The “Special Field” of Dreams: Building a Destination Neurosurgical Practice

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INTRODUCTION

Early neurosurgery developed large referral practices with rudimentary transportation and communication technologies. In a time when neurosurgery was becoming a “special field,” and could be practiced by any surgeon with the inclination, the catchment area for a specialist theoretically encompassed the entire country. In this environment, Cushing built a personal and institutional cachet that he leveraged to build case volume while pioneering neurosurgery as a dedicated specialty.

OBJECTIVE

To evaluate the geographic locations of Harvey Cushing’s neurosurgical patients and determine the catchment area used to develop early neurosurgery as a destination practice.

METHODS

Cushing’s surgical records from 1900-1912 were reviewed; this period represented his transition from general surgeon to dedicated neurosurgeon. Non-neurosurgical cases were excluded.

We collected city and state data for all patients. In some cases, only partial information was available, or the city listed was unlocatable. In those cases, and for patients without home addresses, the location of the home physician was substituted.

An online mapping program was used to calculate the distance from JHH to the patient residence. For patients residing in Baltimore, this was 1.4 mi.

RESULTS

Geographic data were available for 655 patients. The average distance travelled was 379 mi (range 1.4 - 8539 mi).

Although more vulnerable patients (pediatrics, trigeminal neuralgia) traveled slightly farther on average (398mi and 446.8mi respectively), this was not statistically significant.

Review of the records demonstrated that although Cushing’s patients travelled from afar, often follow-up was performed via written correspondence.

Referrals for patients came from his colleagues, local physicians, and patient word-of-mouth.

CONCLUSIONS

The development of a robust neurosurgical practice at the turn of the twentieth century relied on a broad catchment area, as well as institutional and surgeon cachet built through publications, presentations, and colleague referrals. This offers insight into the dynamic interplay necessary for contemporary neurosurgeons looking to build and expand practices.

Figure 1. Map demonstrating geographic spread of Harvey Cushing's neurosurgical patients. His practice largely derived from the North East and South (per US Census categories), patients traveled from the breadth of the US to seek neurosurgical care. Not depicted: 18 international patients, including Canada and the Philippines.