

November 1, 2011

Elliott H. Myrowitz, OD, MPH

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

Johns Hopkins University School of Medicine

July 1, 2002 to present Assistant Professor, Department of Ophthalmology

Personal Data

Office Address: Wilmer Eye Institute at Green Spring Station
10753 Falls Road, Suite 455
Lutherville, Maryland 21093
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Education and Training

Undergraduate

1971-74 University of Maryland, College Park

1975 Bachelor of Science, Pennsylvania College of Optometry

Doctoral

1978 Doctor of Optometry, Pennsylvania College of Optometry

Postdoctoral

1979 Master of Public Health, The Johns Hopkins University School of Hygiene and Public Health

Professional Experience

1974-1978 Research Assistant to the Public Health Department, Pennsylvania College of Optometry

1980-1982 Optometric Consultant, Maryland State Department of Correctional Services

1980-1989 Full Time Staff Optometrist, Department of Ophthalmology, Sinai

Hospital, Baltimore, Maryland

- 1989 - present Team Optometrist Baltimore Orioles Major and Minor Leagues
- 1989-1992 Private Practice Optometry, Pikesville, Maryland
- 1989-1992 Part Time Optometrist, Patuxent Medical Group, Annapolis, Md.
- 1992-1998 Full Time Optometrist, Patuxent Medical Group, Annapolis, Md.
- 1998-2002 Instructor, Wilmer Eye Institute, The Johns Hopkins Medical School.
- 2002 - present Assistant Professor, Wilmer Eye Institute, The Johns Hopkins Medical School
- 2007 - present Chief, Wilmer Eye Institute Optometric Service

RESEARCH ACTIVITIES

Publications, Peer-Reviewed Original Research

1. **Myrowitz EH.** A recent explanation of the entopic phenomenon Haidinger's brushes and its clinical application. *Am J Optom Physiol Opt.* 1979 May; 56 (5):305-308.
2. Brodsky L, **Myrowitz EH.** Motorist visibility of the Surgeon General's smoking warning on cigarette billboards. *Am Journal Optom Physiol Opt.* 1981 Feb;(2):117-24.
3. **Myrowitz EH,** Pearlman P, Goldberg HK. A case of Pseudomonas keratitis in soft contact lens wearer using contaminated chemical disinfection solution. *Contact Intraocular Med J.*1981 Oct-Dec;7(4):337-8.
4. **Myrowitz EH.** A public health perspective on vision screening. *The Am J Optom Physiol Opt.*1984 Jun;61 (6):359-60.
5. Ruskiewicz JP, Godio L, **Myrowitz EH,** France L. Cost and quality implications of changes in tonometry by Optometrists. *J Am Optom Assoc.* 1983 Apr;54(4):339-44
6. **Myrowitz EH,** Melia M, O'Brien TP. The relationship of long term contact lens wear and corneal thickness. *CLAO J* 2002 Oct; 28(4):217-20.
7. Jabbur NS, **Myrowitz EH,** Wexler JL, O'Brien TP. Outcome of second surgery in LASIK cases aborted due to flap complications. *J Cataract Refract Surg.* 2004 May;30(5):993-9.
8. **Myrowitz EH,** O'Brien TP. Effect of contact lens use on corneal thickness

