

The Role of PDs and Chairs in Addressing the Shortage of General Neurologists: Point-Counterpoint



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Learning Objectives

1. Define the current state and future need for general neurologists in the community and in our medical schools and training programs.
2. Discuss the role of program directors in shaping career paths of trainees.
3. Discuss the role of department chairs in faculty recruitment and job descriptions.

The Scope of the Problem

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February 27, 2023

Modern Neurology Training Is Failing Outpatients

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JAMA Neurol. 2023;80(4):333-334. doi:10.1001/iama.neuro.2022.5490

DOI: 10.1111/ene.16237 • Corpus ID: 268730359

General neurology: Current challenges and future implications

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Published in [European Journal of Neurology](#) 28 March 2024 • Medicine

Welcome to the mainland: general neurology's role in rescue from the islands of subspecialisation

[Steven Lewis](#) • Published in [Practical Neurology](#) 24 May 2024 • Medicine

[To Subspecialize or Not, That Is the Question for US and Eur... : Neurology Today \(lww.com\)](#)

The Match

- Neurology is now a competitive match- in 2023, approximately **46%** of those applying for neurology **did not match**
- **99% of positions filled**
- Between 2021 and 2031, an estimated **3% job growth** is projected for neurologists (2)
- By 2025, demand for neurologists is projected to increase to **21,440** (3)

| Specialty | No. of Programs | No. of Positions Offered | No. of Positions Unfilled | No. of Applicants (MD Seniors) | No. of Applicants (Total) | No. of Matches (MD Seniors) | No. of Matches (Total) | % Filled (MD Seniors) | % Filled (Total) |
|-----------|-----------------|--------------------------|---------------------------|--------------------------------|---------------------------|-----------------------------|------------------------|-----------------------|------------------|
| Neurology | 148 | 878 | 1 | 666 | 1,676 | 466 | 877 | 53.1% | 99.9% |

1. nrmp.org, “Advance Data Tables: 2023 Main Residency Match®.” 2. bls.gov, “Occupational Outlook Handbook: Physicians and Surgeons.” 3. aan.com, “The Doctor Won’t See You Now? Study: US Facing a Neurologist Shortage,” April 2013.

ACGME Requirements for Neurology Residency

- 6 months outpatient
 - Continuity clinic (either one session every week or 5 sessions a week every 6th week) = 3 months of outpatient
 - 3 additional months of outpatient
- 6 months of inpatient
- 3 months child neurology
- 3 months elective
- 1 month psychiatry

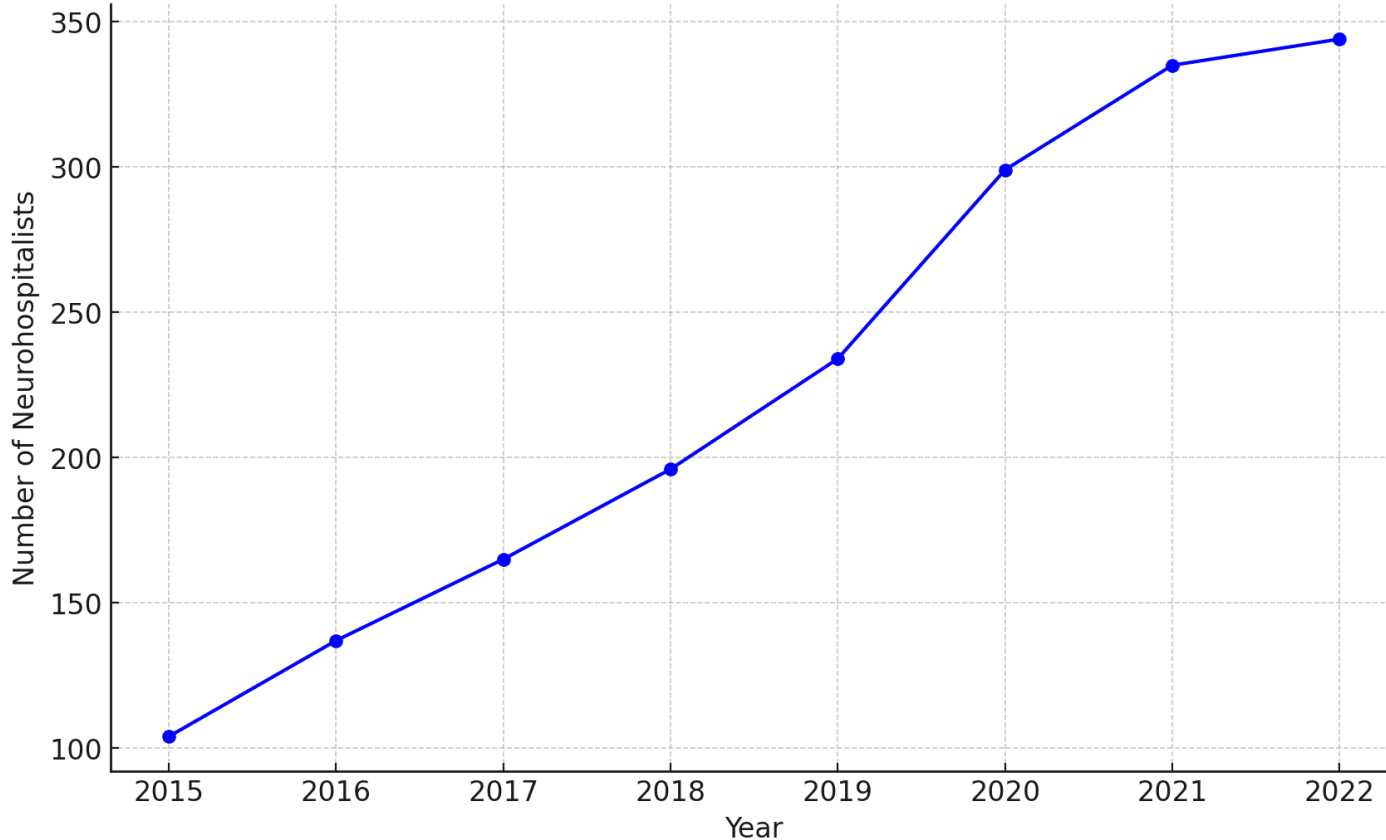
There is no ACGME cap to admissions leading to residents covering inpatients rather than focusing on outpatient training

