ZSFG CHIEF OF STAFF REPORT
Presented to the JCC-ZSFG on August 23, 2022
August 2022 MEC Meeting

CLINICAL SERVICE REPORT:

Neurology Service – J. Claude Hemphill III, MD, Chief

The highlights of the report are as follows:

1. Mission and Scope of the Clinical Service
   a. Missions
      - Clinical Mission – To provide the highest quality neurology specialty and selected subspecialty services for patients of ZSFG and SFHN within the context of a complementary academic agenda
      - Research Mission – To support and encourage clinical and translational research complementing the clinical mission, focusing on the following: (1) Acute Care- stroke, TBI, brain injury after cardiac arrest, seizures; (2)HIV neurology; and (3) Global Health, Equity
      - Teaching Mission – To support UCSF teaching and training of students and post-doctoral trainees in neurology

   b. Clinical Scope
      - Inpatient Services – Personnel for all these services include attending physicians, residents, and medical students. Services for General Consultation and Neurocritical Care also have interns.
        - General Ward Service – inpatients with primary neurological problems (not in ICU); major teaching focus for residents and students
        - General Consultation Service – inpatients with consultation requests from a primary service, majority of which are from Emergency Department; consult services especially consult residents are first point of contact with Neurology for emergency such as "Code Stroke"; calls from SFHN providers outside ZSFG; key rotation for resident development
        - Neurocritical Care Service – patients in ICU or Neurology Service; co-manage patients in ICU or Neurosurgery Service; consult/co-manage patients in ICU with critical neurological problems on cardiology/MICU services (post-arrest) and trauma surgery; attending and fellow coverage for Acute Stroke Activations
      - Outpatient Services
        - General Neurology Clinics – venue at 4M; big clinics operating at 3 half days/ week with 2 half days for new patients (≈25 patients) and 1 half day for follow-up (≈60 patients); staff includes attendings, residents, NPs, students
        - Sub-Specialty Clinics – Stroke Clinic (weekly), Geriatrics Neuro (biweekly), and Neuroimmunology (monthly); Neuromuscular (monthly), and Lumbar Puncture (biweekly)
        - Issues
          - New Patient Clinic
            -High no-show rate causing difficulty for providers to have individual panel of patients
            -Data currently unavailable for provider accountability related to number of patients seen and duration of visits
          - Follow-up Clinic – primarily due to physical plant issues
            -No rooms for attending follow-up clinics or separate subspecialty clinics
            -Only 2-3 attendings for 50-70 resident patients
      - Neurodiagnostic Laboratory Services
        - EEG (includes continuous monitoring) - This program has significantly expanded for the part 6 – 8 years with its shift from outpatient to inpatient service.
          - Strong collaboration with nursing
          - Problem with technician staffing even with reasonable number of machines for outpatient and inpatient EEG; goal is to have 7-day coverage for patient safety
          - EEG machines due for upgrading
        - EMG – 1 EMG machine, 1 EMG room, 2 MDs

2. Faculty and Residents
   a. Trainees in Clinical Programs
      - Neurology Residents (UCSF) with assigned ZSFG 'Chief' – 4 daytime residents and 1 night resident
      - Outside service interns and residents – 3 from Neurosurgery UCSF, 2 from Internal Medicine UCSF, and 6 from St. Mary's Med
      - Neurocritical Care Fellows – 2 each month; currently non-ACGME (will probably be ACGME latest 2025); key to ZSFG Stroke Program coverage
      - Medical Students – 4 3rd year students, sub interns and electives, 1st year UCSF students
   b. Attending and Staff
      - ZSFG-Based- There are 8 full-time staff based at ZSFG and around 20 staff who work clinically at ZSFG who are based in other UCSF campuses. Faculty members and administrators were acknowledged for their expertise, experience, and collaborative efforts.
      - Other Attending Staff
        - UCSF (Parnassus & Mission Bay) – There is reliance on collaboration across various parts of UCSF Neurology Department due to strong relationship with parent department.
        - Community Volunteers – Before, about 40% of inpatient/outpatient service was covered by volunteers. Currently, there are none; they have either retired or moved on.
        - Geriatric Cognitive Disorders Clinic at ZSFG – There is a collaboration between the UCSF Memory and Aging Center and ZSFG Geriatrics, DGIM (Division of General Internal Medicine).
   c. Faculty– All faculty members are involved in local and national service. The following were noted:
      - Dr. Eddy Amorim – Writing Committee Member, American Hospital Association (AHA) Post-Cardiac Arrest 2025 Guidelines
      - Dr. Alexandra Brown – Associate Residency Director, UCSF Department of Neurology
      - Dr. Felicia Chow – local and national involvement in Neuro-Infectious Diseases
      - Dr. Claude Hemphill – administrative and research roles in local and international groups
      - Dr. Nicole Rosendale – involvement in diversity and equity aspect at UCSF, ZSFG, LGBTQ+ (national), and others
      - Dr. Vineeta Singh – Vice-Chair, Neurocritical Care Test Committee; 2022 Master Clinician Award (1st awardee chosen from ≈ 130 clinicians), UCSF Department of Neurology

3. Performance Improvement Activities
   a. General – faculty meeting (monthly), morning report (each weekday), professor rounds (twice monthly)
   b. Projects
      - Joint Commission Primary Stroke Center metrics
        - tPA (Tissue Plasminogen Activator) for Acute Ischemic Stroke: DTN (Door-to-Needle) rate by year – Compliance with national metrics dropped significantly during the COVID-19 pandemic (2020) which was a common finding. At ZSFG, the decline was partially due to families not accompanying family members into ED; there were challenges in finding out when strokes started especially in patients who were non-native English speakers. Neurology Service exerted extensive efforts to improve DTN rate as manifested in increased rates since 2021.
        - Count of Embolectomies (from ED)- There has been strong collaboration not only between Neuro-IR and Neurology but also between ED and Anesthesia. Embolectomy is done less than 1 a week for stroke. This procedure has really become routine in care of stroke patients.
      - Resident Duty Hour supervision – Significant improvement work has been accomplished.
        - Major priority of overall Neurology Department – There was an RRC citation. The Neurology Service has been much concerned about PR regarding house staff morale and resident recruitment.
        - Currently no duty hours violation at ZSFG campus – The citation issue was lifted.

  - Corrective Measures – The citation was lifted due to “zero tolerance” policy instituted by the Department Chair to solve the problem.
    - There were neither additional inpatient resident staffing nor additional NP staffing.
    - Inpatient residents are given extra weekday off every 2 weeks.
    - Twice weekly running total report of individual resident duty hours is generated. If at risk, residents are sent home, and attending physicians cover service themselves.
    - Resident rotation length reduced from a month to at times as short as a week.
  - Current State – There are no duty hour violations. However, there has been additional work (sans additional pay) for attendings which is occasionally last-minute/unanticipated, and there has been less continuity of inpatient care. The attending physicians, nurses, and neurocritical care fellows have voiced complaints. Lastly, it has been difficult to fully staff all inpatient rotations (attending preference for Consult over Ward Service).
  - Long-Term Solution – Neurology Service is working with Residency Program and Dean’s Office on a long-term solution.
- Faculty Compensation – parity with UCSF Health
- SURF CPG “Cardiac Arrest resuscitation care exacerbated by the COVID-19 pandemic and opioid crisis” – There is a disproportionately large percentage of cardiac arrest patients due to drug overdoses.

c. Diversity, Equity, and Inclusion- The Neurology Service aimed to see itself as the “Equity Division” within the overall department. There are individual activities emphasizing women leaders, URM (Underrepresented member) in research, national and local diversity, and resident curriculum.

Furthermore, the new program BALANCE (Glo***BAL*** Neurology, ***N***euroinfe***C***tious Diseases, and Health ***E***quity) is being developed and led by Drs. Felicia Chow and Nicole Rosendale within the Department of Neurology (across all various campuses). The BALANCE Journal Club and BALANCE Faculty Panel Series were started in the past year. Additionally, there has been collaboration with residents to create a “resident section”, along with application for 2 NIH training grants.

4. Research – Many research projects with NIH funding were presented. Awards received by faculty members were recognized.

5. Financial Report
   a. Income/Expenses – The Department transitioned from volunteers to full-time faculty. There were efforts to increase faculty compensation. A higher percentage of revenues arise from Affiliation Agreement.
   b. Billable Clinical Activity – This has leveled off over the last 2 years after a huge increase that was disproportionately high in comparison with increase at ZSFG. Without changes, the current volume could be used as a model for future appropriate staffing.

6. Summary
   a. Assets – These include mission-driven junior and rising faculty; strong ties with UCSF Department of Neurology; collaboration across multiple Services; grant support; collaboration with ZSFG; quality of UCSF Neurology residency & fellowships; and reputation of programs.
   b. Challenges – These include change in resident workforce and expectations; EEG staffing; outpatient clinic infrastructure; and absence of Inpatient and Emergency Child Neurology consultation.
   c. Goals – These include planning and implementing better delivery model; adequate staffing of neurodiagnostic (specifically EEG) program; re-engineering outpatient Neurology service; continued capitalization on strong relationships while keeping mission-driven faculty who are also involved in scholarly activities; enhancement of philanthropy; and maintenance of morale with move to new Research and Academic Building.

The various efforts by the Neurology Service certainly exemplify the aspects of True North Goals.

ZSFG CHIEF OF STAFF ACTION ITEMS
Presented to the JCC-ZSFG on August 23, 2022
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Clinical Service Rules and Regulations

- Neurology R&R (Copies sent to Commissioners)
- Neurology Summary of Changes (attached)

Credentials Committee –

A. Standardized Procedures
   - ED RN SP Chest Pain Protocol Revision (Copies Sent to Commissioners)
   - ED RN SP Chest Pain Protocol Summary of Revisions (attached)

Zuckerberg San Francisco General Hospital
1001 Potrero Avenue
San Francisco, CA 94110
August 8, 2022

NEUROLOGY SERVICE

RULES AND REGULATIONS

2022

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NEUROLOGY SERVICE
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I. NEUROLOGY SERVICE ORGANIZATON

The Neurology Service is an academic component of the University of California, San Francisco (UCSF). The Service also, therefore, conforms to the UCSF regulations and policies and to the policies of the UCSF Department of Neurology. These affect particularly: staff appointments; resident training; policies and allocations; medical student teaching programs; research programs; and financial oversight. There are no perceived conflicts between the UCSF policies and the policies of Zuckerberg San Francisco General Hospital, but if a conflict should arise that relates to patient care activities, the ZSFG Medical Staff Bylaws and Rules and Regulations of ZSFG and this document will take precedence.

The Neurology Service conforms to the Medical Staff Bylaws and Rules and Regulations of Zuckerberg San Francisco General Hospital (ZSFG). This document is therefore supplementary, defining some of the specific rules and regulations that pertain to the Neurology Service and its activities.

The Rules and Regulations of the Neurology Service define certain principles, standards of practice and other rules of the organization of the Neurology Service and the duties of its members.

A. SCOPE OF SERVICE

The mission of the Neurology Service follows the traditional tripartite goals of an academic medical center: Patient Care, Education, and Research. However, in the immediate setting of patient care and patient interactions (inpatient services, outpatient clinics, telephone contact or consultation, etc.) the Neurology Service patient care mission takes precedence whenever there is a conflict or discrepancy among the three mission components. The policies and approaches to clinical service are outlined more specifically in greater detail in a separate document, *Zuckerberg San Francisco General Hospital Neurology Service: Description of Service (Appendix B).*

B. MEMBERSHIP REQUIREMENTS

Membership on the Medical Staff of Zuckerberg San Francisco General Hospital is a privilege which shall be extended only to those practitioners who are professionally competent and continually meet the qualifications, standards and requirements set forth in the ZSFG Medical Staff Bylaws, Article II, Rules and Regulations and accompanying manuals as well as these Clinical Service Rules and Regulations.

1. Privileges to practice on the Neurology Service will be commensurate with clinical training (Board Certified/Board Eligible) and documentation of an acceptable standard of clinical practice.
2. Privileges are approved by the Chief of the Neurology Service, subject to the approval of the Credentials Committee of the Medical Staff and approval of the Governing Body.
3. Individual privileges are subject to review and revision at initial appointment, throughout the period of proctoring, at the time of reappointment, at the time judged appropriate by the Chief of the Neurology Service or at any time recommended by two-thirds of the Voting Professional Staff of the Neurology Service.
4. DEA Certification is required; CPR Certification is recommended but not required.

C. ORGANIZATION AND STAFFING OF THE NEUROLOGY SERVICE

The officers of the Neurology Service are:

1. Chief of Service

The qualifications, selection, review and tenure of the Chief of the Neurology Service are in accordance with ZSFG Medical Staff Bylaws and Rules and Regulations.

