Collaborative Comanagement Between Neurohospitalists and Internal Medicine Hospitalists Decreases Provider Costs and Enhances Satisfaction With Neurology Care at an Academic Medical Center

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James G. Greene, MD, PhD¹

Abstract

Background and Purpose: The majority of academic medical centers are moving to a neurohospitalist model of care for hospital neurology coverage. Potential benefits over a more traditional academic model of patient care include greater expertise in acute neurologic disease, increased efficiency, and improved availability to patients, providers, and learners. Despite these perceived advantages, switching to a neurohospitalist model can come at substantial financial cost, so finding ways to maximize the positive impact of a limited number of neurohospitalists is very important to the future health of academic neurology departments. Over the past 7 years, we have implemented a model for inpatient neurological care based on an intimate collaborative relationship between the neurology and hospital medicine services at our main academic hospital. Our goal was to optimize the value of care by decreasing cost while improving quality. **Methods:** Cost and revenue associated with professional services was evaluated on a yearly basis. As part of ongoing quality improvement efforts, yearly surveys were administered to referring providers during the transition to a collaborative care model in which NHs and medicine hospitalists comanage neurology inpatients. **Results:** Net operating loss was dramatically decreased upon transition to the new care model. Concomitantly, there was a robust positive impact on perception of overall quality, timeliness, and communication skills of neurology services. **Conclusions:** Collaborative comanagement is an effective strategy to improve overall satisfaction with neurology services at a tertiary academic medical center while maintaining financial viability.

Keywords

consultation, hospitalist, collaboration, comanagement, neurohospitalist, quality

Escalating economic pressures and the complex regulatory environment of the US health-care system pose numerous challenges to academic neurology departments with regard to patient care, education, and research. These challenges substantially impact the care of hospitalized patients as neurology faculty members confront a widening knowledge gap between increasingly focused subspecialty interests and the demands of inpatient care for acute complicated neurological diseases. In addition to an ever-expanding scientific knowledge base, increased focus on cost-effectiveness and more stringent resident work hour restrictions threaten to make traditional academic models for teaching and patient care in the hospital untenable.

“Neurohospitalists” (NHs) are an emerging group of inpatient subspecialists that have evolved rapidly in response to this complex inpatient environment.¹⁻⁷ Notwithstanding the uncertainty about the ultimate impact of the change, the majority of academic medical centers are moving to a NH

model of care for hospital coverage.⁸⁻¹⁰ Perceived benefits over a more traditional academic model of patient care include greater expertise in acute neurologic disease, increased efficiency, and improved availability to patients, providers, and learners. Despite these potential advantages, switching to a NH model can come at substantial financial cost, so finding ways to maximize the positive impact of a limited number of NHs is very important to the future health of academic neurology departments. Over the past 7 years, we have implemented

¹ Department of Neurology, Emory University, Atlanta, GA, USA

Corresponding Author:

James G. Greene, Department of Neurology, Emory University, 6009 Woodruff Memorial Research Building, 101 Woodruff Circle, Atlanta, GA 30322, USA.

Email: james.greene@emory.edu

a novel model for inpatient neurological care based on an intimate collaborative relationship between the NH and hospital medicine services at our main academic hospital with the goal of optimizing the value of care by decreasing cost while improving quality. To explore the impact of this collaborative model of care, we prospectively evaluated referring provider satisfaction and provider costs associated with this approach compared to precollaboration metrics. We have found that collaborative comanagement is an effective strategy to improve overall satisfaction with neurology services at a tertiary academic medical center while maintaining financial viability.

Methods

Inpatient Neurologic Care Model

Emory University Hospital (EUH) is a tertiary referral academic medical center in Atlanta, Georgia with over 600 beds. Prior to 2011, we provided care to our neurology inpatients (primary patients and consultations) using what we would consider a “traditional” resident-driven academic model. There were 2 primary inpatient services: stroke and general neurology, each staffed by an attending neurologist selected from a pool consisting of the entire faculty in 2-week rotations, 1 or 2 neurology residents, and a variety of fellows, medical residents, and medical students. A nurse practitioner was also present on the stroke service. In addition, a similarly staffed consult service covered the emergency department (ED) and inpatients on other services. A single first-year neurology resident (post-graduate year 2) on a “night float” rotation covered nights with indirect supervision by an attending available by telephone.