Fellowship Choice

- PGY-3 Residents are preparing applications now (for fellowships starting in 2026)
- Over 30 sub-specialty fellowships to choose from (including neurohospitalist, teleneurology, general neurology)
- 90% of neurology residents go into a fellowship
- 54% felt the fellowship application process begins too early. Approximately 44% felt it should be in the second half of the PGY-3 year and 43% preferred the first half of the PGY-4 year.

Trends in Sub-specialization

Growth of Neurohospitalists in the United States (2015-2022)

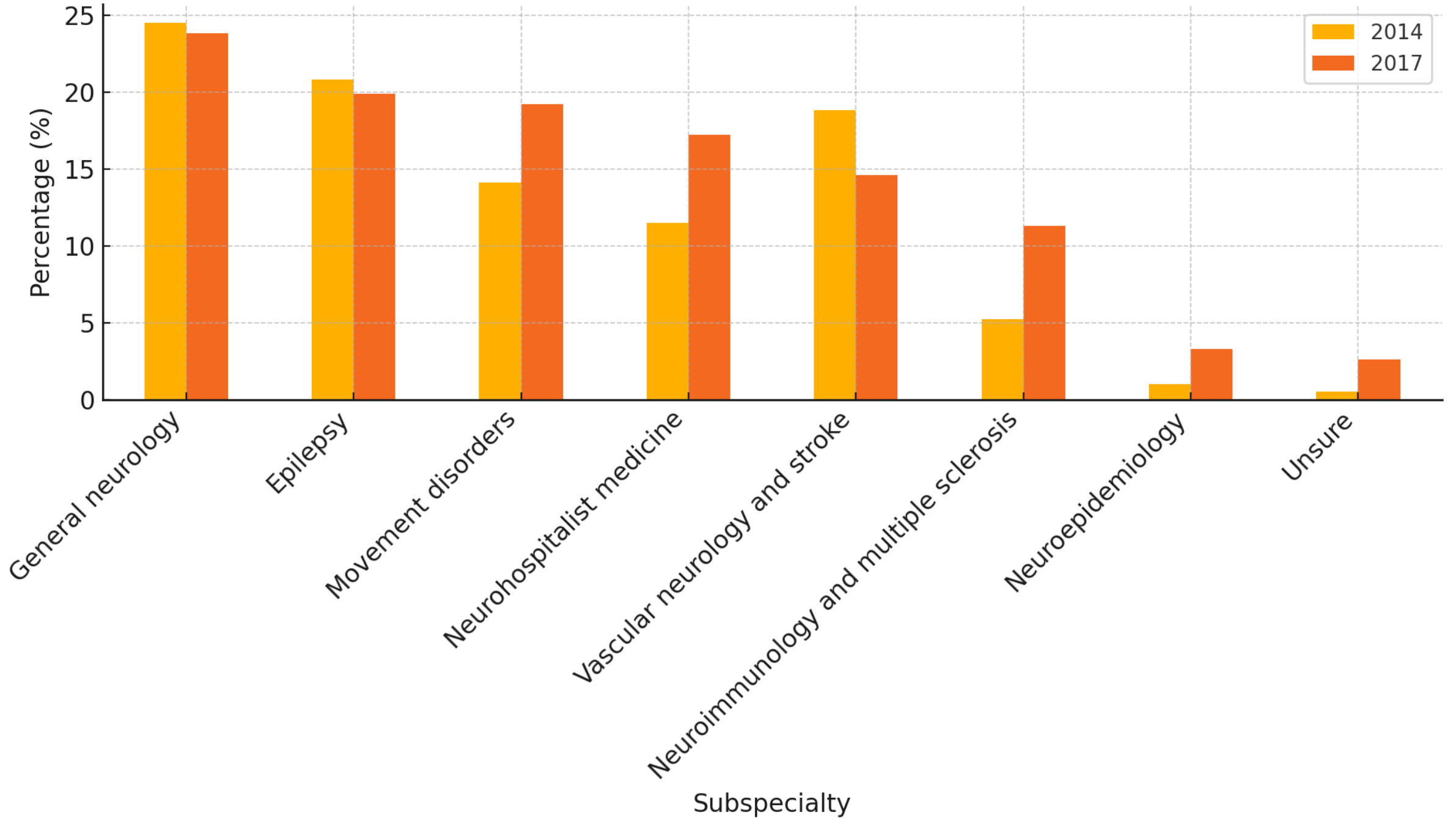


Moving Forward Into the Future

By 2025, it is estimated that more than 20,000 neurohospitalists are needed if the use and delivery of care remains unchanged. The shortage of neurohospitalists will increase. Neurohospitalists will continue to be leaders in implementing efficient processes and technology to allow for treatment of patients.

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Top 5 Subspecialties in 2017 and 5 Subspecialties with Most Change (2014 to 2017)