Responsibilities (See ATTACHMENT D)

- Oversees the clinical, teaching and research activities of the Neurology Service.
- Reviews and recommends all new appointments, requests for privileges, and reappointments for all Neurology Service members.
- Appoints other Neurology Service officers and committee members.
- Manages financial affairs of the Neurology Service.
  - Organizes Morning Report and conducts the majority of sessions.
  - Attends and participates in the Medical Executive Committee, Chief of Service Meetings, and other meetings called by the Executive Administrator, and the Chief of Staff.
  - Participates in the Clinical Practice Group (CPG) and attends the CPG regular meetings and other meetings convened by the Chair of the CPG as needed.
  - Executes disciplinary actions as necessary, as set forth in the ZSFG Bylaws and Rules and Regulations.

2. Director of Performance Improvement and Patient Safety (PIPS)

- Appointment of the Neurology Service Director of PIPS is the prerogative of the Neurology Chief of Service. The term of the appointment is open and subject to periodic performance review by the Neurology Chief of Service.
- **Responsibilities**
  - The Director of PIPS provides overall leadership and direction of the PIPS Plan and PIPS Committee of the Neurology Service.
  - Represents the Neurology Clinical Service on the ZSFG PIPS Committee.
  - Assists in the reappointment process of the members of the Neurology Clinical Service as it relates to quality improvement, management, and assurance.

3. Director of Neurology Outpatient Services

- Appointment of the Director of Neurology Outpatient Services is the prerogative of the Neurology Chief of Service. The term of the appointment is open and subject to periodic performance review by the Neurology Chief of Service.
- **Responsibilities**
  - Oversight of the Neurology new patient and follow-up clinics including making the attending clinic schedule
  - Actively work with nursing and hospital leadership regarding optimizing and improving outpatient services
  - Collaborate and coordinate with referring services regarding Neurology outpatient care
  - Oversee e-Referral as it relates to Neurology Outpatient Services
  - Oversee the EMG portion of the Neurodiagnostic Laboratories
  - Coordinate Neurology Resident teaching relevant to the outpatient domain
  - Collaborate with the Neurology Chief of Service regarding overall direction of the outpatient services program

4. Director of Neurology Inpatient Services (aka Neurohospitalist Service)

- Appointment of the Director of Neurology Inpatient Services is the prerogative of the Neurology Chief of Service. The term of the appointment is open and subject to periodic performance review by the Neurology Chief of Service.
- **Responsibilities**
  - Oversight of the Neurology Ward and Consult Services including making the attending clinic schedule
  - Actively work with nursing and hospital leadership regarding optimizing and improving inpatient services
  - Collaborate and coordinate with referring services regarding Neurology inpatient care

  - Coordinate Neurology Resident teaching relevant to the inpatient domain (Ward and Consult Service)
  - Collaborate with the Neurology Chief of Service regarding overall direction of the inpatient services program

5. Neurology Medical Student Education Site Director

- Appointment of the Neurology Education Site Director is the prerogative of the Neurology Chief of Service in conjunction with the overall UCSF Department of Neurology medical student clerkship director. The term of the appointment is open and subject to periodic performance review by the Neurology Chief of Service.
- **Responsibilities**
  - Provide leadership and supervision regarding medical student rotations (including student electives) on the ZSFG Neurology Service
  - Orient new medical students to the rotation (or provide faculty designee to do so)
  - Actively work with the Department of Neurology medical student clerkship director and staff regarding priorities and programs
  - Assigning grades and entering them into the SOM grading portal for students on the Neuro 140 (MS4) elective rotation
  - Coordinate E-Value or other rotation evaluations, providing feedback to faculty, fellows, and residents as appropriate and leading resolution of any issues brought forward
  - Maintain relevant medical student neurology education portals appropriate for the rotation
  - Collaboration with the Chief of Service regarding overall direction for Neurology medical student education at ZSFG

6. Director of Electroencephalography (EEG) Services

- Appointment of the Director of EEG Services is the prerogative of the Neurology Chief of Service. The term of the appointment is open and subject to periodic performance review by the Neurology Chief of Service.
- **Responsibilities**
  - Oversight of the EEG Service including making the attending clinic schedule
  - Actively work with nursing and hospital leadership regarding optimizing and improving inpatient and outpatient EEG services
  - Collaborate and coordinate with referring services regarding EEG services
  - Collaborate with the Neurology Chief of Service regarding overall direction of the inpatient services program

7. Organization of the Neurology Clinical Service

The activities of the Neurology Clinical Service are divided into the following:

a) Inpatient Adult Neurology Ward Service
b) Inpatient Adult Neurology Consultation Service
c) Inpatient Neurocritical Care Service
d) Outpatient Adult Neurology Clinics
e) Neurodiagnostic Laboratories
f) Child Neurology Service

Each of the above activities, including their organization, goals and schedules, are described in greater detail in the supplementary document, *Zuckerberg San Francisco General Hospital Service: Description of Service*, (*Appendix B*), and are briefly outlined below.

Inpatient Adult Neurology Ward Service

The Inpatient Adult Neurology Ward Service provides hospital care for adult patients with neurological diseases and their complications. The purpose of this Service is to provide optimal diagnostic and therapeutic management of patients for whom neurological disease or dysfunction is the predominating reason for hospitalization and the need for acute medical care. This embodies both specialized (care of the neurological condition, itself) and principal (medical care of associated conditions related to the neurological disease, when appropriate) care to this group of patients.

Inpatient Adult Neurology Consultation Service

The Adult Neurology Consultation Service provides specialized consultation to inpatients hospitalized under the care of other services and to emergency department or outpatients requiring urgent consultation in order to assist in providing optimal care of these patients.

Inpatient Neurocritical Care Service

The Inpatient Neurocritical Care Service provides primary hospital care and consultation for patients with acute and subacute neurological problems requiring critical care services. This includes management of acute stroke and is coordinated with the activities of the ZSFG Joint Commission certified Primary Stroke Center.

Outpatient Adult Neurology Clinics

The Outpatient Adult Neurology Clinics provide specialized neurological evaluation, management and consultation for patients suffering neurological dysfunction. It is the outpatient venue for both neurological consultation (advice to other physicians providing care) and principal neurological care (continuous direct care provided by the Clinic neurologist where appropriate).

Neurodiagnostic Laboratories

The Neurodiagnostic Laboratories currently have two components: the Electroencephalography (EEG) Laboratory (which includes Evoked Potentials) and the Electromyography (EMG) Laboratory. Each laboratory provides diagnostic services for both inpatients and outpatients.

Child Neurology Service

The Child Neurology Service provides neurological services for pediatric patients and is organized together with the Pediatrics Service and provides specialized neurological consultation for selected inpatients and outpatients in the pediatric age group (0-18 years).

II. CREDENTIALING

A. NEW APPOINTMENTS

The process of application for membership to the Medical Staff of ZSFG through the Neurology Service is in accordance with ZSFG Bylaws, and the Rules and Regulations as well as these Clinical Service Rules and Regulations.

Criteria

1. Board Certified or Eligible by the American Board of Psychiatry and Neurology in Adult or Child Neurology
2. Current California Licensure
3. Current DEA Certificate

B. REAPPOINTMENTS

The process of reappointment to the Medical Staff of ZSFG through the Neurology Service is in accordance with ZSFG Bylaws, Rules and Regulations.

C. PRACTITIONER PERFORMANCE PROFILES

The Neurology Service Practitioner Performance Profiles are maintained by the Chief of the Neurology Service.

1. Modification of Clinical Services

The process for Modification of Neurology Clinical Services will be through the appropriate review process as required.

2. Staff Status Changes

The process for Staff Status Changes for members of the Neurology Service is in accordance with ZSFG Bylaws, and the Rules and Regulations.

D. AFFILIATED PROFESSIONALS

The process of appointment and reappointment of Affiliated Professionals to ZSFG through the Neurology Service is in accordance with ZSFG Bylaws, Rules and Regulations as well as these Clinical Service Rules and Regulations.

E. STAFF CATEGORIES

The Neurology Clinical Staff fall in the same staff categories that are described in the ZSFG Bylaws, Rules and Regulations.

III. DELINEATION OF CLINICAL PRIVILEGES

A. DEVELOPMENT OF NEUROLOGY PRIVILEGE CRITERIA

Neurology privileges are developed in accordance with ZSFG Medical Staff Bylaws, Rules and Regulations as well as these Clinical Service Rules and Regulations.

B. ANNUAL REVIEW OF NEUROLOGY CLINICAL SERVICE PRIVILEGE REQUEST FORM

The Neurology Service Privilege Request Form shall be reviewed annually.

C. CLINICAL PRIVILEGES and MODIFICATION/CHANGE TO PRIVILEGES

Clinical Privileges shall be authorized in accordance with the ZSFG Medical Staff Bylaws, Rules and Regulations. All requests for clinical privileges will be evaluated and approved by the Chief of the Neurology Service.

The process for modification/change to the privileges for members of the Neurology Service is in accordance with the ZSFG Medical Staff Bylaws and the Rules and Regulations.

D. TEMPORARY PRIVILEGES

Temporary Privileges shall be authorized in accordance with the ZSFG Bylaws and the Rules and Regulations.

IV. PROCTORING AND MONITORING

A. REQUIREMENTS

Monitoring (Proctoring) of individual neurologists shall be the responsibility of the Chief of the Neurology Service (or designee) and the Director of Performance Improvement and Patient Safety (PIPS) for the Neurology Service and is based on observation and review of the care of five patients for each privilege (see Appendix A).

V. EDUCATION

The Chief of the Neurology Service is responsible for Education and Research and is accountable to the Vice Dean and the UCSF Department Chair for the conduct of graduate and undergraduate medical education and UCSF based research programs conducted through the Neurology Service.

The Neurology Service is an important teaching site for the UCSF Neurology Residency Training Program (See Section VI). Surgery Interns destined for the UCSF Neurosurgery Residency Training Program and St. Mary's Internal Medicine Residents serve one-month rotations on the service intermittently through the year. The Service is also a major teaching site for the UCSF School of Medicine, including Brain, Mind, and Behavior apprenticeships (15-20 MS1s per year) and Neurology 110, the Core Neurology Clerkship (45 MS3s per year). Additionally, 2-4 UCSF and extern MS4s complete Neurology 140, the Consultation Elective in Neurology, at ZSFG yearly.

VI. NEUROLOGY SERVICE HOUSESTAFF TRAINING PROGRAM AND SUPERVISION

The Training of Neurology Residents from UCSF is a major commitment of the Neurology Service. Part of this training involves graduated responsibility as the residents advance in their training. The role and responsibility of house staff at each level of training and their supervision, along with a description of the supervision of medical students is delineated in detail in the document*, Zuckerberg San Francisco General Hospital Neurology Service: Description of Service (Appendix B).* The Neurology Service is intended to be a "Resident-Directed Service" so that whenever appropriate the senior resident on the service will function as the principal coordinator and director of patient triage, evaluation and discharge. Since responsibility is 'graduated' according to the experience, ability and capability of individual house staff, it will be the responsibility of the Attending Physician to judge these qualities and act accordingly; the Chief of Service and other Attending Physicians will assist in this judgment according to their collective experience and the experience within the UCSF Neurology Residency program. Housestaff independently enter all orders, but all DNR orders must be cosigned by an Attending Physician within 24 hours and discharge orders can only be signed by a licensed physician.

The Attending Neurologist in each of the clinical venues is responsible for maintaining the highest quality of patient care, and assumes ultimate responsibility for patient management. This includes assuring that resident-directed activities, and indeed intern and medical student activities, adhere to the highest ethical and professional standards and that they compromise neither patient care nor patient amenities. The supervising Attending Neurologist must appropriately step to the foreground when needed, either for direct patient care or to assure patient understanding and

communication, but also step back when the residents are able to assume this responsibility and perform these duties at the highest level according to their level of training ability and experience. The capacity to adjust in this way, depending upon both the residents' abilities and the patients' needs, will be taken into account when evaluating Neurology Service faculty performance.

Attending Neurologist coverage is available 24 hours a day either in-person or by telephone. Residents are expected to communicate in a timely fashion with the responsible Attending Neurologist in the following circumstances:

1) Patients being considered for admission or transfer to the Neurocritical Care Service.
2) Patients being considered for cooling after cardiac arrest.
3) Patients who die on the Neurocritical Care or Neurology Ward Service without a DNR order.
4) Children seen for neurologic consultation.

Resident evaluation is coordinated through the evaluation process centralized in the Department of Neurology at UCSF. This involves a web-based evaluation system with each Attending Physician filling out a performance assessment at the end of the residents' monthly rotation. This evaluation is discussed with the resident and also the aggregate assessments are reviewed and contribute to the overall performance evaluation of each resident. These are used by the Residency Director and the individual resident's faculty advisor as a basis for assessment of performance and advice regarding improvement. Resident performances are also discussed among Attendings at monthly faculty meetings. Feedback for individual errors or management issues is also discussed at the time of their occurrence by the Attending Physician and by the Chief of Service (or their designee) at Morning Report. All deaths on the Neurology Service are reviewed monthly by the PIPS Director and quarterly by the PIPS Committee, with attention to implications for resident and Attending management issues. Transfers from the Neurology Service are tracked by the Committee quarterly.

