

OVERVIEW

Advanced Practice Providers How They Fit into Neurology Departments

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APP

Advanced practice providers (APPs) are qualified medically licensed health care providers, such as Nurse practitioners (NPs) Physician assistants (PAs), but also includes CRNA, certified nurse-midwives, clinical nurse specialists

Nurse Practitioner

- For NP one must complete a nursing-related 4-year bachelor's degree and become RN (in some instances Asso Degree with RN credential possible). Then, either a Master of Science in Nursing or a Doctor of Nursing Practice degree is required, with 2–4 additional years of advanced education
- NP can be certified by American Academy of Nurse Practitioners or American Nurses Credentialing Center
- NP recertification requires 75 continuing education (CE) hours every 5 years within the NP's specific advanced specialty, and a minimum of 1,000 clinical practice hours, also requires pharmacotherapeutics CEs
- In 22 states, NPs may work independently of physicians

Physician Assistant

- Typically requires 3 years training post Bachelor's degree
- Includes > 2,000 clinical rotations hours
- Advanced curricula can lead to Master Degrees in Physician Assistant Studies or a Master of Health Science or Medical Science degree
- Prior to practice, PA must pass the Physician Assistant National Certifying Examination, administered by the National Commission on Certification of Physician Assistants
- PA recertification requires 100 continuing medical education credits every 2 years and passing the Physician Assistant National Recertifying Exam every 10 years
- In all states, PAs must work under a physician's supervision.



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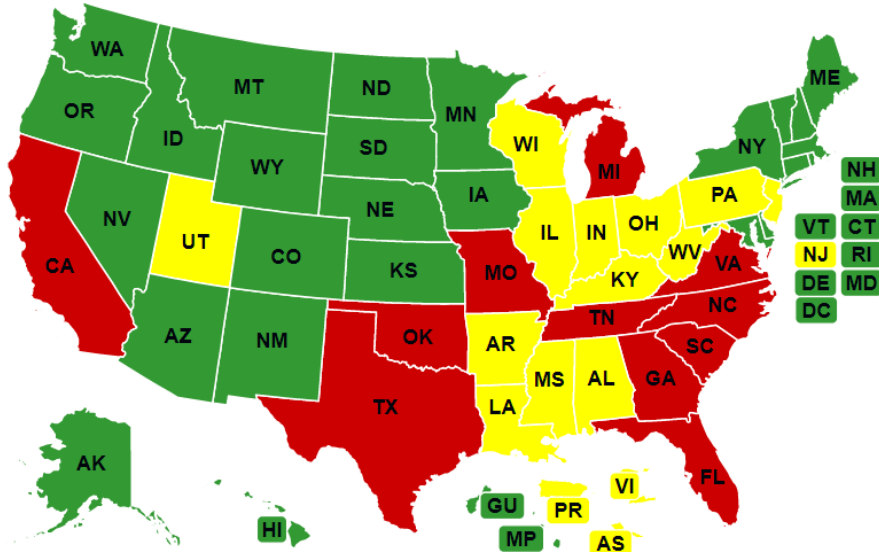
Black SB, et al. *Neurol Clin Pract*. 2016 Dec;6(6):538-542.

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2023 NP State Practice Environment



Legend



- **Full Practice**
No physician oversight required
- **Reduced Practice**
Collaboration agreement with physician required
- **Restricted Practice**
Physician supervision required



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- Currently 40 states report shortages of neurologists
- States with adequate supply overall may have areas of limited access to neurologic care, most often in rural locations “neurology deserts”
- Demand for neurologists will grow faster than the supply in the next decade*
 - In 2012, there was an 11% shortage of neurologists in the United States
 - By 2025, that number will grow to a 19% shortage
- Trend is towards value-based payment models, which will determine reimbursement based on outcomes and quality measures
- A team-based approach to patient care is necessary to achieve desired high-quality outcomes

<https://www.aan.com/advocacy/neurology-advanced-practice-providers-position-statement>



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THE AAN POSITION

- The integration of advanced practice providers (APPs) into the field of neurology to form care teams and create models of care is crucial to improving access, quality, and continuity of care of people with neurologic disease.
- It is necessary to recognize the accepted scope(s) of practice and allow each member of the neurology care team to practice to the full extent of their professional license, training, and abilities.
- The AAN continues to support policies that promote physician-led multidisciplinary care teams.
- The AAN supports the expanded collaborative role that APPs play in neurologic care.