Due to concerns about declining neurology care quality in the hospital superimposed on financial constraints, we hired our first NH in 2011 and began a significant change to our inpatient service model. The transition was gradual between 2011 and 2016 and involved 2 major modifications. First, NHs, rather than the entire neurology faculty, now exclusively provide inpatient neurologic care. This change began with NHs covering the traditional inpatient service for a portion of the total time until a sufficient cohort was recruited. Beginning in 2014, all daytime coverage for weekdays and weekends was provided by NHs. Night phone call coverage backing up the in-house resident was completely assumed by the NH division in 2017 after a gradual transition over several years. Currently, there are 4 NH full-time equivalents (FTE) and 2 advanced practice provider (APP) FTE dedicated to the program at EUH.

The second major change occurred in 2014 when all neurologic inpatients started to be admitted to a new neuromedicine service comanaged by the NH team and the hospital medicine service. Practically speaking, when patients are admitted to the neuromedicine service, NHs and internal medicine hospitalists work together, with the neurology team primarily addressing neurologic problems and the medicine team primarily addressing medical problems. There is a scheduled meeting at 9 AM every day between the neurology and

medicine attendings to coordinate care, and there is frequent communication throughout the day, usually multiple times, involving all levels of each team. Direct admissions and hospital transfers are completed by the neurology team and then discussed with the medicine hospitalist; ED admissions are typically completed in a collaborative manner. The medicine hospitalist team completes almost all hospital discharges, although the neurology team provides neurology follow-up appointments and instructions.

Neurohospitalists serve as attendings on service and are heavily involved in teaching; residents (neurology and internal medicine) continue to triage, evaluate, and follow-up inpatients. Currently, there is 1 senior neurology resident primarily responsible for triaging and coordinating the evaluation of new consults, 1 junior neurology resident primarily responsible for follow-up care, 1 junior neurology resident assigned to night float coverage, 1 senior medicine resident responsible for seeing new consults in conjunction with the neurology senior resident, and 1 APP primarily responsible for a subset of follow-up patients. On weekdays, morning rounds are directed by 1 NH, and afternoon staffing of new consults by another, both of whom are available in the hospital all day; on weekends, a single NH covers in the hospital all day (7 AM to 7 PM) along with 1 neurology resident and 1 APP. The vast majority of patients have trainees involved in their care at some point. Thus, although NHs are able to provide a “pressure relief valve” allowing residents to easily meet other educational responsibilities (didactics, continuity clinic, etc), the service remains very “academic” in character.

Professional Revenue and Cost

This collaboration between the hospital medicine and NH divisions was facilitated by the executive administration of EUH, and the hospital agreed to provide financial support to the program. Before 2011, provider costs associated with inpatient neurologic care were borne exclusively by the neurology department and any resulting provider revenue was credited to the department. In the transition period between 2011 and 2016, costs and revenue were divided between neurology and the hospital. With the transition completed, for 2017 and beyond, all provider costs and revenue associated with inpatient neurology (NH) care have been subsumed by the hospital. Since patient charges are attributed to specific providers, there was detailed data with regard to revenue generation for the entire period before, during, and after the transition; however, exact provider cost data were not available, since inpatient provider costs were not specifically tracked for non-NH faculty before and during the transition. As such, we have estimated provider costs based on the number of FTE required to provide complete coverage for the inpatient responsibilities using average salary and fringe benefit costs. Hospital medicine costs and revenue estimates are based on the need to add 2 additional hospitalists to the medicine department in 2014 to care for the additional patients on the neuromedicine service who were previously on the independent neurology service. Cost and revenue data were

normalized to 2008 values. Data for 2017 are annualized based on values through the first 3 months of the fiscal year. The number of lumbar puncture procedures performed by neurology was extracted from charge data for each year.

Since 2011, new NH faculty have been trained in billing and coding by the program director and inpatient coding team using a plan that has evolved over time. Currently, this involves an initial meeting with the coding team to learn our billing management software (IM Bills; Ingenious Med, Atlanta, Georgia), a self-review slide set about the basics of billing and coding, 2 to 3 in-person meetings with the program director to review documentation and help code encounters appropriately (one on the first day and one a week or two later), and periodic compliance review of 10 patient bills and corresponding documentation by the coders about once a year. Missing charges are tracked monthly and reconciled with providers. In addition, each provider receives a report every 2 months delineating their individual productivity over the preceding 6 to 12 months by encounter number and work relative value unit (wRVU) as compared to the rest of the NH team.

