREDS report no. 11. *Arch Ophthalmol*. 2003 Nov; 121(11): 1621-4.
34. **Friedman DS**, West SK, Munoz B, Park W, Deremeik J, Massof R, Frick K, Broman A, McGill W, Gilbert D, German P. Racial variations in causes of vision loss in nursing homes: The Salisbury Eye Evaluation in Nursing Home Groups (SEEING) Study. *Arch Ophthalmol*. 2004 Jul;122(7):1019-24.
35. **Friedman DS**, Wolfs RC, O'Colmain BJ, Klein BE, Taylor HR, West S, Leske MC, Mitchell P, Congdon N, Kempen J; Eye Diseases Prevalence Research Group. Prevalence of open-angle glaucoma among adults in the United States. *Arch Ophthalmol*. 2004 Apr;122(4):532-8.
36. **Friedman DS**, O'Colmain BJ, Munoz B, Tomany SC, McCarty C, de Jong PT, Nemesure B, Mitchell P, Kempen J; Eye Diseases Prevalence Research Group. Prevalence of age-related macular degeneration in the United States. *Arch Ophthalmol*. 2004 Apr;122(4):564-72.
37. Congdon N, Vingerling JR, Klein BE, West S, **Friedman DS**, Kempen J, O'Colmain B, Wu SY, Taylor HR; Eye Diseases Prevalence Research Group. *Arch Ophthalmol*. 2004 Apr;122(4):487-94. Prevalence of cataract and pseudophakia/aphakia among adults in the United States.
38. Congdon N, O'Colmain B, Klaver CC, Klein R, Munoz B, **Friedman DS**, Kempen J, Taylor HR, Mitchell P; Eye Diseases Prevalence Research Group. Causes and prevalence of visual impairment among adults in the United States. *Arch Ophthalmol*. 2004 Apr;122(4):477-85.
39. Weinreb RN, **Friedman DS**, Fechtner RD, Cioffi GA, Coleman AL, Girkin CA, Liebmann JM, Singh K, Wilson MR, Wilson R, Kannel WB. Risk assessment in the management of patients with ocular hypertension. *Am J Ophthalmol*. 2004 Sep;138(3):458-67.
40. **Friedman DS**, Wilson MR, Liebmann JM, Fechtner RD, Weinreb RN. An evidence-based assessment of risk factors for the progression of ocular hypertension and glaucoma. *Am J Ophthalmol*. 2004 Sep;138(3 Suppl):19-31.

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41. Girkin CA, Kannel WB, **Friedman DS**, Weinreb RN. Glaucoma risk factor assessment and prevention: Lessons from coronary heart disease. *Am J Ophthalmol*. 2004 Sep;138(3 Suppl):11-8.
42. Coleman AL, Singh K, Wilson R, Cioffi GA, **Friedman DS**, Weinreb RN. Applying an evidence-based approach to the management of patients with ocular hypertension: Evaluating and synthesizing published evidence. *Am J Ophthalmol*. 2004 Sep;138(3 Suppl):3-10.
43. Aung T, **Friedman DS**, Chew PT, Ang LP, Gazzard G, Lai YF, Yip L, Lai H, Quigley H, Seah SK. Long-term outcomes in Asians after acute primary angle closure. *Ophthalmology*. 2004 Aug;111(8):1464-9.
44. **Friedman DS**, Reeves SW, Bass EB, Lubomski LH, Fleisher LA, Schein OD. Patient preferences for anaesthesia management during cataract surgery. *Br J Ophthalmol*. 2004 Mar;88(3):333-5.
45. Robin AL, Nirmalan PK, Krishnadas R, Ramakrishnan R, Katz J, Tielsch J, Thulasiraj RD, **Friedman DS**. The utilization of eye care services by persons with glaucoma in rural south India. *Trans Am Ophthalmol Soc*. 2004;102:47-54.
46. Chang, TC, Congdon NG, Muñoz B, Wojciechowski R, Gilbert DM, Chen P, **Friedman DS**, West SK; Heritability of intraocular pressure and cup/disc ratio in a defined, older population *Ophthalmology*. 2005 Jul;112(7):1186-91.
47. Nusz KJ, Congdon NG, Ho T, Gramatikov BI, **Friedman DS**, Guyton DL, Hunter DG. Rapid, objective detection of cataract-induced blur using a bull's eye photodetector. *J Cataract Refract Surg*. 2005 Apr;31(4):763-70.
48. Nordstrom BL, **Friedman DS**, Mozaffari E, Quigley HA, Walker AM. Persistence and Adherence with Topical Glaucoma Therapy *Am J Ophthalmol*. 2005 Oct;140(4):598-606.
49. **Friedman DS**, Nordstrom BL, Mozaffari E, Quigley HA. Glaucoma Management among Individuals Enrolled in a Single Comprehensive Insurance Plan. *Ophthalmology* 2005 Sep;112(9):1500-4.
50. **Friedman DS**, Nordstrom BL, Mozaffari E, Quigley HA Variations in treatment among adult-onset open-angle glaucoma patients. *Ophthalmology* 2005 Sep;112(9):1494-9.
51. **Friedman DS**, Munoz B, Bandeen-Roche K, Massof R, Broman A, West SK. Poor Uptake of Cataract Surgery in Nursing Home Residents: The Salisbury Eye Evaluation in Nursing Homes Groups (SEEING) Study. *Arch Ophthalmol*. 2005 Nov;123(11):1581-1587.
52. Jampel HD, Vitale S, Ding Y, Quigley H, **Friedman D**, Congdon N, Zeimer R. Test-retest variability in structural and functional parameters of glaucoma damage in the glaucoma imaging longitudinal study. *J Glaucoma*. 2006 Apr;15(2):152-7.
53. **Friedman DS**, Jampel HJ, Munoz B, West SK, The Prevalence of Open-Angle Glaucoma Among Blacks and Whites 73 Years of Age and Older: The Salisbury Eye Evaluation Glaucoma Study. *Arch Ophthalmol*. 2006 Nov;124(11):1625-30.
54. **Friedman DS**, Jampel HD, Congdon NG, Miller R, Quigley HA. The TRAVATAN Dosing Aid accurately records when drops are taken. *Am J Ophthalmol*. 2007 Apr;143(4):699-701. Epub 2006 Dec 22.
55. Nolan WP, See JL, Chew PT, **Friedman DS**, Smith SD, Radhakrishnan S, Zeng C, Foster PJ, Aung T. Detection of Primary Angle Closure Using Anterior Segment Optical Coherence Tomography in Asian Eyes. *Ophthalmology* 2007 Jan;114(1):33-9. Epub 2006 Oct 27.

