## Brazilian Neurosurgery: A Bastion of Patient Dedication and True Private Practice

Stefan W. Koester, Savio Batista, Raphael Bertani, Michael Dewan, Eberval Figueiredo Background: Brazil has recently experienced rising wages and a growing middle class, boosting consumption and spurring development in all areas of its economy. The PwC report alludes the spurring healthcare market to an increase in purchasing power, growing middle class, increase in willingness to pay for healthcare, government initiatives to attract investments, and consolidations. During my clinical time spent in São Paulo and Rio de Janeiro, major themes had arisen while observing the public and private sectors for neurosurgery that can be generalizable to the entire Brazilian healthcare system. Our objective was to characterize the breakdown of public and private joint practice, assess the current barriers to care, and obtain qualitative opinions on practice trends from neurosurgeons in Sao Paulo. Methods: In order to help quantify the perceived burden to neurosurgical care, a survey was sent to neurosurgeons and senior residents practicing at Hospital das Clinicas Universidade de São Paulo (HCFMUSP), one of the largest neurosurgery services in Brazil. The survey was sent by the head of neurosurgery at HCFMUSP to other attending physicians, and had information regarding public and private practice makeup, perceived barriers to neurosurgical care, and whether neurosurgeons pursued a source of income outside of neurosurgery. Barriers to care were rated on a 5-point Likert Scale. Those willing to participate were also interviewed by S.W.K. about perceived barriers to care.

**Results**: A survey as well as informal interview was conducted with 3 attending physicians and 2 senior neurosurgery residents. Systemic issues including culture and lack of documentation as was the most highly self-reported burdens to neurosurgical care overall, with a rating of 3.2 out of 5. The next highest rating were postoperative resources and critical care with a rating of 3 out of 6 and personnel (anesthesia), with a rating of 2.6 out of 5. 4 of the 5 had sources of income outside of operating and patient consults (eg neurosurgical products), and 4 of 5 had sources of income outside of neurosurgery altogether. In the year of 2022, the participants reported operating at a range from 3 to 9 different centers and consulted on patients in a range from 1 to 7 different centers. Attending physicians reported a range of 50% to 75% for the proportion of operations performed on private patients and a range of 50% to 100% for the proportion of private patients they see for consults.

**Conclusions**: Neurosurgery at the largest teaching hospital in Brazil demonstrated a unique makeup of private and public joint practice and sources of income outside of neurosurgery. The perceived barriers to care center on culture, post-operative resources, and personnel. The neurosurgeons consult and operate at a high number of different centers relative to organized neurosurgery in other countries. Neurosurgery in Brazil is the story of dedication to patients and teaching despite a fragmented and resource-limited system.