Neurology Satisfaction Survey

Surveys were administered to main referring providers (hospital medicine and emergency medicine) on a yearly basis beginning in 2013 with the goal of assessing the effect of the new care model. The survey was composed of Likert-like questions asking referring providers to rate overall quality, timeliness, communication, and professionalism of neurologic care in the hospital (1 to 5, poor to excellent). There was also space for additional free text comments. Surveys were distributed via the hospital division directors, and responses were anonymous; no identifying data were collected. There was no incentive offered to complete the survey. The survey is listed in Appendix A. In addition, ad hoc data were collected from other services in the hospital on an informal basis.

Data Presentation and Institutional Review Board Approval

Data are presented using Prism GraphPad. Data from each survey question were compared between 2013 and 2016 using Fisher exact test. Because this was a quality improvement project it was exempted from Emory University institutional review board approval. There was no patient contact and patient level data was not accessed or analyzed, so informed consent was not necessary.

Results

Professional Revenue and Costs

Normalized provider revenue and cost data are presented in Figure 1. Prior to the transition, professional fees were credited to the specific division in the neurology department to whom the provider belonged. Over the 7-year transition, NH

Figure 1. Normalized provider net operating income associated with the NH service over time. A, Provider revenue (professional fees) produced over time by non-NH neurologists, NH neurologists, and medicine hospitalists normalized to 2008 values. Addition of the revenue from hospital medicine was associated with the switch to a comanagement neuromedicine service in 2014. B, Provider cost (salary and fringe benefits) incurred over time by non-NH neurologists, NH neurologists, and medicine hospitalists normalized to 2008 values. Addition of costs related to hospital medicine was associated with the switch to a comanagement neuromedicine service in 2014. C, Provider net operating income (loss, defined as revenue minus cost) incurred over time by non-NH neurologists, NH neurologists, and medicine hospitalists normalized to 2008 values. Addition of loss related to hospital medicine was associated with the switch to a comanagement neuromedicine service in 2014. NH indicates neurohospitalist.

professional fees were recognized in the hospital budget and used to offset the cost of the NH program to the hospital; this is symbolized by the gradual transition from white (non-NH

Table 1. Neurology Billed Encounters and wRVU per Encounter From 2008 Through 2016.

Year	Encounters	wRVU/Encounter
2008	5547	1.6
2009	5565	1.7
2010	5565	1.7
2011	6291	1.7
2012	6293	1.7
2013	5639	1.9
2014	6190	2.4
2015	6226	2.6
2016	7759	2.6

Abbreviation: wRVU, work relative value unit.

neurology) to wide-hatched (NH neurology) bars in Figure 1A. Since 2014, when NHs began to be solely responsible for all daytime responsibilities, all provider revenue has been recognized by the hospital and used to offset NH program costs. There was a small increase in professional fees starting in 2011, when the first NH started work. In 2014, there was a large jump in NH neurology provider revenue that has continued to increase as we have optimized our service model. Also beginning in 2014, there was an increase in hospital medicine professional fees associated with institution of the neuromedicine service. As can be seen in Table 1, there were 2 main drivers for the increased revenue generated by the NH team. First, there was a 40% increase in the number of billed encounters per year between 2008 and 2016; second, the wRVU generated per encounter increased by more than 60%.

Normalized salary and fringe benefit cost for neurology providers have remained relatively constant over the 10-year period when adjusted to 2016 dollars; however, the entity responsible for those costs has changed. Prior to 2011, all costs were borne by the neurology department. Since 2011, NH cost has been recognized in the hospitalist budget, so as the coverage model matured and more NHs came on board, costs recognized by the hospital rose substantially. Again, this is depicted by the gradual transition from white (non-NH neurology) to wide-hatched (NH neurology) bars in Figure 1B. Beginning in 2014, there was an increase in hospital medicine provider cost associated with the institution of the neuromedicine service.

Net operating income associated with neurology providers has always been negative for inpatient care and has remained so; however, there were 2 major changes over the transition. First, a larger percentage of the operating loss was absorbed by the hospital as the coverage model developed, depicted by the gradual transition from white (non-NH neurology) to wide-hatched (NH neurology) bars in Figure 1C. Second, there was an approximately 45% decrease in net operating loss attributed to neurologic care in the hospital starting in 2014, when the switch to a neuromedicine service occurred and NHs became responsible for all daytime coverage in the hospital, including net operating loss attributed to the hospital medicine division.

