acute stroke. The mechanical thrombectomy procedures for removal of clot from large vessel of the brain has been shown to be cost effective compared to the traditional medical therapy. Given the fact that clinical outcomes are strongly dependent on time to recanalization, it is important to examine the socioeconomic disparity of geographic living distance from thrombectomy capable stroke centers (TCC) as related to patient outcomes.

METHODS: The data on the US population and geographic location of thrombectomy capable stroke centers was obtained from the US Census Bureau and the websites of accrediting agencies and state governments. Using previously validated methods we estimated the population with 1 hour access to TCC. We additionally acquired median household income data for each state in the US. The proportion of population with 1 hour access to TCC was compared between low, middle and high median household states.

RESULTS: There was a total of 316 TCCs in the analysis, and approximately 65% of all US residents have within one-hour access to a specialized stroke center by way of air or ground. The states with >50% of the population having less than 1-hour access to thrombectomy centers, had the average median income was nearly $10,000 more when compared to states with <50% of the population with 1-hour access to TCC. In high-income states, 69.0% of the population had one-hour access to TCCs. In the middle-income states, 49.5% of the population had one-hour access to TCCs, while only 21.4% states one-hour access to TCCs, p-value = 0.01. A positive and significant relationship between economic status and percentage population with one-hour access was observed (r = 0.44, p-value = 0.01).

CONCLUSION: One-hour access to thrombectomy capable stroke centers is available to 65% of the US residents. A positive and significant relationship between economic status and percentage population with one-hour access was observed.

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The Utility of Remote Video Technology in Continuing Neurosurgical Care in the COVID-19 Era: Reflections From the Past Year

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INTRODUCTION: The 2020 COVID-19 pandemic exposed existing stressors in the neurosurgical care infrastructure in the United States. Several distance-health and audio-visual innovations were implemented that expanded neurosurgical care and education at our institution, including use of remote video technology to facilitate inpatient consultations and outpatient ambulatory virtual visits, optimize our regional hospital neurosurgical coverage, expand our interdisciplinary patient management conferences (i.e. Tumor Board), and further enhance our neurosurgical resident education program. Enterprise patient-experience data was queried for outpatient visits in the department of neurosurgery to evaluate patient satisfaction following the switch to virtual visits.

RESULTS: Between January of 2020 and April of 2021 our department of Neurosurgery more than doubled the utilization of virtual visit following pandemic restrictions. Our survey of 10,772 patient following outpatient visits between April 2020 and March 2021 showed that virtual visitation was equal if not better in providing satisfactory and compassionate patient care. Further, after switching our interdisciplinary spine tumor board to virtual, we increased surgeon participation and attendance by 49.29%. We also found that the integration of remote audio-visual technology in resident didactics and clinical training expanded our ability to provide a comprehensive and personalized educational experience for our trainees.

CONCLUSION: Distance-health technology has improved our ability to provide care and comprehensive training at our institution. Our investment in the infrastructure required for these remote audio-visual services during the pandemic can facilitate the expansion of neurosurgical care provision for patients across the United States in the future. As we progress, governing bodies within organized neurosurgery should advocate for the continued financial and licensing support of these services on a national fiscal and policy level.

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Is Transfer Status Associated With Inpatient Mortality in Patients Transferred for Non-Elective Neurosurgical Diagnoses?

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INTRODUCTION: Inter-hospital transfer plays an important role in providing patients appropriate care in a timely fashion. There is a concern, however, that patients who are transferred fare worse than those who are not. While some work has been done looking at specific diagnoses, a more general overview of the impact of transfer status on neurosurgical patient outcomes is lacking.

METHODS: We analyzed data from the Nationwide Inpatient Sample (NIS) from 2009 to 2018 to determine if the likelihood of mortality was associated with being transferred with non-elective neurosurgical diagnoses. We used multivariate regression analysis with the transfer status as our main exposure and inpatient mortality as the primary outcome. Our model controlled for patient demographics, hospital characteristics, and severity of illness.

RESULTS: Out of a total of 2,080,460 patient weighted discharges with neurosurgical diagnoses, 387,321 (18.7%) were transferred. After controlling for patient- and hospital-related confounders, patients transferred for ventricular shunt procedure had a higher likelihood of inpatient mortality - OR 1.55, 95% CI 1.23, 2.14, p = 0.001. However, intracranial vascular disease (OR 0.72, 95% CI 0.64, 0.82, p < 0.001), craniotomy with device diagnoses (OR 0.87, 95% CI 0.81, 0.92, p < 0.001), craniotomy and intravascular procedures (OR 0.77, 95% CI 0.70, 0.84, p < 0.001), and trauma (OR 0.80, 95% CI 0.75, 0.85, p < 0.001), were all associated with a statistically significantly lower odds of inpatient mortality. The diagnosis of peripheral and cranial nerve disorders was not associated with inpatient mortality (OR 1.07, 95% CI 0.88, 1.30, p = 0.05).

CONCLUSION: For most non-elective neurosurgical diagnoses, patients who are transferred have no difference or a lower likelihood of inpatient mortality. However, patients transferred for ventricular shunt procedures have significantly higher odds of inpatient mortality. Further