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56. Singh M, Chew PT, Friedman DS, Nolan WP, See JL, Smith SD, Zheng C, Foster PJ, Aung T. Imaging of Trabeculectomy Blebs Using Anterior Segment Optical Coherence Tomography. *Ophthalmology*. 2007 Jan;114(1):47-53. Epub 2006 Oct 27.
57. **Friedman DS**, Vedula SS. Lens extraction for chronic angle-closure glaucoma. *Cochrane Database Syst Rev*. 2006 Jul 19.
58. **Friedman DS**, Chew PT, Gazzard G, Ang LP, Lai YF, Quigley HA, Seah SK, Aung T. Long-term outcomes in fellow eyes after acute primary angle closure in the contralateral eye. *Ophthalmology*. 2006 Jul;113(7):1087-91.
59. He M, Foster PJ, Ge J, Huang W, Zheng Y, **Friedman DS**, Lee PS, Khaw PT. Prevalence and clinical characteristics of glaucoma in adult Chinese: a population-based study in Liwan District, Guangzhou. *Invest Ophthalmol Vis Sci*. 2006 Jul;47(7):2782-8.
60. **Friedman DS**, Freeman EF, Muñoz B, Jampel HD, West SK. Glaucoma and mobility performance, the Salisbury Eye Evaluation. *Ophthalmology*. 2007 Dec;114(12):2232-7. Epub 2007 Nov 5.
61. Freeman EE, Munoz B, West SK, Jampel HD, **Friedman DS**. Glaucoma and Quality of Life The Salisbury Eye Evaluation. *Ophthalmology*. 2008 Feb;115(2):233-8. Epub 2007 Jul 26.
62. Sakata LM, Lavanya R, **Friedman DS**, Aung HT, Gao H, Kumar RS, Foster PJ, Aung T. Comparison of Gonioscopy and Anterior Segment Ocular Coherence Tomography in Detecting Angle Closure in Different Quadrants of the Anterior Chamber Angle. *Ophthalmology*. 2007 Oct 2; [Epub ahead of print].
63. Kumar RS, Baskaran M, Chew PT, **Friedman DS**, Handa S, Lavanya R, Sakata LM, Wong HT, Aung T. Prevalence of plateau iris in primary angle closure suspects: an ultrasound biomicroscopy study. *Ophthalmology*. 2008 Mar;115(3):430-4. Epub 2007 Sep 27.
64. Lavanya R, Teo L, **Friedman DS**, Aung HT, Baskaran M, Gao H, Alfred T, Seah SK, Kashiwagi K, Foster PJ, Aung T. Comparison of anterior chamber depth measurements using the IOLMaster, scanning peripheral anterior chamber depth analyser, and anterior segment optical coherence tomography. *Br J Ophthalmol*. 2007 Aug;91(8):1023-6. Epub 2007 Feb 27.
65. Su DH, **Friedman DS**, See JL, Chew PT, Chan YH, Nolan WP, Smith SD, Huang D, Zheng C, Li Y, Foster PJ, Aung T. Degree of Angle Closure and Extent of Peripheral Anterior Synechiae: An Anterior Segment OCT Study. *Br J Ophthalmol*. 2008 Jan;92(1):103-7. Epub 2007 Jun 21.
66. See JL, Chew PT, Smith SD, Nolan WP, Chan YH, Huang D, Zheng C, Foster PJ, Aung T, **Friedman DS**. Changes in anterior segment morphology in response to illumination and after laser iridotomy in Asian eyes: an anterior segment OCT study. *Br J Ophthalmol*. 2007 Nov; 91(11):1485-9. Epub 2007 May 15.
67. Singh M, Aung T, **Friedman DS**, Zheng C, Foster PJ, Nolan WP, See JL, Smith SD, Chew PT. Anterior segment optical coherence tomography imaging of trabeculectomy blebs before and after laser suture lysis. *Am J Ophthalmol*. 2007 May;143(5):873-5.
68. Radhakrishnan S, See J, Smith SD, Nolan WP, Ce Z, **Friedman DS**, Huang D, Li Y, Aung T, Chew PT. Reproducibility of anterior chamber angle measurements obtained with anterior segment optical coherence tomography. *Invest Ophthalmol Vis Sci*. 2007 Aug;48(8):3683-8.

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69. He M, **Friedman DS**, Ge J, Huang W, Jin C, Cai X, Khaw PT, Foster PJ. Laser peripheral iridotomy in eyes with narrow drainage angles: ultrasound biomicroscopy outcomes. The Liwan Eye Study. *Ophthalmology*. 2007 Aug;114(8):1513-9. Epub 2007 Apr 26.
70. He M, **Friedman DS**, Ge J, Huang W, Jin C, Lee PS, Khaw PT, Foster PJ. Laser peripheral iridotomy in primary angle-closure suspects: biometric and gonioscopic outcomes: the Liwan Eye Study. *Ophthalmology*. 2007 Mar;114(3):494-500. Epub 2006 Nov 21.
71. He M, Foster PJ, Ge J, Huang W, Wang D, **Friedman DS**, Khaw PT. Gonioscopy in adult Chinese: the Liwan Eye Study. *Invest Ophthalmol Vis Sci*. 2006 Nov;47(11):4772-9.
72. Okeke CN, **Friedman DS**, Jampel HD, Congdon NG, Levin L, Lai H, Quigley HA. Targeting relatives of patients with primary open angle glaucoma: the help the family glaucoma project. *J Glaucoma*. 2007 Sep;16(6):549-55.
73. Quigley HA, **Friedman DS**, Hahn SR. Evaluation of practice patterns for the care of open-angle glaucoma compared with claims data: the Glaucoma Adherence and Persistency Study. *Ophthalmology*. 2007 Sep;114(9):1599-606. Epub 2007 Jun 18.
74. **Friedman DS**, Quigley HA, Gelb L, Tan J, Margolis J, Shah S, Kim EE, Zimmerman T, Hahn SR. Using pharmacy claims data to study adherence to glaucoma medications: Methodology and findings of the Glaucoma Adherence and Persistency Study (GAPS). *Invest Ophthalmol Vis Sci*. 2007 Nov;48(11):5052-7.
75. **Friedman DS**, Hahn SR, Gelb L, Tan J, Margolis J, Shah S, Kim EE, Zimmerman T, Quigley HA. Doctor-patient communication, health-related beliefs, and adherence in glaucoma: Results from the Glaucoma Adherence and Persistence Study (GAPS). *Ophthalmology*. 2008 Aug;115(8):1320-7, 1327.e1-3. Epub 2008 Mar 5.
76. Sakata LM, Lavanya R, **Friedman DS**, Aung HT, Seah SK, Foster PJ, Aung T. Assessment of the scleral spur in anterior segment optical coherence tomography images. *Arch Ophthalmol*. 2008 Feb;126(2):181-5.
77. Broman AT, Quigley HA, West SK, Katz J, Munoz B, Bandeen-Roche K, Tielsch JM, **Friedman DS**, Crowston J, Taylor HR, Varma R, Leske MC, Bengtsson B, Heijl A, He M, Foster PJ. Estimating the rate of progressive visual field damage in those with open-angle glaucoma, from cross-sectional data. *Invest Ophthalmol Vis Sci*. 2008 Jan;49(1):66-76.
78. Zhou Q, **Friedman DS**, Lu H, Duan X, Liang Y, Yang X, Wang F, Wang N. The epidemiology of age-related eye diseases in Mainland China. *Ophthalmic Epidemiol*. 2007 Nov-Dec;14(6):399-407.
79. He M, Huang W, **Friedman DS**, Wu C, Zheng Y, Foster PJ. Slit lamp-simulated oblique flashlight test in the detection of narrow angles in Chinese eyes: the Liwan eye study. *Invest Ophthalmol Vis Sci*. 2007 Dec;48(12):5459-63.
80. Console JW, Sakata LM, Aung T, **Friedman DS**, He M. Quantitative Analysis of Anterior Segment Optical Coherence Tomography Images: the Zhongshan Angle Assessment Program. *Br J Ophthalmol*. 2008 Jul 10. [Epub ahead of print].
81. Lavanya R, Wong TY, **Friedman DS**, Aung HT, Alfred T, Gao H, Seah SK, Kashiwagi K, Foster PJ, Aung T. Determinants of angle closure in older Singaporeans. *Arch Ophthalmol*. 2008 May;126(5):686-91.
82. **Friedman DS**, Gazzard G, Min CB, Broman AT, Quigley H, Tielsch J, Seah S, Foster PJ. Age and sex variation in angle findings among normal Chinese subjects: a comparison of UBM, Scheimpflug, and gonioscopic assessment of the anterior chamber angle. *J Glaucoma*. 2008 Jan-Feb;17(1):5-10.