Table 2. Proportion of Referring Providers Rating Neurology Service “Very Good” or “Excellent.”^a

Item	2013	2014	2015	2016
Time to bedside	11%	64%	84%	84% ^b
Time to initial recommendations	11%	35%	75%	56% ^b
Overall timeliness	11%	57%	85%	63% ^b
Professionalism	56%	91%	85%	74%
Resident supervision	42%	76%	89%	72% ^b
Attending availability	37%	78%	89%	83% ^b
Overall communication	37%	70%	90%	73% ^b
Clinical quality	63%	78%	95%	90%
Quality of follow-up	13%	61%	74%	63% ^b
Overall quality	40%	74%	90%	79% ^b

^aItems were scored on a Likert-like scale (poor, fair, good, very good, excellent).

^bP value < .05 for comparison between 2013 and 2016 by Fisher exact test.

Satisfaction With Neurology Services

The satisfaction survey was sent to 43 to 50 providers each year, roughly equally split between emergency medicine and hospital medicine. Yearly response rate was between 38% and 47%. Each year approximately 20 referring providers responded (20, 23, 20, and 19 for 2013, 2014, 2015, and 2016, respectively), about half from emergency medicine and half from hospital medicine.

The switch in neurology service model had a robust positive impact on referring provider perception of neurology care in the hospital (Table 2). In 2013, perception of overall quality centered on “good” and perception of timeliness and communication centered at the low end of the scale (“fair”; Figure 2). All measures have centered between “very good” and “excellent” since 2015. The proportion of providers rating the quality of neurology service as very good or excellent progressively increased from 2013 to 2015 with regard to overall quality (40% in 2013 vs 90% in 2015), timeliness (11% vs 85%), communication (37% vs 90%), and professionalism and rapport (56% vs 85%). There was a dip in these percentages in 2016, but the proportion is still dramatically and significantly higher than in 2013.

Narrative comments underwent a similar evolution, as evidenced by the following examples. “When the NH is on, the system works better. When one of the regular floor neurologists are present, we revert to longer delays.” “Prior to having neurology hospitalists, this patient would have lingered in the ED for more than 8 hours and likely been admitted to neuro for unnecessary observation because they wouldn’t have seen what the patient was experiencing.” “There is a noticeable improvement in neurology consultation since the switch.” “Bottom line is that the neurology patients are receiving outstanding care due to the collaboration of HMS and neurology. It is difficult to believe we haven’t done it this way all along.”

Prior to the change in care model, many services were concerned that the neurology services were too reliant on residents for patient management and that resident supervision

Figure 2. A NH program markedly improves perception of inpatient neurologic care. A, When asked to rate overall quality of neurologic consultation, an increasing proportion of referring providers rated their experience as “very good” or “excellent” over time. B, When asked to rate overall timeliness of neurologic consultation, an increasing proportion of referring providers rated their experience as very good or excellent over time. C, When asked to rate overall communication with neurology services, an increasing proportion of referring providers rated their experience as very good or excellent over time. D, When asked to rate professionalism of neurology services, an increasing proportion of referring providers rated their experience as very good or excellent over time. See Table 2 for more details. NH indicates neurohospitalist.

was suboptimal (Figure 3). In addition, it was broadly expressed that customer service provided by residents was highly variable due to the number of residents involved, their workload on service, their other responsibilities, and their frequent switching on and off the inpatient teams. Example comments included the following, “I am unsure of how thorough the attending supervision is given my experience with the attending not signing notes for days at a time, and residents who seem to coast on their own.” “The attending physicians have all been very nice, but have had some professionalism issues with some residents.” The change in service model allowed us to decrease the number of residents required to provide neurology coverage by half and to provide more robust supervision for the residents who remained (Figure 3).

One major source of dissatisfaction for multiple services throughout the hospital (hospital medicine, transplant, oncology, etc) before 2011 was the difficulty in obtaining assistance with lumbar punctures from the neurology consultation service. Although exact numbers of complaints were not

tracked, anecdotally, the neurology chief of service received at least 3 per year from various services and/or the hospital chief of staff. At one point, the issue was raised to the level of the dean’s office in the School of Medicine. Since 2014, those complaints have ceased as the number of lumbar punctures performed by neurology has progressively increased (Figure 4).

