#### Nicole Reams, MD, FAAN Sports Neurologist Northshore University HealthSystem Director, Multidisciplinary Sports Concussion Program (847) 570-2570 Last Revised 5/31/22

### EDUCATION AND TRAINING

#### **UNDERGRADUATE** University of Notre Dame Notre Dame, IN Bachelor of Science, Majored in Pre-Professional Science and Psychology2002-2006 Honors: Graduated Magna Cum Laude Saint Louis University School of Medicine Saint Louis, MO Doctor of Medicine 8/2006-5/2010 **INTERNSHIP** Ann Arbor, MI University of Michigan Health System Internal Medicine Internship 7/2010-6/2011 RESIDENCY University of Michigan Health System Ann Arbor, MI Neurology Residency 7/2011-6/2014 **FELLOWSHIP** University of Michigan Health System Ann Arbor, MI Sports Neurology 7/2014-6/2015 ACADEMIC APPOINTMENT University of Michigan Health System Ann Arbor, MI Clinical Lecturer, Neurology 7/2014-6/2015 University of Chicago Chicago, IL Clinician Educator, Pritzker School of Medicine 9/2015-7/1/21 Senior Clinical Educator, Pritzker School of Medicine 7/1/21-present **BOARD CERTIFICATION** Board Certified in Neurology September 2014 American Board of Psychiatry and Neurology WORK EXPERIENCE Medical Chair for United States Intercollegiate Boxing Association (USIBA)4/2015-present

Consultant, Chicago Force, Women's tackle football league 1/2016-2018

	Northshore University Health System Associate Director Sports Concussion Program	Evanston, IL 7/2015-2/2020
	Independent Neurologic Consultant Chicago Bears	July 2016-present
	Independent Neurologic Consultant Northwestern University Athletic	cs July 2015-present
	Independent Neurologic Consultant Chicago Fire D	ecember 2016-present
	Independent Neurologic Consultant Chicago Wolves	October 2016-2018
	Independent Neurologic Consultant Chicago Force	February 2016-2018
	Independent Neurologic Consultant Chicago Lions	April 2017-present
	Unaffiliated Neurotrauma Consultant Chicago Bears	August 2018-present
	Independent Neurologic Consultant Rockford Ice Hogs	May 2019-present
	NorthShore University HealthSystemHDirector, Multidisciplinary Sports Concussion Program	February 2020-present
	Team Neurologist Rockford IceHogs	March 2021-present
	Team Neurologist Indy Fuel	March 2021-present
DE PHYSICIAN EXPERIENCE		

# RINGSIDE PHYSICIAN EXPERIENCE

USIBA National Championships 2015, 2016, 2018 Hyper Fight Night Schiller Park IL January 20, 2018

# **RESEARCH INTERESTS**

Department of Pediatric Neurology, Neurofibromatosis. Cardinal Glennon Children's Hospital. *Thomas Geller*; *MD*. Frequency, nature, and effect of pain in children with NF-1. Saint Louis, MO. 2008-2010.

Department of Neurology and Psychiatry. Saint Louis University Hospital. *Abilash Desai, MD, Asif Bhutto, MD, Eve Holzemer, MSN, RN.* Improving activities of daily living and frequency of falls in elderly patients with dementia by employing interventions during inpatient hospital stay. 2008-2010

Department of Pharmacology and Physiologic Science, Saint Louis University. *Mark Kneupfer, PhD.* The role of the renin-angiotensin system in the hemodynamic response of rats to cocaine. 2008.

Department of Neurology. University of Michigan. *James Eckner, MD., Andrea Almeida, MD.* Complex reaction time testing in collegiate football players. Ann Arbor, MI. Discontinued 2016.

Department of Neurology. University of Michigan. *James Burke, MD*. Effects of concussion on athletic performance of NFL players. Ann Arbor, MI. 2014-5. Published

Department of Neurology. University of Michigan. *Jeffrey Kutcher, MD*. Proposed criteria for the clinical presentation of chronic traumatic encephalopathy (traumatic encephalopathy syndrome). Ann Arbor, MI. Published June 2016.

Department of Neurology. NorthShore University Health System. *Demetrius Maraganore, MD*. GE: Imaging Biomarkers of Delayed Sequelae in Mild to Moderate Traumatic Brain Injury. Chicagoland, IL. Published

### **RESEARCH TRAINING**

9/25/15 - Financial Conflicts of Interest in Research

9/25/15 - CITI GCP Good Clinical Practices

9/24/15 - CITI Collaborative Institutional Training Initiative

# BIBLIOGRAPHY

Book Chapters:

1. Reams, Nicole. Locked-In Syndrome, In Greenamyre, J.K. editor, *Medlink Neurology*, San Diego: Medlink Corporation. Available at www.medlink. Originally submitted 2013. Annual update submitted February 2014.