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83. **Friedman DS**, Repka MX, Katz J, Giordano L, Ibrionke J, Hawes P, Burkom D, Tielsch JM. Prevalence of Decreased Visual Acuity among Preschool-Aged Children in an American Urban Population The Baltimore Pediatric Eye Disease Study, Methods and Results. *Ophthalmology*. 2008 Jun 4. [Epub ahead of print].
84. **Friedman DS**, Katz J, Repka MX, Giordano L, Ibrionke J, Hawse P, Tielsch JM. Lack of Concordance between Fixation Preference and HOTV Optotype Visual Acuity in Preschool Children The Baltimore Pediatric Eye Disease Study. *Ophthalmology*. 2008 Jun 4. [Epub ahead of print].
85. Okeke CN, Quigley HA, Jampel HD, Plyler RJ, Ying GS, **Friedman DS**. Adherence with Topical Glaucoma Medication Monitored Electronically: the Travatan Dosing Aid (TDA) Study (in press, *Ophthalmology*).
86. Liang YB, **Friedman DS**, Wong TY, Zhan SY, Sun LP, Wang JJ, Duan XR, Yang XH, Wang FH, Zhou Q, Wang NL; Handan Eye Study Group. Prevalence and Causes of Low Vision and Blindness in a Rural Chinese Adult Population The Handan Eye Study. *Ophthalmology*. 2008 Aug 4. [Epub ahead of print].
87. Wong HT, Lim MC, Sakata LM, Aung HT, Amerasinghe N, **Friedman DS**, Aung T. High-definition optical coherence tomography imaging of the irido-corneal angle of the eye. *Archives of Ophthalmology* (in press).
88. Lavanya R, Foster PJ, Sakata LM, **Friedman DS**, Kashiwagi K, Wong TY, Aung HT, Gao H, Ee AG, Seah SK, Aung T. Screening for narrow angles in the Singapore population: Evaluation of new non contact screening methods. *Ophthalmology* (in press).
89. Ramulu PY, West SK, Munoz B, Jampel HD, **Friedman DS**. Glaucoma and reading speed: The Salisbury Eye Evaluation Project. *Archives of Ophthalmology* (in press).
90. Jampel HD, **Friedman DS**, Quigley H, Vitale S, Miller R, Knezevich F, Ding Yulan. Agreement among glaucoma specialists in assessing progressive disc changes from photographs in open-angle glaucoma patients. *American Journal of Ophthalmology* (in press).
91. Duan XR, Liang YB, **Friedman DS**, Sun LP, Wei WB, Wang JJ, Wang GL, Liu W, Tao QS, Wang NL, Wong TY. Prevalence and associations of epiretinal membranes in a rural Chinese adult population: the Handan Eye Study. *Invest Ophthalmol Vis Sci*. (in press)
92. Wang FH, Liang YB, Peng XY, Wang JJ, Zhang F, Wang GL, Sun LP, **Friedman DS**, Wang NL, Wong TY. Risk factors for diabetic retinopathy in a rural Chinese population with Type 2 diabetes: the Handan Eye Study. *Archives of Ophthalmology* (in press).
93. Wang FH, Liang YB, Peng XY, Wang JJ, Zhang F, Wang GL, Sun LP, **Friedman DS**, Wang NL, Wong TY. Prevalence of diabetic retinopathy in a rural Chinese population with Type 2 diabetes: the Handan Eye Study. *Ophthalmology* (in press).
94. Yin Q, Hu A, Liang Y, Zhang J, He M, Lam DS, Ge J, Wang N, **Friedman D**, Zhao J, Congdon NG. A two-site, population-based study of barriers to cataract surgery in rural China. *Invest Ophthalmol Vis Sci*. 2008 Nov 21. [Epub ahead of print]
95. **Friedman DS**, Okeke CN, Jampel HD, Ying GS, Plyler RJ, Jiang YZ, Quigley HA. Risk factors for poor adherence with eyedrops in electronically monitored glaucoma patients (in press, *Ophthalmology*).
96. Giordano L, **Friedman DS**, Repka MX, Katz J, Ibrionke J, Hawse P, Tielsch JM,. Prevalence of refractive error in an urban population: The Baltimore Pediatric Eye Disease Study (in press, *Ophthalmology*)

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97. Gelb L, **Friedman DS**, Quigley HA, Lyon DW, Tan J, Kim EE, Zimmerman TJ, Hahn SR. Physician beliefs and behaviors related to glaucoma treatment adherence: the Glaucoma Adherence and Persistency Study. *J Glaucoma*. 2008 Dec;17(8):690-8.