VII. NEUROLOGY SERVICE CONSULTATION CRITERIA

Refer to IX.G. below: Attending Physician Responsibilities.

VIII. NEUROLOGY SERVICE DISCIPLINARY ACTION

The Zuckerberg San Francisco General Hospital Staff Bylaws, Rules and Regulations will govern all disciplinary action involving members of the ZSFG Neurology Service.

IX. PERFORMANCE IMPROVEMENT/PATIENT SAFETY (PIPS) AND UTILIZATION MANAGEMENT

The Neurology Service is committed to the maintenance of the highest standards of practice and dedicated to the continued efforts to improve Neurology Service performance. The PIPS effort is embedded in the day-to-day activities of the Service and in structured activities, including Morning Report, Attending Rounds, Professor's Rounds and the PIPS Committee.

The Chief of Service, or designee (e.g. Director of PIPS), is responsible for ensuring solutions to quality care issues. As necessary, assistance is invited from other departments, the Performance Improvement/Patient Safety Committee, or the appropriate administrative committee or organization.

The goals and objectives of the Neurology Service PIPS Program include, but are not limited to:

1) To ensure appropriate care and safety of all patients receiving care in the Neurology Service. It is understood that this care is provided chiefly in the 4M Clinic and acute medical-surgical areas (wards, ICUs, Emergency Department);
2) To minimize morbidity and mortality, as well as to avoid unnecessary days of inpatient care. Efficiency in delivery of service remains a prime objective.

The Neurology Clinical Service PIPS Program is delineated in the document, *Zuckerberg San Francisco General Hospital Neurology Service PIPS Plan. (Appendix C).*

A. NEUROLOGY CLINICAL SERVICE INDICATORS

Clinical Service Indicators for the Neurology Clinical Service are delineated in the document, *Zuckerberg San Francisco General Hospital Neurology Service PIPS Plan. (Appendix C).*

B. NEUROLOGY CLINICAL SERVICE PRACTITIONER PERFORMANCE PROFILES

Practitioner Performance Profiles for the Neurology Clinical Service are delineated in the document, *Zuckerberg San Francisco General Hospital Neurology Service PIPS Plan. (Appendix C).*

C. MONITORING AND EVALUATION OF APPROPRIATENESS OF PATIENT CARE SERVICES

The Monitoring and Evaluation of Appropriateness of Patient Care Services of the Neurology Clinical Service is delineated in the document, *Zuckerberg San Francisco General Hospital Neurology Service PIPS Plan. (Appendix C).*

D. MONITORING AND EVALUATION OF PROFESSIONAL PERFORMANCE

Monitoring and Evaluation of Professional Performance of attending physician and NP providers on the Neurology Clinical Service is accomplished by the Neurology Chief of Service using the Ongoing Provider Performance Evaluation (OPPE) program every year. An annual report of Neurology Service PIPS activities is made to the ZSFG PIPS Committee every year and is delineated in the document, *Zuckerberg San Francisco General Hospital Neurology Service PIPS Plan. (Appendix C).*

E. MEDICAL RECORDS

The members of the Neurology Service are committed to the maintenance of complete, accurate, meaningful and timely medical records in accordance with the ZSFG Bylaws, Rules and Regulations that define the minimal standards for medical records of the Service.

Medical Records shall include complete documentation of patient’s clinical information, diagnosis, and current status and management plan in the chart. The details of the formats and responsibilities of each member of the clinical “team” with respect to this documentation are outlined in a separate document, *Zuckerberg San Francisco General Hospital Neurology Service: Description of Service (Appendix B).*

F. INFORMED CONSENT

All decisions for treatment (or withdrawal of treatment) should involve the active participation of the patient or his/her surrogate, and should be made after appropriate discussion of the risks, benefits, and alternatives.

G. ATTENDING PHYSICIAN RESPONSIBILITIES

The responsibilities of each member of the clinical neurology “team” are delineated in detail in the document, *Zuckerberg San Francisco General Hospital Neurology Service: Description of Service (Appendix B).* The Attending Neurologists assigned to the individual components of the Neurology Clinical Service have the ultimate responsibility for patient management. In brief:

1) The Attending Neurologist assigned to the Adult Inpatient Ward Neurology Service will assume overall responsibility for the care of patients admitted to that Service. This entails:
   - Direct evaluation of these patients, initially within the first 24 hours of their admission, and throughout their hospital stay.
   - Supervision of all aspects of their care, including major decisions in management and close supervision of the resident staff.
   - Documentation of this participation in the form of daily notes in the medical record (weekend cross-coverage may be shared with the Attending Neurologists assigned to the Neurology Consultation Service)
   - Availability by pager or telephone 24 hours per day.

2) The Attending Neurologist assigned to the Adult Inpatient Consultation Neurology Service will assume overall responsibility for inpatient consultations. These include:
   - Direct evaluation of inpatients within 24 hours of the request for consultation usually following initial evaluation by the consultant resident.
   - Review of all neurology consultations evaluated by the neurology resident in the Emergency Department not resulting in admission (and hence not covered by the above consideration or not assumed by the Inpatient Service Ward or Neurocritical Care Attending). This may be performed at the time of evaluation or retrospectively, the following day, depending upon the complexity and acuity of the problem. This may also take place at Morning Report, with the faculty member staffing Morning Report serving as the designee of the Neurology Consultation Service Attending for purposes of case review.
   - Assure that the advice of the Neurology Service is accurate, appropriate, and well founded, and that this is communicated in a clear and timely manner.
   - Availability by pager or telephone 24 hours per day.

3) The Attending Neurologist assigned to the Neurocritical Care Service will assume overall responsibility for the care of patients admitted to that Service. This entails:
   - Direct evaluation of these patients, initially within the first 24 hours of their admission, and throughout their hospital stay.
   - Supervision of all aspects of their care, including major decisions in management and close supervision of the resident staff.
   - Documentation of this participation in the form of daily notes in the medical record. Daily attending documentation notes may also be completed by the Neurocritical Care Fellow assigned to the service if that fellow holds a faculty Clinical Instructor title and is in a non-ACGME position
   - Assure that the advice of the Neurology Service is accurate, appropriate, and well founded, and that this is communicated in a clear and timely manner.
   - Supervise any neurocritical care procedures performed, depending on the level of experience, training, and expertise of the fellow or resident performing the procedure
   - Availability by pager or telephone 24 hours per day.

4) The Attending Neurologist assigned to the Child Neurology Service will assume the overall responsibility of all neurology consultations involving patients in the pediatric age group in conjunction with the Child Neurology Fellow based at Benioff UCSF Children's Hospital. This includes:
   - Staffing of Child Neurology Outpatient Clinic on the ZSFG campus
   - Direct evaluation of inpatients as deemed appropriate by the requesting service and if available and on campus.

- The adult Neurocritical Care Service Attending may participate in the care of children with critical neurological emergencies admitted to ZSFG (e.g. neurotrauma)
- The adult Neurology Consult Service may staff inpatient consults for children ages 17 years and older
- Other neurological consultations will be directed from the ZSFG Pediatrics Service to the Child Neurology Fellow on call for UCSF Benioff Children's Hospital

5) The Attending Neurologists assigned to supervision of the Neurology Clinic will assume ultimate responsibility for the patients evaluated and cared for in the Neurology Clinic. The degree of direct supervision of outpatient evaluation will depend upon the:
   - Training level, individual experience, and proven ability of the resident staff also caring for the patient, as well as
   - The complexity and difficulty of the patient problem.
   - This will range from complete and thorough evaluation by the Attending in cases where students are first evaluating patients to a brief review of the findings and plan in the case of advanced residents.
   - The Attending Neurologists in the Clinic will also serve to assure the efficient and timely triage and evaluation of patients and the highest standards and courtesy and professionalism in the clinic.

6) The Attending Neurologist assigned to either perform and interpret EMG's or interpret EEG's and Evoked Potentials will have received appropriate subspecialty training (Board Eligibility or Certification) and will assure that these are performed in a timely manner commensurate with optimal clinical care and that interpretations are made and conveyed to the referring physician in useful form, usually within one to two (1 to 2) days of their performance, depending upon the reason for the test. If privileged to do so, an attending neuromuscular neurologist may also perform botulinum toxin injections in patients for whom this is indicated.

X. MEETING REQUIREMENTS

In accordance with ZSFG Medical Staff Bylaws, all active members are expected to show good faith participation in the governance and quality evaluation process of the ZSFG Medical Staff by attending a minimum of 50% of all committee meetings assigned, clinical service meetings and the Annual Medical Staff Meeting.

All Neurology Service faculty holding a 50% or greater appointment at ZSFG will be expected to serve on ZSFG Medical Staff committees. A minimum service of one committee per 50% appointment (e.g. 100% faculty will serve on at least two medical staff committees) will be expected.

The Neurology Service will maintain the following committees and regular meetings:

1. The Neurology Service faculty meeting will occur monthly or as needed.
2. The Neurology Service PIPS committee will meet quarterly, or as needed. The composition of this committee is discussed in the ZSFG Neurology Service PIPS Plan.

As defined in the ZSFG Medical Staff Bylaws, a quorum is constituted by at least three (3)-voting members of the Active Staff for the purpose of conducting business.

XI. ADDITIONAL NEUROLOGY CLINICAL SERVICE SPECIFIC INFORMATION

Orientation of Medical Staff is the responsibility of the Chief of the Neurology Service or designee. Risk Management compliance is in accordance with the ZSFG Bylaws, Rules and Regulations.

XII. VOTING CRITERIA

Members of the Neurology Clinical Service professional staff for purposes of voting on rules, regulations, and policies shall be those members whose principal clinical activities (>50%) are performed at ZSFG and who are geographically located principally on the ZSFG campus. This group shall be referred to as the *Voting Professional Staff of the Neurology Clinical Service.* Special exception will be made for individuals providing subspecialty expertise critical to the Neurology Service's overall mission (e.g., Child Neurology) who are approved by a two-thirds (2/3rds) majority of the Voting Professional Staff of the Neurology Clinical Services.

XIII. ADOPTION AND ADMENDMENT

The Neurology Service Rules and Regulations will be adopted and revised by a majority of all Active members of the Neurology Service bi-annually.

Appendix A - Zuckerberg San Francisco General Hospital Neurology Privilege Form

Privilege	Status	Approved

Neuro NEUROLOGY 2017

FOR ALL PRIVILEGES
All complication rates, including transfusions, deaths, unusual occurrence reports, patient complaints, and sentinel events, as well as Department quality indicators, will be monitored semiannually.

CORE PRIVILEGES

18.10 ADULT NEUROLOGY

Work up, diagnose, and treat patients on the Neurology Service and consult on patients with neurological problems in the inpatient setting and emergency department. Work up, diagnose, treat, and consult on adult patients (age 17 and older) with neurological problems in the clinics. Core privileges include lumbar puncture.

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology).

PROCTORING: Review of 5 cases REAPPOINTMENT: Review of 3 cases

18.20 CHILD NEUROLOGY

Work up, diagnose, treat, and consult on pediatric patients (under age 18 and those patients up to age 30 with neurologic conditions that typically present during childhood) with neurological problems in the inpatient and outpatient settings. Core privileges include lumbar puncture.

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology with Special Qualification in Child Neurology).

PROCTORING: Review of 5 cases REAPPOINTMENT: Review of 3 cases

SPECIAL PRIVILEGES

18.30 PROCEDURAL SEDATION

PREREQUISITES: The physician must possess the appropriate residency or clinical experience (read Hospital Policy 19.8 SEDATION) and have completed the procedural sedation test as evidenced by a satisfactory score on the examination. Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Neurology and has completed at least one of the following:

- Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Emergency Medicine or Anesthesia or,
- Management of 10 airways via BVM or ETT per year in the preceding 2 years or,
- Current Basic Life Support (BLS) certification (age appropriate) by the American Heart Association

PROCTORING: Review of 5 cases (completed training within the last 5 years)

REAPPOINTMENT: Completion of the procedural sedation test as evidenced by a satisfactory score on the examination, and has completed at least one of the following:

- Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Emergency Medicine or Anesthesia or,
- Management of 10 airways via BVM or ETT per year for the preceding 2 years or,
- Current Basic Life Support (BLS) certification (age appropriate) by the American Heart Association

18.40 EEG

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology or Neurology with Special Qualification in Child Neurology).

PROCTORING: Review of 5 cases by an assigned Neurology Service Staff Member with EEG privileges.

REAPPOINTMENT: Review of 3 cases.

18.50 EMG

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology or Neurology with Special Qualification in Child Neurology).