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ROLE OF APP IN NEUROLOGY PRACTICE

Ambulatory setting

- Can see established or new patients
- Can perform patient education, counselling, brief standardized testing, e.g., brief cognitive assessment such as MoCA, EDSS rating
- Can perform procedures, e.g., Botulinum toxin inj or Occipital Nerve Block for headaches, programming of neuromodulation devices, e.g., VNS, DBS
- Can assist in running IV infusion center

Inpatient setting

- Can be embedded into inpatient teams along with Neurohospitalist, EMU, stroke team, neurocritical care
- Can perform E & M services, assist in hospital admissions, daily rounds
- Can perform procedures as permitted per laws in the state, e.g., LP, Art line or Central line placement, ET intubation or Vent management, etc
- Can be a bridge from inpatient to outpt, e.g., stroke APP can also run a post-discharge follow up clinic



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Billing for APPs

- The E&M service can be billed under Physician NPI or APP's own NPI
- Billing under APP's own NPI (no direct physician involved in the care provided) is reimbursed at 80% of physician fee schedule
- For Outpt services to be billed under "incident to" (to be reimburse at 100% of physician fee schedule)
 - Part of the patient's normal course of treatment, during which a physician personally performed an initial service and remains actively involved in the course of treatment
 - Services performed in physician's office and directly supervised a physician from the practice
 - APP paid by physician's practice and expense to physician's practice
- For inpatient services
 - Physician and APP see the patient on the same day, can be billed at 100% physician's fee schedule
- New proposed rule by CMS starting Jan 2024, both the ACP and the MD will be required to document how much time they spent, and the visit will be billed under the provider who spent more than half of the time during the visit



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Neurology Education for APPs

- APPs do not necessarily train specifically for subspecialties of medicine
- During training for the NP or PA degree, neurology training may be limited to few weeks
- Slowly Fellowships are starting in Neurology for APPs
 - Some fellowships are combined with Neurosurgery/Neurocritical care
- Quick Web search showed at least 8 Neurology fellowship programs
 - UVA, Duke, MSKCC, Dartmouth, MUSC, Metro Health, Mayo (Arizona), Augusta Uni, Giesinger and OSF Health



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Building successful Neurology APP presence

- Choose candidates wisely
 - APP with prior Neurology/Neurosciences experience, e.g., worked on the neurology office, floor or Neurocritical care unit, neuroscience research
 - Nurse with Neuro credentials Certified Neuroscience Registered Nurse certification (CNRN) or Stroke Nurse Certification (SCRN) by the American Board of Neuroscience Nursing (ABNN)
- Onboarding
 - Training of neurology APP takes time (~ 3-6 months), usually not supported financially
 - Start with wider focus - training ambulatory and inpatient setting
 - Then focus on the specific training for the role
 - For independent ambulatory practices start with fewer simpler diagnoses and build gradually
- Advanced planning for APP's role in the practice
- Poor initial efforts may lead to insecure and frustrated practitioner and may lead to poor retention



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CHALLENGES

Launching APP in practice

- First in the department
- Credentialing and onboarding
- Role of APP in the practice/department
- Faculty's knowledge of APP's background, medical knowledge and skill set
- Faculty's understanding of their responsibility for clinical care provided by APP and billing
- EMR and billing issues
- Neurologic differential diagnoses, challenging cases
- Neuroradiology information
- Variability in approach from different physician mentors



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STRATEGIES for SUCCESS

From APP
perspective

- Neurology is hard and involves lifelong learning
- Ask questions, know your boundaries
- Ask for shadowing in various settings (inpt, stroke, EMU, outpt)
- Establish a buddy system (peer-to-peer, faculty mentor)
- Participate in resident educational conferences
- Create self-directed learning, identify external resources
- Learn EMR and notes/templates
- Learn to interpret CT scans, MRIs, EEG reports and then review images yourself



