

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF NEUROLOGY

Darin Zahuranec, M.D., assistant professor of neurology, Department of Neurology, Medical School, is recommended for promotion to associate professor of neurology, with tenure, Department of Neurology, Medical School.

Academic Degrees:

M.S.	2009	University of Michigan
M.D.	2001	Case Western Reserve University
B.S.	1997	Case Western Reserve University

Professional Record:

2007-present	Assistant Professor of Neurology, University of Michigan
2005-2007	Clinical Lecturer, Department of Neurology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Zahuranec teaches neurology and vascular neurology to medical students (five to twelve students per year), neurology residents (12-15 residents per year), and vascular neurology fellows (one to two fellows per year). This teaching occurs in the outpatient stroke clinic, on the inpatient wards, and during acute stroke cases. This includes didactic and bedside teaching focused on relevant medical literature in addition to clinical supervision. In addition, he provides three hours of didactic lectures per year to clinical nurses as a part of their stroke unit training. Dr. Zahuranec has also been an invited speaker at multiple physician continuing medical education events on topics of end-of-life decisions after stroke and stroke health disparities. His bedside and didactic teaching is consistently highly rated. Dr. Zahuranec has also mentored neurology residents, vascular neurology fellows, medical students, and fellows and junior faculty from internal medicine on research in end-of-life decision making, general research best practices, and career development. He is currently mentoring a 3rd year medical student on his capstone research project for the bioethics pathway of excellence, and also a junior faculty member at the University of Wisconsin on her ongoing research project investigating variability in clinical decision making. Furthermore, he is the coordinator of the neurology resident outpatient rotation in vascular neurology and schedules the vascular neurology fellow and resident outpatient clinic.

Research: Dr. Zahuranec has developed a national reputation for his expertise in end-of-life decision making for severe stroke. This is a unique research niche at the intersection of medicine, ethics, and decision science that is gaining increasing recognition nationally, in part due to Dr. Zahuranec's work in this area. His expertise is clearly demonstrated by multiple

invited presentations on this topic at the American Heart Association/American Stroke Association (AHA/ASA) International Stroke Conference, invited physician continuing medical education presentations (Iowa Neurological Association Meeting, CHRISTUS Spohn Neuroscience Conference), and his selection as an author on the first-ever AHA/ASA Scientific Statement on Stroke Palliative Care. His productivity is evidenced by his 35 peer-reviewed publications and grant funding which includes a K23 (PI: Zahuranec), an R01 as the principal investigator (multiple PIs Zahuranec, Morgenstern), and two other grants where he is a key co-investigator (R01, PI: Levine, and R03, PI: Likosky). He is also the PI on another submitted R21 with a likely fundable score (impact score 20). His K23 award is investigating both variability in physician recommendations for severe stroke, as well as the experience of family surrogate decision makers after severe brain hemorrhage. The R01 grant is a natural extension of this work, investigating both the decision processes and long-term impact of end-of-life decisions on stroke patient family members in a multi-ethnic population. The pending R21 application represents a critical move from observational research to intervention, with a goal of developing a novel web-based tool to help family members through the difficult process of serving as a surrogate decision maker for a family member with severe stroke. Dr. Zahuranec has secondary research interests in stroke epidemiology and health disparities, with multiple publications on ischemic stroke and intracerebral hemorrhage epidemiology, authorship of a book chapter in the definitive textbook for vascular neurology (Stroke: Pathophysiology, Diagnosis, and Management), and three extramural invited presentations in this area. Dr. Zahuranec is also a valuable participant in many team science initiatives and is a member of our stroke research group that won the Michigan Institute for Clinical and Health Research Inaugural Team Science award in 2014. His value as a team scientist is also apparent by his inclusion as a co-investigator on other grants (PI: Levine and PI: Likosky), where he will assist these investigators by applying his research expertise in survey design and mixed methods research to other areas of health care. He also has collaborated with investigators across the medical school (neurosurgery, emergency medicine, vascular surgery, cardiology, and cardiac surgery) as an investigator in multicenter stroke clinical trials. Furthermore, he is a faculty member in the Center for Bioethics and Social Sciences in Medicine, participating in regular group meetings providing feedback on others' ongoing research at the intersection of patient care, social science, and decision psychology.

Recent and Significant Publications:

Zahuranec DB, Brown DL, Lisabeth LD, Gonzales NR, Longwell PJ, Smith MA, Garcia NM, Morgenstern LB: Ethnic differences in do-not-resuscitate orders after intracerebral hemorrhage. *Crit. Care Med* 37:2807-2811, 2009.

Zahuranec DB, Morgenstern LB, Sánchez BN, Resnicow K, White DB, Hemphill JC: Do-not-resuscitate orders and predictive models after intracerebral hemorrhage. *Neurology* 75:626-633, 2010.