PROCTORING: Review of 5 cases by an assigned Neurology Service Staff Member with EMG privileges.

REAPPOINTMENT: Review of 3 cases.

18.60 EVOKED POTENTIALS

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology or Neurology with Special Qualification in Child Neurology).

PROCTORING: Review of 5 cases by an assigned Neurology Service Staff Member with evoked potential privileges.

REAPPOINTMENT: Review of 3 cases.

18.70 BOTULINUM TOXIN FOR MOVEMENT DISORDERS, SPASTICITY OR REFRACTORY HEADACHE

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified by the American Board of Psychiatry and Neurology (Neurology or Neurology with Special Qualification in Child Neurology) and training in administration of botulinum toxin for the above indications.

PROCTORING: Review of 5 cases by an assigned Neurology Service Staff Member with botulinum toxin privileges.

REAPPOINTMENT: Review of 3 cases.

18.80 CRITICAL CARE

Evaluation and management of critically ill patients, including management of airway, ventilation, hemodynamics, sedation, and analgesia. Staffing of Stroke/Neurocritical Care Follow-Up Clinic and consults outside the ICU that require a neurointensivist.

PREREQUISITES: Currently Board Admissible, Board Certified, or Re-Certified in American Board of Psychiatry and Neurology (Neurology or Neurology with Special Qualification in Child Neurology) or American Board of Emergency Medicine and eligible or certified in Neurocritical Care by the American Board of Psychiatry and Neurology or United Council for Neurologic Subspecialties.

PROCTORING: Review of 5 cases by an assigned Neurology Service Staff Member with Critical Care Privileges

REAPPOINTMENT: Review of 3 cases

18.90 CTSI (CLINICAL AND TRANSLATIONAL SCIENCE INSTITUTE) - CLINICAL RESEARCH ___

Admit and follow adult patients for the purposes of clinical investigation in the inpatient and ambulatory CTSI Clinical Research Center settings.

PREREQUISITES: Currently Board Admissible, Certified, or Re-Certified by one of the boards of the American Board of Medical Specialties. Approval of the Director of the CTSI (below) is required for all applicants.

PROCTORING: All OPPE metrics acceptable REAPPOINTMENT: All OPPE metrics acceptable

_______________________________ ______________

CTSI Medical Director Date

I hereby request clinical privileges as indicated above.

_______________________________ ______________

Applicant Date

APPROVED BY

_______________________________ ______________

Division Chief Date

_______________________________ ______________

Service Chief Date

Zuckerberg San Francisco General Hospital
1001 Potrero Avenue
San Francisco, CA 94110
August 8, 2022

Appendix B - Zuckerberg San Francisco General Hospital Neurology Clinical Service:

Description of Service

(Maintained in the Department of Neurology)

This document describes the Neurology Service at Zuckerberg San Francisco General Hospital, including its mission, the organization of its clinical services, the duties and regulations regarding various personnel and the schedule of activities. It serves as a supplement to the document, *Rules and Regulations, Neurology Service, Zuckerberg San Francisco General Hospital.*

The Neurology Service at Zuckerberg San Francisco General Hospital is divided into several principal components that contribute to fulfilling its clinical mission. These include the **Adult Inpatient Neurology Ward Service, Adult Inpatient Neurology Consultation Service, Neurocritical Care Service,** and **Neurology Outpatient Clinics**. The service also oversees the **Neurodiagnostic Laboratories**, including the electroencephalography (EEG), electromyography (EMG) laboratories (in combination with the Hospital) and cooperates with the Pediatric Service in providing **Child Neurology Service** specialty care. These are complementary components that contribute to the continuity of patient care and the continuity and breadth of education, as well as provide a platform for clinical research.

These activities are driven by a strong commitment to the overall service mission of Zuckerberg San Francisco General Hospital and by the association with and commitment to the University of California, San Francisco and particularly its Department of Neurology. The Neurology Service believes that specialized neurological care is an essential component of the patient care services at ZSFG. Likewise, the Neurology Service at ZSFG is an important component of the UCSF Neurology Department and both enhances the academic activities of the Department and benefits from the programs, leadership and resources of the ‘parent’ Department. This document focuses on the clinical services and emphasizes the organization and hierarchical responsibilities of physician members of ‘team’ in relation to the component activities. It also explains the weekly schedules for the three inpatient services that are included at the end of this document.

Mission of the Neurology Service

The mission of the Service follows the traditional tripartite goals of an Academic Medical Center: patient care, education and research.

Patient Care. This is the principal focus of day-to-day activity of the Service and the component of our mission that underlies the Service’s very existence. The Service’s objective is to provide exemplary patient care and clinical service to the patient community served by ZSFG within the limits of available resources. This is the ***first priority*** of all activities related to patients. The Service aims to provide timely, knowledgeable and humane service to all individuals within the framework of the institution.

Education. ZSFG is a major postgraduate and medical student teaching venue in the UCSF system. The major educational emphasis of the Service, and one that lies at its very core, relates to the UCSF Neurology Residency Training Program. The Neurology Resident rotations at ZSFG are among the most important of the three years of this specialty training. This importance is based on the nature and traditions of this Institution and to the patient populations served. In turn, the Resident Trainees provide critical service to the Hospital and to these patients. The supervision of residents is aimed at allowing *graduated responsibility* based both upon the years of training and upon the individual capabilities of the trainee, while at the same time providing the safeguards of appropriate Attending Staff supervision. This training is effected principally through experience and instruction at the bedside and organized formally through the various inpatient teaching and work rounds and individual review of patients in the outpatient setting.

Medical student teaching, particularly at the third year level, is also an important activity that receives major attention of the Service. Customarily 4-5 students rotate monthly on the Service as part of their mandatory neurology clerkship. They rotate among the inpatient Ward, Consultation, and Neurocritical Care services. Fourth year students may also elect rotation on the Inpatient Consultation and Neurocritical Care Services. Teaching of students involves bedside rounds as well as group didactic sessions centering on ‘case vignettes; designed to broaden their familiarity with the full spectrum of neurological disease.

Research. The ZSFG Neurology Service considers the development of Clinical and Translational Research directed at elucidating and ameliorating the diseases afflicting the patients cared for at ZSFG to be critically important and a central aspect of its mission. There is a direct connection with the UCSF Brain and Spinal Injury Center at ZSFG. There are now ongoing clinical research studies in HIV-AIDS, stroke, and traumatic brain injury.

Without vigorous and strong commitment to each of the three components of the mission, the Neurology Service would lose its identity and *raison d'etre*, at least in its current form. Each of these components contributes directly (e g. shared personnel and resources) and indirectly (e.g. quality of personnel and intellectual rigor) to the strength of the other. None can be sacrificed or compromised without important impact on the other.

The following section describes each component of the Clinical Service.

Inpatient Adult Neurology Ward Service

The Inpatient Neurology Ward Service provides specialized care for patients with neurological Diseases and their complications. Its purpose is to admit and care for patients in which the need for neurological diagnosis and treatment is preeminent and for those who have received principal care from the Service when they develop other complications requiring hospitalization. The physician and physician-in-training personnel centrally contributing to the Service include: the General Inpatient Ward Attending Neurologist, the Senior neurology Resident, the Junior Neurology Resident, PGY1(s) when present, and the third-year Medical Students spending their required Neurology Clerkship on the Service. Other personnel are also

critical to the operation of the Service, including particularly the Neuroimaging unit of the Department of Radiology, the nurses on the various units, the Social Worker assigned to the Service, and the Neurorehabilitation 'team' from Physical, Occupational and Speech Therapy; these components will not be discussed further here, however, except as they relate to the schedule and expectations of the Service. The following describes some of the expectations and responsibilities of each of the aforementioned physician and physician-in-training team members.

Ward Service Attending Neurologist – The general Ward Service Attending Neurologist is ultimately responsible for care of patients on the Service except for those housed in the Intensive Care Unit (ICU). This involves both supervisory and direct patient evaluation and management. With respect to the latter, the following rules should be followed, with rare exceptions:

- S/he will directly evaluate and provide an admission note on all new patients within 24 hours of admission and earlier if indicated by the type or complexity of the illness.

- S/he will directly evaluate and provide a progress note on all patients ***daily***. This will generally be done in the context of daily Attending Work Rounds made with the Neurology Residents. Weekend cross-coverage may be shared with the Inpatient Neurology Consult Attending.

- S/he will oversee the entire staff but generally confer with and communicate with the Senior Resident in directing the Service. S/he will directly participate in all decisions regarding invasive diagnostic studies, therapy and life support.

- Since the Service is committed to functioning as a 'Resident-Run' service, the Attending Physician needs to make judgments and adjustments with respect to when s/he needs to assume the primary physician role and when s/he can delegate this role to the resident staff. This will depend on the individual capabilities of the resident and on the complexity and nature of the patients' illnesses. At all times the Attending must be sufficiently familiar with the details of the patients' management to assure that optimal care is being administered. The latter includes not only the accuracy of diagnosis and the appropriateness of therapies, but also the manner and thoroughness of communication with families and other personnel involved in the patients' overall care. The Attending must set and assure the standard with respect to professionalism and highest ethical and personal interactions.

- The Ward attending physician also plays an overall role in coordinating the educational experience of the MS3 students rotating on the various ZSFG neurology services. Case vignettes (standardized and provided by the Department of Neurology medical clerkship director) should be discussed with the entire group of rotating MS3 students at least once each week.

Ward Service Senior Neurology Resident – This resident directly manages the Ward Service and serves as the overall "Practice Group Leader" for all the Neurology residents rotating at

ZSFG at a given time. This resident importantly oversees the details of day-to-day decisions regarding triage and admission, as well as diagnosis and therapy. S/he rounds daily with the Attending Neurologist on Ward Attending Work Rounds and participates in Resident Work Rounds. S/he directs patient-related decisions in consultation with the Attending Physicians as needed. S/he also plays a major role in teach Medical Students the fundamental aspects of neurology, including the neurological examination and basic care of those with neurological impairment. The formal duties thus include:

- Directly supervising care of all patients on the Ward Service. This requires direct evaluation of each patient and ongoing monitoring of all diagnostic studies, therapy and patient status.
- Overseeing the quality and timeliness of chart documentation by the Junior Resident and adding a formulation, clarification summary note on complex admissions or during the course of a complex course of illness.
- Assuring the timely completion of discharge notes, including sharing this duty with the Junior Resident.
- Reporting to, consulting with, and rounding with the Attending Neurologists daily.
- Assisting and filling in for the Junior Resident during the daytime when they are absent or too busy to provide timely coverage of patients on the Service, or consultation on other services including the Emergency Department.
- Attending Morning Report.
- Planning the biweekly Professor's Rounds, including case selection and organization.
- Planning the on-call and other house staff scheduling (after the first few months, this may be delegated to the Junior Resident).
- Participating in Outpatient Clinics.
- Overseeing Resident Work Rounds during the week.
- Coordinating rounding schedules and resident responsibilities for the weekend days.

Ward Service Junior Neurology Resident – Although not the neurologist of record (since this is the Attending Physician), the Junior Resident serves as *the neurology Ward team member who is the primary interface* with the patient (and family, associates, etc.). S/he provides documentation of the patient's illness, manages and schedules tests, and deals with the logistics of care with the assistance of the PGY1 (when available). This resident will usually carry the 'Ward Service Pager' (**415-327-WARD**) during the day.

- Rounds each weekday on all patients on the service, and on weekends assigned, overseeing evaluation and care during these rounds. After the initial months of the new academic year, the Junior Resident can 'run' these rounds at the discretion of the Senior Resident.
- Provides a full admission note emphasizing neurologic aspects of diagnosis, formulation, planned evaluations and therapies.
- Provides independent daily progress notes summarizing the patient's status (including disposition), analysis and formulation of diagnosis and plan. The junior Ward resident also reviews, amends, and co-signs medical student notes.

- Presents patients to the Attending or Professor on Rounds if the students are not available for this duty. Additionally, presents and demonstrates the salient neurological findings and discusses diagnosis and rationale of the plan at the bi-weekly "Professor's Rounds" Clinical Case Conference.
- Attends Morning Report.
- Participates in Outpatient Clinics

Student Clerks – The primary responsibility of medical students relates to their education. However, because the Service adheres to the general philosophy that their *active* participation in the patient care team is an important vehicle for education, the students will also participate in the care activities. These include:

- Rounding daily on all patients on the Service.
- Assisting in patient care by: evaluating assigned patients on admission, following those patients daily, performing (under direct supervision) lumbar punctures and similar procedures on these patients, contributing daily notes summarizing results of diagnostic studies, patient status and changes in therapies and plans (not to substitute for the Resident notes), and contributing a recent review of the literature as a further guide to those caring for the patient. The students should also summarize the Attending Round evaluation of patients, including the principal new findings revealed by the history and examination and the diagnostic opinion and plan provided by the Attending Neurologist.