Discussion

These results demonstrate that collaborative comanagement of neurologic inpatients by academic NHs and internal medicine hospitalists is an effective strategy to increase overall referring provider satisfaction with neurology services while improving financial viability. At the same time, it can decrease reliance on neurology residents as a workforce.

Academic NHs generated more than twice as much professional fee revenue in the hospital than non-NH faculty members through a combination of seeing more patients and maximizing revenue for each patient encounter. If personnel

Figure 3. An academic NH program improves resident supervision and decreases reliance on resident workforce. A, An increasing proportion of referring providers rated neurology resident supervision as “very good” or “excellent” over time. B, The number of residents required to help provide inpatient neurologic care decreased with institution of a NH program. See Table 2 for more details. NH indicates neurohospitalist.

Figure 4. A NH program increases the number of lumbar punctures performed by the inpatient neurology care team. Lack of assistance with lumbar punctures was a substantial contributor to negative perception of neurologic services eliminated by the change in care model. NH indicates neurohospitalist.

costs are comparable, NHs can provide substantial savings and minimize losses attributed to inpatient neurologic care. Major factors leading to a higher number of patient encounters in our model included more active attending follow-up of consultation patients, a greater weekend presence of NH attendings as compared to their non-NH counterparts, and greater reliance on staffing resident patients in person rather than over the phone. Better education and understanding of billing and coding requirements resulted in higher levels of service for each individual patient encounter; our experience suggests that the main difference was related to documentation and accurate recognition of the value of services provided rather than an increase in service per se. In other words, NHs documented and coded encounters at an appropriate level, whereas non-NHs undercoded. Similar results have been reported during transition to medicine hospitalist inpatient coverage.¹¹

Regarding cost, the NH program concentrated inpatient provider salary and fringe benefits onto line items on budgets for the hospital and academic practice. As a result, costs that were previously distributed and relatively invisible with regard to budgeting risked being seen as “new” by the entities funding them, even though it would be more accurate to state they were “newly recognized.” Overall, concentrating inpatient neurologic care responsibilities with a limited number of NHs provided clarity as to the true cost of providing neurology services in the hospital. These costs are in line with those associated with medicine hospitalist programs, and these data make clear that similar to internal medicine hospitalist programs, a NH program typically requires significant financial support from the hospital to maintain viability.¹²

Hospital satisfaction with neurologic services increased dramatically after the transition to the novel service model. Assessment of clinical expertise and professional rapport improved, but the most prominent drivers for the change in perception were items related to customer service, including timeliness, communication, and availability. Even small changes in service mind-set made big differences in hospital perception. For example, prior to the transition, lumbar punctures were a constant source of irritation and friction between the neurology team and radiology, hospital medicine, transplant medicine, and oncology, among others. Willing provision of that small service to the hospital was a major contributor to the positive change in perception of the neurology department. Consultation effectiveness, satisfaction, and customer service are understudied areas in medicine in general, but confidence in consultants is an important component contributing to team care of complicated inpatients.¹³⁻¹⁸

The financial and satisfaction improvements reported here for an academic practice would also be expected to apply to community neurology practices, since many of the driving forces leading to development of NH practices in the community are similar to those experienced in academic settings.^{1,5,10} For example, relieving non-NH neurologists from inpatient duties in academics allows them to focus their efforts in areas they are more productive, such as research and subspecialty

clinics; there is a direct parallel in freeing up outpatient-based community neurologists to serve clinic patients more effectively. Two particularly relevant points to take away would be that financial support from the hospital is critical to develop a sustainable program for inpatient neurologic coverage and that customer service is a key driver for providing quality inpatient neurologic care.¹⁹⁻²¹

These results suggest that academic NHs can simultaneously improve resident supervision and reduce the dependence of inpatient services on resident workload. The advantages of academic NHs with regard to resident education have been discussed in several recent reports, and those reports are supported by the experience of internal medicine in the transition from traditional to hospitalist services.^{8,9,22-24} The potential benefits of improved resident supervision on patient care have received less attention.²⁵ Our data indicate concern from referring services about lack of resident supervision and its impact on patient care prior to the transition to our new care model. The perceived improvement in resident supervision was paralleled by increased confidence in the clinical care provided.