Review Articles

1. **Friedman DS**, Schein, O. Assessing disability in the patient with cataract. *Current Opinion in Ophthalmology* 1998;9:1-4.
2. Congdon NG, **Friedman DS**, Lietman T. Important causes of visual impairment in the world today. *JAMA* 2003; 290: 2057-2060.
3. **Friedman DS**, He M. Anterior chamber angle assessment techniques. *Surv Ophthalmol*. 2008 May-Jun;53(3):250-73. Major Review.

Educational Publications

Editorials

1. **Friedman, DS**, Who needs an iridotomy?, *Br J Ophthalmol* 2001 Sep;85(9):1019-21.
2. **Friedman DS**. HIPAA: How Have the First Two Years Gone? *Am J Ophthalmol*. 2006 Mar;141(3):543-546.
3. **Friedman DS**, Cramer J, Quigley HQ. A More Proactive Approach is Needed in Glaucoma Care. *Arch Ophthalmol* 2005 Aug;123:1134-1135.
4. Garway-Heath DF, **Friedman DS**. How should results from clinical tests be integrated into the diagnostic process? *Ophthalmology*. 2006 Sep;113(9):1479-80.
5. **Friedman DS**. Issues in screening for glaucoma. *Ophthalmic Epidemiol*. 2007 May-Jun;14(3):101-2.

Letters

1. Quigley, Congdon, **Friedman**. Glaucoma in China (and worldwide): changes in established thinking will decrease preventable blindness. *Br J Ophthalmol* 2001 Nov;85(11):1271-2.
2. Yip JL, Jones E, Foster PJ, Nolan WP, **Friedman DS**. *Ophthalmology*. 2006 Aug;113(8):1467; author reply 1467-8. Comment on: *Ophthalmology*. 2005 Aug;112(8):1355-9. Cataract after laser iridotomy.

Book Chapters or Monographs

1. **Friedman DS**, "Visual Fields" in *Ophthalmology Secrets*, Vander JF and Gault JA eds. Philadelphia: Hanley and Belfus, 1998.
2. **Friedman DS**, Tielsch, JM. Epidemiologie des glaukoms. *Search on Glaucoma*, 5:28-30, 1997.
3. **Friedman DS**, Schein O. "Evidence-Based Ophthalmic Surgery." In *Evidence-Based Surgery*, Gordon TA and Cameron JL editors. B C Decker Inc, Ontario, 2000.
4. Schein OD, **Friedman DS**, Fleisher LA, Lubomski LH, Magaziner J, Sprintz M, Kempen J, Reeves SW, Robinson KA, Bass EB. Anesthesia management during cataract surgery. Evidence Report/Technology Assessment No. 16 (Contract 290-097-0006 to the Johns Hopkins University Evidence-Based Practice Center). AHRQ

Curriculum Vitae

- Publication No. 00-0015. Rockville, MD: Agency for Healthcare Research and Quality, 2000.
5. Jampel H, Lubomski L, **Friedman D**. Treatment of Coexisting Cataract and Glaucoma. Evidence Report/Technology Assessment Number 38. (Prepared by Johns Hopkins University Evidence-based Practice Center under Contract No. 290-97-0006.) AHRQ Publication No. 03-E041. Rockville, MD: Agency for Healthcare Research and Quality. June 2003. Friedman DS. "Glaucoma." In Principles of Ambulatory Medicine, Seventh Edition, Burton, J., et. al. editors. Lippincott, Williams and Wilkins, Philadelphia, 2007.
 6. **Friedman DS**, Congdon NG, Kempen J, Tielsch JM, O'Colmain B. "Vision Problems in the U.S.: Prevention of adult vision impairment and age-related eye disease." Schaumburg, IL, Prevent Blindness America, 2002.
 7. Ramulu P and **Friedman DS**. "Epidemiology of Glaucoma." In Ophthalmology 3rd Edition, Yanoff and Duker editors, Elsevier Publishing, London (in press).
 8. Hassan S and **Friedman DS**. "Low Vision, Vision Disability, and Blindness" In Albert & Jakobiec, Principles and Practice of Ophthalmology, 3rd Edition Elsevier Publishing, London (in press).
 9. **Friedman DS** and Lee A. "Geriatric Ophthalmology" in Research Agenda Setting Process (RASP): New Frontiers in Geriatrics Research: An Agenda for Surgical and Related Medical Specialties American Geriatric Society (in press).

Books

Weinreb RN and **Friedman DS** (eds). Angle Closure and Angle Closure Glaucoma. Kugler Publications, The Hague, The Netherlands, 2006.

EXTRAMURAL SPONSORSHIP

Currently Funded:

- 9/30/02 – 2/28/09 *BALTIMORE PEDIATRIC EYE DISEASE SURVEY*
1 U10 EY-14483
National Eye Institute (NEI)
\$7,484,850.11
PI: James Tielsch
Co-PI: David S. Friedman; 30-50% effort
Notes: This project aims to estimate the prevalence of and risk factors for pediatric eye disease in Baltimore for black and white children six months to six years of age in Baltimore. Dr. Friedman is responsible for the conduct of the research including organizing personnel, creating data management systems, and supervising the clinical activities.
- 6/01/08 – 5/31/09 *SENIOR OPHTHALMOLOGIST*
No grant number provided
Helen Keller International, Inc (HKI)
\$52,217

Curriculum Vitae

David S. Friedman, MD, MPH, PhD

Curriculum Vitae

PI: David Friedman, 25% effort

Notes: Dr. Friedman receives funding from HKI through a grant to Johns Hopkins to act as senior advisor to all eye health programs carried out by the agency. HKI implements innovative eyecare programs in countries around the world in blindness prevention efforts. Dr. Friedman reviews these projects and recommends operational research as well as programmatic innovations. This funding is intended to be ongoing and funds have been allocated to support this work for at least the next three years.

5/01/08 – 4/30/11

WILMER INSTITUTE MENTORED CLINICAL RESEARCH SCHOLAR PROGRAM

3 K12 EY015025

National Eye Institute (NEI)

PI: Harry Quigley

5% effort

Notes: Dr. Friedman is the lead mentor for Dr. Pradeep Ramulu's training as a clinician scientist with an emphasis in the impact of eye disease on function and quality of life.

6/04/04 – 5/31/09

MULTI-CENTER UVEITIS STEROID TREATMENT (MUST) TRIAL

1 U10 EY 014660

National Eye Institute

\$17,252,615.10

PI: Holbrook

5% effort

Notes: A multi-center randomized controlled clinical trial, which will compare the fluocinolone acetonide implant to "standard therapy" for the treatment of patients with severe, vision-threatening intermediate, posterior, or panuveitis. Dr. Friedman is the glaucoma specialist for the study and assists in the design of clinical examinations and determination of glaucoma endpoints. He will be lead author on manuscripts related to glaucoma endpoints.

