NATIONAL INSTITUTE FOR HEALTH SPECIALITIES

NIHS Entrustable Professional Activities (EPAs) for Specialty Education in Medical Internship

Draft version 1

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List of EPAs:

Medical internship

EPA 1: Gather a history and perform a physical examination

Key Features: This EPA focuses on the ability to perform an accurate complete or focused history and physical exam in a prioritized, organized manner without supervision and with respect for the patient.

The history and physical examination should be tailored to the clinical situation and specific patient encounter. This data gathering and patient interaction activity serves as the basis for clinical work and as the building block for patient evaluation and management. Learners need to integrate the scientific foundations of medicine with clinical reasoning skills to guide their information gathering.

Functions:

1. History
    - Obtain a complete and accurate history in an organized fashion.
    - Demonstrate patient-centered interview skills (attentive to patient verbal and nonverbal cues, patient/family culture, social determinants of health, need for interpretive or adaptive services; seeks conceptual context of illness; approaches the patient holistically and demonstrates active listening skills).
    - Identify pertinent history elements in common presenting situations, symptoms, complaints, and disease states (acute and chronic).
    - Obtain focused, pertinent histories in urgent, emergent, and consultative settings.
    - Consider cultural and other factors that may influence the patient's description of symptoms.
    - Identify and use alternate sources of information to obtain history when needed, including but not limited to family members, primary care physicians, living facility, and pharmacy staff.
    - Demonstrate clinical reasoning in gathering focused information relevant to a patient's care.
    - Demonstrate cultural awareness and humility (for example, by recognizing that one's own cultural models may be different from others) and awareness of potential for bias (conscious and unconscious) in interactions with patients.
2. Physical Exam
    - Perform a complete and accurate physical exam in logical and fluid sequence.
    - Perform a clinically relevant, focused physical exam pertinent to the setting and purpose of the patient visit.
    - Identify, describe, and document abnormal physical exam findings.
    - Demonstrate patient-centered examination techniques that reflect respect for patient privacy, comfort, and safety (e.g., explaining physical exam maneuvers, telling the patient what one is doing at each step, keeping patients covered during the examination).

Assessment Plan:
Direct observation by supervisor
Assessment form will collect data on:
- Condition: acute, chronic.
- Settings: urgent, emergent, consultative.
- Case mix: Internal Medicine, Surgery, Pediatrics, Ob & Gyn, Family Medicine, Psychiatry.

Basis for formal entrustment decisions:
- Collect a minimum of 2 observations of achievement for each specialty
- Covering at least 4 different major specialties (see above) and at least 1 from Psychiatry.
- By at least 3 different observers

When in unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:
1. PC 2: Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
- Obtains a complete and accurate history in an organized fashion.
- Identifies pertinent history elements in common presenting situations, symptoms, complaints, disease states (acute and chronic).
- Obtains focused, pertinent histories in urgent, emergent, and consultation settings.
- Identifies and uses alternate sources of information to obtain history when needed, including from family members, primary care physicians, living facilities, and pharmacies.
- Performs a complete and accurate physical exam in logical and fluid sequence.
- Performs a clinically relevant, focused physical exam pertinent to the setting and focus of the patient visit.
- Identifies, describes, and documents abnormal physical exam findings.
- Demonstrates clinical reasoning in gathering focused information relevant to a patient's care.
- Links current findings to those from previous patients.

2. MK 1: Demonstrate an investigatory and analytic approach to clinical situations
- Uses analytic reasoning and activation of prior knowledge to guide process.

3. ICS 1: Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
- Demonstrates patient-centered interview skills (attentive to patient verbal and nonverbal cues, patient/ family culture, social determinants of health, need for interpretive or adaptive services; demonstrates active listening skills).
- Demonstrates patient-centered examination techniques that reflect respect for patient privacy, comfort, and safety (that is, explaining physical exam maneuvers, telling the

patient what the physician is doing at each step, keeping patients covered during the examination).