Outpatient Neurology

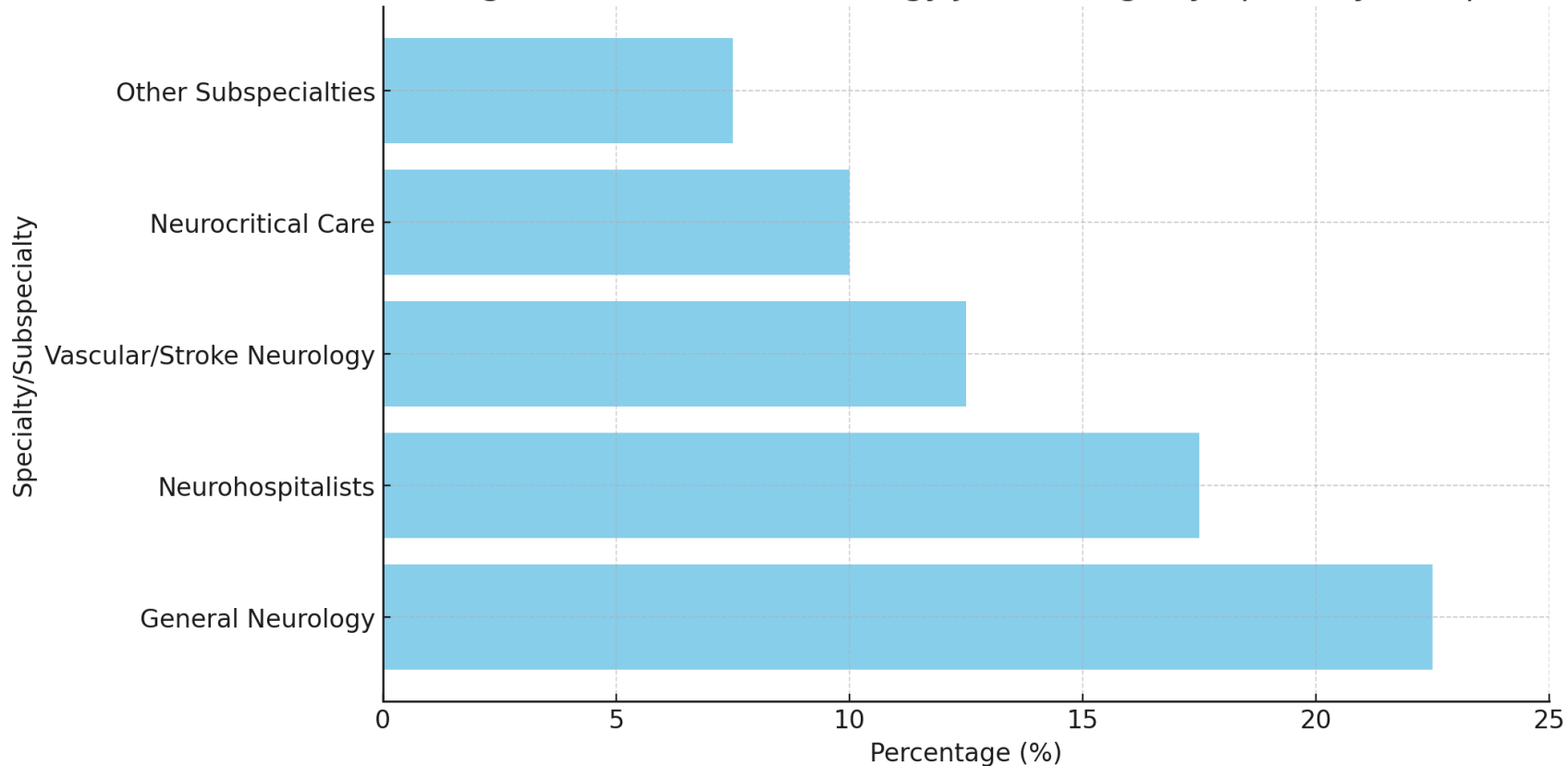
- 25% plan to practice general neurology post-fellowship
- 46% of residents reported they did not have enough outpatient exposure before making fellowship decisions (14% of child neurology residents)
- Approximately half of residents have exposure to General Neurology practices in their community
 - For other half of residents, Resident Continuity Clinic is their Only exposure to Outpatient Neurology (comprises less than 20% of residency training)

The Resident Continuity Clinic Experience?

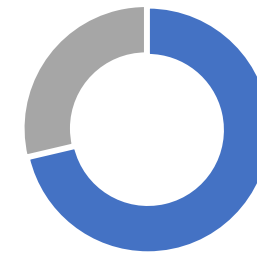
1. Longitudinal experience following panel of diverse patients
2. Clinical and communication skills and long-term care management
3. Supervised by attending comfortable with general neurology
4. Teaches administrative aspects of outpatient care
5. Prepares residents for independent practice in outpatient setting
6. Provides mentorship in general neurology
7. Residents are evaluated and given feedback to support learning and professional growth

