**Curriculum Vitae**

**Brian Bucca, OD, FAAO**

**Biographical Sketch**

**Current Position:**

2007 – Present Director of Eye Care

Director of the Fundus Photography and Retinopathy Reading Center

Associate Professor, of Pediatrics and Ophthalmology

University of Colorado, Denver – Anschutz Medical Campus

The Barbara Davis Center for Childhood Diabetes

1775 Aurora Court, MS A140

Aurora, CO 80045

[brian.bucca@ucdenver.edu](mailto:brian.bucca@ucdenver.edu)

Fax: 303-724-0656

**Past Positions:**

2006-2007 Deputy Chief of Optometry Services

Lieutenant Commander, United States Public Health Service

Northern Navajo Medical Center

Shiprock, NM 87420

2002-2006 Director of Diabetic Eye Care

Lieutenant, United States Public Health Service

Northern Navajo Medical Center

Shiprock, NM 87420

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**Education**

**Years Insitution Degree**

2001-2002 University of Southern California College of Optometry Residency - Ocular Disease

1997-2001 University of Alabama Birmingham Doctor of Optometry

1993-1997University of Southern Mississippi Bachelor of Science

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**Academic appointments**

**Years** **Institution/title Rank**

2015 – Present University of Colorado, Anschutz Medial Campus Associate Professor

Director of Eye Clinic - Barbara Davis Center

Primary Appointment: Pediatrics

Secondary Appointment: Ophthalmology

2010 – 2015 University of Colorado, Anschutz Medial Campus Assistant Professor

Director of Eye Clinic - Barbara Davis Center

Primary Appointment: Pediatrics

Secondary Appointment: Ophthalmology

2007 – 2010 University of Colorado, Anschutz Medial Campus Instructor

Director of Eye Clinic - Barbara Davis Center

Primary Appointment: Pediatrics

Secondary Appointment: Ophthalmology

2006 – 2007Southern California College of Optometry Adjunct Faculty

Optometry Residency Director

2004 – 2006 Southern California College of Optometry Adjunct Faculty

Optometry Externship Director

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**Hospital, government professional positions**

Hospital positions

2006 – 2007 Deputy Chief of Optometry Services

Northern Navajo Medical Center

2005 – 2006 Acting Chief of Optometry Services

Northern Navajo Medical Center

2002 – 2005 Director of Diabetic Eye Care

Northern Navajo Medical Center

Government positions

2002 – 2007 Lieutenant Commander

United States Public Health Service, Indian Health Service

Northern Navajo Medical Center

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**Honors, special recognitions and awards**

**US Public Health Service Medals**

**Achievement Medal** - For outstanding performance and leadership in reestablishing the

Diabetic Eye Care program at the Northern Navajo Medical Center

**Citation Medal** - For outstanding performance in the National Diabetes Prevention Outcomes Study

**Unit Commendation Medal** -For professional and leadership contributions in forming the first PHS Optometry Professional Advisory Group

**Commendation Medal** - For sustained and outstanding performance, leadership and professional contributions at the Northern Navajo Medical Center

**National Nominee for Young Optometrist of the Year** – Armed Forces Optometric Society (2004)

**Finalist USPHS Exceptional Proficiency Promotion** – Promotion specifically reserved for

officers who exhibit exceptional capabilities in the areas of administration and/or their

chosen profession

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**Membership in professional organizations**

2020 – Present Fellow, Optometric Retina Society

2004 – Present Fellow, American Academy of Optometry

2002 – 2008 Colorado Optometric Association (COA)

2003 – 2006 Commissioned Officers Association

2003 – 2006 Armed Forces Optometric Society

1997 – 2006 American Optometric Association

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**Major Committee and Service Responsibilities**

**Barbara Davis Center Committees**

2020 – 2022 BDC COVID Committee (QUIK Committee)

2007 – Present Executive Committee

2012 – Present EPIC Superuser Committee

2012 – Present Quality Improvement Committee

**National Committees**

2005 – 2007 Public Health Service Optometry Professional Advisory Group

2010 – 2011 American Academy of Optometry Fellowship Admittance Committee

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**Licensure and Board Certification**

**State Optometry Licensures**

2001 – Present Colorado

2002 – 2011 New Mexico

**Board Certification**

2013 – Present American Board of Certification in Medical Optometry

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**Review and Referee Work**

2011 – Present Ad hoc reviewer, Diabetes Care

2009 – Present Ad hoc reviewer, Diabetes Technology and Therapeutics

2014 – Present Ad hoc reviewer, British Medical Journal Open Diabetes Research and Care

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**Invited Extramural Lectures**

2012 Colorado Association of Physician Assistants annual meeting

Lecture title: “Ocular Disease Clinical Pearls for the Physician Assistant”

2010 Management of Diabetes in Youth Conference

Lecture title: “Screening for Diabetic Retinopathy”

