



# Increasing Medical Student Awareness and Education in Neurosurgery through Interest Group Participation

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## Introduction

Neurological surgery exposure in medical school curriculum is limited, in part due to the relatively small size of our workforce. Improvement in exposure of medical students to common neurosurgical issues such as management of spinal degenerative disease, neuro-trauma, and tumors and vascular lesions of the central nervous system is important, regardless of their chosen specialty choice, to facilitate improved future interaction between specialties. Increased involvement of neurosurgical faculty and residents in preclinical and clinical curriculum has been demonstrated to improve students’ fund of knowledge on management of neurosurgical disorders.

### UMDNJ - New Jersey Medical School

- Class size of approximately 200 students
- Students on neurology rotation may complete a 2 week rotation in Neurosurgery - 48 students per year
- Elective time during thrid year may allow a student to spend 2 additional weeks on neurosurgery
- Fourth year acting internship for students applying to neurosurgery

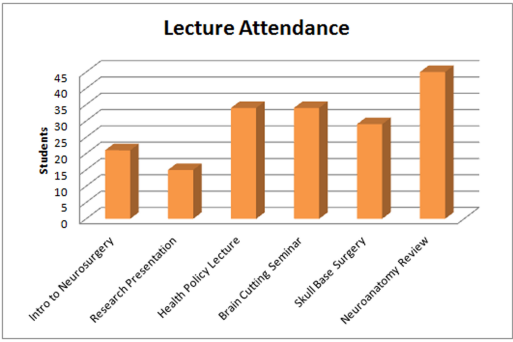
## Methods

In 2012, our medical school formed a neurosurgery interest group which has attracted students interested in multiple disciplines. We summarize the activities of the interest group and the opportunities that the interest group has provided to the students. We include strategies for involving faculty, residents and fellows; and integration of multi-disciplinary didactics.

## Results

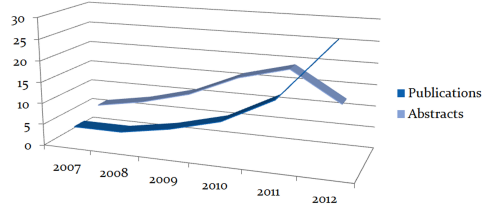
Our program has created new research opportunities to expose students to preparation of peer-reviewed publication manuscripts. In total, 55 students have signed up for the interest group. Weekly meetings include clinical case presentations, journal clubs and lectures by related services and have attracted an average of 29 participants.

### Student Attendance at Interest Group Sessions



Since the inception of the interest group, 30 research projects have been initiated including poster presentations, publications and book chapters.

Department of Neurological Surgery Research Productivity



Research Productivity of the Department of Neurological Surgery from 2007 through 2012. Note the increase in productivity after inception of the interest group in 2012.

### Neuroanatomy Review



Attendees at a neuroanatomy review session sponsored by the Neurosurgery Interest Group

Reasons for participating have included increasing knowledge of neurosurgical diseases, gaining exposure to a surgical field, resident shadowing, and research opportunities.

### Neurosurgery Interest Group Structure

- Faculty Advisor
- Resident Advisor
- Resident Mentors for Research Projects
- Executive Committee
- Members

### Meetings

- Week 1: Didactic Lecture by NS Faculty, Fellows, Residents
- Week 2: Journal Club – Landmark NS papers, Research Project Presentations
- Week 3: Multi-Disciplinary Didactic Lecture (ENT, Path, Anesthesia, Ophtho, PM&R, Rads)
- Week 4: Executive Board Meeting

## Conclusions

Improving undergraduate medical education in neurosurgery involves a comprehensive approach. The addition of a neurosurgery interest group allows for the development of additional didactic curriculum inclusive of student -faculty interaction to educate students on neurosurgical diseases. Development of such a program should focus on mentoring opportunities with faculty and house-staff, multi-disciplinary didactic lectures and research opportunities.

## Learning Objectives

- 1) Learn components of an educational curriculum for a neurosurgery interest group.
- 2) Learn strategies for involving faculty and residents in a neurosurgery interest group.

## References

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