AAN Career Center – Today's Jobs

Percentage Breakdown of Neurology Job Postings by Specialty/Subspecialty



RosmanSearch Client Needs, 2023

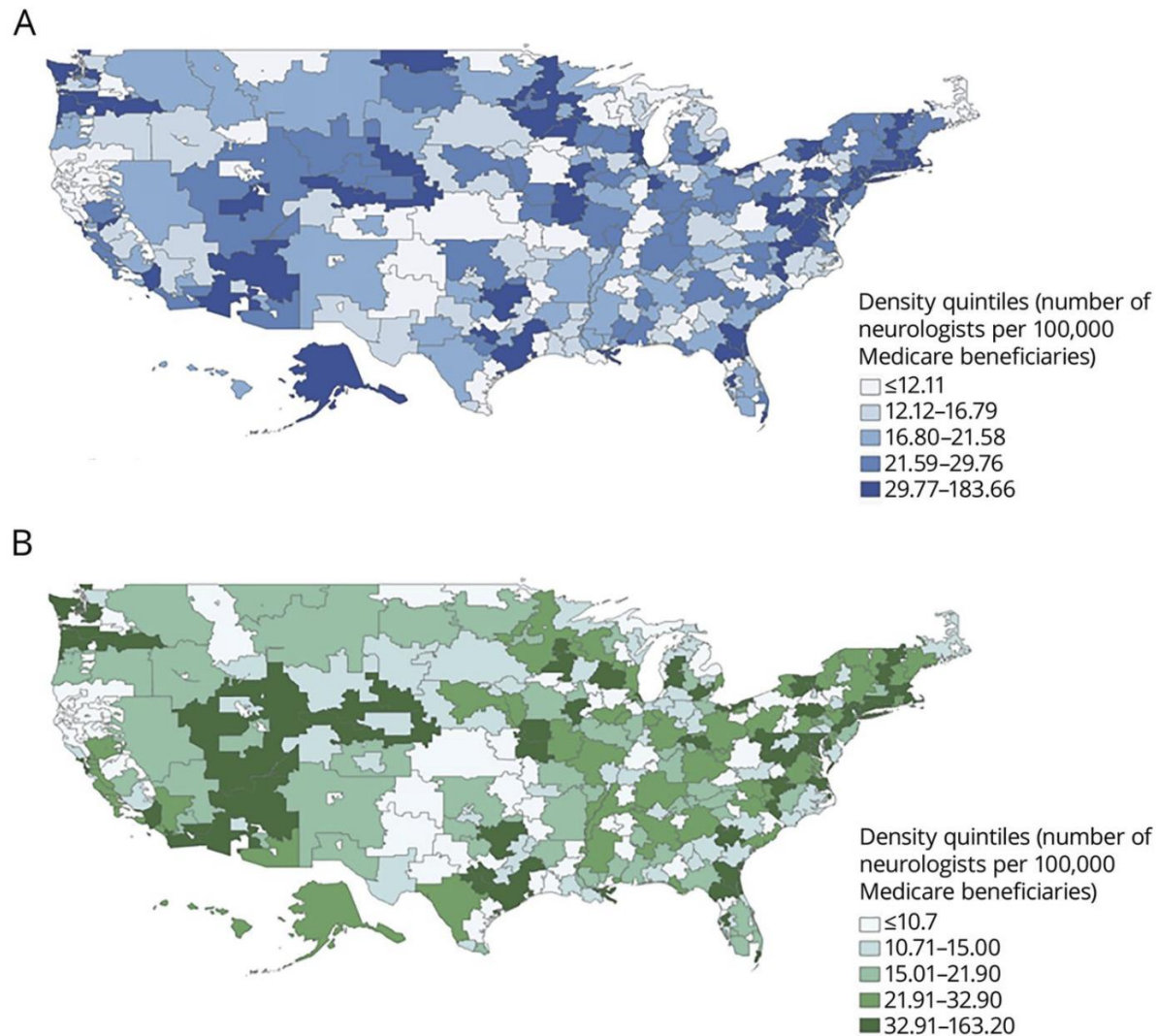


- Need General Neurologist
- Need Subspecialty Neurologist

After Fellowship

- How many sub-specialty trained neurologists feel willing and able to see general neurology patients?
- “You are all board-certified neurologists.”
- Neurologists in the highest neurologist density regions performed an average 50% fewer office visits compared with neurologists in the lowest neurologist density regions
- Wait-times for neurology appointments are >30 days in areas with "surplus of neurologists"

Figure Geographic Distribution of Neurologists at Hospital Referral Region Level



Medicare
Data

AAN
Membership
Data

Lin CC, Callaghan BC, Burke JF, et al. Geographic Variation in Neurologist Density and Neurologic Care in the United States. *Neurology*. 2021;96(3):e309-e321.

US Efforts

- The American Academy of Neurology's (AAN) General Neurology (GN) Task Force made 23 recommendations aimed at improving the general neurology workforce. These recommendations include:
 - 1. Reviewing Population Needs:** Assessing the neurological care needs of different populations to ensure the workforce is aligned with demand.
 - 2. Enhancing GN Training Programs:** Strengthening training programs for general neurologists to better prepare them for the evolving needs of patients.
 - 3. Addressing Workforce Shortages:** Implementing strategies to increase the number of general neurologists entering the workforce.
 - 4. Improving Access to Care:** Enhancing access to neurological care for underserved and rural populations.
 - 5. Continuing Education:** Providing ongoing educational opportunities for general neurologists to keep up with advances in the field.

General Neurology – Variation World-Wide

EAN Task Force on General Neurology

The efficient work of the General Neurology TF after its creation in 2021 culminated in the recently published [white paper on general neurology](#) outlining the current challenges and future implications. This was a collaborative work with leading global neurological societies (*AAN, AFAN, ANZAN, AOAN, EFNA, PAFNS, RRFs, and WFN*). The Taskforce then met with the EAN Board Members, and a decision was made that, due to the extremely important nature of general neurology as a field, the Taskforce has a right to further existence, moreover, the majority of the EAN Board are now active members of the Taskforce. The Taskforce plans to investigate the current situation further by approaching the RRFs and the EAN National Neurological Societies with a survey with nuanced questions. Additionally, an official letter was sent to the aforementioned neurological societies enquiring on their willingness to collaborate, many of which have already confirmed their participation in the TF.