measurements. *J Cataract Refract Surg.* 2004 Jun;30(6):1154

9. **Myrowitz EH**, Kouzis AC, O'Brien TP. High interocular symmetry in average simulated keratometry, central thickness, and posterior elevation. *Optom Vis Sci* 2005 May;82:428-31.
10. Hindman HB, McCally RL, **Myrowitz EH**, Terry MA, Stark WJ, Weinberg RS, Jun AS. Evaluation of deep lamellar endothelial keratoplasty surgery using scatterometry and wavefront analyses. *Ophthalmology* 2007 Nov;114(11):2006-12
11. **Myrowitz EH**, Ren S, Chuck RS. Comparison of central corneal thickness measured with four pachymeters. *Eye and Contact Lens*, 2007 May; 33(3) 156-160.
12. Quinto G, Camacho W, Combs JC, Vedula SS, **Myrowitz EH**, Chuck RS. Mitomycin C for prevention of postoperative haze following excimer laser surface ablation in moderate to high myopia (Protocol). *Cochrane Database of Systematic Reviews* 2008, Issue 4.
13. **Myrowitz EH**. Laser-assisted intrastromal keratomileusis in a patient with Systemic Mastocytosis. *Optometry.* 2008 Feb;79(2):95-7.
14. **Myrowitz EH**, Kurwa A, Parker J, Chuck RS. Wavefront-guided Photorefractive Keratectomy after Radial Keratotomy in Nine Eyes. *J of Refract Surg* 2009 May; Surg.2009May;25(5):470-2
15. **Myrowitz EH**, Chuck RS. A Comparison of Wavefront-Optimized and Wavefront-Guided Ablations. *Curr Opin Ophthalmol.* 2009 Jul;20(4):247-50
16. Kuo IC, **Myrowitz EH**, Schein OD, Chuck RS. Wavefront-Guided photorefractive Keratectomy to correct ametropia following aspheric ReSTOR implantation. *J Refract Surgery* 2009 Dec;25(12):1111-5
17. Dunlap K, Chak G, Aquavella JV, **Myrowitz EH**, Akpek E. Short-Term visual Outcomes of Boston Type 1 keratoprosthesis implantation. *Ophthalmology* .2010 Apr;117(4):687-92..Epub2010 Jan 22.
18. **Myrowitz EH**. Juvenile Myopia Progression, Risk Factors and Interventions. *Saudi J Ophthal.* 2011 Vol 25 issue 2.

Extramural Funding

Active

1. Fall 2010. Comparative Effectiveness of Screening for Glaucoma. Evidence Based Practice Center, JHSPH, Agency for Healthcare Research and Quality grant. (10% effort Fall 2010-Fall 2011)

Previous

1. Fall 2007. Evaluation of Pataday (Olopatadine 0.2%) in atopic patients with contact lens intolerance. Johns Hopkins IRB 12383 Role: Principal Investigator
2. Fall 2007. Visual performance in Dry Eye patients. Johns Hopkins IRB 15086 Role: Principal Investigator
3. Fall 2008. A multi-center evaluation of Cooper Vision's Avaira daily wear soft Contact lens sphere versus Vistakon's Oasys spherical daily wear soft contact lens Johns Hopkins IRB 19075 Role: Co-Investigator.
4. Fall 2008. Post approval study of CustomVue LASIK for monovision with the Star S4 IR excimer laser system. Johns Hopkins IRB 19367 Role: Co-Investigator
5. Fall 2006. Comparison of Restasis versus artificial tears in patients with contact lens intolerance due to discomfort from dryness: A randomized clinical trial. Johns Hopkins IRB 6002 Role: Principal Investigator.
6. Spring 2006. Wavescan guided LASIK for the treatment of high myopic patients with VISX Star IT excimer laser system. Role: Co- Investigator.
7. Spring 2006. Chakshu Ck-0103, eyedrop study for loss of contrast sensitivity in patients with nuclear sclerotic cataracts. Role: Sub-Investigator.
8. Fall 1979.U.S.A.I.D. Epidemiological Survey of Vision Impairment in Leogane, Haiti.
9. 1976-1977. Beta Sigma Kappa National Student Research Grant, "Scintillating Patterns of Coherent Light and the Retinitis Pigmentosa Patient."

Non Funded Research.

1. Fall 2006. Scatterometry and Wavefront data in corneal refractive surgery patients. Role: Co-Investigator.
2. Summer 2008. Study of Health, Emotional Well-Being and LASIK (HEaL Study) Johns Hopkins IRB 17402 Role: Co-Investigator.
3. Summer 2008. Longitudinal study of early lens protein changes using Dynamic Light Scattering (DLS) Johns Hopkins IRB 10918 Role: Co-Investigator
4. Fall 2011. Relationship between autorefractor "confidence score" and Visual Acuity in soft contact lens patients. Role Principle Investigator. NA00036873