9/30/08 – 9/29/2011

NATIONAL VISION PRESERVATION INITIATIVE

1 U58DP001311

Centers for Disease Control

\$999,830 (\$131,073 sub-contract to JHU) for year 1

PI: Jeff Todd

JHU-PI: David S. Friedman; 10% effort

Notes: This project has two components: a programmatic part that will screen for and treat eye diseases among underserved adults and children in the United States, and a research effort to determine the best approaches for carrying out these activities. Dr. Friedman is the PI for the research component in adults and is the JHU PI supervising activities which include designing, implementing and disseminating the findings of the research.

Curriculum Vitae

David S. Friedman, MD, MPH, PhD

Curriculum Vitae

Approved, pending *INDIA US GENETIC STUDY OF OCULAR QUANTITATIVE TRAITS*
1R21EY018149-01A1
National Eye Institute and Department of Biotechnology, India
\$140,006 (\$15,478 sub-contract to JHU) for year 1
PI: Janey Wiggs
JHU PI: David S. Friedman; 5% effort
Notes: The primary objective of this exploratory grant is to examine the use of consanguineous pedigrees for quantitative trait mapping and to perform initial gene mapping studies for selected quantitative traits that are significant risk factors for common ocular complex disorders. A long-term goal is to use this approach to develop and support a genotype/phenotype database resource that will enable investigators to discover, assess and validate genes and biomarkers responsible for quantitative traits that contribute to complex human ocular disease. Dr. Friedman will supervise the collection of data on ocular phenotypes for this research.

Previously Funded

7/1/96 – 6/30/02 *OUTCOMES OF VISION RESTORATION IN NURSING HOME RESIDENTS*
K-23 EY00358
National Eye Institute
\$745,408
PI: David S. Friedman
Notes: This grant supported a five-year training period for David S. Friedman to work towards becoming an independent clinical investigator.

5/1/99 – 4/30/03 *INTERVENTIONS FOR VISUAL LOSS IN NURSING HOME RESIDENTS*
AG15812
National Institute on Aging
\$512,357
PI: Sheila K. West
25% effort
Notes: In this project, we measured the impact of a visual impairment intervention program on socialization, and a variety of other measures of function among nursing home residents. Dr. Friedman was the study ophthalmologist and a co-investigator. As such he played an active role in the conduct of the study including participating in all study-related planning meetings and examining study subjects.

7/1/00 – 6/30/01 *SURGICAL TREATMENT OF CO-EXISTING CATARACT AND GLAUCOMA*
Agency for Healthcare Research Quality
\$220,000
PI: Henry Jampel

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Notes: This research was conducted to review systematically the literature on managing patients with cataract and glaucoma. Dr. Friedman was a Co-Investigator with a leadership role on the project.

7/1/00 – 6/30/02

ROBERT E. MCCORMICK SCHOLAR AWARD

Research to Prevent Blindness

\$50,000

PI: David S. Friedman

Notes: This was an unrestricted grant to support Dr. Friedman's research efforts.

7/1/00 – 6/30/02

A CASE CONTROL STUDY OF ACUTE ANGLE-CLOSURE GLAUCOMA IN SINGAPORE

Johns Hopkins-Singapore

\$129,167

PIs: David S. Friedman and Harry Quigley

10% effort

Notes: The purpose of this project was to identify new ocular risk factors for acute angle-closure glaucoma. Over 100 acute cases were enrolled in the study as well as over 250 controls. Dr. Friedman designed the study, obtained funding, and conducted the research in Singapore, and was responsible for the data analysis and publication of findings.

6/1/01 – 5/31/03

PREVALENCE AND IMPACT OF GLAUCOMA AMONG THE VERY ELDERLY
1 R01 EY013460

National Eye Institute

\$225,000

PI: David S. Friedman

30% effort

Notes: The proposed research obtained solid estimates of glaucoma prevalence rates among the most rapidly increasing segment of the United States population, individuals 75 years of age and older. The research was a supplement to an already scheduled evaluation of a large multiracial cohort of older individuals that will take place in June 2001 in Eastern Maryland. Dr. Friedman was responsible for the conduct of the research including organizing personnel, creating data management systems, and examining all subjects at risk for glaucoma based on the results of a screening examination.

7/1/01 – 6/30/02

PREVALENCE AND IMPACT OF MAJOR BLINDING CONDITIONS IN THE UNITED STATES

National Eye Institute funded through Prevent Blindness America

\$67,140

JHU PI: David S. Friedman

Notes: This study merged data from previous research to determine the prevalence of macular degeneration, glaucoma, cataract, diabetic

Curriculum Vitae

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retinopathy, and refractive error in individuals over the age of 40. It resulted in the best estimates of the prevalence of blindness and visual impairment from these conditions currently available for the United States.

7/1/01 – 6/30/03

INDIA NATIONAL GLAUCOMA OUTCOMES AND TREATMENT TRIAL (INGOTT)

Pharmacia, Inc.

\$50,000

PI: Nathan Congdon

Notes: The goal of this project was to determine optimum treatment for the initial management of patients diagnosed with glaucoma in southern India. Dr. Friedman is Co- Investigator. As such, he participated in study design, forms development, and study implementation.

7/1/02 – 6/30/04

JAHNIGEN CAREER DEVELOPMENT SCHOLARS AWARD

American Geriatrics Society

\$200,000

PI: David S. Friedman

Notes: This was a development grant to support Dr. Friedman's research efforts. Specifically, this grant supported Dr. Friedman in developing as an independent investigator working on issues related to older patients.

5/1/03 – 4/30/06

WILMER INSTITUTE MENTORED CLINICAL RESEARCH SCHOLAR PROGRAM

1 K12 EY015025

National Eye Institute (NEI)

PI: Harry Quigley

5% effort

Notes: Dr. Friedman was the lead mentor for Dr. Lydia Giordano in her training to carry our research on pediatric eye diseases.

5/15/07 – 5/14/08

SENIOR TECHNICAL ADVISOR

No grant number provided

ORBIS International

\$110,908

PI: David Friedman, 35% effort

Notes: Dr. Friedman received funding from ORBIS International through a grant to Johns Hopkins to act as senior advisor to all eye health programs carried out by the agency. ORBIS International is an eyecare development organization with five country teams that implement blindness prevention programs. Dr. Friedman visited countries where projects were active, reviewed them, and recommended operational research as well as programmatic innovations. He also reviewed all new proposals.

EDUCATIONAL ACTIVITIES/MENTORING/THESIS COMMITTEES

Curriculum Vitae

David S. Friedman, MD, MPH, PhD

Curriculum Vitae

Classroom Teaching

Co-Leader, Areas of Interest Medical School Course, Public Health and Community Service Focus (2008 – present)

The Areas of Interest Course will promote in-depth learning and scholarship through additional coursework and an independent mentored project in an area of individual interest, and broaden student's perspectives on available career paths.

