

# CHRISTOPHER NEWEY

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## Education

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Undergraduate

08/1999 - 04/2003

Oklahoma Christian University, Oklahoma Christian University, Oklahoma

BS, Biochemistry, Summa Cum Laude

Graduate

07/2003 - 08/2006

A.T. Still University - Kirksville College of Osteopathic Medicine, Kirksville, Missouri

MS, Biomedical Science - Neuropharmacology

"Increase in Sensitivity of the Baroreceptor Reflex Following Carbachol Microinjection into the Posterior Hypothalamic Nucleus of Awake Rats"

Medical School

07/2003 - 05/2008

A.T. Still University - Kirksville College of Osteopathic Medicine, Kirksville, Missouri

DO, Kirksville

Post-Graduate

07/2008 - 06/2012

Cleveland Clinic, Cleveland, Ohio, Residency, Neurology

Post-Graduate

07/2012 - 06/2013

Cleveland Clinic, Cleveland, Ohio, Fellowship, Clinical Neurophysiology

Post-Graduate

07/2013 - 06/2015

University of Chicago, Chicago, Illinois, Fellowship, Neurocritical Care

## Certification

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American Board of Psychiatry and Neurology - Neurology, 09/2012

American Board of Psychiatry and Neurology - Clinical Neurophysiology, 10/2013

United Council of Neurological Subspecialties - Neurocritical Care, 12/2015

National Board of Physicians and Surgeons - Neurology, Clinical Neurophysiology, 05/2017

American Board of Psychiatry and Neurology - Epilepsy, 10/2017

## Honors and Awards

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Oklahoma Boys State, Lone Grove High School, 05/1998  
Awarded for academic and leadership excellence.

All State Golfer, Oklahoma High School Sports Society, 04/1999  
Awarded for being top golfer in state of Oklahoma in Class 2A.

Salutatorian, Lone Grove High School, 05/1999  
Awarded for graduating second in high school class.

Dean's List Honor Roll, Oklahoma Christian University, 06/2000  
Awarded for academic excellence.

Physical Science Award, Oklahoma Christian University, 06/2000  
Awarded top student in the physical sciences.

Dean's List Honor Roll, Oklahoma Christian University, 06/2001  
Awarded for academic excellence.

Physical Science Award, Oklahoma Christian University, 06/2001  
Awarded top student in the physical sciences.

Alpha Chi Honor Society, Oklahoma Academy of Science, 06/2001  
Awarded for academic excellence.

Who's Who Among American College Students, Oklahoma Christian University, 06/2001  
Awarded for academic excellence.

Alpha Chi Honor Society, Oklahoma Christian University, 06/2002  
Awarded for academic excellence.

Dean's List Honor Roll, Oklahoma Christian University, 06/2002  
Awarded for academic excellence.

Biomedical Sciences Section Winner, Oklahoma Academy of Science, 06/2002  
Awarded top presentation/poster at annual meeting.

Physical Science Award, Oklahoma Christian University, 06/2002  
Awarded top student in the physical sciences.

President's Medal, Oklahoma Christian University, 04/2003  
Awarded top academic student graduating from OC in the year of 2003.

Physical Science Award, Oklahoma Christian University, 06/2003  
Awarded top student in the physical sciences.

Alpha Chi Honor Society, Oklahoma Christian University, 06/2003  
Awarded for academic excellence.

Dean's List Honor Roll, Oklahoma Christian University, 06/2003  
Awarded for academic excellence.

StillBright Award, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2004  
Awarded top student scholarship.

Student Government Association Leadership Award, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2005  
Awarded top leader within the SGA.

Welch Scholar, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2006  
Awarded top student scholarship.

Snyder-Crummy Scholarship, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2006  
Awarded top student scholarship.

Russell C. McCaughan, D.O., Education Scholarship, American Osteopathic Foundation, 05/2006  
Awarded top student scholarship.

Student Government Association Leadership Award, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2006  
Awarded top leader within the SGA.

Student D.O. of the Year, A.T. Still University - Kirksville College of Osteopathic Medicine, 05/2007  
Awarded the top D.O. student of the university for the year of 2006-2007.

Cleveland Area Consultant-Liaison (C-L) Parsa Award, Cleveland Area Psychiatry Society, 04/2009  
Awarded top research poster and presentation at annual meeting.

Medical Student Liaison Award - Neurology, Cleveland Clinic, 06/2012  
Awarded for excellence in medical student education in the field of neurology.

Trainee Neurology Teacher of the Year, Cleveland Clinic, 06/2012  
Awarded the resident educator of the year for neurology.