EDUCATIONAL ACTIVITIES

Publications, Other

1. Reestablished and became editor of PROBA, a research activities newsletter Pennsylvania College of Optometry 1976-1977.
2. Myrowitz, EH. Design and Evaluation of Contact Lenses. Manual designed for ophthalmology residents. November, 2005; 1-24.
3. Myrowitz, EH. Co-management of corneal refractive surgery. Maryland Optometry Board of Examiners. June 2007: 1-3
4. Myrowitz, EH. Advanced studies in contact lens care and ocular health. Johns Hopkins Advanced Studies in Ophthalmology, CME Monograph. and at www.JHASIO.com May 2008

Other Media

ABC News OnCall health video interviews, August 2009

<http://abcnews.go.com/Health/EyeHealthDryEye/doctor-diagnose-dry-eye-kind-tests-expect/story?id=8701442>

<http://media.abcnews.com/Health/EyeHealthDryEye/severe-cases-dry-eye-treated/story?id=8701467>

<http://abcnews.go.com/Health/EyeHealthDryEye/medications-dry-eye-avoid-dry-eye/story?id=8701436>

<http://68.71.208.17/Health/EyeHealthDryEye/punctual-occlusion-work-risksbenefits-procedure-dry-eye/story?id=8701466>

Parade Magazine February 7, 2010

<http://www.parade.com/health/2010/02/07-is-your-vision-worse.html>

Teaching

Classroom Instruction

1. 1980 – 1982. Visiting Lecturer in Epidemiology, Pennsylvania College of Optometry. E. Myrowitz course director, Epidemiology for Optometrists.
2. 2006 – present. Contact lens design and clinical care. Wilmer residents lecturer.
3. 2007 - present Corneal refractive surgery. Wilmer residents lecturer
4. 2006 – present Cornea Fellows Journal Club

Clinical Instruction

1. 1987 – 1990. Adjunct Faculty, Pennsylvania College of Optometry 4th year Optometry student externship program.
2. 1998 – present. Full time Faculty The Johns Hopkins University School of Medicine, Wilmer Refractive Surgery Center, teaching ophthalmology residents,

cornea fellows, and optometric residents.

3. 2005 – present. Director of Optometric residency, Baltimore Veterans Administration and The Wilmer Eye Institute. Optometry resident rotation each Monday and every other Thursday.

Mentorship

1. 2009-2011, Karen Dunlap, O.D. and Josephine Owoeye, O.D. becoming Assistant Professors at the Wilmer Eye Institute.
2. 2010-present, Thesis committee, Lori Grover, O.D., PhD candidate JHSPH.

CME Instruction at Johns Hopkins

1. December 4, 1998. Co-director and lecturer, The First Wilmer LASIK Co Management Program, Lutherville, MD.
2. April 17, 1999. “LASIK patient selection and post operative optometric management” Maryland Optometric- Wilmer Contact Lens and Eye Disease meeting, Baltimore, MD.
3. June 30, 1999. Course director and lecturer, Wilmer Comanagement Program, Lutherville, MD.
4. June 16, 2000. Course director and lecturer, Wilmer Comanagement Program, Lutherville, MD.
5. April 28, 2000. “Evaluation of Instrumentation for Mapping the Anterior And Posterior Corneal Elevation as well as Corneal Thickness Prior to Refractive Surgery.” The Sixtieth Wilmer Residents Meeting, Baltimore, MD.
6. January 19,2000. “Clinical Optics” 7th Annual Education for Ophthalmic technicians course, Wilmer Eye Institute, Baltimore, MD.
7. May 18,2002.“The relationship of long term contact lens wear on corneal thickness with implications for LASIK surgery”. The Sixty-First Wilmer Residents Meeting, Baltimore, MD.
8. July 30, 2002.“Custom Wavefront Guided LASIK”. Optometric workshop at The Wilmer Eye Institute at Green Spring Station, Lutherville, MD
9. October 10, 2002. “Presbyopia and computer vision syndrome”. JHU CME For Primary Care Providers, Baltimore, MD.
10. May 26, 2004. “Contact lenses and refractive surgery”. Wilmer Refractive Journal Club, Lutherville, MD.

