

Colin Catel MMS, PA-C

Assistant Professor, University of Colorado.

I began my career at the University of Colorado Department of Neurosurgery in early 2006 shortly after Dr. Kevin Lillehei took over the chairmanship of the Department. Since my hiring, I have helped establish our institution as a national leader in cranial neurosurgery, engaged in a vigorous training program for interns, residents, and Advance Practice Providers. I have developed multiple inter-disciplinary specialty clinics, and have been of service to the University, the greater Denver community, and my profession. The following document summarizes these endeavors.

Curriculum Vitae

EDUCATION

MMS, PA-C, Midwestern University 2001-03, Chicago, IL

Master of Science program, Biochemistry, University of Denver 2000-01, Denver, CO

Master of Science program, Neural Control of Movement/Applied Physiology, University of Colorado 2000-01, Boulder, CO

Bachelor of Science, Kinesiology, University of Colorado, 1994-99, Boulder, CO

Commercial Flight School, Embry Riddle Aeronautical University, 1986-88, Prescott, AZ.

CERTIFICATION AND LICENSURE

- Board-certified Physician Assistant, 2003 to present.
- Licensed PA-C in Colorado State, 2003 to present.
- Active DEA license 2003 to present
- BLS current.

MEDICAL TRAINING

- **Clinical internship:** South San Francisco General Surgery, San Francisco, CA, 2003.
- **Clinical internship:** Memorial Hospital Cardiothoracic Surgery, Colorado Springs, CO, 2003.
- **Clinical internship:** Cook County, Evanston/Northwestern Hospital systems, Chicago, IL, 2002-03.

PROFESSIONAL EXPERIENCE

Neurosurgical Physician Assistant, University of Colorado School of Medicine, 2006-Present, Aurora, CO

- Assess, diagnose, and treat patients at high-volume neurosurgery practice specializing in CNS tumors, Neuro-Endocrine tumors, Peripheral Nervous System tumors, Genetically heritable diseases of the CNS, CSF dynamics.

Surgical Physician Assistant, Orthopedic Associates, Denver, CO 2005-06

- Practice of surgical management of orthopedic injury, sports medicine, physiatry.

Surgical Physician Assistant, Colorado Springs Orthopedic Group, Colorado Springs, CO, 2003-2005

- Development of surgical management skills in a high-volume orthopedic practice.

TEACHING EXPERIENCE

- **Volunteer Academic Instructor**, Rocky Vista University Physician Assistant Program, 2020 to present.
- **Assistant Professor**, University of Colorado School of Medicine, Department of Neurosurgery, 2006-present.
- **Teaching Assistant**, University of Colorado Boulder, Biomechanics/Neural Control of Movement Program, Fall 1999 - Spring 2000.

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MEDICAL INFORMATICS EXPERIENCE

- Epic Inpatient/Outpatient super-user.
- Microsoft Word/Outlook/PowerPoint proficient.

ADMINISTRATIVE EXPERIENCE

UCH/CU SOM Compliance Committee member 2023

PUBLICATIONS

“Strategies to reduce readmissions for hyponatremia after transsphenoidal surgery for pituitary adenomas.” Endocrine 62(11), June 2018. DOI: [10.1007/s12020-018-1656-7](https://doi.org/10.1007/s12020-018-1656-7)

“Bisphosphonate Treatment in Polyostotic Fibrous Dysplasia of the Cranium: Case Report and Literature Review.” Endocrine Practice: September 2010, Vol. 16, No. 5, pp. 851-854

CONFERENCE PRESENTATIONS

“*Primary Brain Tumors of the CNS.*” Neurosciences Conference, Aurora, CO 2019.

“*Patient experiences undergoing pituitary surgery.*” Pituitary Tumor Conference. Aurora, CO, 2018,2019, 2022.

“*History of Pituitary Surgery in the US.*” Pituitary Tumor Conference. Aurora, CO 2017.

MEMBERSHIPS AND ASSOCIATIONS

- American Academy of Physician Assistants
- American Association of Neurological Surgeons

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COMMUNITY SERVICE

- Sky High Hope Camp, Medical staffed summer program for children with Cancer, 2007 to present.
- Fundraiser/Spin Instructor, Brent’s Place Roadless Ride, 2010 to present.
- Plus Vite Cycling, Community fund-raising program for cyclists, 2012 to present.

PROFESSIONAL REFERENCES:

Denise Damek, MD, Program Director
Department of Neuro-Oncology
University of Colorado/Anschutz Medical Center
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Bette Kleinschmidt-Demasters, MD, Head of Neuropathology
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Bryan Haugan, MD, Head, Division of Endocrinology
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Clinical Expertise Accomplishments and Objectives

Primary Tumors of the Central Nervous System Program Development.

Within the Department of Neurosurgery my supervising physician Dr. Kevin Lillehei is nationally renowned in the surgical treatment of complex intra-cranial tumors. My objective when hired was to help build a national center of excellence for cranial neurosurgery and 15 years later we have a regional and national reputation as one of the best.

In service to the University, I established a relational model for the APP/Neurosurgeon to maximize patient care while consistently striving for efficient use of time. I support a Department Chair who runs an academic department, provides cranial procedures for greater than 250 patients per year, while engaging in the training of future cranial neurosurgeons.

My clinical expertise in both inpatient and outpatient management of complex intra-cranial patients allows me to see greater than 800 patients per year. Many of these patients represent underserved communities with varying levels of socio-economic diversity which brings unique challenges to my position. I bring a unique knowledge of regional/community resources, relationships with specialty providers within and outside of the University Hospital, and I strive to represent the University as an example of professionalism in every patient encounter.

