

INTRODUCTION

This retrospective study analyzes 385 neurology and neurosurgery transfer requests between January 1, 2014 and December 31, 2016. 129 cases were designated as potentially avoidable, defined as not essential to the well-being of the patients. Unnecessary transfers create additional stress for patients and families already struggling with disease and adversely affect the capacity in the referral center, impacting other patients who have more pressing and necessary issued requiring transfer. Amelioration benefits the patients, referring and referral physicians, and the healthcare system as a whole. This study is ongoing, adding analyses of OSF SFMC transfers from the I-80, Pontiac, and Bloomington hospitals in the same 24 month transfer period.

METHODS

135 cases were split between three teams (Dr. Elwood, Dr. Bhimoreddy, and Dr. Tracy/Jonathan Jou). Records were distilled into 23 categories to differentiate disease etiology with need of subsequent transfer to OSF. Potentially avoidable transfer cases were sorted by possible remediation within the general categories of increased availability of consults, telemedicine, on-site imaging, or palliative care. Cases were logged after review of the relevant medical records detailing the nature of the injury, the initial series of care, the decision making behind the transfer, the acceptance of transfer, and the total duration of stay after transfer to OSF. Cases were then designated necessary or potentially avoidable. Potentially avoidable transfers was assigned a solution which could have allowed equivalent outcomeas without transfer.

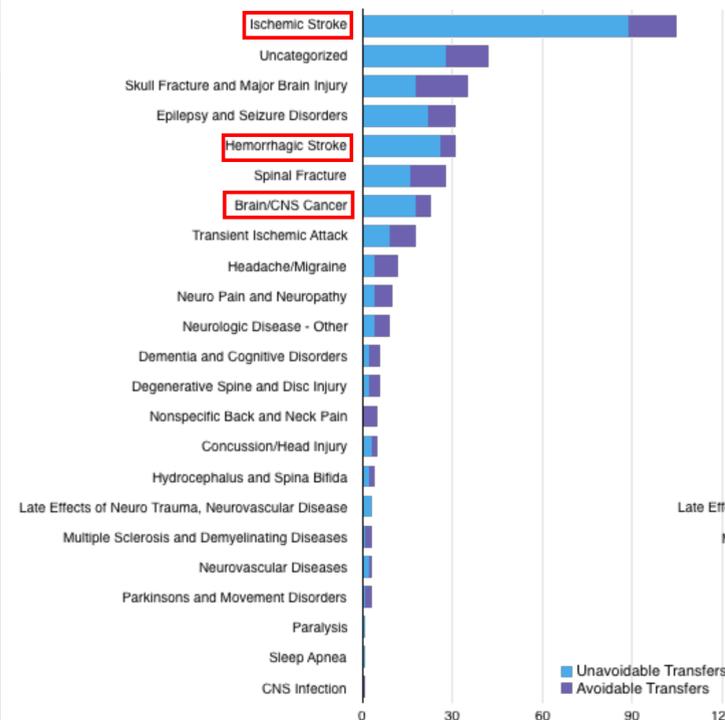
RESULTS

Our results demonstrate that in 385 cases, 256 were deemed transfers which significantly benefitted the patient. This group comprised ischemic stroke (35%), hemorrhagic stroke (10%), epilepsy and seizure disorders (8%), skull fracture and major brain injury (7%), and brain/CNS cancer (7%). 129 cases were designated as potentially avoidable transfers. The vast majority of these patients could be addressed with specialty telemedicine consult (71%) or a next-day neurology consult at the Illinois Neurological Institute (17%). Quantification of care-hours suggested that a total of 7,103 hours were misallocated to patients who did not benefit directly from transfers to St. Francis, averaging 2.29 potentially avoidable work days (54.96 hours) per patient. Our results were comparable to similar studies carried out at Emory University and the University of Alabama-Birmingham.