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STRATEGIES for SUCCESS

From Department
perspective

- Plan ahead
- Define role (generalist vs specialist) and expectations (include physicians, support staff as well)
- Develop a Curriculum- Onboarding template, Shadowing schedule (inpt, outpt, EMU, stroke service) , education resources (resident lectures, create a library, funding for conferences)
- Provide adequate time for training (3-6 months) Shadowing followed by gradual increasing responsibility
- Identify and assign buddies (peer-to-peer and faculty mentor)
- Educate physicians about their role as supervisor along with responsibility and liability for such a role, educate nurses and support staff about their role and expectation
- Develop a policy for challenging patients, e.g., request to be seen only by a “real doctor”
- Invest in time and resources upfront on onboarding to prevent burnout and departures
- Develop strategy to support physician mentors (compensation for their time and effort)
- For research or other roles, specific training for those roles is necessary
- Utilize experienced APPs to mentor, educate new hires
- Expect and plan for revolving door as tenure of an APP may be shorter than a faculty



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How do we do it

- Total of 7 APP
- 3 with inpt/oupt combination
- Epilepsy NP : EMU in morning- Amb in afternoon (responsible for Epilepsy conf, Surgery coordination, Epilepsy support group)
- Stroke NP : Rounding in morning (after stroke team signs off - before discharge), 2 week follow up, works with Stroke program coordinator
- Ambulatory APP: General neurology, headache program, Botox, Nerve blocks, some specific program needs, etc
- Community Hospital NP: Morning half day rounds on admitted patients on hospitalist service provides follow up on consults (consult coverage provided by Teleneurology), Afternoon Ambulatory practice



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Neurology *fellowship or Residency* for APPs

1. UVA: <https://www.aan.com/advocacy/neurology-advanced-practice-providers-position-statement>
2. Duke: <https://neurology.duke.edu/education-and-training/advanced-practice-providers-program>
3. MSKCC: <https://www.mskcc.org/hcp-education-training/fellowships/advanced-practice-provider-np-pa-fellowship-neurology-neurosurgery>
4. Dartmouth: <https://appap.org/appap-programs/dartmouth-health-neurology-advance-practice-provider-fellowship/>
5. MUSC: <https://medicine.musc.edu/departments/neurology/education/fellowships/advanced-practice-provider>
6. Metro Health, Cleveland: <https://www.metrohealth.org/careers/provider-opportunities/advanced-practice-provider-opportunities/neuroscience-fellowship-for-advanced-practice-providers>
7. Mayo (Arizona): <https://college.mayo.edu/academics/health-sciences-education/nurse-practitioner-or-physician-assistant-neurology-fellowship-arizona/application-process/>
8. Augusta Uni (Neurocritical care): <https://www.augusta.edu/mcg/neurology/sections/neurocritical/ncc-fellowship.php>
9. Geisinger : <https://www.geisinger.org/health-professions/health-professions/neuroscience-adv-pract-residency>
10. OSF HealthCare: <https://www.osfhealthcare.org/locations/colleges-schools/advanced-practice-provider-fellowship-program/>
11. Carilion Clinic: <https://www.carilionclinic.org/gme/neurology-np-pa-fellowship#about>



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Resources

- <https://www.aanp.org/practice/clinical-resources-for-nps/clinical-resources-by-therapeutic-area/neurology>
- Onboarding resources: [Advanced Practice Provider and Care Team Resources | AAN](#)



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DISCLOSURES

No relevant disclosure

Statements made here are based on my understanding of the field and should not be considered a legal opinion

Questions? Contact Jen Hurley at jhurley@myana.org.



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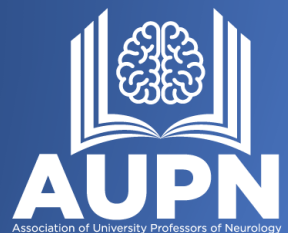
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The finances of outpatient APPs in an academic neurology practice

Dane Chetkovich, MD, PhD

Vanderbilt University Medical Center



Why Hire outpatient APPs?