In the past 17 years I have consistently cared for multitudes of patients during very dynamic and ever-changing landscapes. My inpatient responsibilities during the recent CoVid-related surges met the demands consistent with a Level 1 Trauma Center caring for urgent and emergent patients during a global pandemic while striving to manage both my personal and family risks.

Within the past year I was successfully able to hire and implement a Neurosurgery Nurse Navigator. This position further broadens the ability to care for complex brain tumor patients with a single point of contact for referring providers, patient advocates, and patients themselves. This position has consistently led to greater patient care and satisfaction while reducing the time between referral and scheduling new patient visits.

Multi-Disciplinary Neuro-Endocrine Tumor Program Development.

As part of a nationally renowned pituitary tumor program, I have helped develop a model of an in-house multi-specialty clinic to serve regional and national pituitary tumor patients. My clinical expertise includes management of complex Neuro-Endocrine Tumor patients with rare diseases such as Cushing's Disease and Acromegaly.

During the past 17 years my clinical experience and expertise was combined with directional research aimed at decreasing Pituitary Tumor patient re-admissions for hyponatremia. I was integral in the development of an inpatient protocol that has become the standard of care at the University Hospital as well as multiple outside institutions. My work with some of the nation's leading Neuro-Endocrinologists allowed me to participate in the publication of our research demonstrating the efficacy of our model.

Multi-Disciplinary Von-Hippel Lindau Program Development.

The early years of my practice within the University laid bare the difficulties and inefficiencies of caring for patients with Von-Hippel Lindau Disease. These patients require care from Neurosurgery, Medical Oncology, Radiation Oncology, Ophthalmology, Neuro-Otology, and Genetic Oncology. Prior to my arrival it was not uncommon for patients to have extreme difficulty coordinating their care for such a complex disease.

I developed an intake protocol for both newly diagnosed and known patients with Von-Hippel Lindau Disease to smoothly transition among the specialty services. Over time, we have successfully treated multitudes of patients with this diagnosis and are now recognized as a national referral center.

Neurofibromatosis Program Development.

Similar to our Von-Hippel Lindau Disease program, I have established intake protocols management strategies for patients with Neurofibromatosis Type I and II. Patients with this diagnosis require input from Neuro-Oncology, Radiation Oncology, Neuro-Otology, and Genetic Oncology.

My clinical expertise in the care of these patients serves to further promote the mission of the University of Colorado Hospital by providing a central point of contact service to reduce time between diagnosis and intervention for this complex disease.

Neuro-Psychology/Neuro-Cognitive Program Development.

Representative of the University's mission to improve lives through learning, healing and discovery, in 2007 I recognized a gap in the care of patients with complex brain tumors and neurologic disease. With the help of my supervising physician Dr. Lillehei, we approached the University to help create what is now a very robust Neuro-Psychology program within the Department of Neurosurgery.

Neuro-Psychology is an integral part in the care of patients with complex brain tumors, traumatic brain injury, neuro-cognitive disorders, dementia, Parkinson's Disease, and many other neuro-degenerative processes. Our Neuro-Psychology program is considered one of the best and most sought-after programs in the Mountain West region of the United States providing both diagnostic and treatment-related recommendations to hundreds of patients every year.

Cerebral Spinal Fluid Dynamics Clinic Development.

In 2010 it became apparent to me that there was a great need to establish protocols to care for patients with altered Cerebral Spinal Fluid dynamics. As such I embarked upon self-education of the current diagnostic procedures, medical management strategies, and surgical interventions for patients with idiopathic intracranial hypertension and normal pressure hydrocephalus.

Fast-forward to 2021 and we now have a dedicated program that works with Neuro-Psychology, Physical Therapy, and Neurology to streamline the intake, diagnosis, and treatment of patients with altered cerebral spinal fluid dynamics. Our program has been so successful that it has been

used as a template for a similar program currently being launched in the Department of Neurology.

Teaching, Research and Education Objectives

At the core of my education as a Physician Assistant and prior Graduate student is the desire to pass on my knowledge and experience working in Neurosurgery these past 15 years. In keeping with the University's reputation as a premier educational institution, my teaching, research, and education have all centered upon improving patient care within the University Hospital inpatient and outpatient settings.

Teaching.

In the past 17 years I have precepted countless Advanced Practice Provider students from within the University School of Medicine programs and from programs outside of the University. These students spend a month with me learning the basics of clinical Neurosurgical care as well as first-assisting in the operating room. Several of my former students are now employed both within the University Hospital system and regional centers.

I am currently a volunteer Adjunct Faculty at Rocky Vista University where I am engaged in teaching clinical exam skills as well as having the privilege to develop course curriculum and individual lectures covering neurologic and neurosurgical disease.

Research.

As a busy clinician I have had limited opportunity to do research however my interests lie within improving patient care and outcomes. I have published collaborative studies investigating strategies to minimize re-hospitalization after neuro-endocrine tumor surgeries as well as novel treatment of fibrous dysplasia of the cranium.

My objective for future research is centered on collaborating with my colleagues in Neurosurgery and Endocrinology to write a definitive chapter regarding the surgical and medical management of pituitary tumors.

Education.

In-line with the University's mission of improving patient's lives on a personal level, I have dedicated my career towards educating patients about their conditions while caring for them. I firmly believe that people who understand the processes driving their conditions become more engaged patients who actively participate in their care.

Likewise, I have spoken at several conferences targeting patients and providers alike to bring awareness to common neurologic tumors and diseases in the hope that increased awareness will improve patient care and clinical outcomes.