2008 Navajo Area Indian Health Service Resident’s Conference

Lecture title: “Crash Course in Diabetic Retinopathy”

2008 Management of Diabetes in Youth Conference

Lecture title: “Screening for Diabetic Retinopathy”

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**Teaching Record**

**Classroom presentations**

2020 – Present “Traumatic/Atraumatic Red Eye and Chronic Vision Loss”

4.5 hour talk in HEENT block to 2nd year Physician Assistant students discussing signs/symptoms, differential diagnoses and treatment modalities for a multitude of oculosystemic and purely eye pathology

2018 – Present “Eye Exam Components and Clinical Skills”

2 hour talk in HEENT block to 1st year Physician Assistant students

Discussion of how to perform an eye exam and differentiating physiologic

vs pathologic conditions. More detailed than talk of same name below

2018 – Present “Acute Vision Loss, Diplopia, Strabismus and Amblyopia”

2 hour talk in HEENT block to 1st year Physician Assistant students

2016 - Present “Emergency Ophthalmology for Physician Assistants”

2 hour talk discussing ocular emergencies/urgencies

2012 – 2014, “Physical Diagnosis of the Eye for the Physician Assistant”

2020 – Present 1-2 hour practicum instructing on ocular diagnostic skills such as

preliminary testing, corneal fluorescein staining and ophthalmoscope use

**Invited Intramural presentations**

2019 – Present BDC Pediatric Endocrine Fellows Conference (Annual invitation)

1 hour talk using case presentations to outline A1C dynamics in predicting

retinopathy occurrence/progression with emphasis on the vital role of retinal

imaging.

2015 BDC Noon Education Conference

Lecture title: “Treatment of Vision-Threatening Diabetic Retinopathy”

2011 – 2014 Bimonthly presentation to pediatric patients/parents attending insulin pump training.

Lecture title: “How can the Insulin Pump Reduce Risk of Diabetic Retinopathy“

2008 – 2014 Annual Presentation: BDC Pediatric Endocrine Fellows Conference

Lecture title: “Diabetic Retinopathy for the Non-Eye Care Provider”

2014 BDC Noon Education Conference

Lecture title: “Predicting Pregnancy-related Diabetic Retinopathy Progression”

2013 BDC Noon Education Conference

Lecture title: “Retinal Vessels, Mirrors of Vascular Health”

2012 BDC Noon Education Conference

Lecture title: “Predicting the Early Worsening phenomenon in Diabetic Retinopathy”

2010 BDC Noon Education Conference

Lecture title: “Wolfram Syndrome, A Rare Optic Neuropathy in Youth with Type 1 Diabetes”

2010 University of Colorado Hospital Endocrinology Department

Lecture title: “The Role of Glycemic Variability in Diabetes Complications”

2009 BDC Noon Education Conference

Lecture title: “Diabetic Retinopathy for the Non-Eye Care Provider”

**Attending Duties**

2015 – Present Attending Physician – Pediatric Disease Optometry Residency affiliated

with Children’s Hospital Colorado

2002 – 2007 Clinical Instruction of Optometry externs, hospital-based Optometry clinic, 40hours/week

2002 – 2007 Clinical Instructions of Optometry residents, hospital-based Optometry clinic, 40 hours/week

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**Grant Support**

**Grant:** DP3DK094333-01 1.2 Calendar months

**Funding Agency:** National Institute of Diabetes and Digestive and Kidney Diseases

**Title:** Validation of Potential Protective Factors from Diabetic Complications

**Role:** Site Principle Investigator

**Grant Amount:** $168,300 direct

**Dates:** September 2011 – September 2013

**Description:**

The Medalist Study investigated microvascular and macrovascular disease in persons that had type 1 diabetes for 50 years or more (Medalists). These individuals lived through times when care for diabetes was suboptimal compared with today’s technologies and insulins. Study of the Medalists showed that a significant number were relatively free of cardiovascular disease and proliferative retinopathy and it was felt that there must be some protective factors within these individuals.

The Validation of Potential Protective Factors from Diabetic Complications study aimed to study individuals who experience rapid progression of retinopathy in the first 17 years of type 1 diabetes despite good control. The intent was to investigate if the protective factors found in the Medalists were absent in those who experienced rapid progression.

**Unfunded Research Participation**

**Grant:** U18 DP003256 (Dabelea)

**Funding Agency:** CDC

**Title:** SEARCH for Diabetes in Youth Study, Colorado Center

**Role:** Contracted Ophthalmic photographer

**Total direct grant amount:** $689,590

**Dates:** 09/30/10 – 09/29/15

**Description:**

The major goals of this project are to gather epidemiologic data on diabetes complications and methods of medical treatment in a multicultural cohort of children under 20 years of age with type 1 and type 2 diabetes.