Neurology Inpatient Consultation Services

The Neurology Inpatient Consultation Services are divided into two components: an Adult Neurology Consultation Service and a Child Neurology Consultation Service. Together they provide specialized neurological consultation for the other inpatient services, the Emergency Department and, when needed, outpatient clinics of ZSFG. They are staffed by an Attending Neurologist assigned to each Service who assumes ultimate responsibility for the performance of the Services and the care delivered, and a Junior Resident who is the focus of the activities of both components. A student subPGY1 and MS3 student clerks may also be assigned to the Service to assist in these tasks.

Rules of Consultation Service – In order to provide optimal service for the care of patients and assistance to the primary physicians caring for patients requiring neurological expertise, there are expectations requiring the timeliness, level of expertise, and communication of this service. These are embodied in the following guidelines:

- All requested *routine consultations* will be seen by the consulting resident on the day of the request unless the requesting physician directly stipulates that a delay of up to 48 hours is acceptable. This means that consultations not seen by the daytime coverage will be evaluated by the resident on duty at night. SubPGY1 students may evaluate these patients, first, but the resident will still see them on the same day.

- All *urgent consultations* will be seen by the consulting resident within two hours of request and emergency consultations seen even more rapidly. Exceptions may relate to conflicts among urgent patients; these should be explicitly triaged by the consultation resident in agreement with the requesting physician or seen by another resident (e.g. Ward resident) if needed.
- *Acute Stroke Activations* represent an important exception to the expected time of evaluation. *Acute Stroke Activations* (also referred to as "Stroke Codes") are formal emergency activation in the hospital which specify the location of the relevant patient. Neurology residents are expected to respond in person immediately (physical presence within 5 minutes), and in the rare case in which they are performing a procedure (e.g. lumbar puncture) that cannot be safely immediately interrupted, then they are to call the hospital location (usually ED) in order to notify of the delay.
- All adult inpatients should be presented to and evaluated by the Attending Adult Neurologist within 24 hours of the requested consultation. Difficult or urgent patients should be discussed by telephone or directly evaluated more rapidly. Exceptions include Emergency Department consultations in which patients are discharged; these cases should be discussed before discharge or retrospectively the next day, depending upon the complexity of the problem. Patients evaluated on Saturday may be reviewed and evaluated by the Attending on Monday if they are not complex and such review is not urgent.
- In the case of patients seen in the Emergency Department or outpatient clinics during daytime hours who clearly require admission to the Neurology Ward or Neurocritical Care Service, the Consultation Resident should serve as a triage officer. This entails entering a brief note, seeing that emergency management is begun and that appropriate laboratory studies are ordered, and then turning the patient over to the Inpatient Service team for definitive admission evaluation (and admission note) and care. The exception to this policy will be when the inpatient resident team is not immediately available due to other patient care responsibilities; Attending Rounds are not a sufficient reason for the Inpatient Resident Staff to defer this task.
- The conclusions and recommendations of the Consultation Service should be clearly and rapidly communicated to the physicians of the primary service caring for the patient. This principally involves inclusion of the consultation note in the chart with designation of who has reviewed the case. For non-routine consultations and at times for routine consultations as well, the resident is also responsible for more active communication to the physicians requesting the consult. This entails direct telephone contact and discussion or, under certain circumstances, faxing of a copy of the Consultation Note or e-mail communication. In some cases, the Attending Physician will undertake telephone communication.
- All contact and communication with other services, as well as with nursing and other personnel should be conducted with the highest level of professionalism and courtesy. Residents must recognize that there is no such thing as an "inappropriate" request for consultation or assistance. If assistance is requested, it is needed.

The responsibilities and expectations of the members of the team are outlined as follows:

Attending Adult Neurologist – The Attending Adult Neurologist is responsible for the overall quality of the Consultation Service. This physician must review all patients consulted. With the exceptions enumerated above (discharged ED patients) this entails direct evaluation of the patients in a timely (within 24 hours) manner. More urgent consultation are discussed by telephone or directly seen within a shorter time frame depending upon the complexity or urgency of the problem. In the case of those patients directly evaluated, a note reflecting the evaluation and describing any additions or corrections of the resident's evaluation (or students and resident's notes) as well as a clear set of recommendations should be placed in the chart. In brief, the Attending:

- Oversees all aspects of the Consultation Service, assuring the quality of its evaluations, recommendations and service delivery.
- Evaluates and provides a note on all patients within 24 hours of the request. This note should clearly articulate the problem and recommendations and also invite further questions and discussion if needed.
- Reviews in detail all patients seen by the resident but not available for direct evaluation (e.g. ED patients). A designee such as the Neurology attending supervising Morning Report may serve this function.

Attending Child Neurologist – The practice and standards for the Attending Child Neurologists are the same as for the Attending Adult Neurologist as just described with the exception that when emergency consultation is needed and the Attending Child Neurologist is not directly available, the ZSFG Pediatrics Service will contact the Child Neurology Fellow on call at UCSF Benioff Children's Hospital by telephone for advice. If bedside immediate evaluation is deemed necessary (such as in the case of a critically ill child), an adult neurologist may initiate the Attending duties (Consult Attending if child age ≥ 17, Neurocritical Care Attending if child is admitted to the hospital and is critically ill) until the Child Neurology Attending or Fellow is available.

Neurology Consultation Resident – This individual serves as the focus of the Service, triaging all Consultations and evaluating all patients seen during the daytime hours as well as following up on all patients evaluated by the covering residents during night or weekend hours. This resident is the primary interface of the Neurology Service with other services in the Hospital. S/he is therefore expected to provide courteous, friendly and willing service at all times. Their evaluation of patients should address the broad spectrum of patient needs conveyed by the individuals caring for these patients. This resident will be responsible for the Consultation pager (**415-327-NERV)** carrying it during the daytime and passing it on to the night or weekend call resident. Among the specific responsibilities are the following:

- Evaluation of consultations in the various venues (inpatient wards, ED and outpatient clinics) following the time guidelines above.
- Providing an initial note at the time of the initial evaluation (designated, "will present to the Service Attending" or the like before evaluation by the Attending) in the medical record, and providing follow-up notes as indicated (usually at least every other day, depending upon the patient's condition and the availability of results of diagnostic studies

and the effects of therapeutic intervention). If patients are no longer to be followed by the Service, an *explicit* note in the chart should say this and invite re-consultation as needed.
- Supervising student sub-PGY1 and MS3 clerks on the Service and directly evaluating any patients seen by these individuals *before* they are presented to the Attending Neurologist. This requires an **independent note** by the resident documenting her/his examination and finds.
- Communication with the primary service as outlined above.
- Attending Morning Report.

Student Clerk – The primary responsibility of medical students relates to their education. However, because the Service adheres to the general philosophy that their *active* participation in the patient care team is an important vehicle for education, the students will also participate in the care activities. These include:

- Rounding daily with the Consult Service.
- Assisting in patient care by: evaluating assigned patients and following those patients as appropriate. The students should also summarize the Attending Round evaluation of patients, including the principal new findings revealed by the history and examination and the diagnostic opinion and plan provided by the Attending Neurologist.

Inpatient Neurocritical Care Service

The Neurocritical Care Service provides primary and consultative coverage for patients with critical neurological conditions. These include patients with acute stroke, neurotrauma, seizures, and neuromuscular conditions. Additionally patients on other clinical services, including neurosurgery, trauma surgery, medical intensive care, and cardiology, who have critical neurological issues are seen. The Neurocritical Care Service provides faculty coverage for acute stroke intervention as part of the Primary Stroke Center and comprehensive stroke center services.

Neurocritical Care Attending – The Neurocritical Care Attending will assume supervision of care for patients on the Neurology Service while they are in the ICU.

S/he will directly evaluate and provide an admission note on all new patients within 24 hours of admission to the ICU and earlier in indicated by the type or complexity of the illness. S/he will directly evaluate and complete a progress note on all patients ***daily***. Attending notes may be completed by a neurocritical care fellow with faculty status as a Clinical Instructor who is in a non-ACGME position.
- S/he will generally confer with and communicate with the Neurology Neurocritical Care resident in supervising this component of the Service. S/he will directly participate in all decision regarding invasive diagnostic studies, therapy and life support.
- Since the Service is committed to functioning as a ‘Resident-Run’ service, the Neurocritical Care Attending Physician needs to make judgments and adjustments with respect to when s/he needs to assume the primary physician role and when s/he can

delegate this role to the resident staff. This will depend on the individual capabilities of the resident and on the complexity and nature of the patients' illnesses. However, all major decisions and procedures will be reviewed by the Neurocritical Care Attending. At all times, the Neurocritical Care Attending must be sufficiently familiar with the details of the patients' management to assure that optimal care is being administered. The latter includes not only the accuracy of diagnosis and the appropriateness of therapies, but also the manner and thoroughness of communication with families and other personnel involved in the patients' overall care. The Attending must set and assure the standards with respect to professionalism and highest ethical and personal interactions.

- The Neurocritical Care Attending will staff the weekly Stroke Clinic.
- The Neurocritical Care Attending will be available by pager and telephone 24 hours a day.

Neurocritical Care Fellow- As ZSFG is a principle teaching institution for the UCSF Neurocritical Care fellowship, the Neurocritical Care Fellow will serve the function as team leader for morning work rounds. The fellow will also serve as the primary contact for the Neurology Consult resident regarding acute stroke and neurocritical care cases.

Neurocritical Care Neurology Resident- The Neurology resident rotating on the Neurocritical Care Service will be responsible for daily rounding and notes on all patients on the Neurocritical Care Service. This resident will be responsible for ordering or recommending tests and treatments for service patients. Additionally, the resident will

- Serve as the primary conduit for communication with families of patients on the Neurology Service in the ICU.
- Serve as the primary conduit for communication with other clinical services seeking neurocritical care consultation
- Provide basic teaching to the student clerk on the service

Student Clerk – The primary responsibility of medical students relates to their education. However, because the Service adheres to the general philosophy that their *active* participation in the patient care team is an important vehicle for education, the students will also participate in the care activities. These include:

- Rounding daily with the Neurocritical Care Service.
- Assisting in patient care by: evaluating assigned patients and following those patients as appropriate. The students should also summarize the Attending Round evaluation of patients, including the principal new findings revealed by the history and examination and the diagnostic opinion and plan provided by the Attending Neurologist.

Neurology Resident In-house Night Coverage

Resident Night Coverage – Neurology overnight in-house coverage is provided seven days a week by a Night Resident who serves from approximately 7 PM through Morning Report the next day. This night coverage system was instituted in response to changes in housestaff duty hours. The overnight resident will handle all consultations and oversee the care of the Ward and Neurocritical Care patients during this period. S/he will also be available by telephone as a resource for advice and consultation by the SFHN. S/he will carry all service pagers during this time. All admission and consultations will be 'checked out' with the daytime resident staff before or during Morning Report or in a sign-out session on the weekends. Cases requiring attending or fellow input will be discussed by telephone or by direct presentation to the Attending or Neurocritical Care Fellow/Attending on call.

Neurology Outpatient Clinics

As Neurology evolves increasingly to an outpatient specialty, the importance of this activity will continue to increase, both with respect to service delivery and teaching. The outpatient clinic activity of the Adult Service now uses the 4M Clinics facility and includes three regular weekly sessions: two General New Patient clinics (Thursday afternoon and Friday morning) and one follow-up clinic (Tuesday afternoon). There are also four subspecialty clinics: a weekly Stroke Clinic, a monthly Geriatics-Neuro Clinic, a monthly Neuroimmunology Clinic which is imbedded into a new patient clinic, and a monthly Epilepsy Clinic. The Child Neurology Clinic meets Friday mornings in the Pediatric area.

Because the allotted time (including room and nurse availability) for the principal Neurology Clinics is constrained, it is critical that the clinics start on time and that patient flow is maintained so that they can end on time as well. Attendings, Residents and Students are therefore expected to arrive on time. The Clinics have become important teaching vehicles for students, expanding their range and volume of experience. This must continue, yet not unduly inconvenience patients nor impede patient 'throughput.' Much of the patient care in the clinics is performed by Residents for similar reasons, along with economic considerations. The following outlines some of the responsibilities of the personnel in the Adult Neurology Clinics.

Attending Neurologists – Usually three Attendings are assigned to each New Patient clinic session and two or three to the Follow-up clinic session. Their duties include: teaching students and PGY1s and directly evaluating in detail all their patients; overseeing residents and any nurse practitioners, applying the principles of graduated responsibility described earlier; and direct evaluation of patients as needed to facilitate patient flow. Their activities in this context include:

- Directing the Clinic. One of the Attending Neurologists in each clinic will assume the role of director for that session. Associated duties include triaging (when each patient is to be seen, by whom, and into which room); assigning patients based on their complexity and suitability for teaching is an important duty. These activities are important to increase the efficiency of the session and require someone to maintain an overview for the day.