All-Star Lecturer, A.T. Still University - Kirksville College of Osteopathic Medicine, 02/2017  
Kickoff lecturer for the all-star alumni lecture series for the bicentennial celebration.

## Professional Experience

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Research Assistant, 08/2002 - 06/2003  
Neuroscience, University of Oklahoma / Oklahoma Foundation for Digestive Research, Oklahoma City, Oklahoma

- I worked in a research lab evaluating the effect of irritable bowel syndrome on the GI nervous system. My role was to implant spinal cord stimulators into the rats for IBS simulation. I then harvested the tissue evaluating the effects using a combination of microscopy, immunology, and physiology.

Research Assistant, 07/2003 - 08/2006  
Pharmacology, A.T. Still University - Kirksville College of Osteopathic Medicine, Kirksville, Missouri

- I worked in a research lab evaluating the effect of pharmacologically stimulating the posterior hypothalamus has on the baroreceptor reflex.

Moonlighter, 07/2010 - 06/2013  
Neurology, Cleveland Clinic, Cleveland, Ohio

- I moonlighted in the epilepsy monitoring unit, neurocritical care unit, and neurology consultation service.

Medhelp Form Moderator, 07/2010 - 06/2013  
Public Relations, Cleveland Clinic, Cleveland, Ohio

- I moderated the neurology medhelp forum answering questions on a daily basis.

Clinical Instructor, 01/2011 - 07/2013  
Neurology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, Ohio

- I regularly taught the medical students rotating through the neurology core block.

Assistant Professor, 07/2015 - 08/2017  
Neurology, University of Missouri, Columbia, Missouri

- I was the co-director of the neurocritical care unit. I worked with the neurosurgery, pulmonary critical care, and neurology services to create a 14 bed neurocritical care unit.

Staff, 08/2017 - present  
Cerebrovascular Center, Cleveland Clinic, Cleveland, Ohio

- Staff physician working in the 24 bed neurocritical care unit.

Staff, 08/2017 - present  
Cerebrovascular Center, Cleveland Clinic, Cleveland, Ohio

- Staff physician working on the ICU-EEG monitoring team. I read ~40-60 continuous EEGs per day and provide consultation for epilepsy/status epilepticus/seizures to the hospital.

Assistant Professor of Neurology, 08/2018 - present  
Neurology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, Ohio

- I educate residents, fellows, medical students, and rotating observers through formal didactics as well as bedside teaching.

Medical Director, Multimodal Monitoring, 09/2019 - present  
Cerebrovascular Center, Neurological Institute, Cleveland Clinic, Cleveland, Ohio

I am leading the efforts of creating a multimodal monitoring program in the neurocritical care unit.

### Research Experience

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*Ongoing*  
07/2008 - present  
Principal Investigator, Dept. of Neurology, Cleveland Clinic  
Clinical and EEG Markers for Targeted Monitoring in the Critically Ill Patient

- I reviewed thousands of EEG to determine clinical and EEG markers and risk for seizures in the hospitalized patient. We have published our initial data. We are currently reviewing other variables for impact.

08/2017 - present  
Principal Investigator, Dept. of Neurology, Cleveland Clinic  
Prognosis post cardiac arrest

- I am evaluating the ability to use different modalities, especially the EEG, on prognosticating post-cardiac arrest. This is a multicenter study.

08/2017 - present  
Principal Investigator, Dept. of Neurology, Cleveland Clinic  
Seizure risk in the critically ill patient

- I am creating a risk stratification score in critically ill patients to identify who are at highest risk for developing seizures while admitted. We are then looking at the periodic patterns and daily seizure risk with the goal of creating a daily seizure risk score based on EEG to identify when to discontinue EEG monitoring. Finally, we aim to determine how inhospital seizures affect patient reported outcomes.

12/2017 - present  
Principal Investigator, Dept. of Neurology, Neurologic Institute  
Patient/Family Satisfaction in the NeuroICU

- I am reviewing patient/family satisfaction in the neuroICU and ways to improve it. We are currently reviewing the data and preparing for publication.

*Completed*  
08/2002 - 06/2003  
Research Assistant, Dept. of Neuroscience, University of Oklahoma / Oklahoma Foundation for Digestive Research  
Spinal Cord Stimulation for Treatment of Pain Associated with Irritable Bowel Syndrome. Mentor: Dr. Greenwood-Van Meerveld

- I worked in a research lab evaluating the effect of irritable bowel syndrome (IBS) on the GI nervous system. My role was to implant spinal cord stimulators into the rats for IBS simulation. I then harvested the tissue evaluating the effects using a combination of microscopy, immunology, and physiology.