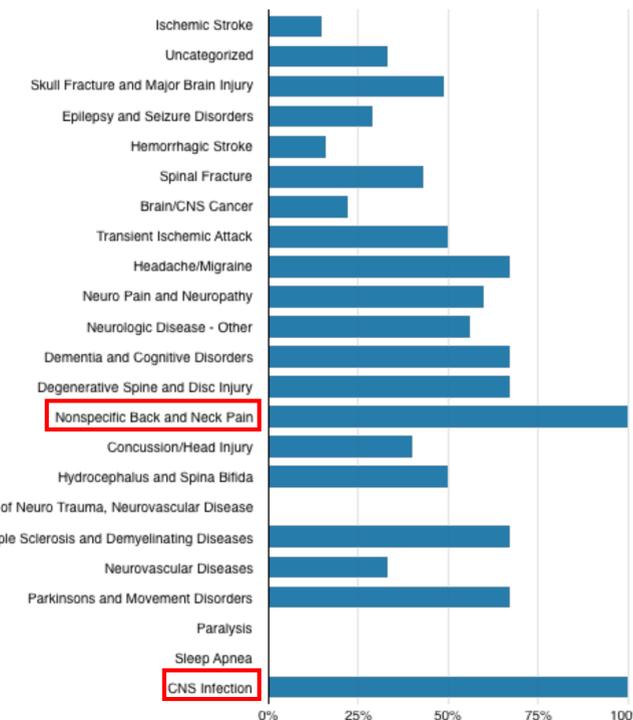
MAP OF STUDIED REGION



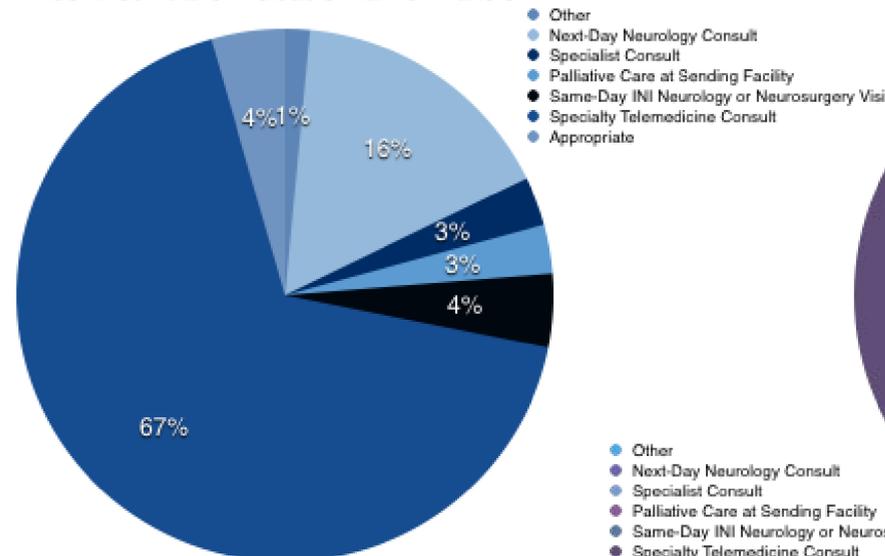
Total Unavoidable and Avoidable Transfers



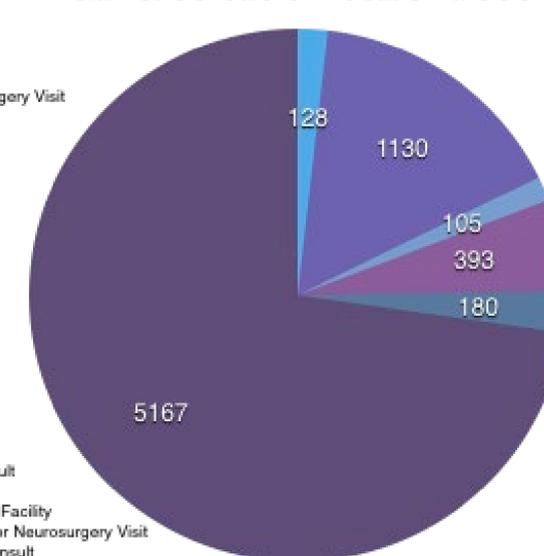
Etiology vs. % Avoidable Transfers



Identified Future Avoidable Plan for Transfer



Total Hours of Care for Avoidable Transfers



CONCLUSIONS

We conclude that the addition of same-day and next-day neurosurgery consults for patients with non-emergent neurologic lesions may decrease the cost of healthcare for these patients along with the transfer and bed capacity burden of the OSF health care network. Results also suggest that an increase in teleneurosurgery services emphasizing remote use of picture archiving and communication system (PACS) may allow on-site discussion of the need to transfer patients. Creation of a virtual neurohospitalist service may serve as an intermediary for management and consultation for potential transfer patients. Finally, protocols developed for the management of common illnesses such as BPPV, headache, lumbar pain, traumatic subarachnoid hemorrhage, and small subdural hematoma may assist in determining which patients would most benefit from transfers.

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