2. Reams, Nicole. Fibromyalgia, In Greenamyre, J.K. Editor. Medlink Neurology, San Diego: Medlink Corporation. Available at www.medlink. Originally submitted 12/3/14.

3. Reams N, Bodyna J. "Concussion Management" <u>Dis Mon.</u> 2019 Mar 22. pii: S0011-5029(19)30033-1. doi: 10.1016/j.disamonth.2019.02.006. [Epub ahead of print]

### Abstracts, Poster Presentations, and Manuscripts:

1.Chrusciel DG, Karis N, Chibnall JT, Tait RC, Nayak A, Morefield C, Geller TJ. "Study of the prevalence of pain in children and adolescents with Neurofibromatosis 1," in Proceedings of the Children's Tumor Foundation Conference, Portland, Ore, USA, 2009.

2. Karis N, Eckner JT, Kutcher JS, Broglio SP. "Head Impact Exposure and Magnitude in High School Football by Player Position": Poster session presented at: Sports Neurology Section, 65<sup>th</sup> Annual Conference of the American Academy of Neurology; 2013 Mar 16-23; San Diego, CA.

3. Reams N, Eckner JT, Kutcher JS, Bancroft R, Pohorence M, Broglio SP. "Neurocognitive function in athletes with history of concussion": Poster session presented at: University of Michigan, Neuroscience Day; 2014 May 21; Ann Arbor, MI and AAN Sports Neurology Conference; 2014 July 12; Chicago, IL.

4. Reams N, Hayward R, Kutcher JS, Burke J. "Effect of Concussion on Performance in NFL Players": Platform presentation presented at: Big Sky Athletic Training Sports Medicine Conference; 2015

February 3; Big Sky, MT; All Eyes on Concussion Symposium, 2015, Ann Arbor, MI. Poster presentation AAN July 2015.

5. Reams N, Aagesen A, Almeida AA, Giordani B, Paulson H, Eckner JT, Lorincz ML, Kutcher JS. "Proposed Guidelines for the Clinical Presentation of Chronic Traumatic Encephalopathy (Traumatic Encephalopathy Syndrome". Poster presentation AAN July 2015, Denver, CO; Lunch workshop ANA September 2015; Chicago, IL. Manuscript: Reams N, Eckner JT, Almeida AA et al. A Clinical Approach to the Diagnosis of Traumatic Encephalopathy Syndrome: A Review. JAMA Neurol. 2016 Jun 1;73(6):743-9.

6. Reams N, Hayward RA, Kutcher JS, Burke JF. Effect of Concussion on Performance of National Football League Players. Int J Sports Physiol Perform. 2017 Jan 17:1-17. doi: 10.1123/ijspp.2016-0508.

7. Reams N, Anderson J, Perlman R et al. Investigating ioflupane I123 injection and single photon emission tomography as an imaging biomarker for long-term sequelae following mild traumatic brain injury. Brain Inj. 2018;32(1):105-112. Epub 2017 Nov 13.

8. Simon KC, Reams N, Beltran E, Wang C, Hadsell B, Maurer D, Hillman L, Tideman S, Garduno L, Meyers S, Frigerio R, Maraganore DM. Optimizing the electronic medical record to improve patient care and conduct quality improvement initiatives in a concussion specialty clinic. Brain Inj. 2019 Oct 23:1-6. Doi: 10.1080/02699052.2019.2680867 [Epub ahead of print]

9. Reams N, Beltran E, Moulthrop H, Wilk G, Frigerio R. Relationship Between Mood and Somatic Symptoms at Initial Presentation of mTBI to a Concussion Clinic. Presented at American Academy of Neurology Sports Concussion Conference, Virtual Meeting, July 2020, Abstract/Virtual Powerpoint.