07/2003 - 08/2006

Research Assistant, Dept. of Pharmacology, A.T. Still University - Kirksville College of Osteopathic Medicine  
Increase in Sensitivity of the Baroreceptor Reflex Following Carbachol Microinjection into the Posterior Hypothalamic Nucleus of Awake Rats. Mentor: Dr. John Martin

- I worked in a research lab evaluating the effect of pharmacologically stimulating the posterior hypothalamus has on the baroreceptor reflex

07/2013 - 04/2017

Principal Investigator, Dept. of Neurology, University of Chicago and University of Missouri  
Continuous EEG as a Marker of Ischemic Penumbra. Mentor: Dr. Agnieszka Ardelet

- I was evaluating the use of EEG to determine if pressure augmentation was adequate in patients with ischemic penumbra from either acute ischemic stroke or vasospasm from subarachnoid hemorrhage.

07/2015 - 12/2016

Principal Investigator, Dept. of Neurology, University of Missouri  
Comparison of two surface cooling devices for temperature management in a neurocritical care unit

- I evaluated various methods of maintaining normothermia in the neurocritically ill patient.

07/2015 - 01/2017

Principal Investigator, Dept. of Neurology, University of Missouri  
Variability in diagnosing brain death at level of tertiary academic center

- I reviewed all brain death diagnoses at a level 1 trauma center and then identified areas for improvement. We then created an updated policy to meet the standards proposed by the American Academy of Neurology.

07/2015 - 08/2017

Principal Investigator, Dept. of Neurology, University of Missouri  
Improvement in Quality Outcome Measurements in Neurosciences Intensive Care Unit After Appointment of Neurointensivists

- I was co-director/co-founder of a neurointensive care unit at an academic institution. I was interested in the quality improvement and patient experience from pre-appointment to post-appointment.

## Research Support

Increase in Sensitivity of the Baroreceptor Reflex Following Carbachol Microinjection into the Posterior Hypothalamic Nucleus of Awake Rats

Christopher Newey and John Martin, Principal Investigator  
Granting Agency: A.T. Still University - Kirksville College of Osteopathic Medicine  
Award Amount: \$5000  
Term of Award: 08/2003 - 08/2006  
Role: Graduate Student

Patient/Family Satisfaction in the NeuroICU  
Christopher Newey, Principal Investigator  
Granting Agency: Neurologic Institute Center for Outcome Research  
Award Amount: \$50000  
Term of Award: 01/2018 - 01/2019  
Role: Principal Investigator

## Research Interests

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- I am interested in the use of multiple modalities in the monitoring of critically ill patients to ultimately optimize and individualize the care for the patient. I am also interested in the patient experience in the neurocritical care unit.

## Publications

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### Articles

Mullaguri Naresh,Battineni Anusha,George Pravin,Newey Christopher Ryan. "Decompression Hemicraniectomy for Refractory Intracranial Hypertension in Reversible Cerebral Vasoconstriction Syndrome.". Journal of neurosciences in rural practice, 1900; 10(2), 355-359. PMID: 31001036

Gordhan Ajeet D,Newey Christopher R,Wong Gene,Wieland John. "N-butyl cyanoacrylate embolization of small bowel arteriovenous malformation presenting with acute massive lower gastrointestinal hemorrhage.". Journal of vascular and interventional radiology : JVIR, 2008; 19(11), 1669-70. PMID: 18789722

Newey Christopher R,Sarwal Aarti,Uchin Jeffrey,Mulligan Guy. "Necrotic skin lesions after hemodialysis.". Cleveland Clinic journal of medicine, 2011; 78(10), 646-8. PMID: 21968470

Newey Christopher R,Bermel Robert A. "Fulminant cerebral demyelination in neuromyelitis optica.". Neurology, 2011; 77(2), 193. PMID: 21747076

Newey Christopher R,Khawam Elias,Coffman Kathy. "Two cases of serotonin syndrome with venlafaxine and calcineurin inhibitors.". Psychosomatics, 2011; 52(3), 286-90. PMID: 21565602

Sarwal Aarti,Newey Christopher R,Menon Venu. "Giant osborn waves seen in a patient with hypothermia associated with status epilepticus-induced diffuse cerebral injury.". Therapeutic hypothermia and temperature management, 2011; 1(1), 53-5. PMID: 24716887

Newey Christopher R. "Dilemma: obese patients with stroke-like symptoms.". Journal of neuroimaging : official journal of the American Society of Neuroimaging, 2013; 23(1), 154. PMID: 20977533

Newey Christopher R,Appleby Brian S,Shook Steven,Sarwal Aarti. "Patient With voltage-gated potassium-channel (VGKC) limbic encephalitis found to have Creutzfeldt-Jakob disease (CJD) at autopsy.". The Journal of neuropsychiatry and clinical neurosciences, 2013; 25(3), E05-7. PMID: 24026723