- Evaluating the patients seen by the students. Each of these patients requires a careful review of history and examination and plan of further evaluation and treatment performed

by the Attending. The Attending must also plan for follow-up of each of these patients, either by him/herself or my direct assignment to another Attending or Resident. The Attending Physician’s note must document the independent complete evaluation, formulation and plan.

- Evaluating patients seen by Residents. The requirement for Attending supervision varies according to the experience and capability of the individual residents, as well as the problem of the patient. Hence, the supervision requirements range from careful and thorough assessment of new patients seen by PGY1s or beginning first-year Neurology Residents to brief review of the findings and plan of Senior Residents seeing patients in follow-up. The Attending Physician is responsible for knowing the patient flow and assignments and providing judgment regarding the supervisory needs of the patients being seen.
- Direct evaluation of patients. Because of the need to maintain patient flow and the limited value of some patients as ‘teaching cases,’ the Attending Neurologist assigned to Clinic often needs to join directly in the effort to evaluate patients not seen by the Resident, PGY1s or Students. In these instances, the Attending will assume full responsibility for care of these patients or triage for resident follow-up.

Neurology Residents – The Neurology residents providing Outpatient Service to ZSFG do this as part of an independent outpatient rotation, as well as during their inpatient rotation at the Hospital and during other rotations when they participate in their Continuity Clinic here.

- Adult Neurology New Patient Clinics: Neurology residents on the dedicated outpatient rotation at ZSFG as well as mixed outpatient rotations across the UCSF-staffed hospitals staff the adult Neurology New Patient Clinics. The Neurology Residents assigned to the ZSFG Ward and Consult services also participate in a limited role in the ZSFG Adult Neurology New Patient Clinics, usually once weekly. At the early Junior level, the resident’s patients will usually be reviewed in some detail with the Attending, while at the Senior level the review is much less detailed. Since this is a graduated process, the judgment of how much supervision is needed should be determined by the Attending Physician. It is imperative that the Residents arrive in the clinic on time and that they begin seeing patients as soon as they are available. Results of evaluations should be conveyed to the referring physicians by computerized note, fax, e-mail or telephone.
- Adult Neurology Follow-up Clinics: Each UCSF Neurology Resident maintains a continuity clinic at ZSFG and they generally staff this clinic once monthly during the time slot for the Adult Neurology Follow-up Clinics. The residents should consider the clinic as a *time assignment* rather than strictly on the basis of patients scheduled. In general, they will see only those patients that they have been following long-term. However, if they are not fully booked with follow-up patients, they will be assigned to evaluate either patients that are new to them, but who were seen in new patient clinic by a provider who does not have a follow-up clinic, or follow-up patients who need to be seen before the availability of their ‘continuity’ neurologist permits. Assignment will be made by the Attending Physician supervising the clinic session.

- Child Neurology Clinic: these clinics are staffed by Child Neurology fellows and attendings as designated.

Neurodiagnostic Laboratory

The Neurodiagnostic Laboratory represent a joint enterprise with ZSFG in which the Neurology Service provides the professional expertise in overseeing and interpreting test results and the Hospital provides the facilities, equipment and technical support. This document considers only the aspects supplied by the Neurology Service – the "professional component."

The Laboratory is organized into two sections operating separately except for aspects of scheduling and support: EEG, and EMG.

EEG – the EEG Laboratory is an important resource for patient care with its value relating principally, although not exclusively, to the diagnosis of seizure disorders and toxic-metabolic brain disease. The EEG's are interpreted by one of the Neurology Attendings who provides special expertise in EEG and epilepsy. It is important that this is done on a timely basis. Networking arrangements allow digital EEG records to be transmitted. The scheduling and responsibility for the timeliness of service is assumed by the Clinic clerks, in conjunction with the technician. In addition to the high-level specialized expertise, the requirements of the Laboratory include:

- Timely interpretation of records. Interpretation of routine records should be within 72 hours and interpretation of urgent records within 12 hours. If requested, these reports can be available to the referring physician immediately after reading by voice, fax or computer entry into the medical record. The office can be contacted for an earlier reading.
- While it is desirable that scheduling of routine testing occurs within one week of request, current resources do not allow this. Exceptions for both inpatients and outpatients will be triaged by the Senior Neurology Resident.
- Emergency EEG's are occasionally performed by the Neurology Residents after hours. This extra service will vary with the training of the resident on call, the medical need and the concomitant workload with the decision being made by the resident, after evaluating the patient, in consultation with the Consult Attending.

EMG – The EMG Laboratory likewise provides a needed on-site facility for evaluation of nerve and muscle disorders. Since the EMG examination is more akin to a physician consultation than to a simple (mechanized) laboratory test, the professional staff is rate-limiting for this facility. The Director of this Laboratory will assure not only the quality of the Service, but its timeliness, in order to assure high standards of care for the Hospital and Neurology Services at ZSFG. The goals of the laboratory are to provide timely and quality service similar to that of EEG, including:

- Availability of the unit for scheduling routine studies as soon as possible, and for acute needs (e.g. for diagnosis of myasthenia gravis or inpatient studies) within two days of request. Unfortunately, due to other responsibilities, the availability of the present Director is limited and, hence, there are unwanted delays in scheduling studies. Urgent studies are performed upon request, however.
- Reports should be available to the referring physician immediately after reading by voice, fax or computer entry into the medical record. The office can be contacted for an earlier reading.

Conferences and Rounds

The formal aspects of the teaching and patient care activities of the Service are structured in a series of conferences and rounds. Some of these are included in the schedule that follows in this document. The structure and purpose are discussed here.

House Staff Work Rounds – This is a critical aspect of patient care. These are the daily morning work rounds on the various services and involve the residents and students assigned to the specific services. During these rounds all inpatients on the Neurology Ward Service are evaluated by direct examination and chart (including laboratory results) review, and the plans for diagnosis and treatment are discussed, reviewed and assigned for implementation. These begin first thing in the morning, usually at 7:00 A.M. (Monday through Friday). On Neurocritical Care Work Rounds, patients on the Neurosurgery Service are seen beginning at 7:00 A.M. each weekday, with other patients on the Neurocritical Care Service to follow. Neurology Consult work rounds are usually done prior to Morning Report by the Inpatient Neurology Consultation Resident. Residents from the various services then meet at Morning Report.

Morning Report – This is held each weekday and is attended by the neurology Residents assigned to ZSFG inpatient Neurology services and the night coverage Resident. The primary purpose of this exercise relates to Quality Management of the Service, with teaching an important secondary goal. All new inpatients seen by any of the adult inpatient services (Ward, Consultation, Neurocritical Care) will be briefly (beginning with a concise one minute synopsis) presented to the Chief of Service or their designee, and those presenting diagnostic or therapeutic difficulty will be highlighted for further discussion. This includes patients seen in the ED and sent home. Similarly, any active or unsettled diagnostic or therapeutic issues with patients admitted or initially consulted earlier will be discussed. The Attending neurologists rotating on the inpatient services are encouraged but not required to attend Morning Report. The objective of this exercise is to provide a consistent and uniform level of care and oversight for the Neurology Service through this common reporting mechanism. This also facilitates subspecialty consultation and entry of patients into clinical research protocols.

Consult Attending Rounds – These are held daily and are a mixture of patient care (first priority) and teaching rounds. Teaching is at the Resident level and directed to issues of diagnosis and practical management. The timing of these rounds will vary with the Attending's schedule of other activities but generally will begin either early in the morning or in the afternoon, allowing all patients to be evaluated by the Attending within 24 hours of the consultation. Problem or

difficult diagnosis/management patients will be staffed outside of this schedule. When the regular Attending assigned to this rotation for the month cannot be available, another Neurologist needs to be available to substitute.

Ward Attending Rounds – During these rounds the Attending Neurologist reviews (visiting each patient and reviewing their diagnostic studies and progress generally) the Service with the Senior resident (and/or Junior resident if available) and completes the Attending notes. These notes are generally brief and relate to overall diagnostic and care summary issues; they are supplementary, but not a substitute for the more detailed Resident notes. These are almost exclusively patient care rounds with some supplementary teaching if time allows. These rounds are generally done immediately after Morning Report each weekday and in the mornings on weekends.

Neurocritical Care Attending Rounds – These are held daily after Morning Report. Patients are presented to the Neurocritical Care Attending by the student or resident primarily responsible for the patient. Diagnostic and treatment plans are reviewed and updated. These rounds also serve an important teaching function and may be supplemented by didactic teaching and medical literature review when appropriate.

Professor's Rounds – This conference is held on Tuesday mornings, usually biweekly. One or two cases are presented to a visiting professor. They will generally be chosen from the inpatient and outpatient services because: 1) they represent interesting examples of diagnoses that are worthy of sharing with others, or 2) represent difficult diagnostic or management problems. The Senior Resident on the Ward Service will be responsible for organizing the cases and seeing that the patients and other material (neuroimages, electrophysiology) are available for review. For the Case Conferences, the Junior Resident will generally present the case (succinctly) and demonstrate the relevant (but not extraneous) findings; the Junior or Senior Resident will also present a brief review of the problem related to the major issues exemplified by the patient. Participation by physicians and consultants from other services is encouraged.

Neuroimaging Conference – This is presented by Neuroradiology in combination with Neurology and Neurosurgery every Wednesday. A list of cases to be presented is submitted by the Junior Ward Resident the afternoon before the conferences; late additions may be added on to the conference. Additionally, on other days pertinent neuroimages will be reviewed with the Neuroradiology staff on an *ad hoc* basis.

Resident Neurology Didactic Conference – This is a weekly conference, usually at noon on Mondays, during which a faculty member provides an educational lecture on a specific topic directed at residents and students. As part of this, once a month there is a journal club in which a specific article of interest is reviewed and once a month there is a Neurology M&M session in which the Senior Ward resident reviews one or more cases for quality improvement purposes.

Appendix C - ZSFG Neurology Clinical Service Performance Improvement & Patient Safety Plan

Organization and Responsibility:

1. **Department Chairperson:** S. Andrew Josephson, M.D., Professor and Chairman, UCSF Department of Neurology, has delegated responsibility for the ZSFG Neurology **Performance Improvement and Patient Safety (PIPS)** Program to J. Claude Hemphill, M.D.,M.A.S., Professor of Neurology, Chief of Neurology at ZSFG.

2. **Performance Improvement and Patient Safety (PIPS) Coordinator:** Nicole Rosendale, M.D., Assistant Professor of Neurology

3. **Performance Improvement and Patient Safety Committee:**
Nicole Rosendale, M.D., Assistant Professor of Neurology, Neurology PIPS Coordintor; J. Claude Hemphill, III, M.D.,M.A.S., Professor of Neurology, Chief of Neurology at ZSFG; Cate Freyer, MBA, Neurology Service Division Manager; Sara Cole, RN, ZSFG Stroke Program

4. **Performance Improvement and Patient Safety (PIPS) Plan:**
The ZSFG Neurology Performance Improvement and Patient Safety Plan is reviewed every second year by the Neurology Chief of Service

Departmental Review and Evaluation:

1. The Neurology Service PIPS Committee meets quarterly, with the following regular agenda items:
   - Review of all deaths on the Neurology Service. The PIPS Officer reviews the charts of each of these patients monthly and summarizes each case for the Committee.
   - Review of sentinel events, and stroke quality measures.
   - Discussion of patient care issues generated from Morning Report, Professor's Rounds, and Monthly M&M Conference
   - Selected PIPS issues, including ongoing projects. These are determined by the Committee on an ongoing basis. Emphasis is on high-risk or high-volume issues or where possible problems or inefficiencies have been identified by attending staff, residents, nursing, patients or other individuals. These reviews are limited to issues that can be adequately researched using available resources. Special review is considered for issues related to the Primary Stroke Center.

2. **Staff Meeting:** The ZSFG Neurology Service Attending On-Campus Staff meets monthly (or as needed). Performance improvement and patient safety issues are among the standing agenda items. Discussions generally include:

   - Reports of issues arising from the Neurology Service PIPS Committee Meeting.
   - Review of hospital-wide utilization statistics and Neurology Service inpatient and outpatient census and trends.
   - Review of additional patient care issues identified by meeting attendees or by other personnel (for example, 4M nursing) prior to meeting.
   - Discussion of clinical studies concluded, in process, or proposed.
   - Discussion of performance of Residents and Attending Physicians based on ongoing monitoring activities and evaluation sheets.