This study has several limitations. First, it was primarily observational in nature, so there was little control with regard to other potential confounding variables. For example, survey data were collected in a prospective manner, but data collection did not start until after 1 NH had started work. Narrative comments suggested that it already had an impact on perception of neurology services, so the true impact of NHs may be underreported in these data. Second, as described in the Methods, although revenue data were available for NH and non-NH neurologists alike, it was not possible to extract exact cost data related to neurology coverage in the hospital for non-NH neurologists. In addition, we did not include any costs not directly related to salary or fringe benefits (continuing medical education, travel, administrative support, etc). These costs were impossible to tease out reliably, so we made the assumption that they would be similar for NH and non-NH faculty members. Third, the survey outcome measures were subjective; perceived quality of care is not equivalent to actual quality. Ideally, quantification of specific items, such as ED length of stay, hospital length of stay, morbidity, mortality, and readmissions, would be measured before and after implementation of changes such as institution of a NH program and collaborative comanagement. We are currently in the process of analyzing those data, but such a study is not without confounding variables, and in a hospital environment that is constantly changing in all aspects, determining the effect of a single variable is exceedingly difficult. Neurology coverage is already seen as critical for most hospitals, so the key goal is providing the highest possible value per dollar spent. Regardless, a positive collegial interaction and perception of quality care would be expected to improve the function of the entire hospital team caring for a patient from the ED through discharge.^{16,18} Fourth, with regard to educational impact, although anecdotal reports from neurology and internal medicine residents have been uniformly positive, we do not have detailed survey data from learners over time.

Finally, there were 2 major changes to neurology services in 2014: switch to complete coverage by NH neurologists and switch to a neuromedicine service with collaborative comanagement for patients previously on the independent neurology inpatient team. The individual impact of each change is impossible to delineate, but anecdotal evidence suggests both have been significant. It is clear that there is a substantial difference perceived between NH and non-NH faculty with regard to efficiency and enthusiasm for patient care, clinical acumen, and skill as a teacher by all involved parties, including referring services from across the hospital, nursing staff, residents and medical students, and patients.

At the same time, benefits from the combined neuromedicine service include an enhanced sense of teamwork between neurology and internal medicine, improved medical care for neurology inpatients, and shorter wait times for patients being admitted from the ED. Elimination of any argument about appropriate admitting service from the ED has been a major boon. One additional advantage has been improved neurologic care for other patients throughout the hospital. Collaborating with hospital medicine to care for patients who would have previously been on the independent neurology service has saved neurology provider time. Using that "extra" time has allowed NHs to provide a similar level of collaborative care to patients on other hospital services, including oncology, transplant, and surgery, which has met with extremely positive feedback.

Despite interpretive limitations, the magnitude of the financial and customer service improvements induced by this change in care model was substantial and convincing. The costs associated with inpatient neurologic care cannot be completely overcome by professional fee revenue, but neurology is a critical service that supports essentially every other service throughout a hospital, including emergency medicine, hospital medicine, oncology, transplant medicine, and general, cardiac, and neurological surgeries. Robust neurology coverage allows these other services to operate at their full potential, and a NH model of care can maximize value for neurology practices and hospitals.

Appendix A

Emory University Hospital Neurology Consult Service Survey

[All questions scored on a Likert-like scale from poor (1) to excellent (5)]

1. Please rate the time to initial consult at EUH (time from initial page to bedside evaluation by neurologist).
2. Please rate the time to receive initial recommendations at EUH (time from initial page to follow-up with referring team).
3. Please rate the overall timeliness of neurology evaluations and recommendations at EUH. Please provide specific examples (positive or negative) if applicable.

4. Please rate the professionalism, friendliness, and rapport of neurologists toward you as the referring team at EUH. Please provide specific examples (positive or negative) if applicable.
5. Please rate the supervision of neurology residents by neurology attendings at EUH.
6. Please rate the availability and accessibility of the attending neurologist to your service as the referring team at EUH.
7. Please rate the overall communication between neurology and you as the referring team at EUH. Please provide specific examples (positive or negative if applicable).
8. Please rate the clinical quality of neurologic consultations and recommendations at EUH.
9. Please rate the quality and timeliness of consultation follow-up at EUH.
10. Please rate the overall quality of neurology consultations at EUH. Please provide specific examples if applicable.
11. Please provide additional comments if applicable.

Author's Note

Because this was a quality improvement project it was exempted from Emory University IRB approval. There was no patient contact and patient level data was not accessed or analyzed, so informed consent was not necessary.

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Declaration of Conflicting Interests

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