4. ICS 7: Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions
5. P 1: Demonstrate compassion, integrity, and respect for others
6. P 3: Demonstrate respect for patient privacy and autonomy
7. P 5: Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation

Medical internship

EPA 2: Prioritize a differential diagnosis following a clinical encounter

Key Features: This EPA focuses on the ability to integrate patient data to formulate an assessment, developing a list of potential diagnoses that can be prioritized and lead to selection of a working diagnosis. Developing a differential diagnosis is a dynamic and reflective process that requires continuous adaptation to avoid common errors of clinical reasoning such as premature closure.

Functions:

- Synthesize essential information from the previous records, history, physical exam, and initial diagnostic evaluations.
- Integrate the scientific foundations of medicine with clinical reasoning skills to develop a differential diagnosis and a working diagnosis.
- Engage with supervisors and team members for endorsement and verification of the working diagnosis in developing a management plan.
- Explain and document the clinical reasoning that led to the working diagnosis in a manner that is transparent to all members of the health care team.
- Manage ambiguity in a differential diagnosis for self and patient and respond openly to questions and challenges from patients and other members of the health care team.

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Case mix: Internal Medicine, Surgery, Pediatrics, Ob & Gyn, Family Medicine, Psychiatry.

Basis for formal entrustment decisions:

- Collect a minimum of 2 observations of achievement for each specialty (8 observations)
- Covering at least 4 different major specialties (see above) and at least 1 from Psychiatry.
- By at least 3 different observers

When in unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. PC 2: Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
    - Can link current findings to prior data in approaching a patient assessment.
    - Gathers pertinent information from many sources and proposes a relevant differential diagnosis that is neither too broad nor too narrow.
    - Can usually integrate current and emerging information to continuously update the differential diagnosis.

2. PC 4: Interpret laboratory data, imaging studies, and other tests required for the area of practice
3. MK 2: Apply established and emerging biophysical scientific principles fundamental to health care for patients and populations
4. MK 3: Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care
    - Can usually articulate a management plan based on the well-reasoned differential and working diagnoses.
5. MK 4: Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention and health promotion efforts for patients and populations
6. ICS 2: Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
    - Can link current findings to prior data in approaching a patient assessment.
    - Gathers pertinent information from many sources and proposes a relevant differential diagnosis that is neither too broad nor too narrow.
    - Can usually integrate current and emerging information to continuously update the differential diagnosis.
7. PBLI 1: Identify strengths, deficiencies, and limits in one's knowledge and expertise
    - Can link current findings to prior data in approaching a patient assessment.
    - Gathers pertinent information from many sources and proposes a relevant differential diagnosis that is neither too broad nor too narrow.
    - Can usually integrate current and emerging information to continuously update the differential diagnosis.
8. P 3: Recognize that ambiguity is part of clinical health care and respond by using appropriate resources in dealing with uncertainty

Medical internship

EPA 3: Recommend and interpret common diagnostic and screening tests

Key Features: This EPA describes the essential ability of the day 1 resident to select and interpret common diagnostic and screening tests (enumerated below) using evidence-based and cost-effective principles as one approaches a patient in any setting.

Functions:

- Recommend first-line, cost-effective diagnostic evaluation for a patient with an acute or chronic common disorder or as part of routine health maintenance.
- Provide a rationale for the decision to order the test.
- Incorporate cost awareness and principles of cost-effectiveness and pre-test/post-test probability in developing diagnostic plans.
- Interpret the results of basic diagnostic studies (both lab and imaging); know common lab values (e.g., electrolytes).
- Understand the implications and urgency of an abnormal result and seek assistance for interpretation as needed.
- Elicit and take into account patient preferences in making recommendations.