3. **Staff Appointment / Appraisal Process** (Credentialing)

- **Appointment:** The major categories of Clinical Privileges on the ZSFG Neurology Service include:
  - Core Privileges in Adult or Child Neurology
  - Special Privileges
  - Moderate Sedation
  - EEG
  - EMG
  - Evoked Potentials
  - Botulinum Toxin for Movement Disorders, Spasticity, or Refractory Headache
  - Critical Care
  - CTSI

Physicians are proctored for their first five cases during their initial appointment. The scope of activities proctored is consonant with the clinical privileges requested. Proctoring will include direct observation of faculty performing the activity / procedure for which privileges are performed as well as by ongoing review of cases and patient management through Morning Report and Professor's Rounds. This will be performed by the Chief of Service or an appropriate designee; data will also be monitored from other sources, including hospital and outpatient service notes. Following the proctoring period and based on the review of same, the Chief of Service must verify proficiency in the requested areas prior to granting privileges in those areas and the Credentials Committee of the Medical Staff must approve the application.

Physicians' clinical and teaching performance are periodically evaluated using the following methods:

- Review of charts by PIPS Officer and PIPS Committee and derived from sources described above
- OPPE performed every 6 months, with Neurology Service-specific indicators for either inpatient or outpatient
- Evaluation by residents and medical students (with respect to teaching)

- **Reappointment:**
  - Department of Neurology files include information on current licensure, CPR training status, CME training, DEA status, and other relevant items
  - Files also include documentation of any issues relating to the clinical performance of the individual that have been generated by ongoing PIPS activities of the Department. These are reviewed by the Chief of Service during the reappraisal process.

Appendix D – Job Description: Chief, Neurology Service

Position Summary:

The Chief of Neurology Service directs and coordinated the Service's clinical, educational, and research functions in keeping with the values, mission, and strategic plan of Zuckerberg San Francisco General Hospital (ZSFG) and the Department of Public Health (DPH). The Chief also insures that the Service's functions are integrated with those of other clinical department and with ZSFG as a whole.

Reporting Relationships:

The Chief of the Neurology Service reports directly to the Vice Dean and the University of California, San Francisco (UCSF) Department of Neurology Chair (Dr. Andy Josephson). The Chief is reviewed no less than every four years by a committee appointed by the Chief of Staff. Reappointment of the Chief occurs upon recommendation by the Chief of Staff, in consultation with the Vice Dean, the UCSF Department Chair, and the ZSFG Executive Administrator, upon approval of the Medical Executive Committee and the Governing Body. The Chief maintains working relationships with these persons and groups and with other clinical departments.

Position Qualifications:

The Chief of the Neurology Service is Board certified in Neurology, has a University faculty appointment, and is a member of the Active Medical Staff at ZSFG.

Major Responsibilities:

The major responsibilities of the Chief of the Neurology Service include the following:

Providing the necessary vision and leadership to effectively direct the Service in developing and achieving goals and objectives that are congruous with the values, mission, and strategic plan of ZSFG and the DPH; this includes oversight of inpatient and outpatient Neurology Service activities and the neurodiagnostic and neurophysiology laboratories (including electroencephalography and electromyography laboratories);

In collaboration with the Executive Administrator and other ZSFG leaders, developing and implementing policies and procedures that support the provision of services by reviewing and approving the Service's scope of service statement, reviewing and approving Service policies and procedures, identifying new clinical services that need to be implemented, and supporting clinical services provided by the Department;

In collaboration with the Executive Administrator and other ZSFG leaders, participating in the operational processes that affect the Service by participating in the budgeting process, recommending the number of qualified and competent staff to provide care, evaluating space and equipment needs, selecting outside sources for needed services, and supervising the selection, orientation, in-service education, and continuing education of all Service staff;

Serving as a leader for the Service's performance improvement and patient safety programs by setting performance standards and priorities, determining the qualifications and competencies of Service personnel, and maintaining appropriate quality control programs; and

Performing all other duties and functions spelled out in the ZSFG Medical Staff Bylaws.
Specific duties and responsibilities include:

- Oversight of the clinical, teaching and clinical research activities of the Neurology Clinical Service
- Reviews and recommends all new appointments, requests for privileges, and reappointments for all Neurology Clinical Service members

- Appointment of other officers of the Neurology Service and committee members
- Oversight of the financial affairs of the Neurology Service
- Organize Morning Report
- Attendance and participation in the Medical Executive Committee, Chief of Service Meetings, and other meetings called by the Executive Administrator, and the Chief of Staff
- Participates in the Clinical Practice Group (CPG) and attends the CPG regular meetings and other meetings convened by the Chair of the CPG as needed.
- Execution of disciplinary actions as necessary, as set forth in the ZSFG Bylaws and Rules and Regulations.

Appendix E – ZSFG Neurology Ward and Consult Attending Expectations

ZSFG Ward Attending Expectations 2022-2023

Typical ward attending schedule

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
7:30 AM-8:00 AM		Morning report			Morning report
9:00 AM-11:00 AM	Attending rounds	Attending rounds	Attending rounds	Attending rounds	Attending rounds
12:00 PM-1:00 PM	Conference (3C + Zoom)	Assisting in completing tasks			
1:00 PM-2:00 PM		Assisting in completing tasks	Neuroradiology conference (HB 247 + Zoom)		
1:00 PM-5:00 PM		Assisting in completing tasks		Resident clinic (4M)	

Daily clinical responsibilities

1. The ward attending is expected to be on the SFGH campus during regular working hours each weekday for clinical, teaching, and supervisory duties. Workspace will be made available for attendings from non-SFGH sites.
    a. If an attending must leave campus during this time for other professional activities, they are expected to be available by pager and/or cell phone. The attending should be available to return to campus during regular working hours to assist in patient care if needed.
    b. The ward attending serves as secondary attending for consults when the consult attending is in clinic and can staff ED consults being discharged home when schedule allows. This should not significantly delay the patient's discharge from the ED.
2. Attendings must be available each weekday and during assigned weekends to round with the ward resident.
    a. **Weekdays:** Attending rounds are from 9AM-10:45AM M-Th and 9AM-11AM on Friday. Any patient not seen by the end of rounds will be seen by the attending alone (students and rotators also allowed to accompany if not otherwise needed, but the neurology residents should be dismissed to begin the work of the day).
        i. Seeing stable follow-up patients without the residents and then "card flipping" during rounds is acceptable before going to see the new patients and anyone who is unstable as a team. The specific style of rounds can be coordinated between the attending and the Ward Senior resident.
        ii. The last 5 minutes of rounds should be reserved to divide tasks for the day, including the tasks with which the attending can assist (i.e. calling families, running family meetings, calling PCPs or other outpatient providers, assisting with LPs, etc.)

b. The ward attending is expected to attend multidisciplinary rounds with the junior resident, Utilization Management, Social Work, and PT/OT/SLP. These are currently held in person in H4009 M-Th from 10:45AM-11AM.

c. If there are lower level of care (LLOC) patients on the service with complex discharge needs, the attending has the opportunity to discuss barriers to discharge with UM/SW leadership during Complex Care Rounds on Thursday from 1:25PM-1:35PM via Zoom (call information in Cate's orientation email). The team SW can guide if this conversation is needed during the team's MDR M-Th.

d. If the ward attending is scheduled for Neuro-New Clinic on Friday morning, rounds should occur prior to clinic starting at 9AM (being attentive to morning report from 7:30AM-8:00AM and to restrictions on the time residents are allowed to come in in the morning). The recommendation is for this to occur as work rounds (aka discovery rounds) where the attending joins the residents during their normal pre-rounding process from 8AM-9AM.

e. If the ward resident is scheduled for Neuro-New Clinic on Friday morning, rounds can occur prior to clinic starting (as above) or can occur with the remaining resident in the typical fashion. The specific workflow should be coordinated between the attending and Ward Senior.

f. **Weekends:** See below for further details. It is strongly recommended that rounds with the residents be completed by 11AM on Saturday and Sunday.

3. The ward attending is expected to assist in ensuring **no resident violates duty hour requirements.**
    a. The attending is expected to check in with the Ward Senior at 3PM M-F to discuss updates for the patients, determine what tasks still need to be completed (or assist the resident to triage what work can be deferred to the following day), and assist in completing any necessary tasks to ensure the residents are able to sign out on time. Examples of tasks include, but are not limited to, calling families, calling PCPs or other outpatient providers, writing patient letters or filling out disability paperwork.
    b. The attending and ward residents will receive an email each Wednesday and Thursday morning detailing the number of hours worked by the residents that week (calculated Sunday to Saturday). Residents are not allowed to work >79 hours. The attending should work with the resident to ensure they stay within those requirements. If further coverage is needed, jeopardy will be activated to cover the remaining hours of the week.
    c. To meet duty hour requirements, each Ward resident is given 2 Tuesdays off / month (alternating Ward Senior and Ward Junior). The attending is expected to assist in completion of the necessary tasks for the day. This can include, but is not limited to, writing progress notes for the day (attending only templates have been shared), coordinating follow up appointments with PCPs, family updates, running family meetings or performing LPs. Specific workflow needs for the day should be an ongoing discussion between the resident and attending during the day to ensure the resident signs out on time.
    d. On the day a resident is assigned to swing shift (cross cover and consults between 5-7PM) they are not to come in prior to 7:30AM. Pre-rounding duties may therefore be incomplete prior to rounds. Flexibility in workflows to accommodate this on rounds is encouraged (i.e., seeing patients together that were not seen during pre-rounds, reviewing labs or imaging in the moment on rounds, etc.).
    e. Residents must have at least 8 hours off between shifts. On rare occasions, this may result in a resident needing to come in later than 7:30 am. On such occasions, the resident is expected to notify their attending by email upon leaving the hospital of their expected arrival time the next morning.

f. The attending running morning report will check in with night float to ensure their work can be completed and that they leave no later than 9AM. The recommendation is for residents to complete the notes for any patient they sent home from the ED followed by any admission notes (ICU then ward) followed by any inpatient consult notes. Any notes not completed can be shared and completed by the appropriate day resident.

4. Notes / EHR responsibilities
   a. Each patient must be seen daily (7 days a week) and an attending attestation must be written for each resident note. The attestations are templated to optimize billing (see Epic PowerPoint for screen shots of how to access). The attestation must be signed no later than 8AM the day following the attending's evaluation (i.e. if the patient is seen on Monday during rounds, the attestation is required by 8AM Tuesday morning).
   b. All newly admitted patients must have an H&P from the attending in the chart within 24 hours of hospital admission. This occurs in the form of the attending attestation to the resident H&P OR attestation to the initial consultation note (marking clearly in that attestation that that is the H&P and not consultation only note). The H&P attestation is templated to optimize billing (see Epic PowerPoint). If the resident H&P was signed after midnight, no resident progress note is needed the day the patient is first staffed by the attending (ex: if admitted by night float and the H&P signed after midnight on Tuesday, staffed during rounds on Tuesday, no resident progress note is needed for Tuesday). If, however, the H&P is signed before midnight, the resident must write a progress note for the following day (ex: admitted by night float and note signed Monday before midnight, staffed by the attending on rounds Tuesday, attending attests the H&P and the resident progress note for Tuesday). The attestation for the progress note can refer to the H&P attestation (a dot phrase for this that you can use – ".nlrhp") but the progress note must still be attested.
   c. Residents are expected to write a discharge summary on the day of discharge for each patient. This counts as the note for the day and does not require an additional progress note.
   d. The resident notes for patients who were discharged home without being staffed by an attending should be signed by the ward attending on the days they are assigned for morning report. These notes do not require the attestation template, and require only a statement that the patient was not personally interviewed or examined by the attending, that you agree with the recommendations as stated (or adjust those recommendations in the attestation depending on the conversation), and that it is not a billable note. (Feel free to steal the dot phrase created with this wording – ".nlreddc")
   e. On the first day of the rotation, the attending must reassign themselves as the attending for all ward patients (see Epic PowerPoint for screenshots on how to do this). This is essential to ensure Secure Chat messages are appropriately routed.
   f. Each weekday and assigned weekend, the ward attending must check their inbox for orders and PT/OT/SLP documentation to co-sign (see Epic PowerPoint for instructions).
      i. The PT/OT/SLP services will send their initial evaluation notes to you to co-sign. *Do not attest*, just click the "co-sign" button and cancel any charge session that pops up automatically. This serves as confirmation that you authorize their treatment plan but does not trigger billing on our end.
      ii. Each newly admitted patient must have an "admit to inpatient" order OR "admit to observation" order signed within 24 hours of admission. This order will be in your Epic inbox to co-sign. If the patient will be in the hospital for 2 or more midnights, they should be admitted to "inpatient". If in the hospital overnight only, the order should be for "observation" (the residents will know how to change the order type if needed).

5. Clinic: For most weeks, the ward attending will be assigned to staff one half day of resident clinic each week. Typically, this is the Neuro-New Clinic on Thursday from 1PM-5PM, however will occasionally be the resident continuity clinic on Tuesday 1PM-5PM or the Neuro-New Clinic on Friday from 9AM-12PM (see Cate Freyer's orientation email for assignment).
    a. During clinic, the ward attending is expected to staff patients with the residents and NPs (including physically seeing all new patients), sign Epic attestations (see Epic PowerPoint guide for screenshots), and co-sign resident orders/prescriptions as needed.