Newey Christopher Ryan,Sarwal Aarti,Tepper Deborah. "Iatrogenic venous thrombosis secondary to supplemental medicine toxicity.". Journal of complementary & integrative medicine, 2013; 10(3), E05-7. PMID: 23969472

Porter Meko, Newey Christopher R, Toth Gabor. "Teaching NeuroImages: treatment-resistant rapidly progressive amyloid β-related angiitis.". *Neurology*, 2013; 80(18), e187-8. PMID: 23628934

Newey Christopher R, Wong Chong, Wang Z Irene, Chen Xin, Wu Guiyun, Alexopoulos Andreas V. "Optimizing SPECT SISCOM analysis to localize seizure-onset zone by using varying z scores.". *Epilepsia*, 2013; 54(5), 793-800. PMID: 23621877

Cerejo Russell, Newey Christopher, Stillman Mark. "Teaching NeuroImages: Wernicke encephalopathy: diagnostically deceptive but treatable.". *Neurology*, 2013; 80(9), e92. PMID: 23439708

Newey C R, Sarwal A, Wisco D, Alam S, Lederman R J. "Variability in diagnosing Creutzfeldt-Jakob disease using standard and proposed diagnostic criteria.". *Journal of neuroimaging : official journal of the American Society of Neuroimaging*, 2013; 23(1), 58-63. PMID: 23163590

Newey Christopher R, Sarwal Aarti, Wu Guiyun. "Radiological correlate of ocular flutter in a case with paraneoplastic encephalitis.". *Journal of neuroimaging : official journal of the American Society of Neuroimaging*, 2013; 23(2), 251-3. PMID: 22175797

Newey C R, Sarwal A, Hantus S. "Continuous electroencephalography (cEEG) changes precede clinical changes in a case of progressive cerebral edema.". *Neurocritical care*, 2013; 18(2), 261-5. PMID: 22108782

Wisco Dolora, Uchino Ken, Saqqur Maher, Gebel James M, Aoki Junya, Alam Shazia, George Pravin, Newey Christopher R, Man Shumei, Tateishi Yohei, McNeil Julie, Winfield Michelle, Cheng-Ching Esteban, Hui Ferdinand K, Toth Gabor, Bain Mark, Rasmussen Peter A, Masaryk Thomas, Ruggieri Paul, Hussain Muhammad Shazam. "Addition of hyperacute MRI AIDS in patient selection, decreasing the use of endovascular stroke therapy.". *Stroke*, 2014; 45(2), 467-72. PMID: 24407952

Newey Christopher R, George Pravin, Hantus Stephen. "Evaluating persistent altered mental status after status epilepticus.". *Neurology. Clinical practice*, 2015; 5(6), 534-535. PMID: 29595837

Newey Christopher R, Sarwal Aarti. "Ictal Asystole in Focal Epilepsy: To Pace or Not to Pace?". *The Neurohospitalist*, 2015; 5(4), NP3-6. PMID: 26425256

Olgun Gokhan, Newey Christopher R, Ardel Agnieszka. "Pupillometry in brain death: differences in pupillary diameter between paediatric and adult subjects.". *Neurological research*, 2015; 37(11), 945-50. PMID: 26184095

George Pravin, Newey Christopher R, Bhimraj Adarsh. "The tablet device in hospital neurology and in neurology graduate medical education: a preliminary study.". *The Neurohospitalist*, 2015; 5(1), 15-21. PMID: 25553224

Belton Patrick J, Nanda Ashish, Alqadri Syeda L, Khakh Gurpreet S, Chandrasekaran Premkumar Nattanmai, Newey Christopher, Humphries William E. "Paradoxical cerebral air embolism causing large vessel occlusion treated with endovascular aspiration.". *BMJ case reports*, 2016; 2016(4), e10. PMID: 27435840

Natteru P, Mohebbi M R, George P, Wisco D, Gebel J, Newey C R. "Variables That Best Differentiate In-Patient Acute Stroke from Stroke-Mimics with Acute Neurological Deficits.". *Stroke research and treatment*, 2016; 2016(1), 4393127. PMID: 28050311

Newey Christopher R, Wisco Dolora, Nattanmai Premkumar, Sarwal Aarti. "Observed medical and surgical complications of prolonged barbiturate coma for refractory status epilepticus.". *Therapeutic advances in drug safety*, 2016; 7(5), 195-203. PMID: 27695621

Newey C R, Sarwal A, Hantus S. "[<sup>18</sup>F]-Fluoro-Deoxy-Glucose Positron Emission Tomography Scan Should Be Obtained Early in Cases of Autoimmune Encephalitis.". *Autoimmune diseases*, 2016; 2016(5), 9450452. PMID:

27559482

Newey C R,Martin J R. "Increase in sensitivity of the baroreceptor reflex following microinjection of carbachol into the posterior hypothalamic nucleus of awake rats.". Autonomic & autacoid pharmacology, 2016; 36(1-2), 3-13. PMID: 27555117

Newey Christopher R,Cueva Wilson,Vellipuram Anantha,Hornik Alejandro. "Medical Decision Making: Hypophagia Prior to Intravenous Tissue Plasminogen Activator in Acute Ischemic Stroke.". Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association, 2016; 25(10), e181-2. PMID: 27492945

Belton Patrick J,Nanda Ashish,Alqadri Syeda L,Khakh Gurpreet S,Chandrasekaran Premkumar Nattanmai,Newey Christopher,Humphries William E. "Paradoxical cerebral air embolism causing large vessel occlusion treated with endovascular aspiration.". Journal of neurointerventional surgery, 2017; 9(4), e10. PMID: 27455873

Aujla Gurpreet Singh,Nattanmai Premkumar,Premkumar Keerthivaas,Newey Christopher R. "Comparison of Two Surface Cooling Devices for Temperature Management in a Neurocritical Care Unit.". Therapeutic hypothermia and temperature management, 2017; 7(3), 147-151. PMID: 27960070

Newey C R,Le N M,Ahrens C,Sahota P,Hantus S. "The Safety and Effectiveness of Intravenous Lacosamide for Refractory Status Epilepticus in the Critically Ill.". Neurocritical care, 2017; 26(2), 273-279. PMID: 27844464

Newey Christopher Ryan,Bell Robert,Burks Melody,Nattanmai Premkumar. "A new strategy in neurocritical care nurse continuing stroke education: A hybrid simulation pilot study.". Electronic physician, 2017; 9(5), 4255-4260. PMID: 28713493

Nattanmai Premkumar,Newey Christopher R,Singh Ishpreet,Premkumar Keerthivaas. "Prolonged duration of apnea test during brain death examination in a case of intraparenchymal hemorrhage.". SAGE open medical case reports, 2017; 5(5), 2050313X17716050. PMID: 28680635

George Pravin,Newey Christopher R,Mente Karin P,Pioro Erik P. "Positron emission tomography imaging in a case of E200K mutation-related spongiform encephalopathy with non-diagnostic magnetic resonance imaging and cerebrospinal fluid testing.". SAGE open medical case reports, 2017; 5(5), 2050313X17700347. PMID: 28491313

Punj Pragya,Nattanmai Premkumar,George Pravin,Newey Christopher R. "Successful Extubation Using Heliox BiPAP in Two Patients with Postextubation Stridor.". Case reports in pulmonology, 2017; 2017(5), 1253280. PMID: 28373921

Pandey Ashutosh,Sahota Pradeep,Nattanmai Premkumar,Newey Christopher R. "Variability in Diagnosing Brain Death at an Academic Medical Center.". Neuroscience journal, 2017; 2017(5), 6017958. PMID: 28352638

Natteru P,George P,Bell R,Nattanmai P,Newey C R. "Central Hyperthermia Treated with Bromocriptine.". Case reports in neurological medicine, 2017; 2017(5), 1712083. PMID: 28348904

Punj Pragya,Nattanmai Premkumar,George Pravin,Newey Christopher R. "Abnormal Breathing Patterns Predict Extubation Failure in Neurocritically Ill Patients.". Case reports in critical care, 2017; 2017(5), 9109054. PMID: 28348899

George Pravin,Wisco Dolora R,Gebel James,Uchino Ken,Newey Christopher R. "Nurses Are as Specific and Are Earlier in Calling In-Hospital Stroke Alerts Compared to Physicians.". Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association, 2017; 26(5), 917-921. PMID: 28342656

Newey Christopher R,Hornik Alejandro,Guerch Meziane,Veripuram Anantha,Yerram Sushma,Ardelt Agnieszka. "The Benefit of Neuromuscular Blockade in Patients with Postanoxic Myoclonus Otherwise Obscuring Continuous

Electroencephalography (CEEG)." . Critical care research and practice, 2017; 2017(5), 2504058. PMID: 28265468

Newey Christopher R,George Pravin,Nattanmai Premkumar,Ahrens Christine,Hantus Stephen,Sarwal Aarti."Evolution of Cerebral Atrophy in a Patient with Super Refractory Status Epilepticus Treated with Barbiturate Coma.". Case reports in neurological medicine, 2017; 2017(5), 9131579. PMID: 28182114