11. March 30, 2008. "Evidence based care in contact lens, corneal therapeutics and glaucoma". Wilmer Eye Institute- Maryland Optometric Association meeting, Baltimore, MD
12. March 30, 2008. "Monovision compared to multifocal contact lenses. Wilmer Eye Institute- Maryland Optometric Association meeting, Baltimore, MD
13. March 22, 2009. "What is Evidence Based Care" Wilmer Eye Institute- Maryland Optometric Association meeting, Baltimore, MD
14. December 2, 2010. "Outcomes in Wavefront-Guided and Wavefront-Optimized Corneal Refractive Surgery". 23rd Annual Current Concepts in Ophthalmology Course, Baltimore, Maryland.
15. December 11, 2009. "Contact lens design and evaluation" Wilmer Resident lecture Baltimore, Maryland
16. December 14, 2009. "Optical Management of post corneal surgery complications" Wilmer Corneal Fellows Journal club. Baltimore, Maryland
17. January 11, 2010. "Wavefront-Guided Vision Correction" Wilmer Corneal Fellows Journal Club.
18. March 7, 2010. "Sports Vision" Third annual Wilmer Eye Institute – Maryland Optometric Association meeting. Baltimore , Maryland.
19. March 7, 2010. " Evidence Based Eye Care" Third annual Wilmer Eye Institute Maryland Optometric Association meeting. Baltimore, Maryland.
20. March 7, 2010. "Etiology of Myopia" Third annual Wilmer Eye Institute Maryland Optometric Association meeting. Baltimore, Maryland.
21. January 25, 2011. "Scleral Contact Lenses" Wilmer Corneal Fellows Journal Club.
22. March 6, 2011. Overview of Evidence Based Care. Fourth annual Wilmer Eye Institute-Maryland Optometric Association meeting. Baltimore, Maryland.
23. March 6, 2011. Instrument Screening for Corneal Pathology. Fourth annual Wilmer Eye Institute-Maryland Optometric Association meeting. Baltimore, Maryland.
24. March 6, 2011. Scleral Contact Lenses: When to Use and Clinical Pearls. Fourth Annual Wilmer Eye Institute-Maryland Optometric Association meeting. Baltimore Maryland.
25. August 24, 2011. Using wavefront technology for Corneal Refractive. Wilmer Cornea Fellows Journal club.

26. October 24, 2011. Introduction of Contact Lens Design and evaluation. Wilmer Resident morning lecture.
27. October 25, 2011. Advanced Contact lens Design and Evaluation. Wilmer Resident morning lecture.
28. December 1, 2011. Visual and non-Visual factors associated with Patient Satisfaction and Quality of Life in LASIK. 24th Annual Current Concepts in Ophthalmology course. Baltimore, Maryland.
29. December 1, 2011. Advanced Contact Lens Workshop. 24th Annual Current Concepts in Ophthalmology course. Baltimore, Maryland.

CME instruction outside Johns Hopkins

1. December 10, 2001. "The relationship of long-term contact lens wear on corneal thickness." American Academy of Optometry Annual Meeting, Philadelphia, PA.
2. June 4, 2002. O'Brien TP, Myrowitz EH. "Wavefront patterns in professional athletes" ASCRS, Philadelphia, PA.
3. December 9, 2004. "Clinical Pearls in using Wavefront technology in Refractive surgery". American Academy of Optometry, Tampa, FL.
4. December 11, 2004. "High interocular symmetry in average simulated Keratometry, central thickness, and posterior elevation". American Academy of Optometry. Tampa, FL.
5. December 7, 2006. "Evaluation of Deep Lamellar Endothelial Keratoplasty Surgery Using Scatterometry and Wavefront Analyses". American Academy of Optometry. Denver, CO.
6. December 8, 2006. "Comparison of Central Corneal Thickness measured with four Pachymeters". Am Academy of Optometry. Denver, CO.
7. October 26, 2007. "Long term efficacy of photorefractive keratectomy for elevated subepithelial nodules in patients with keratoconus who are contact lens intolerant. Am Academy of Optometry Tampa Fla.
8. May 9, 2007. "Comparison of Central Corneal Thickness measured with four Pachymeters". Assoc. for Research in Vision and Ophth., Ft. Lauderdale, FL.
9. November 21, 2008. "Ehlers-Danlos syndrome and LASIK" Optometric Council of

Refractive Technology, Anaheim, California.