- Increase patient volumes and improve access
 - Shifting follow-up visits to APP allows MDs to see more new patients
 - Patients can usually be seen more quickly by the APP when urgent situations arise
 - Faster hospital discharge follow-ups
- Increase touch points for patients with chronic illness
- Maximize MD acuity
 - MDs can see more new patients
 - Complex patients can remain with MD

APP structure at VUMC

- 1.0 FTE= 8 clinic sessions and 1 administrative day
- Each session contains 8 x 30 minute blocks
 - 30 minute return patients
 - 60 minute new patients
- Total APPs-3 inpatient, 26 outpatient
 - Sleep- 8
 - General/stroke- 8
 - Cognitive- 3
 - Neuromuscular- 2
 - Epilepsy- 2
 - Movement- 1
 - MS- 1
 - Oncology- 1

APP structure at VUMC

- Each division has 1 main and 1 back up supervising physicians
 - Supervisor manages administrative issues and gives lectures
 - 5-10% administrative support for divisions with >5 APPs for main supervisor
 - Value-add compensation bonus for <5 APPs for main supervisor
 - Doc of the month in division signs charts and gives a lecture
- 2 lead APPs
 - 10% administrative time support

APP structure at VUMC

- Onboarding (4 months)
 - 1 month shadowing only- all docs and APPs in division
 - 2 month with 66% template
 - 1 month with one 30 minute block reduction per session
 - Must develop relationship with docs to build referrals
- New Patients
 - General- new headaches
 - Neuromuscular- new neuropathy

APP structure at VUMC

- APPs bill independently
- APPs build own patient panel
- Fill rate 80-100% of MD utilization
- Incorporation in RVU-based comp model
 - Stopped removing “complicated” patients
 - Built in add-on slots
 - Has led to high retention and recruiting in department

APP Finances- structure

- Base pay 50th percentile MGMA Academic
- MGMA RVU Data: 75%= 1943*
- RVU breakeven point: Salary + Fringe + PDF + Malpractice/ tax adjusted \$/RVU= 2300
- Assigned RVU Target (based on 50th percentile practice history)= 2550
- This structure produces 12% margin on cost basis at benchmark performance
- Excess RVU paid out at 38% of collections

APP Finances- FY23 performance

- 86% of APPs earned RVU bonus
- Bonuses 1-40% of base salary (median 8%)
- Benchmark Margin 12%; Actual performance= 25% margin on cost basis

Conclusions

- VUMC neurology utilizes an independent billing APP model
- APPs are included in the compensation plan
- RVU targets set higher than benchmark and breakeven points
- Most APPs can easily exceed benchmarks
- In this model total APP compensation exceeds MGMA 75%
- In this model APPs are generally profitable in the outpatient setting
 - APP Salary: 10% of department salary cost
 - APP Collections: 15% of department collections
- MDs and APPs overall happy, with excellent APP recruiting and retention

Neurology APPs at UNC

Gwenn Garden, MD/PhD
Distinguished Professor and Chair
UNC Chapel Hill





DISCLOSURES

Nothing to disclose



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Neurology APPs at UNC Chapel Hill

- Overview
- APP onboarding, leadership and management structure
- Subspecialty APPs
- General Neurology Program
- Multi-disciplinary Program



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Neurology APPs at UNC Chapel Hill

- Inpatient – Neuro-ICU \$ 😞
- Research - \$ 😊
- Ambulatory Clinic –
 - Subspecialty clinics - \$ 😊
 - Procedures - \$ 😊
 - Multidisciplinary clinic - \$ 😞 ➡ 😊
 - General Neurology - \$ 😊



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Neurology APPs at UNC Chapel Hill

Onboarding process for new APPs

- Individual skills assessment
- Weekly didactic training through on-line portal
- Paired with sub-specialty provider
- Shadow within the group for 2-8 weeks
- Training templates
- Revisit skills assessment monthly for 4-6 months