**Grant:** U01 DK048375 (Hamman)

**Funding Agency:** NIH/NIDDK

**Title:** Diabetes Prevention Program and Outcomes Study (DPPOS)

**Role:** Contracted Ophthalmic photographer

**Total direct grant amount:** $620,178

**Dates:** 08/20/94 – 01/31/14

**Description:**

The major goal of this study is to investigate how lifestyle modification and/or medication can help prevent conversion to type 2 diabetes in persons with impaired glucose tolerance.

**Grant:** U01 DK061242 (Zeitler)

**Funding Agency:** NIH

**Title:** Treatment Options for type 2 Diabetes in Adolescents and Youth (TODAY)

**Role:** Contracted Ophthalmic photographer

**Total direct grant amount:** $480,156

**Dates:** 09/30/01 – 02/28/12

**Description:**

The major goal of this study is to investigate the effects interventions (lifestyle and/or medication) on outcomes in children with type 2 diabetes.

**Grant:** R01 HL113029 (Snell-Bergeon)

**Funding Agency:** NIH, NHLBI

**Title:** Complications and Comorbidities of Type 1 Diabetes

**Role:** Ophthalmic photographer

**Total direct grant amount:** $489,505

**Dates:** 06/01/2013 - 05/30/2017

**Description:**

To determine the risk factors for the development of accelerated coronary artery disease, diabetic nephropathy, retinopathy and neuropathy in a cohort of adults with long-term type 1 diabetes

**Grant:** 17-2013-313 (Rewers)

**Funding Agency:** JDRF 

**Title:** Models Predicting Accelerated Cardiorenal Complications of Type 1 Diabetes

**Role:** Ophthalmic photographer

**Total direct grant amount:** $459,729

**Dates:** 3/1/2013 - 2/28/2016

**Description:**

Examine models for predicting accelerated cardiorenal complications of type 1 diabetes

in a longstanding cohort of adults with type 1 diabetes followed in the Coronary Artery

Calcification in Type 1 Diabetes Study.

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**Bibliography**

**Peer-reviewed publications**

1. Bucca B, Maahs D, Snell-Bergeon J, Hokanson J, Rinella S, Bishop F, Boufard A, Homann, J, Cheung CY, Wong TY. Dynamic Changes in Retinal Vessel Diameter During Acute Hyperglycemia in Type 1 Diabetes. *J Diab Comp 2018;32,* 234-239.

<https://www.clinicalkey.com/service/content/pdf/watermarked/1-s2.0-S1056872716308145.pdf?locale=en_US>

1. Bucca B, Klingensmith GJ, Bennett J. Wolfram Syndrome, a Rare Optic Neuropathy in Youth with Type 1 Diabetes. *Optometry and Vision Science 2011*;88:1383-1390.

<http://journals.lww.com/optvissci/Fulltext/2011/11000/Wolfram_Syndrome__A_Rare_Optic_Neuropathy_in_Youth.18.aspx>

**Scientific Posters/Abstracts**

1. American Diabetes Association 69th Scientific Sessions: Poster

Bucca B, McFann K, Kinney G, Naik R, Maahs D, Snell-Bergeon J, Rewers M. Proliferative Diabetic Retinopathy is Related to Advanced Coronary Artery Calcification in Type 1 Diabetes. Diabetes;58(Suppl 1) 2009. Supplement not available online

1. International Society for Pediatric and Adolescent Diabetes; 37th Annual Meeting: Poster

Bucca B, Maahs DM, Bishop FK, McFann K, Jalal D, Sirota J, Wadwa RP. Uric Acid is Not Correlated with Diabetic Retinopathy in Youth with Type 1 Diabetes. *Pediatric Diabetes* 2011;12. <http://onlinelibrary.wiley.com/doi/10.1111/j.1399-5448.2011.01818.x/abstract>

1. International Society for Pediatric and Adolescent Diabetes; 38th Annual Meeting: Poster

Bucca B, Maahs D, Wadwa RP, Snell-Bergeon JK, Slover R, Cheung CY, Ikram MK, Wong TY. Retinal Vascular Geometry in Adolescents with Type 1 Diabetes: a Pilot Study. *Pediatric Diabetes* (2012) 13;Supp 17: 87.

P203-106 <http://onlinelibrary.wiley.com/store/10.1111/j.1399-5448.2012.00919.x/asset/j.1399-5448.2012.00919.x.pdf?v=1&t=hy59mdfd&s=0bdffc82e6b4c6806b776cf25cee35f5724b17bc>

1. American Diabetes Association 74th Scientific Sessions: Moderated poster

Bucca B, Maahs D, Snell-Bergeon JK, Hokansen J, Rinella S, Bishop F, Boufard A, Homann J, Cheung CY, Wong TY. Dynamic Changes in Retinal Vessel Diameter During Acute Hyperglycemia in Type 1 Diabetes. *Diabetes*; 63(Suppl 1): A152. 2014

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<http://diabetes.diabetesjournals.org/content/63/Supplement_1/A103.full.pdf+html>