10. November 24, 2008. "Wavefront-guided Photorefractive Keratectomy after Radial Keratotomy". American Academy of Optometry, Anaheim, California.
11. November 10, 2009. "Complex Cases Presentation" Optometric Council on Refractive Technology. Orlando Florida
12. January 29, 2010. Schoen R, Myrowitz EH. "Accelerated Restoration of Functional Vision with Semi-scleral Rigid Gas Permeable Contact Lenses Subsequent to Penetrating Keratoplasty" Global Specialty Lens Symposium, Las Vegas, Nevada.
13. May 12, 2010. "Ocular Allergy" Greater Baltimore Optometric Association meeting. Baltimore, Maryland.
14. November 16, 2010. Enhancement of Wavefront-Guided Corneal Refractive Surgery. Optometric Council on Refractive Technology. San Francisco, California.

CLINICAL ACTIVITIES

Certification

Optometry Licensure

Maryland Optometric License number TA0756 Expiration Date 6/30/13

Specialty Certification

1981-present Fellow, American Academy of Optometry

2011 Diplomate in Cornea, Contact Lenses and Refractive Technologies, American Academy of Optometry

Service Responsibilities

August 2005 - present Director of Baltimore VA Optometric Residency at Wilmer

November 2006 - present Leader of Wilmer Optometric Service

Clinical Program Building/ Leadership

November 2006 – August 2007 Peer elected leader of Wilmer Optometric group

August 2007 – present First appointed Chief of Wilmer Optometric Services

ORGANIZATIONAL ACTIVITIES

August 1998 – present Wilmer Eye Institute Refractive surgery committee

August 2006 – 2008 Wilmer 2010 Implementation team, Residency subcommittee

August 2006 – present Maryland Board of Optometry Quality improvement committee

Sept. 2006 – present Am. Acad. of Optometry Fellowship entrance committee

Sept. 2011 - present Wilmer Residents Education Task Force

Journal Peer Review and Editorial Board Activities

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|---|--------------|
| Journal of Refractive Surgery | 2008-present |
| Optometry and Vision Science | 2009-present |
| Cornea | 2010-present |
| Ophthalmic Epidemiology | 2010-present |
| Journal Cataract and Refractive Surgery | 2011-present |
| The Cochrane Library | 2011-present |
| Editorial Board Optometry Times | 2009-present |

Professional Societies

American Academy of Optometry

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|-----------------|---------------|
| 1978 to present | Active member |
| 1981 to present | Fellow |
| 2006 | Service Award |
| 2011 | Diplomate |

Optometric Council on Refractive Technology

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| 2006 to present | Active member |
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Association for Research in Vision and Ophthalmology

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| 2006 to 2010 | Active member |
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Maryland Optometric Association

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| 2006 to present | Active member |
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Conference Organizer

1. June 30, 1999. Course Director and lecturer, Wilmer LASIK Comanagement Program, Lutherville, MD.
2. June 16, 2000. Course Director and lecturer, Wilmer LASIK Comanagement Program, Lutherville, MD.
3. July 30, 2002. "Custom Wavefront Guided LASIK". Optometric workshop at The Wilmer Eye Institute at Green Spring Station, Lutherville, MD
4. March 30, 2008 "Evidence based care in Contact Lens, Glaucoma, and Cornea Therapeutics". Course Director Wilmer/ Maryland Optometric Assoc Balto. MD
5. March 22, 2009 "Evidence based care in Keratoconus, Ophthalmic Nutraceuticals, and Visual Impairment and Rehabilitation. Course Director Wilmer/ Maryland Optometric Assoc. Balto. MD.
6. March 7, 2010 "Evidence based care in Myopia Control, Retina, and Vision Enhancement. Course Director Wilmer / Maryland Optometric Assoc. Balto. MD.
7. March 6, 2011 "Fourth Annual Evidence Based Care in Optometry". Course Director Wilmer / Maryland Optometric Assoc. Balto. MD.
8. March 11, 2012 "Fifth Annual Evidence Based Care in Optometry", Course