### Non-peer reviewed publication

- 1. Illinois Pediatrician, the Illinois Chapter, American Academy of Pediatrics newsletter (Winter 2019): "Heads Up! What is Postconcussion Syndrome and What you Need to Know about Prolonged Concussion Recovery"
- Illinois Academy of Family physician May-June 2019 newsletter:"Concussion: new guidelines and accurate diagnoses" <u>http://newsletter.iafp.com/newsletter.iafp.com/wwwroot/2019/May-June\_2019/</u>
- 3. Illinois College of Emergency Physicians: January 2019. "Concussion in the ED: new guidelines and accurate diagnoses" <u>www.icep.org/concussion-in-the-ed-new-guidelines-and-accurate-diagnoses/</u>
- 4. NeurologyToday, 10/3/19, interview with Susan Kreimer, "Concussion Symptoms are associated with low testosterone and erectile dysfunction in former professional football players"
- 5. Reams, N and Bodya J. Disease-a-month 65 (2019): 100853. Concussion management.
- 6. NeurologyConsultant, Consultant360. "5 questions about the challenges of diagnosing mTBI in youth" 3/3/20.
- 7. American Academy of Neurology Position Statement: Sports Concussion, 2020. https://www.aan.com/policy-and-guidelines/policy/position-statements/sports-concussion/
- 8. NorthShore Health You: Concussion Signs & Symptoms- How to Handle During COVID-19: https://www.northshore.org/healthy-you/concussions-and-covid-19/ August 2020.

- 9. Neurology Today "The Evolution of Sports Concussion as a Subspecialty in Neurology, 20 years of Remarkable Progress", By Susan Kreimer, March 17, 2022; Nicole Reams interviewed
- 10. Connections: NorthShore patient story and publication, May 2022; Nicole Reams interviewed
- 11. Chicago Health Magazine: Getting Ahead of Head Injuries, 6/1/22 https://chicagocaregiving.com/getting-ahead-of-head-injuries/

#### Speaking Engagements

- 1. Big Sky Athletic Training Conference. February 3, 2015. Big Sky, MT. "Effects of Concussion on Performance of NFL Players".
- 2. National Council on Youth Sports Safety: PASS. March 14, 2015. Chicago, IL. Expert Panel.
- 3. American Academy of Neurology Sports Concussion Conference. July 2015. Denver, CO. "Postconcussion Syndrome".
- 4. American Neurological Association. September 29, 2015. Chicago, IL. "Proposed Clinical Criteria for the Diagnosis of Traumatic Encephalopathy Syndrome".
- 5. Big Sky Athletic Training Conference. February 2, 2016. Big Sky, MT. "When is a concussion not a concussion?"
- 6. Athletico Physical Therapy Lunch 'n Learn Journal club. February 19, 2016. Niles, IL. "Case Studies"
- 7. Athletico Physical Therapy Lunch 'n Learn March 4, 2016. Arlington Heights, IL. "When is a concussion not a concussion?"
- 8. Glenview Stars youth ice hockey coaches' meeting May 2, 2016. Glenview, IL. "Concussion for Coaches".
- 9. NorthShore Sports Medicine Conference and Concussion Symposium. May 7<sup>,</sup> 2016. Lake Forest, IL. "Sports Neurology", "Updates in Concussion Management".
- 10. Northwestern University Sports Medicine Grand Rounds. May 9, 2016. Evanston, IL. "When is a concussion not a concussion?"
- 11. University of Michigan Concussion Symposium "Return on Investment". May 21, 2016. Ann Arbor, MI. "Longterm consequences of head impact exposure"
- 12. Hamburg University Athletic Trainers Meeting; expert panel, May 23, 2016. Oakbrook, IL
- 13. Michigan Athletic Training Society Sports Medicine Conference. June 10, 2016. Ann Arbor, MI. "Concussion and Performance".
- 14. American Academy of Neurology, Sports Concussion Conference. July 8, 2016. Chicago, IL. "Concussion sideline and clinical exam"; Moderator: "Postconcussion Syndrome"
- 15. Big Sky Athletic Training Conference. Big Sky, MT. February 7, 2016. "Alternative Medicine and Concussion Management".
- 16. New Trier High School Education. January 24, 2017. "When is a concussion not a concussion".
- 17. NorthShore Glenbrook Hospital, concussion cases lecture presented for Athletico ATs; January 2017
- 18. Concussion Online Chat given at NorthShore University HealthSystem December 2016
- 19. Featured in Connections, NorthShore magazine Fall 2016, Spring 2017
- 20. Fox news interview January 2016; Sports Concussion
- 21. Sports Medicine Grand Rounds, NorthShore University HealthSystem "What is Sports Neurology?" February 16, 2017
- 22. Concussion cases, Athletico Lincolnshire, May 12, 2017.
- 23. "Concussion and cheer and gymnastics", Athletico Oakbrook May 20, 2017
- 24. NorthShore University HealthSystem Medical Grand Rounds "Concussion management for primary care" June 3, 2017