Weekends, Call and Signout

1. It is the responsibility of the ward and consult attendings to divide up the weekends during their half-month block.
2. When covering a weekend, the attending is responsible for staffing all ward patients and all new and active follow-up consult patients. It is not expected for the attending to be onsite all day to staff new consults/admits in the afternoon.
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1. Conferences
    a. Attendings are expected to attend neuroradiology conference every Wednesday at 1pm. These occur both in person and via Zoom.
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    a. Attendings are encouraged to sign up to provide a 1-hour didactic educational session during their half-month rotation, if space is available. This can cover a topic of their choosing, be a formal presentation or chalk talk, and can be a talk (or variation of a talk) they have previously given.
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    c. Attendings are also encouraged to give informal chalk talks to students, rotators and residents as time allows.
    d. Attendings are required to perform an observed exam with the students rotating on the ward service. This should be scheduled at the end of week 2 or the beginning of week 3 of the students' rotation block. The goal of this exercise is to provide feedback on exam techniques for the student, both verbally after the observation as well as through a feedback form the student will send through MedHub. Ideally, the student would not be

familiar with the patient at the time of the exam, and the patient should speak English if possible.

e. Attendings will provide verbal feedback to students and residents and evaluate them using MedHub at the end of the half-month rotation (although mid-rotation verbal feedback is also welcomed).
    i. Student MedHub evaluations are due within 1 week of the end of their rotation
f. Attendings may also be asked to fill out BBOTs (Brief Bridges Observational Tool) for the students. These are brief feedback forms sent to the attending through MedHub to reflect feedback given on presentations, exam, or other aspects of clinical care. The students are also able to fill these forms out themselves and send to the attending for review.

ZSFG Consult Attending Expectations 2022-2023

Typical consult attending schedule

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
7:30 AM-8:00 AM	Morning report		Morning report		
9:00 AM-11:00 AM	Attending rounds	Attending rounds	Attending rounds	Attending rounds	Attending rounds
12:00 PM-1:00 PM	Conference (3C + Zoom)				
1:00 PM-2:00 PM			Neuroradiology conference (HB 247 + Zoom)		
1:00 PM-5:00 PM	Staffing ED consults	Resident clinic (4M)	Staffing ED consults	Staffing ED consults	Staffing ED consults

Daily clinical responsibilities

6. The consult attending is expected to be on the SFGH campus during regular working hours each weekday for clinical, teaching, and supervisory duties. Workspace will be made available for attendings from non-SFGH sites.
    a. If an attending must leave campus during this time for other professional activities, they are expected to be available by pager and/or cell phone. The attending should be available to return to campus during regular working hours to staff a patient if needed.
    b. The consult attending serves as a secondary attending when the ward attending is in clinic and can assist in clinical tasks (including, but not limited to, discussing clinical questions or assisting with LPs) as needed.
7. Attendings must be available each weekday and during assigned weekends to round with the consult resident.
    a. **Weekdays:** Attending rounds are from 9AM-11AM M-F. Any patient not seen by 11AM will be seen by the attending alone (students and rotators also allowed to accompany if not otherwise needed, but the neurology resident should be dismissed to begin the work of the day).
    b. If the attending or resident is scheduled for Neuro-New Clinic on Friday morning, rounds should occur prior to clinic starting at 9AM (being attentive to morning report from 7:30AM-8:00AM and to restrictions on the time residents are allowed to come in in the morning). The recommendation is for this to occur as work rounds (aka discovery rounds) where the attending joins the resident during their normal pre-rounding process from 8AM-9AM.
    c. **Weekends:** See below for further details. It is strongly recommended that rounds with the residents be completed by 11AM on Saturday and Sunday.
8. Attendings should make every effort to staff ED consultations throughout the day.
    a. All new ED consults M-F between 8AM-5PM (within reason) who are being discharged home should be seen and staffed by the consult attending prior to discharge. This should not significantly delay the patient's discharge from the ED. This includes patients seen by

the night float resident who remain in the ED the following morning if possible. The resident is not required to join the attending to see the patients, depending on workflow, but should discuss their findings and recommendations with the attending prior to the attending staffing the patient.

b. The consult attending should provide sign out (either verbal or email) to the ward or ICU attending for all consults they staff who are then admitted to the primary neurology service.

c. At the discretion of the consult attending and resident, new inpatient consults (med/surg, ICU, inpatient psych, PES and 4A) seen by the resident after attending rounds can be staffed by the attending the same day or can be staffed the following day during attending rounds.

9. The consult attending is expected to assist in ensuring **no resident violates duty hour requirements.**
    a. The attending is expected to check in with the resident at 3PM M-F to discuss updates for the patients and plan who needs to be seen the following day, determine what tasks still need to be completed (or assist the resident to triage what work can be deferred to the following day), and assist in completing any necessary tasks to ensure the residents are able to sign out on time. This can include, but is not limited to, writing follow up consultation notes or discussing recommendations with teams / patients.
    b. The attending and consult resident will receive an email each Wednesday and Thursday morning detailing the number of hours worked by the resident that week (calculated Sunday to Saturday). Residents are not allowed to work >79 hours. The attending should work with the resident to ensure they stay within those requirements. If further coverage is needed, jeopardy will be activated to cover the remaining hours of the week.
    c. On the day a resident is assigned to swing shift (cross cover and consults between 5-7PM) they are not to come in prior to 7:30AM. Pre-rounding duties may therefore be incomplete prior to rounds. Flexibility in workflows to accommodate this on rounds is encouraged (i.e., seeing patients together that were not seen during pre-rounds, reviewing labs or imaging in the moment on rounds, etc.).
    d. Residents must have at least 8 hours off between shifts. On rare occasions, this may result in a resident needing to come in later than 7:30 am. On such occasions, the resident is expected to notify their attending by email upon leaving the hospital of their expected arrival time the next morning.
    e. The attending running morning report will check in with night float to ensure their work can be completed and that they leave no later than 9AM. The recommendation is for residents to complete the notes for any patient they sent home from the ED followed by any admission notes (ICU then ward) followed by any inpatient consult notes. Any notes not completed can be shared and completed by the appropriate day resident.
10. Notes
    a. All new consults must have an attending attestation within 24 hours of the initial resident note. The attestations are templated to optimize billing (see Epic PowerPoint for screen shots of how to access). The attestation must be signed no later than 8AM the day following the attending's initial evaluation (i.e. if the consultation is first staffed on Monday during rounds, the attestation is required by 8AM Tuesday morning).
    b. All follow-up consults should have a resident note and attending attestation for every day they are seen on rounds. If the resident has not completed the follow-up notes by 3PM, the attending is encouraged to write an attending-only follow-up note for that day. The follow-up attestations and attending-only follow-up notes are templated to optimize billing (see Epic PowerPoint for screen shots of how to access). The attestation must be signed no later than 8AM the day following the follow-up evaluation.

   c. The resident notes for patients who were discharged home without being staffed by an attending should be signed by the consult attending on the days they are assigned for morning report. These notes do not require the attestation template, and require only a statement that the patient was not personally interviewed or examined by the attending, that you agree with the recommendations as stated (or adjust those recommendations in the attestation depending on the conversation), and that it is not a billable note. (Feel free to steal the dot phrase I created with this wording – ".nlreddc")

11. EHR responsibilities
    a. It is recommended that the attending assign themselves as the consult attending in EPIC on the first day of the rotation (details for how to do this are included in Cate's orientation email). This ensures that any primary team will contact the appropriate person for follow up questions.
    b. Each assigned weekend, the attending must check their inbox for orders and PT/OT/SLP documentation to co-sign (see Epic PowerPoint for instructions).
       i. The PT/OT/SLP services will send their initial evaluation notes to you to co-sign. *Do not attest*, just click the "co-sign" button and cancel any charge session that pops up automatically. This serves as confirmation that you authorize their treatment plan but does not trigger billing on our end.
       ii. Each newly admitted patient must have an "admit to inpatient" order OR "admit to observation" order signed within 24 hours of admission. This order will be in your Epic inbox to co-sign. If the patient will be in the hospital for 2 or more midnights, they should be admitted to "inpatient". If in the hospital overnight only, the order should be for "observation" (the residents will know how to change the order type if needed).
12. Clinic: In most weeks, the consult attending will be assigned to staff one half day of resident clinic each week. Typically, this is the resident continuity clinic on Tuesday 1PM-5PM, however will occasionally be the Neuro-New Clinic on Thursday 1PM-5PM or Friday 9AM-12PM (see Alexandra Brown's schedule for assignment).
    a. During clinic, the consult attending is expected to staff patients with the residents and NPs (including physically seeing all new patients), sign Epic attestations (see Epic PowerPoint guide for screenshots), and co-sign resident orders/prescriptions as needed.

Weekends, Call and Signout

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14. The attending must sign out the service either verbally or via email to the incoming attending at the end of the rotation and each weekend for which they are not working.

Transfers

1. The consult attending is responsible for screening potential transfers to the neurology service, except in the case of neurologic emergencies. The patient will be staffed on attending rounds, and the consult attending will determine if the patient is appropriate for transfer after staffing the consult. If the patient is stable, the transfer would then occur at 7AM the following morning, with transfer orders being placed by the ward team and the patient staffed on ward rounds. The consult attending should provide sign out (either verbal or email) to the ward attending.
    a. For neurologic emergencies (hemorrhage, status), the transfer request will be triaged through the ICU fellow/attending, and the patient can be transferred immediately once approved.
2. The hospital is currently not transferring patients from other facilities.

Conference and teaching responsibilities

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Neurology Rules and Regulations – changes for 2022
J. Claude Hemphill III, MD,MAS – Chief, Neurology Service

1. Change document date to August 8, 2022
2. Changed “beeper” to “pager” several times through the document
3. Changed OPPE reporting to every year in section IX.D.
4. Updated privilege form to reflect that Critical Care can now be certified through American Board of Psychiatry and Neurology
5. Changed pager numbers for Ward and Consult residents to current numbers in Appendix B.
6. Changed night resident coverage to seven nights a week in Appendix B.
7. Changed clinic staffing by attendings and residents to reflect current staffing model in Appendix B.
8. Appendix C (Neurology Service PIPS Plan) has been updated to reflect current leadership, membership, and scope. No significant changes in actual activities.
9. Pages 36-44, updated Ward and Consult Attending responsibilities. Minor changes related to schedules and faculty oversight of resident duty-hours

Protocol #7
Assessment and Management of Chest Pain

Protocol: Chest Pain

A. Definition: This protocol covers the initial assessment and management of patients with suspected cardiac ischemia seen by Registered Nurses (RN) in the Emergency Department (ED).

Indications

- Suspected cardiac ischemia

Exclusions

- Acute chest trauma or suspected musculoskeletal pain
- Fever > 38 ° C (100.4 ° F)

B. Data Base

1. Subjective Data

- Review history and signs and symptoms suggestive of ischemia
  - Retrosternal chest discomfort
  - Pain spreading to shoulders, neck, arms, or jaw, or pain in back
  - Associated lightheadedness, fainting, diaphoresis, or nausea
  - Shortness of breath
  - Global feeling of distress, anxiety, or impending doom
- Pertinent past medical history, current medications and allergies
- Characteristics of pain (PQRST); location, quality, and intensity (1-10)
- Any treatments used prior to arrival

2. Objective Data

- Perform focused physical exam relevant to chest pain/cardiac disease
- Level of consciousness (may use Glasgow Coma Scale)
- Measure vital signs at least every two-hours, or more frequently, as needed
- Skin signs: color, temperature, moisture, and capillary refill

2. Interventions once patient is placed in an exam room

   • Attach cardiac monitor, assess rhythm, and monitor for dysrhythmias

   • Place on pulse oximetry and measure SpO_2

C. Diagnosis

a. Consistent with subjective and objective findings

b. Assessment of status of disease process

D. Plan

1. Administer oxygen via nasal cannula at 2 liters/minute if SpO_2 <94%

2. Start saline lock IV (18-gauge or larger). Draw full tubes. Give IV push, 0.9% NS flush 10ml PRN for PIV maintenance and with medication administration.

3. Patient education and counseling appropriate to disease process

4. Laboratory and ECG's:
   - Stat 12-lead ECG, show to Attending MD when completed
   - Initiate and send High-Sensitivity Troponin Care Path in EMR
     - Ensure 0-hour yellow top lab tube is labeled specifically with the 0-hour specimen lab label, not a generic patient label

5.

6. Consultation with physician as needed, or:
   - HR >120
   - SBP <90
   - RR >28
   - SpO_2 <92%

ED RN SP REVISIONS

Summary of changes:

1) Added the ability of the RN to order and send HS Trop Care Path
2) Clarified cardiac monitoring, pulse oximetry once placed in exam room/treatment area.
3) Minor formatting changes.