Director, Wilmer / Maryland Optometric Assoc. Balto. MD

Leadership Training

1. May 15, 2007. Practical communication skills in clinical care using MBTI Personality theory.
2. May 31, 2007. Negotiation skills for faculty.
3. March 17, 2008. The Mechanics of Leadership.
4. May 5, 2008. Managing Multiple Priorities
5. May 29, 2008. Performance management through five key conversations
6. January 13, 2010. Speak Like a Pro.

RECOGNITION

Awards, Honors

1. 2011 American Academy of Optometry Diplomate, fifth awardee in Refractive Technologies, in Cornea, Contact Lenses and Refractive Technologies section.
2. 2010 Optometrist of The Year, Maryland Optometric Association
3. 2006 Peer selected Optometric Leader, Wilmer Eye Institute
4. 2006 American Academy of Optometry Service Award
5. 1978-79 U.S. Public Health Service Traineeship Grant
6. 1978 Vodnoy Clinical Optometry Award
7. 1978 J. Harold Bailey Award
8. 1978 Vision Service Plan Award
9. 1977 Gold Key International (Optometric Leadership)
10. 1974-78 Beta Sigma Kappa (Academic Honor)
11. 1971-72 Phi Eta Sigma (Freshman Scholastic)

Invited Talks and Meeting Session Chair

1. April 29, 2007. "Clinical Pearls in using Wavefront technology in Refractive surgery". New England Professional Conferences. Timonium, MD
2. March 9, 2008. "Ocular Allergy" Allegheny Optical National lecture Series VIII, Hagerstown, MD.
3. February 21, 2010. "Evidence Based Care in Wavefront-Guided Vision Correction" Illinois College of Optometry, Chicago Illinois.
4. February 21, 2010. "Evidence Based Care in Sports Vision". Illinois College of Optometry, Chicago Illinois.

5. February 27, 2011. Clinical Pearls in Using Wavefront Technology in Refractive Surgery. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
6. February 27, 2011. Basic Contact Lens Design. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
7. February 27, 2011. Advanced Contact Lens Design. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
8. February 27, 2011. The long Term Effects of Contact lens wear on the Cornea. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
9. February 28, 2011. High Interocular Symmetry in Average Keratometry, Central Corneal Thickness and Posterior Corneal Elevation. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
10. February 28, 2011. Optometry Cases That Show the Importance of Evidence Based Care Decision Making. Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
11. February 29, 2011. Chair, Low Vision Session Saudi Ophthalmology 2011. Riyadh, Saudi Arabia.
12. February 17, 2012. Chair, World Ophthalmology Congress WOC-SOSFR68 Contact lenses 1 Session. Abu Dhabi, UAE
13. February 17, 2012. Pediatric Contact lenses. World Ophthalmology Congress WOC- SOSFR94 Contact Lenses 2 Session, Abu Dhabi, UAE.
14. February 18, 2012. Chair, World Ophthalmology Congress WOC IS-SOSSA216 Research Session. Abu Dhabi, UAE
15. February 18, 2012. Evidence Based Practice in Optometry WOC IS-SOSSA216 Research Session. Abu Dhabi, UAE.

OTHER PROFESSIONAL ACCOMPLISHMENTS

With Terrence O'Brien, MD, Nada Jabbur, MD, and Roy Chuck, MD created a successful Wilmer Laser Vision Center. Over a thirteen year period this program has been a source of FDA clinical research, patient care excellence, residency and fellowship training and financially profitable for the Wilmer Eye Institute.

Created in 2007, first annual joint Wilmer Eye Institute-Maryland Optometric Association continuing education meeting with the theme of Evidence Based Care. This program has grown each year. The 5th Annual Evidence Based Care in Optometry meeting will be held March 11, 2012 and receives national attention.

