CSEF Milestones – Neurology Clerkship

This document illustrates the progression from 3rd to 4th year and the performance expectations of a 3rd year versus a 4th year student.

Oral Presentations

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Delivers presentations that are accurate, clear, well organized, focused, and concise for most patients ☐ Accurately reports patient data (history, neurological exam, prior imaging, serum, CSF, and electrophysiological data) ☐ Presents pertinent positive and negative findings in a manner that enables listener to recognize/prioritize the differential diagnosis and rule in/out diseases ☐ Presents clinical reasoning, including a synthesis statement of the patient's history and neurological examination, with a leading localization and a prioritized differential diagnosis based on that localization, and a management plan for common conditions	☐ Integrates/synthesizes new patient information in real time into presentation ☐ Proactively seeks to involve patient and family when presenting in front of the patient ☐ Able to tailor length and complexity of presentation to situation and receiver of information ☐ Presents clinical reasoning effectively, including a concise, well-organized synthesis statement with a leading diagnosis and localization, a prioritized differential diagnosis with justification, and a clear management plan for uncommon conditions ☐ Where relevant, able to provide concise and structured sign-out to next provider shift using IPASS format	☐ Can effectively involve patient and family when presenting in front of the patient at the bedside ☐ Tailors length and complexity of presentation to situation and receiver of information with minimal advance warning at the bedside

Documentation

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
- Writes notes that are complete, accurate, and well-organized - Documents diagnostic reasoning, including a synthesis statement of the patient's history and neurological examination, with a leading localization and a prioritized differential diagnosis based on that localization, justifying it with epidemiology (e.g., prevalence) and positive and negative findings - Creates a problem list that is appropriately prioritized and complete for major biopsychosocial problems - Provides an appropriate rationale for the management plan for common conditions	- Documents pertinent positive and negative findings in a manner that enables reader to recognize/prioritize the differential diagnosis and rule in/out diseases - Documents diagnostic reasoning clearly, including a synthesis statement of the patient's history and neurological examination with a leading diagnosis and a prioritized differential diagnosis based on localization, justifying it with relevant epidemiology (e.g., prevalence), positive and negative findings, and pathophysiology - Creates a problem list that is appropriately prioritized and complete for major and minor biopsychosocial problems - Provides an appropriate rationale for the management plan for common conditions, citing relevant guidelines and evidence where applicable - Defines discharge criteria/follow-up plan for uncomplicated patients	- Provides an appropriate rationale for the management plan for common and less common conditions, citing relevant guidelines and evidence, where applicable - Proactively updates discharge documentation (when relevant) in real time to facilitate transfer of care and handoffs - Updates electronic handover tool with clear, relevant, and succinct documentation, when applicable - Sometimes documents patient's values and goals of care which may include advanced care planning

Data Synthesis/Diagnostic Skills

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Identifies and attempts to prioritize patients' major biopsychosocial problems and concerns, in the synthesis statement (i.e., "one-liner") ☐ Prioritizes differential diagnosis accurately based the localization along the neuro-axis ☐ of the patient's historical symptoms and neurological examination signs for most common clinical problems specific to the patient, including "can't miss" diagnoses ☐ Justifies differential diagnosis logically for common clinical problems by using localizing ☐ evidence from the patient's history and neurological examination as well as relevant ancillary data ☐ Routinely attempts to localize the patient's symptoms and signs along the neuro-axis, and occasionally makes the correct diagnosis for typical presentations of common diseases	☐ Identifies "sick" vs. "not sick" patients correctly, identifies proper level of service for patient (Neuro-ICU, step-down, floor, observation, or discharge) ☐ Prioritizes differential diagnosis based on localization accurately for common and most uncommon clinical problems specific to the patient including "can't miss" diagnoses ☐ Justifies differential diagnosis logically for less common clinical presentations by using disease prevalence, pathophysiology, and pertinent positive and negative clinical findings ☐ Makes the correct diagnosis for typical presentations of common diseases and occasionally makes the correct diagnosis for atypical presentation of common diseases or typical presentations of uncommon diseases	☐ Often identifies "sick" vs. "not sick" patients correctly for common and uncommon presentations ☐ Filters, prioritizes, and synthesizes the history to develop a differential diagnosis in real time for complicated or atypical presentations ☐ Identifies one's own clinical reasoning errors within the diagnostic process, with guidance ☐ Makes the correct diagnosis for typical presentations of common diseases and often makes the correct diagnosis for atypical presentation of common diseases or typical presentations of uncommon diseases

Management Planning

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Provides appropriate diagnostic and therapeutic management suggestions for the most common routine outpatient conditions (e.g., headache, memory loss, dizziness) ☐ Appropriately incorporates management algorithms for common acute inpatient presentations (e.g., protocol for acute stroke or seizure management) ☐ Attempts to provide appropriate management suggestions for less common conditions (e.g., multiple sclerosis flare, Guillain-Barre Syndrome) ☐ Appropriately includes underlying rationale for the management of these conditions	☐ Provides appropriate diagnostic and therapeutic management suggestions for common and less common inpatient and outpatient neurological conditions ☐ Integrates/synthesizes new clinical data effectively in real time to modify diagnostic plans when appropriate ☐ Incorporates best available evidence-based data into management planning using primary literature and consensus guidelines ☐ Begins to incorporate contingency planning into management plans ☐ Defines discharge criteria/follow up plan for patients starting at admission and as part of daily management plan	☐ Develops and implements an initial management plan for patients with urgent or emergent conditions, when applicable ☐ Consistently incorporates contingency planning into management plans ☐ Able to modify management plans in real time with minimal guidance based on new information or a change in status ☐ Accurately defines discharge criteria/follow up plan for all patients ☐ Share best available evidence-based data/guidelines with their supervisor, peer, and/or team