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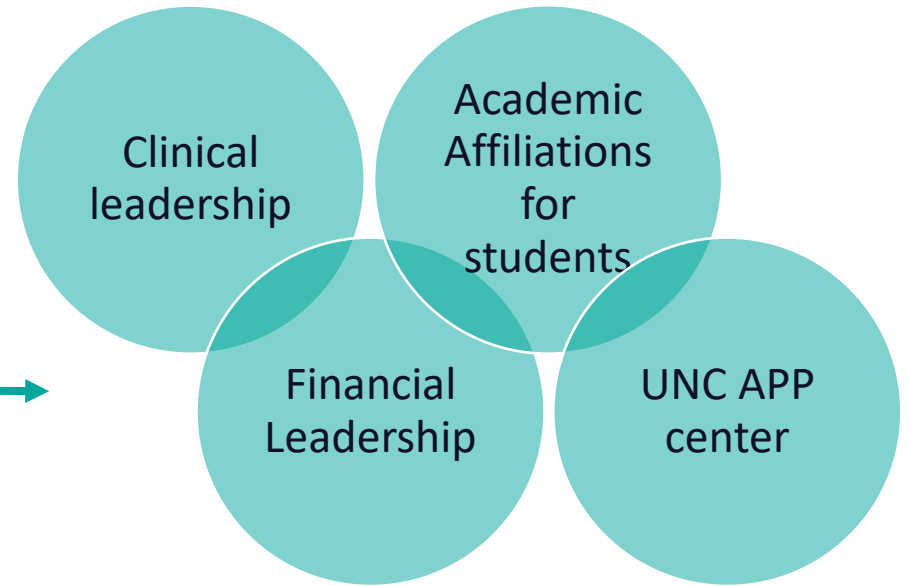
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Collaborates



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Neurology APPs at UNC Chapel Hill

General Neurology Program

- General Neurology APP training program is 6 to 12 months
 - During training – notes are co-signed and MD bills (this is costly)
- Goal is independent practice for new and return patients.
 - MD always available for consultation
- Patients can be referred to “new” patient slots for sub-specialty consultation.
 - Some patients are triaged to sub-specialty groups
- Run virtual clinic for DOC contract



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Neurology APPs at UNC Chapel Hill

Sub-Specialty Clinic Model -

(Child, Cognitive, Epilepsy, Movement, MS, NM, Sleep, Stroke)

- Group practice model
 - Annual/new patient letters supporting role of APPs in group practice
 - MD template is 3 new, 2 return patients per half day
 - APP template generally 100% return patients (with some exceptions)
 - Cancellations filled via Epic automated scheduling
 - Schedule utilization of APPs > 90%, no show rate < 7%



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Neurology APPs at UNC Chapel Hill

Multidisciplinary Clinic Model - ALS

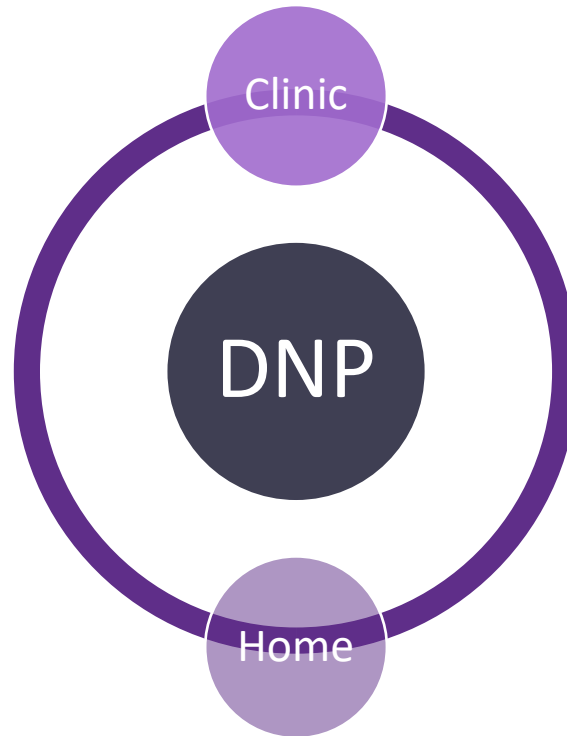
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VETERANS ADMINISTRATION

G-TUBES AND VENTILATION

VENDORS AND DME

INSURANCE AUTHORIZATIONS

CODE STATUS AND ADVANCED
DIRECTIVES



PATIENT OUTREACH, PALLIATIVE
AND HOSPICE

CARE COORDINATION AND
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