- 25. NorthShore University HealthSystem Pediatric Grand Rounds "What is Sports Neurology?" July 18, 2017
- 26. American Academy of Neurology Sports Concussion Conference July 2017, "Diagnostic approach to traumatic encephalopathy syndrome". Jacksonville, FL.
- 27. "Sideline and acute concussion management", presented to Chicago Lions Rugby
- 28. "Rugby concussion management" presented to Rugby Illinois
- 29. "Acute concussion management", presented at fall athletic night, Grayslake North High School August 2017.
- 30. "Age at first exposure to contact football: should we ban youth football?" Vernon Hills Town Hall meeting, expert panel; April 2018.
- 31. "Age at first exposure to contact football" Athletico lecture and Q&A, Palatine IL April 18, 2018
- 32. "Age at first exposure to contact football", journal club Athletico Glenview, May 23, 2018
- 33. "TBI, CTE, and Molecular Imaging: What we know today", Society of Nuclear Medicine and Molecular Imaging; June 25, 2018
- 34. Concussion Education/Introduction; Grayslake North High School, fall sports night, August 6, 2018.
- 35. NorthShore HealthSystem Concussion Symposium, Nicole Reams lecturer and moderator, October 5<sup>th</sup>, 2018
- 36. "Emerging diagnostics for Acute concussion", American Academy of Neurology, Philadelphia May 2019
- 37. "Sports Neurology Review: vestibular considerations and emerging diagnostics", NorthShore Neurology Grand Rounds, March 2019, Evanston, IL
- 38. "Long-term consequences of concussion", NorthShore pediatric grand rounds, June 2019, Evanston, IL
- 39. "Deconstructing Postconcussion Syndrome", American Academy of Neurology Sports Concussion Conference, July 2019, Indianapolis
- 40. "The influence of gender on concussion", American Academy of Neurology Sports Concussion Conference, July 2019, Indianapolis
- 41. "5 questions about the role of gender on concussion", NeurologyConsultant, Consultant 360, https://www.consultant360.com/exclusive/neurology/5-questions-about-role-gender-concussion
- 42. Hosted Mayo Clinic-NorthShore TBI Symposium Skokie Hospital Skokie, IL September 2019. Lecture "Concussion Boot Camp"
- 43. SMP Concussion management lecture December 2019
- 44. Prospect High School Parent's Night. Introduction to Concussion. January 2020
- 45. Virtual Zoom Journal Club Athletico: Case Studies for Concussion: November 2020
- 46. Big Sky Athletic Training Sports Medicine Conference "Current Understanding of Sleep in Concussion and Athlete Brain Health" February 1, 2022 (Upcoming) Big Sky, MT
- 47. Concussion Management and Return to Learn, Rolling Meadows High School, February 2022
- 48. AAN National Meeting Director: "The non-concussion side of sports neurology" and "Exercise as brain medicine" April 5, 2022, Seattle, WA
- 49. AMSSM "Adding Objectivity to Concussion Management Through Technology" April 22, 2021 Austin, TX
- 50. AMSSM "Assessment of Emerging Technologies for Concussion- A Deeper Dive" April 12, 2022 Austin, TX

# PROFESSIONAL MEMBERSHPS

American Academy of Neurology American Medical Student Association USA Boxing 2010-present 2006-2010 4/2015-present

#### COMMITTEES/HONORS

AAN Palatucci Advocacy and Leadership Forum graduate. May 2016. New Mexico.

Concussion Expert on Concussion Oversight Committee: Stevenson, Warren, Grayslake North, Grayslake Central, Glenbrook South (ended 2020), NorthShore Country Day, Rochelle Zell Jewish High School, Lake Forest High School, Lake Zurich High School (began 2018), Mundelein High School (began 2018)

Spring 2016-present

American Academy of Neurology, Sports Concussion Conference Planning Subcommittee. Spring 2016-present.

American Academy of Neurology, Neuro Trauma, Critical Care, and Sports Neurology Topic Work Group Section Representative May 2018-present

Education Program Director for Acute Concussion, AAN National Meeting, May 2019present

American Academy of Neurology Media Expert on Concussion March 2021- present

Fellow of the American Academy of Neurology (FAAN) Sept 2021-present

Top Neurologists Illinois, findatopdoc.com March 2022