Zahuranec DB, Wing JJ, Edwards DF, Menon RS, Fernandez SJ, Burgess RE, Sobotka IA, German L, Trouth AJ, Shara NM, Gibbons CM, Boden-Albala B, Kidwell CS: Poor long-term blood pressure control after intracerebral hemorrhage. *Stroke* 43:2580-2585, 2012.

Zahuranec DB, Lisabeth LD, Sánchez BN, Smith MA, Brown DL, Garcia NM, Skolarus LE, Meurer WJ, Burke JF, Adelman EE, Morgenstern LB: Intracerebral hemorrhage mortality is not changing despite declining incidence. *Neurology* 82:2180-2186, 2014.

Zahuranec DB, Fagerlin A, Sánchez BN, Roney ME, Thompson BB, Fuhrel-Forbis A, Morgenstern LB: Variability in physician prognosis and recommendations after intracerebral hemorrhage. *Neurology* 86:1864-1871, 2016.

Service: Dr. Zahuranec has contributed to service both internally and externally. He has served as a member of the department's Quality Assurance Committee, the Patient and Family Partnership Council for Neuroscience, and as an ad hoc reviewer for the Medical Liability Review Committee. Currently, he serves as the departmental planning lead for the university's initiative to support Diversity, Equity, and Inclusion. He has also served on the grant review committee for an institutional palliative care grant competition. He has been active externally with the AHA/ASA, having completed a three-year term as a member of the annual meeting program planning committee where he served as category chair for outcomes, quality, and health services research. He has also been selected to serve on two separate National Writing groups for AHA/ASA Statements. He has served as a manuscript reviewer for multiple journals, including high impact journals such as *Circulation*, *Stroke*, and *Neurology*, and has served as an abstract reviewer for the International Stroke Conference and the American Academy of Neurology Annual Meeting. Dr. Zahuranec has served as the attending on the inpatient neurology service an average of four weeks per year. He has a private cerebrovascular disorder clinic one half day per week and staffs resident cerebrovascular disorder clinic about once every six weeks. Dr. Zahuranec attends stroke rounds to give advice on management of neurology inpatients about one week out of six. He takes acute stroke call on days, nights (average four nights/month) and weekends (one day/month) and holidays in rotation with the Brain Injury Group. During this time, he takes outside hospital calls for acute stroke transfers/management, telemedicine evaluations, as well as in-person evaluation at UM. Additionally, from 2009-2015, he coordinated a multidisciplinary outpatient Stroke Patent Foramen Ovale Clinic (average one half day per month), designed to provide patients with easy access to simultaneous evaluation with stroke neurology and interventional cardiology.

External Reviewers:

Reviewer A: "...Dr. Zahuranec has been successful as a clinical stroke researcher and educator, even while carrying a busy clinical schedule. He is an excellent collaborator with great integrity – someone that other academicians in the field enjoy working with."

Reviewer B: "...Dr. Zahuranec has distinguished himself as an excellent clinician amongst his colleagues and students and has a bright future in research... Dr. Zahuranec is an innovative clinician with the ability to creatively integrate various promising interventions and educational opportunities for improving outcomes of stroke patients. His commitment to both education and collaboration with colleagues is highlighted throughout his medical career. Dr. Zahuranec is an accomplished and outstanding physician, neurologist, teacher, educator and investigator with a record of scholarly achievement and broad national recognition as a leader in the field of neurology."

Reviewer C: “Dr. Zahuranec is on an excellent career trajectory... He has had roles on the Program Committee and as a session moderator in the premiere, international scientific stroke conference. He will likely continue to be successful...”

Reviewer D: “Dr. Zahuranec has developed a national reputation as an expert in the areas of decision-making on end-of-life care in stroke patients, impact of withdrawal of care on patients’ outcomes after intracerebral hemorrhage, and the epidemiology of this disease... Dr. Zahuranec is a well-rounded academic neurologist. His achievements as a clinician and researcher have earned him a national level of recognition. He is on the right path to become a leader in the field.”

Reviewer E: “...I have been quite impressed by the quality, focus and clinical impact of Dr. Zahuranec’s works. In particular, his work on prognosis and surrogate decision making for patients with severe intracerebral hemorrhage, has and is continuing to advance the field, the inconsistency in prognostication between physicians that he recently published suggests substantial opportunities to improve these life-or-death discussions with families—few thing [sic] could be more important... I believe Dr. Zahuranec’s [sic] to be a leader in this field of end of life decision making after severe stroke. Moreover, his service on local and national committees and as a reviewer for journal articles is impressive.”

Summary of Recommendation:

Dr. Zahuranec is a highly regarded clinician and teacher and a noted researcher in the area of end-of-life care. I am pleased to recommend Darin Zahuranec, M.D. for promotion to associate professor of neurology, with tenure, Department of Neurology, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

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