Teamwork & Professionalism

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Shows respect towards peers, supervisors and clinical staff through appropriate verbal and nonverbal communication ☐ Integrates effectively into team activities by recognizing distinct roles, responsibilities, and contributions of interprofessional team members' and demonstrates understanding and limitations of their role and where they can proactively participate in meeting needs of team ☐ Communicates with the interprofessional team, keeping members informed and up-to-date while maintaining clear and effective communication channels. ☐ Demonstrates trustworthiness and reliability including consistent punctuality, preparation, and commitment to assigned tasks, while maintaining confidentiality and ethical standards ☐ Identifies opportunities for growth in one's performance through self-reflection, being receptive to feedback and actively using it to improve behavior and performance	☐ Shows respect towards peers, supervisors and clinical staff through appropriate verbal and nonverbal communication ☐ Actively integrates into the team by anticipating workflow and positively contributing to the team's efficiency ☐ Proactively communicates with interprofessional team members (e.g., Consults, referrals, PT, social work, VNA) to improve patient care ☐ Able to articulate an appropriate consult question prior to initiating a consult ☐ Incorporates recommendations from interprofessional team members into the care plan ☐ Demonstrates trustworthiness and reliability, appreciates the professional role and gravity of being the "doctor" by being fully engaged in patient care activities, while maintaining confidentiality and ethical standards ☐ Displays self-awareness of knowledge, skills, and limitations by engaging in appropriate help-seeking behaviors, and soliciting input from supervisors	☐ Actively integrates into the team by anticipating workflow and positively contributing to the team's efficiency by mentoring students ☐ Leads coordination of care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams ☐ Anticipates consultative needs and incorporates recommendations ☐ Proactively develops strategies and plans to address limitations of knowledge, skills, and emotions whether self-identified or highlighted through feedback from others ☐ Demonstrates flexibility and maturity in adjusting to change and constructive feedback ☐ Displays self-awareness of knowledge, skills, and limitations by engaging in appropriate help-seeking behaviors, and soliciting input from supervisors in an efficient and timely way

Patient Centered Communication & Humanistic Care

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
- Provides accurate information to the patient - Emphasizes key points of diagnosis and/or plan - Encourages patient questions/perspectives/concerns - Uses appropriate language based on patient's health literacy - Avoids medical jargon for most patients - Engages appropriately with interpreters when interpreters are needed - Ensures that patient/family understands explanations/counseling using verbal and non-verbal techniques (reflective statements, summary statements, open body language, nodding, eye contact, etc.) - Demonstrates humanism, empathy, compassion and cultural humility by acknowledging patients' emotional needs and responding with appropriate validation and support	- Communicates about diagnostic testing and how results will influence diagnosis, further evaluation, and future plans of care - Addresses patient questions while communicating plan - Communicates appropriately about discharge readiness in discussions with patient/family - Demonstrates ability to navigate difficult patient conversations and encourage behavioral change - Identifies appropriate opportunities for basic patient counseling, motivational interviewing, teach-back and provides patient centered education/resources when applicable - Demonstrates cultural humility through active learning, seeking patient perspectives on their experiences with the healthcare system and adjusting approach accordingly.	- Identifies and attempts to mitigate barriers to effective communication - Attempts to lead challenging conversations, i.e. family meetings, delivering bad news, and discussing goals of care with patients and families when applicable - Engages in shared decision-making with consideration of patient values and psychosocial determinants - Consistently demonstrates cultural humility and mentors students in developing these skills

Interviewing Technique

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Introduces self to patient and attempts to develop rapport ☐ Takes a chronologic history of present illness without interruption ☐ Attempts to use the principles of localization and differential diagnosis to gather data ☐ Follows an organized interview framework ☐ Uses summarization of history back to patient or checks for accuracy ☐ Actively listens using verbal and non-verbal techniques (reflective statements, summary statements, open body language, nodding, eye contact, etc.) ☐ Completes within appropriate time frame	☐ Demonstrates patient-centered interview skills (e.g., attends to patients' verbal/nonverbal cues, culture, social determinants, need for interpretive/ adaptive services etc.) ☐ Probes for subtle pertinent details when gathering data necessary for differential diagnosis prioritization based on localization	☐ Probes for relevant, subtle details ☐ Utilize agenda setting when relevant

Physical Exam/Mental Status Exam Skills

Target Behaviors for 3rd Year	Target Behaviors for 4th Year/ Reach Behaviors for 3rd Year	Reach Behaviors for a 4th Year
☐ Includes aspects of all routinely tested neurological systems in the routine neurological examination including mental status, cranial nerve, motor, sensory, reflex, coordination, and gait examinations in an organized fashion ☐ Attempts to uses the patient's history to guide the neurological examination and expands testing of specific neurological systems based on the suspected localization (e.g., neuromuscular, movement, neuro-ophthalmologic, cognitive examinations) ☐ Performs examination in a patient-sensitive manner ☐ Identifies and interprets common and obvious pertinent findings	☐ Performs specific maneuvers to increase or decrease likelihood of diagnoses on the differential (e.g., neuromuscular, movement, neuro-ophthalmologic, cognitive, coma examinations) ☐ Demonstrates focused, efficient, and systematic exam on all relevant system	☐ Identifies and interprets even subtle findings accurately ☐ Performs advanced specific physical exam maneuvers to increase or decrease likelihood of diagnoses on the differential