Newey Christopher R,Sahota Pradeep,Hantus Stephen. "Electrographic Features of Lateralized Periodic Discharges Stratify Risk in the Interictal-Ictal Continuum.". Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society, 2017; 34(4), 365-369. PMID: 28166083

Shukla Anukrati,Alqadri Syeda,Ausmus Ashley,Bell Robert,Nattanmai Premkumar,Newey Christopher R."Vasopressin Bolus Protocol Compared to Desmopressin (DDAVP) for Managing Acute, Postoperative Central Diabetes Insipidus and Hypovolemic Shock.". Case reports in endocrinology, 2017; 2017(4), 3052102. PMID: 28127476

Newey Christopher R,Chandrasekaran Premkumar N,Mohebbi Mohammad R. "Posterior reversible encephalopathy syndrome after high-dose cytarabine in acute myelogenous leukemia.". Neurology India, 2017; 65(1), 220. PMID: 28084289

Mohebbi Mohammad R,Punj Pragya,Chandrasekaran Premkumar N,Newey Christopher R. "Paroxysmal sympathetic hyperactivity after symptomatic hypoglycemia.". Neurology India, 2017; 65(1), 189-190. PMID: 28084274

Mullaguri Naresh,Katyal Nakul,Sarwal Aarti,Beary Jonathan M,George Pravin,Karthikeyan Naresh,Nattanamai Premkumar,Newey Christopher R. "Pitfall in Pupillometry: Exaggerated Ciliospinal Reflex in a Patient in Barbiturate Coma Mimicking a Nonreactive Pupil.". Cureus, 2017; 9(12), e2004. PMID: 29507852

Katyal Nakul,Newey Christopher R. "Does a Spontaneous Intracerebral Hemorrhage Predispose to a Secondary, Distant Intracerebral Hemorrhage? A Case Report and Review of the Literature.". Cureus, 2017; 9(12), e1999. PMID: 29507847

Katyal Nakul,Korzepe Amanda,Newey Christopher. "Inadvertent Central Arterial Catheterization: An Unusual Cause of Ischemic Stroke.". Journal of neurosciences in rural practice, 2017; 9(1), 155-158. PMID: 29456363

Katyal Nakul,Sarwal Aarti,George Pravin,Banik Biswajit,Newey Christopher R. "The Relationship of Triphasic Waves with Intracranial Pressure as a Possible Prognostic Marker in Traumatic Brain Injury.". Case reports in neurological medicine, 2017; 2017(1), 4742026. PMID: 29318067

Mullaguri Naresh,Battineni Anusha,Newey Christopher R,Nattanmai Premkumar. "White Matter Changes in Corpus Callosum in a Patient with Idiopathic Normal Pressure Hydrocephalus.". Journal of neurosciences in rural practice, 2017; 8(4), 657-659. PMID: 29204033

Sarpong Yaw,Nattanmai Premkumar,Schelp Ginger,Bell Robert,Premkumar Keerthivaas,Stapleton Erin,McCormick Ashley,Newey Christopher R. "Improvement in Quality Metrics Outcomes and Patient and Family Satisfaction in a Neurosciences Intensive Care Unit after Creation of a Dedicated Neurocritical Care Team.". Critical care research and practice, 2017; 2017(4), 6394105. PMID: 29119023

Frenkel Mark B,Sarwal Aarti,Wren Mary Petrusis,Newey Christopher R,Couture Daniel E. "Subdural Instillation of a Thrombolytic Agent for Treatment of Recurrent Subdural Hematoma.". Clinical neuropharmacology, 2017; 40(6), 279-280. PMID: 28976409

Newey Christopher R,Gupta Vikas,Ardelt Agnieszka A. "Monitoring Pressure Augmentation in Patients With Ischemic Penumbra Using Continuous Electroencephalogram: Three Cases and a Review of the Literature.". The Neurohospitalist, 2017; 7(4), 179-187. PMID: 28974996

Mullaguri Naresh,Khan Zalan,Nattanmai Premkumar,Newey Christopher R. "Extubating the Neurocritical Care Patient: A Spontaneous Breathing Trial Algorithmic Approach.". *Neurocritical care*, 2018; 28(1), 93-96. PMID: 28948503

Newey Christopher R,George Pravin,Sarwal Aarti,So Norman,Hantus Stephen. "Electro-Radiological Observations of Grade III/IV Hepatic Encephalopathy Patients with Seizures.". *Neurocritical care*, 2018; 28(1), 97-103. PMID: 28791561

Khan Zalan,Newey Christopher R,George Pravin,Raber Lary. "Finger Flexion to Noxious Stimulation in a Brain-dead Patient: A Case Report and Review of Literature.". *Cureus*, 2018; 10(11), e3622. PMID: 30693168