COURSE OBJECTIVES

In the first two years of medical school, students will:

1. Choose an Area of Interest;
2. Meet daily during intersessions in seminars led by faculty members with interest and experience in the Area of Interest;
3. Identify a mentor;
4. Develop a plan for a scholarly project within Area of Interest in consultation with mentor and Area Leaders;
5. Conduct an independent scholarly project;
6. Disseminate scholarly project through presentation and/or publication; and
7. Consider and/or implement plans for a year-long independent study experience if desired.

This course is under development, but will be a core element of the first and second year of the medical student curriculum. The public health and community service area of interest will focus on broadening the student's knowledge of community health and public health policy, community service learning, and policy-relevant questions concerning the accessibility, adequacy, organization, cost and effectiveness of health care services either in the United States or abroad. Students will explore the ways that healthcare systems, governments, doctors and patients interact to deliver healthcare, and will choose a project that could be experiential (e.g., placement in government office or community organization) or contribute to generalizable knowledge through analysis of relevant health care data. Students who pursue a year-long experience may apply for a Masters in Public Health, Masters of Business Administration, or Masters in Public Policy.

Dr. Friedman is co-leader of the public health and community service area with Eric Bass in this planning phase and will continue to lead this course when it is implemented in 2010.

Co-Director, Public Health Ophthalmology Course, Dana Center, Wilmer Eye Institute

July 2000 – June 2001 and 2004 – 2005

Fourteen-credit course administered with Johns Hopkins Bloomberg School of Public Health. Responsible for generating funding, enrolling students (about 12 per year), curriculum development, mentoring students, and organizing coursework.

Co-Director: . Eye Disease: Epidemiology and Control [340.640.01]

Johns Hopkins Bloomberg School of Public Health, 2001

This course offers an introduction into blinding eye conditions, the epidemiology, and research approaches to studying them.

Curriculum Vitae

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Curriculum Vitae

Lecturer Eye Disease: Epidemiology and Control, 340.640.01

Johns Hopkins Bloomberg School of Public Health, 2002 - present
Lectured to students on glaucoma and pediatric eye diseases

Lecturer Introduction to the Biomedical Sciences [260.600]

Johns Hopkins Bloomberg School of Public Health, 2005 - present
Lecture each summer to students on major public health interventions to prevent blindness

Small Group Leader

Johns Hopkins School of Medicine Course on Research Ethics (C.O.R.E.), 2005 - present
Small group facilitator for discussion of ethical issues related to research. Have led small groups on four separate occasions (3 hours each session)

Teaching Assistant, Epidemiology 2

Johns Hopkins Bloomberg School of Public Health, 1997

Lectures

- Wilmer resident glaucoma lecture series (Six to eight hours of lectures per year for the past 10 years)
- Wilmer resident epidemiology lectures
- Johns Hopkins medical student lectures on glaucoma and world blindness
- Johns Hopkins Bloomberg School of Public Health summer institute course on tropical medicine (lectures on tropical eye disease)
- Maryland Optometric Association Bi-Annual Meeting, "Glaucoma Management and Visual Fields," 1999, 2001
- University of Maryland Update on Glaucoma, 1999 – 2001
- Current Concepts in Ophthalmology, Johns Hopkins, 1999 – 2004

Clinical Training

Resident Training: Throughout my years at Wilmer I have supervised resident surgeries, initially every other week (when I saw patients at Bayview), then for the past 3 years, one morning a month. I have had a resident observer in my clinic for about half a day per week throughout my tenure at Wilmer.

Fellowship Training (Glaucoma Service **Fellowship Director** since 2007): Organize fellow activities, hold research meetings with the fellow and residents, and train the fellows in surgical techniques.

CME Instruction

Lecturer Military and Tropical Medicine

Uniformed Services University of Health Services 2001 - present

Curriculum Vitae

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Lecture annually to military doctors who will be working overseas on tropical eye diseases

CME Roundtable (cme2 and New York Eye and Ear Infirmary), 8/07

Presented data on predictors of patient adherence to glaucoma therapy and participated in a roundtable discussion of issues related to adherence with glaucoma medications. The roundtable was taped and will be published for CME credit.

CME Lectures at American Academy of Ophthalmology and other Meetings

Presented CME-sponsored lectures during the annual meeting of the American Academy of Ophthalmology on around 8 occasions on topics including patient management, risk assessment in glaucoma, who is going blind from glaucoma, compliance with medical therapy and angle closure glaucoma. A representative sample of these talks include: “*Innovations In Glaucoma: What’s New, What’s Really True?*” 10/05, Chicago (AAO); “*Are All Americans Receiving Comparable Glaucoma Care?*” (Ophthalmology Times 9/05); Baltimore “*Insights on Corneal Thickness, and ALT/SLT*” 6/2005 (Ophthalmology Times); “*Improving Outcomes: Patient management Advances for Glaucoma.*” 10/2005 (Dulaney Foundation) “*Innovative Approaches to the Diagnosis and Treatment of Glaucoma*” (Ophthalmology Times, 2004); and *Keys to the Glaucoma Code: Early Assessment, Diagnosis, and Treatment.* 10/04 (Ophthalmology Times)

CME Symposium Director: American Academy of Ophthalmology (2004, Health Management Solutions)

Directed a symposium attended by over 150 ophthalmologists on patient management and risk of non-compliance

Program Developer and Lecturer: Treatment of Risk in the Glaucoma Continuum (UMDNJ-Center for Continuing and Outreach Education and Impact Communications, 2005)

This was a four hour CME course that I played a lead role in creating. The learning objectives for the course were to improve physicians’ ability to review the glaucoma continuum, explain the concept of global risk as it applies to treatment decisions in glaucoma, examine evidence supporting risk calculations, incorporate a risk calculator into patient management plans, and determine an appropriate management approach for best clinical outcomes. Finally, there was a CME-certified CD-ROM that included my lecture on *Assessing Risk Factors and Their Effect on Disease Progression*

Program Developer and Lecturer on Improving Patient-Doctor Communications to Increase Patient Adherence with Therapy: Annual Society of Cataract and Refractive Surgeons (AHECME, 3/2007)

This material was based on research I carried out on the drivers of adherence to medical therapy for glaucoma and presents techniques for improving adherence

Program Developer and Co-Chair: Enhancing Adherence with Glaucoma Therapy: Practical Strategies for Superior Outcomes: American Academy of Ophthalmology (JHU CME, 11/2007)

Curriculum Vitae

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Curriculum Vitae

This is a 2.5 hour program based on research I carried out on the drivers of adherence to medical therapy for glaucoma and presents techniques for improving adherence