Planned initiatives

- EAN White Paper on General Neurology
- Surveys on general neurology, incl. RRFs and EAN National Neurological Societies
- Training, curriculum, and CME
- Potential Mentorship and Scholarship programmes
- Future of general neurology


General Neurology – Variation World-Wide

- **Survey Results from AAN 2023:**


- **28%** of AAN members reported general neurology as their main field of activity

- **European Academy of Neurology**

- **75%** of respondents identified general neurology as their main activity
- **65%** of residency was spent in general neurology
- Only **50%** considered general neurology training during residency sufficient

ORIGINAL ARTICLE |  Open Access | 

General neurology: Current challenges and

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First published: 28 March 2024 | <https://doi.org/10.1111/ene.16237>

This is a white paper of the European Academy of Neurology (EAN) Ger collaboration with representatives of American Academy of Neurology Australian New Zealand Association of Neurologists (ANZAN), Asian and Neurology (AOAN), European Federation of Neurological Associations (Neurological Societies (PAFNS), Residents and Research Fellows Section Federation of Neurology (WFN).

C. L. A. Bassetti, T. Berger, P. Berlit, P. Boon, J. Kruja, E. Moro, S. Ozturk, Accorroni: RRFs. A. Arnesen: EFNA. H. B. Basri: AOAN. A. Charway-Felli: Markowski: AAN. M. T. Medina: PAFNS. P. McCombe: ANZAN.

TABLE 1. Progressive reduction of general neurologists.

| Year | % | <i>n</i> |
|------|----|----------|
| 2014 | 46 | 3505 |
| 2015 | 40 | 3896 |
| 2016 | 37 | 4153 |
| 2017 | 36 | 4369 |
| 2018 | 35 | 4401 |
| 2019 | 33 | 4364 |
| 2020 | 31 | 4208 |
| 2021 | 31 | 4162 |
| 2022 | 29 | 4037 |
| 2023 | 28 | 3930 |

Note: The table shows the percentage and absolute number of American Academy of Neurology members identifying themselves as general neurologists (2023 American Academy of Neurology Demographics Report).

Residency in Neurology (5 years)

Common Trunk
Years 1-3

Specialized Trunk
Years 4-5

General rotations

Early "fellowships"***

General Neurology*

Neurophysiology**

Clinical Fellowships

Academic Fellowships

Board examination

Advanced Fellowship (1-2 years)

General Neurology Track

«General Neurology Fellow»
Several clinical rotations

«General Neurology Attending»
4 rotations*

Specialized Neurology Track

«Specialized Neurology Fellow»
Specific clinical and academic rotations

«Specialized Neurology Attending»

* Neurorehabilitation, inpatient service, outpatient clinic, emergency neurology

** EEG, ENMG, sleep, neurovascular ultrasound (two rotations)

*** Rotations in different subspecialties in the late phase of residency.

Westchester Medical Center Neurology Residency

- General neurology residency track
- General neurology fellowship
- Certification in EMG track during residency
- Continuity clinic beginning in PGY-1 year
- But...we still have front-loaded program and only 4 weeks of elective and 6 weeks of outpatient education during PGY-2 year

Actionable Steps for PDs

- Review and revise neurology residency curricula to ensure adequate and early exposure to outpatient neurology.
- Implement structured training programs that cover a wide range of outpatient scenarios and patient care needs.
- Engage in discussions and collaborations with healthcare leaders to advocate for policy changes supporting outpatient training.

Role of Chairs

1. Curriculum Enhancement and Training:

- Integrate GN into Residency Programs
- Structured GN Curriculum
- Improve Outpatient Experience

2. Mentorship and Career Development

- Mentorship programs
- Career pathways
- Recognize and reward excellence

3. Academic and Research Opportunities

- Promote academic career paths
- Support research in GN

4. Advocacy and Public Engagement

- Fair reimbursement models
- Raise awareness and promote the role of GN in providing holistic and complex neurological care

5. Role Modeling and Leadership

- Lead by Example
- Encourage a balanced workforce