Katzan Irene L,Schuster Andrew,Newey Christopher,Uchino Ken,Lapin Brittany. "Patient-reported outcomes across cerebrovascular event types: More similar than different.". *Neurology*, 2018; 91(23), e2182-e2191. PMID: 30381370

Katyal Nakul,George Pravin,Nattanamai Premkumar,Raber Larry N,Beary Jonathan M,Newey Christopher R. "Improvement in Sonographic Vasospasm Following Intravenous Milrinone in a Subarachnoid Hemorrhage Patient with Normal Cardiac Function.". *Cureus*, 2018; 10(7), e2916. PMID: 30186721

Punia Vineet,Bena James,Krishnan Balu,Newey Christopher,Hantus Stephen. "New onset epilepsy among patients with periodic discharges on continuous electroencephalographic monitoring.". *Epilepsia*, 2018; 59(8), 1612-1620. PMID: 29974460

Lam Helena,Katyal Nakul,Parker Catherine,Natteru Prashant,Nattanamai Premkumar,Newey Christopher R,Kraus Chadd K. "Thromboelastography With Platelet Mapping is Not an Effective Measure of Platelet Inhibition in Patients With Spontaneous Intracerebral Hemorrhage on Antiplatelet Therapy.". *Cureus*, 2018; 10(4), e2515. PMID: 29942718

Katyal Nakul,Narula Naureen,George Pravin,Nattanamai Premkumar,Newey Christopher R,Beary Jonathan M. "Delayed Post-hypoxic Leukoencephalopathy: A Case Series and Review of the Literature.". *Cureus*, 2018; 10(4), e2481. PMID: 29922522

Katyal Nakul,Taqui Ather M,Tepper Deborah,Beary Jonathan M,Newey Christopher R. "Fulminant Herpes Simplex Virus Type I Encephalitis Despite Maximal Medical Therapy.". *Cureus*, 2018; 10(4), e2467. PMID: 29900087

Katyal Nakul,Newey Christopher R,George Pravin,Nattanamai Premkumar,Beary Jonathan M,Ardelt Agnieszka,Vellipuram Anantha. "Somatosensory Evoked Potentials as a Tool to Evaluate Brainstem Herniation in the Neuroscience Intensive Care Unit.". *Cureus*, 2018; 10(4), e2443. PMID: 29881656

Mullaguri Naresh,Hepburn Madhah,Newey Christopher Ryan,Nattanmai Premkumar Chandrasekharan. "Dihydroergotamine Complicating Reversible Cerebral Vasoconstriction Syndrome in Status Migrainosus.". *Journal of neurosciences in rural practice*, 2018; 9(2), 272-275. PMID: 29725183

Khan Zalan,Nattanamai Premkumar,George Pravin,Newey Christopher R. "Spot Sign in Acute Intracerebral Hemorrhage in Magnetic Resonance Imaging: A Case Report and Review of the Literature.". *The neurologist*, 2018; 23(3), 104-107. PMID: 29722746

Khan Zalan,Nattanamai Premkumar,Keerthivaas Premkumar,Newey Christopher R. "An Evaluation of Complications in Femoral Arterial Sheaths Maintained Post-Neuroangiographic Procedures.". *Cureus*, 2018; 10(2), e2230. PMID: 29713575

Newey Christopher R,Kinzy Tyler G,Punia Vineet,Hantus Stephen. "Continuous Electroencephalography in the Critically Ill: Clinical and Continuous Electroencephalography Markers for Targeted Monitoring.". *Journal of clinical*

neurophysiology : official publication of the American Electroencephalographic Society, 2018; 35(4), 325-331. PMID: 29677014

Mullaguri Naresh,Sarwal Aarti,Katyal Nakul,Nattanamai Premkumar,George Pravin,Newey Christopher R. "Transcranial Doppler as an Ancillary Study Supporting Irreversible Brain Injury in a Post Cardiac Arrest Patient on Extracorporeal Membrane Oxygenation.". Cureus, 2018; 10(2), e2161. PMID: 29644151

Yerram Sushma,Katyal Nakul,Premkumar Keerthivaas,Nattanamai Premkumar,Newey Christopher R. "Seizure prophylaxis in the neuroscience intensive care unit.". Journal of intensive care, 2018; 6(2), 17. PMID: 29515808

Omer Tarig,Mullaguri Naresh,George Pravin,Newey Christopher R. "False-Negative Platelet Factor 4 Antibodies and Serotonin Release Assay and the Utility of Repeat Testing in the Diagnosis of Heparin-Induced Thrombocytopenia and Thrombosis.". Case reports in hematology, 2019; 2019(2), 1585014. PMID: 30729049