Kaiser Permanente Annual Meeting Invited Lecturer (2007)

Spoke on data regarding current glaucoma management gaps as well as on angle closure glaucoma mechanisms to an audience of about 100 physicians

Mentoring

- Sherman Reeves (Medical Student, 2000): Helped him design and conduct a study of patient preferences for anesthesia management which resulted in a publication in the peer-reviewed literature
- Kevin Nusz (medical student, 2001): Organized research study of the impact of cataract on visual fields and vision testing which resulted in a peer-reviewed publication
- Mingguang He (MD, 2000 - 2001): Mentored his MPH studies at Johns Hopkins when he participated in the Public Health Ophthalmology program and assisted him in the design and analysis of his dissertation work which was carried out at University College London
- Rahul Ali (MD, 2004 - 2005): Mentored his MPH studies at Johns Hopkins with weekly meetings and substantial input on his final thesis for a study of endophthalmitis prophylaxis
- Lydia Giordano (optometrist, 2003 - 2006): Acted as lead mentor for her K12 which focused on the epidemiology of pediatric eye diseases. Met once every one to two weeks for over three years to assist her in her work.
- Pradeep Ramulu (ophthalmologist, 2007 – present): Mentor on his K12 award to study clinical research and epidemiology. Assisting him with large database analyses and study design. We meet weekly to review his progress.
- Christopher Brady (medical student, 2007-2008): Organized a research project for him in India to improve eyecare delivery in a charitable eye hospital.
- Lisa Keay (optometrist and PhD, 2007): Actively working with her in her training here at Wilmer. We are currently collaborating on a study of spectacle correction to be conducted in China and India.
- Ferhina Ali (JHU medical student): I am her preceptor on her Frameworks in Global Health award. She is assisting in our research on refractive error in India and I have arranged for her to visit other large eyecare institutions there.
- Dolly Chang (MD, MPH student, 2008 - 2009) MPH mentor and capstone thesis advisor. Meet weekly to review progress.
- Deepika Nemani (MPH student 2008 – 2009) MPH mentor and capstone thesis advisor. Meet weekly to review progress.
- Ramya Swamy (MD, MPH student 2008 – 2009) capstone thesis advisor. Assisting Dr. Swamy in developing a research project in Indonesia related to providing eyecare to diabetics in Jakarta.

Clinical Fellows

Scott LaBorwit, M.D., 1998-1999

Curriculum Vitae

David S. Friedman, MD, MPH, PhD

Curriculum Vitae

Dana Blumberg, M.D. 2004-2005
Kimberly Brown, M.D., Ph.D. 2005-2006
Sunita Radhakrishnan, M.D. 2006-2007
Travis Frazier, M.D. 2007 – 2008
Eiyass Albeiruti, M.D. 2008 - present

Thesis Committees

Thesis Defense Committee Chair, Robert Wojciechowski, Doctor of Philosophy Candidate in the Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health (June 15, 2007), *Quantitative trait linkage analyses of ocular refraction in four populations*

Thesis Committee Member, Tianjing Li, Doctoral Candidate Department of Epidemiology (2008 – present)

EDITORIAL ACTIVITIES

Reviewer for the following Journals:

- Ophthalmology
(*Editorial Board Member* 2005 – present)
- Journal of Glaucoma (*Editorial Board Member* 2006-present)
- Investigative Ophthalmology and Vision Sciences
(*Guest Editorial Board Member* and frequent reviewer)
- American Journal of Epidemiology
- American Journal of Ophthalmology
- Archives of Ophthalmology
- Eye
- Indian Journal of Ophthalmology
- British Journal of Ophthalmology

CLINICAL ACTIVITIES

Licensed to practice medicine in the state of Maryland, Lic. No. D0050673

Board certified by the American Academy of Ophthalmology since May 1997, re-certified 2006

Service Responsibilities

Glaucoma subspecialist.

- Outpatient clinic 1.5 days per week
- Operating room half a day per week

Curriculum Vitae

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ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments:

Departmental:

- *Resident Education Committee, Wilmer, 1999-2004*
- *Implementation Committee for Wilmer 2020, Wilmer, 2006 (ongoing)*
- *Organizing Committee, Wilmer Research Meeting, 1999 – 2006 (Co-Chairperson 2002 – 2005)*

University:

Institutional Review Board Member: Wilmer representative to the IRB, 2001 – 2007. The IRB meets every week for three hours. Furthermore, Dr. Friedman reviewed all protocols from Wilmer prior to submission to the IRB and offered feedback both on research ethics and study design.

Professional Societies:

American Academy of Ophthalmology
American Glaucoma Society (Member 1999 – present)
Association for Research in Vision and Ophthalmology
Pennsylvania Ophthalmology Society (1993-1996)

Organizational Responsibilities:

American Academy of Ophthalmology

- Member: *Glaucoma Preferred Practice Patterns Panel* (American Geriatric Society representative to the committee, 2008 – present). The Preferred Practice Patterns are widely cited as the definitive reference for the current state of knowledge about best practices in ophthalmology and are freely available to the public. This committee produces 3 major volumes related to primary open angle glaucoma, primary open angle glaucoma suspects, and angle closure glaucoma.
- Member: *Refractive Errors Preferred Practice Patterns Panel, AAO*
- Member: Eye Disease and Aging Committee
- Achievement Award (2006)

Association for Research and Vision in Ophthalmology

- Member: Members-in-Training Committee
- Paper Session Moderator: Glaucoma Epidemiology, ARVO, 2001
- Paper Session Moderator: Glaucoma Epidemiology, ARVO 2005
- Paper Session Moderator: Pediatric Eye Disease, ARVO 2008

Curriculum Vitae

David S. Friedman, MD, MPH, PhD

Curriculum Vitae

World Glaucoma Association

- **Chairperson:** Angle-Closure Consensus Panel
- **Co-chairperson:** Research Committee
- Member Definitions and Mechanisms Consensus Panel Committee
- Member Surgical Management of Glaucoma Consensus Panel
- Associate Board Member

American Glaucoma Society

- Chairman Practice Guidelines Sub-Committee (2006 – present)
- Member since 2001

International Association to Prevent Blindness: Member of Technology Committee

RECOGNITION

Academic Honors

- Alpha Omega Delta, Johns Hopkins School of Hygiene and Public Health (1996)
- Distinction in Major (1985)
- Phi Beta Kappa (1985)
- Summa cum laude, Yale University (1985)

Awards

- American Geriatrics Society Douglas Jahnigen Award (2003 – 2005)
- Research to Prevent Blindness Robert E. McCormick Award (2000)
- NIH Mentored Clinical Scientist Training Grant Recipient (1996 – 2001)
- Roy O. Scholz Award, Johns Hopkins University (1992)
- Paul Dudley White Scholarship, Harvard Medical School (1990)
- Stanford University Scholarship for study in Taiwan (1987)
- Fulbright Scholarship Finalist (1987)

INVITED LECTURES

“Glaucoma Management in the 21st Century”, Riskey Hospital, Central University of Venezuela, 1998.

“Preventing Blindness by Gonioscopying our Patients Better”, European Congress of Ophthalmology, Stockholm, Sweden, 1999.

“Angle-Closure Glaucoma” UCSF Meeting on Global Blindness, San Francisco, 2001

“The Evidence Supporting Anesthesia Management Strategies During Cataract Surgery,” Ophthalmic Anesthesia Society, Chicago, 2001

Curriculum Vitae

“Prevalence of Blindness and Blinding Eye Conditions in the United States,” Keynote Speaker, Vision Problems in the United States, Prevent Blindness America Washington D.C. Symposium on Capitol Hill, March 2002

American Academy of Ophthalmology: Glaucoma Sub-Specialty Day: This is an invited lecture and the program is attended by over 1,000 ophthalmologists from around the world.

- “Glaucoma Around the World,” New Orleans, 2001
- “The Effect of Race on Surgical Outcomes in Glaucoma”, Chicago, 2002
- “Gonioscopy and Angle Assessment,” Anaheim, 2003
- “Lessons Learned from the Ocular Hypertension Treatment Study”, New Orleans, 2004
- “It is Time to Screen for Glaucoma”, Chicago, 2005
- Chairman, Symposium on Angle Closure Glaucoma, Las Vegas, 2006
- “The Role of Cataract Surgery in Angle Closure Glaucoma,” New Orleans, 2007
- “Recent Clinical Trials in Angle Closure Glaucoma,” Atlanta, 2008

“Tools for Critical Appraisal of the Literature: Understanding Statistics in Ophthalmology,” Evidence-Based Glaucoma Symposium Brussels, Belgium, January 2004

“Mechanisms of Angle-Closure Glaucoma,” Angle-Closure Research Meeting: Singapore National Eye Center, Singapore, 2004

“Mechanisms of Angle Closure Glaucoma,” Third Meeting of the Asian Angle-Closure Glaucoma Club: WuHan, China, September, 2004

“Glaucoma Management” Santiago, Chile, October 2004 National Ophthalmology Meeting

“Long-Term Outcomes after Acute Angle-Closure Attacks,” Fourth Meeting of the Asian Angle-Closure Glaucoma Club: Taiwan, November 2005

“Patient Management in the World of Glaucoma,” Eighth Japan Glaucoma Council, Tokyo, 2006

“A modest proposal” for WHO guidelines and recommendations for the prevention and treatment of glaucoma,” International Glaucoma Research Society, Vancouver, 2007

“Management of Glaucoma and Cataract, Controversies on Treatment Approach,” 6th International Symposium on Ocular Pharmacology and Therapeutics, Berlin 2006

“Patient Preferences for Anesthesia Management During Cataract Surgery,” Ophthalmic Anesthesia Society, Chicago, IL 2007

“Issues Related to Screening for Angle Closure Glaucoma,” North American Perimetric Society, featured speaker, Skaneateles Falls, NY 2007

Curriculum Vitae

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Curriculum Vitae

State University of New York, Buffalo, Annual Glaucoma Symposium, featured speaker, Buffalo, NY, 2008 (October)

Yale University 12th Annual Glaucoma Meeting, invited speaker, New Haven, CT, 2008

Royal Australia and New Zealand Congress of Ophthalmology Annual Meeting: Invited Speaker, Melbourne, 2008

Rotterdam Glaucoma Symposium, featured speaker, Rotterdam, 2009

Visiting Professor

Scheie Eye Institute, 2002, “Interventions to Improve Quality of Life in Nursing Homes”

Cole Eye Institute, 2004 : “Mechanisms of Angle-Closure Glaucoma” and “New Paradigms in the Management of Angle-Closure Glaucoma”

University of Montreal, 2005 “New Paradigms in Angle-Closure Glaucoma,”

Tongren Eye Hospital, Beijing, 2005 “Long-Term Outcomes in Angle-Closure Glaucoma”

University of Alabama, 2006 “Patients and Doctors, Failures and Opportunities in Glaucoma Management”

Stanford University, 2006 “Understanding Angle Closure Glaucoma”

Pacific Medical College, 2006 “Understanding the Process of Care for Glaucoma Patients”

Moorfields Eye Hospital, London, 2007, invited to present at Glaucoma Faculty Conference and visit Moorfields clinics, “Quality of Life Assessment in Glaucoma.”

University of Michigan Kellogg Eye Institute, “Angle Closure Glaucoma” and “Patient Doctor Communications,” 2008

SCIENTIFIC PRESENTATIONS

Association of Research in Vision and Ophthalmology annual meeting

- 1999: “Digital Image Capture and Automated Analysis of Posterior Capsule Opacification”
- 2000: “8-year Incidence of Open-angle Glaucoma Among Blacks and Whites in East Baltimore”
- 2001: “Angle-Closure Glaucoma in Singapore: A Case-Control Study”
- 2002: “Prevalence of Age-Related Macular Degeneration in the United States”
- 2003: “Prevalence and Causes of Low Vision Among Nursing Home Residents: The SEEING Study” [poster]

Curriculum Vitae

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Curriculum Vitae

- 2004: “The Prevalence of Open-Angle Glaucoma Among Blacks and Whites 74 Years of Age and Older”
- 2005: “Predictors of Treatment and the Likelihood of Ongoing Medication Use Among Individuals Diagnosed with Glaucoma or as Glaucoma Suspects” [poster]
- 2006: “Long-Term Outcomes in the Contra-lateral Eye of Patients with Acute Angle Closure Attacks”

American Glaucoma Society

- 2001: “Angle-Closure Glaucoma in Singapore: A Case-Control Study”
- 2002: “The Incidence of Glaucoma Among Blacks and Whites in East Baltimore”
- 2003: “The Prevalence of Open-Angle Glaucoma in the United States”
- 2005: “Predictors of Treatment for Glaucoma in a Large Managed Care Database” [selected as a “best paper”]
- 2006: “The TDA Accurately Records when an Eyedrop is Delivered” [Poster]

OTHER PROFESSIONAL ACCOMPLISHMENTS

Organized free eye care screening for Chinese-speaking patients at an annual health fair, Philadelphia, 1994-1996

Advisory Boards and Consultancies

Pfizer U.S. Advisory Board Member (2003 – present)

Allergan U.S. Advisory Board Member (2007)

Zeiss-Meditec (Consultant)

Alcon (Consultant)

NicOx (Glaucoma Advisory Board, 2008)