#### *Book Chapters*

Newey CR. "Intracranial Pressure". Rae-Grant A (editors), 5-Minute Neurology Consult, Lippincott Williams and Wilkins, 2011

Newey CR and Gomes J. "Brain Herniation Syndromes". Rae-Grant A (editors), 5-Minute Neurology Consult, Lippincott Williams and Wilkins, 2011

Newey CR. "Neuro-ophthalmology". Fernandez H (editors), Question and Answer Book for Ultimate Board Review Book in Neurology, Demos Medical Publishing, 2011

Newey CR. "Neuro-endocrinology". Fernandez H (editors), Question and Answer Book for Ultimate Board Review Book in Neurology, Demos Medical Publishing, 2011

Newey CR. "Dementia". Fernandez H (editors), Question and Answer Book for Ultimate Board Review Book in Neurology, Demos Medical Publishing, 2011

Christopher Newey. "Neuroresuscitation ". The Alliance (editors), Organ Donation Advanced Seminar for Standardized Clinical Education, The Alliance, 2018

## Teaching Experience

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#### *Curriculum/Course Development and/or Teaching*

Nursing and Residents, Simulation, University of Missouri, 07/2015 - 08/2017

Residents, Neurocritical Care, University of Missouri, 07/2015 - 08/2017

Nurses, physicians, EMS, Neurocritical Care, University of Missouri, 04/2016 - 02/2017

Fellows, Neurocritical Care, Cleveland Clinic, 08/2017 - present

#### *Presentations*

Physicians, Can PLED Morphology Be Predictive of Seizures and/or Status Epilepticus, Cleveland Clinic, 05/2013 - 05/2013

Physicians, Seizure Prophylaxis in Neuro ICU, University of Chicago, 09/2014 - 09/2014

Physicians, Making Sense of Continuous EEG in the Critically Ill., University of Missouri, 10/2015 - present

Physicians, Making Sense of Continuous EEG in the Critically Ill, University of Missouri, 10/2015 - 10/2015

Physicians, Brain Death: Cross your T's and dot your I's, University of Missouri, 08/2016 - 08/2016

Nurses, physicians, other, Pathophysiology and fever control in the neurocritical care unit, Cleveland Clinic, 05/2017 - present

Nurses, physicians, other, The devastated brain injured patient; Death by Neurological Criteria, University of Missouri, 05/2017 - present

## Professional Membership

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Member, American Osteopathic Association, 08/2004 - 04/2019

Member, American Academy of Neurology, 01/2005 - present

Member, Neurocritical Care Society, 01/2010 - present

Member, American Epilepsy Society, 01/2012 - present

Member, American Clinical Neurophysiology Society, 01/2012 - present

Member, Society of Critical Care Medicine, 01/2014 - present

Member, Chest, 01/2015 - 12/2016

### *Editorial Boards*

Associate Editor, Journal of Academic Hospital Medicine, 07/2016 - present

## Committee Service

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Member, Neurosciences Morbidity and Mortality Task Force, University of Missouri, 2015 - 2017  
I reviewed all mortalities and areas for improvement.

Member, ICU Oversight Committee, University of Missouri, 2015 - 2017  
I was involved with governance of all ICUs at the University Hospital.

Member, Stroke Committee, University of Missouri, 2015 - 2017  
I was involved in reviewing the quality measures of all stroke patients admitted to the University Hospital.

Member, Anticoagulation Task Force, University of Missouri, 2015 - 2017  
I was involved in creating the protocols for reversing antithrombotics/anticoagulants. I was also involved in reviewing all heparin infusion related complications.

Member, Quality Improvement Task Force, University of Missouri, 2015 - 2017  
I was involved in reviewing quality measures of the neurosciences services and also creating protocols to improve quality.

Member, Inpatient Medical Directors Committee, University of Missouri, 2015 - 2017  
I was a member of the committee that set policies for the hospital.

### *National*

Board Member, Lifebanc, 2019 - present

*Cleveland Clinic*

Member, ICU Quality Improvement – C.Diff Task Force, Cleveland Clinic, 2017 - present

I am responsible for reviewing C.Diff cases in the neurocritical care unit and identify areas for improvement.

Member, ICU-EEG, Cleveland Clinic, 2017 - present

We review the use of ICU EEG in the hospital to improve patient care, research, education, and innovation.

Chair, Multimodal Monitoring, Cleveland Clinic, 2018 - present

I am starting a multimodal monitoring (MMM) committee to increase utility of MMM in the ICU and to improve our patient care, research, innovation, and education.

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Extracurricular Activities and Interests

- Golf
- Biking
- Weightlifting

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Languages

- English (native)