Common diagnostic and screening tests include the following:

- Plasma/serum/blood studies: arterial blood gases, culture and sensitivity, HIV antibodies, bilirubin, electrolytes, HIV viral load, cardiac enzymes, glucose, lipoproteins, coagulation studies, hepatic proteins, renal function tests, CBC, HgbA1c, RPR
- Urine studies: microscopic analysis, U/A dipstick
- Body fluids (CSF, pleural, peritoneal) Chlamydia, cell counts, culture and sensitivity, culture and sensitivity, Gonorrhea, protein(s)

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Condition: acute, chronic, screening
- Tests:
    - Plasma/serum/blood studies: arterial blood gases, culture and sensitivity, HIV antibodies, bilirubin, electrolytes, HIV viral load, cardiac enzymes, glucose, lipoproteins, coagulation studies, hepatic proteins, renal function tests, CBC, HgbA1c, RPR
    - urine studies: microscopic analysis, U/A dipstick
    - body fluids (CSF, pleural, peritoneal): Chlamydia, cell counts, culture and sensitivity, culture and sensitivity, Gonorrhea, protein(s)
- Results: normal, abnormal

Basis for formal entrustment decisions:

- Collect 10 observations of achievement.

- At least 3 different observers
- At least 8 abnormal results
- A least 8 different tests

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 4:** Interpret laboratory data, imaging studies, and other tests required for the area of practice
    - Incorporates knowledge of sensitivity and specificity and pre-test and post-test probabilities along with patient risk factors in recommending tests.
    - Correctly interprets abnormal laboratory and imaging findings for common tests.
    - Identifies critical values and responds correctly and with commensurate urgency by (a) initiating confirmatory or corrective measures or (b) notifying the health care team for assistance in recognition of his or her own limitations.
    - Is able to distinguish common, insignificant abnormalities from clinically important abnormalities
2. **PC 5:** Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
3. **PC 7:** Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making
    - Consistently discusses diagnostic plans with the patient and provides evidence that patient preferences have been solicited and factored into decision making.
4. **PC 9:** Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health
5. **MK 1:** Demonstrate an investigatory and analytic approach to clinical situations
    - Is able to explain how the results of each test will influence diagnosis, management, and health-risk stratification and subsequent evaluation.
6. **MK 4:** Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention and health promotion efforts for patients and populations
7. **PBLI 9:** Obtain and use information about individual patients, populations of patients, or communities from which patients are drawn to improve care
8. **SBP 3:** Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
    - Recommends reliable, cost-effective tests when indicated for screening or evaluating patients with common acute or chronic conditions.
    - Includes in the rationale for recommendations some consideration of costs and patient resources.

Medical internship

EPA 4: Enter and discuss orders and prescriptions

Key Features: This EPA is focused on the ability to prescribe therapies or interventions beneficial to patients by writing safe and indicated orders.

It is expected that physicians will be able to do this without direct supervision when they matriculate to residency. Entering residents will have a comprehensive understanding of some but not necessarily all the patient's clinical problems for which they must provide orders. They must also recognize their limitations and seek review for any orders and prescriptions they are expected to provide but for which they do not understand the rationale. The expectation is that learners will be able to enter safe orders and prescriptions in a variety of settings (e.g., inpatient, ambulatory, urgent, or emergent care).

Functions:

- Demonstrate an understanding of the patient's current condition and preferences that will underpin the orders being provided.
- Demonstrate working knowledge of the protocol by which orders will be processed in the environment in which they are placing the orders.
- Compose orders efficiently and effectively, such as by identifying the correct admission order set, selecting the correct fluid and electrolyte replacement orders, and recognizing the needs for deviations from standard order sets.
- Compose prescriptions in verbal, written, and electronic formats.
- Recognize and avoid errors by using safety alerts (e.g., drug-drug interactions) and information resources to place the correct order and maximize therapeutic benefit and safety for patients.
- Attend to patient-specific factors such as age, weight, allergies, pharmacogenetics, and co-morbid conditions when writing or entering prescriptions or orders.
- Discuss the planned orders and prescriptions (e.g., indications, risks) with patients and families and use a nonjudgmental approach to elicit health beliefs that may influence the patient's comfort with orders and prescriptions.

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Order sets (select all that apply): admission order set, fluid/electrolyte replacement, prescription.
- Patient-specific factors: weight, allergies, pharmacogenetics, co-morbid conditions

Basis for formal entrustment decisions:

Basis for formal entrustment decisions:

- Collect 4 observations of achievement.
- At least 2 different observers
- All different orders

- A palette of patient specific factors

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 2:** Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
   - Can filter and synthesize information (e.g., history, signs, symptoms) to identify or clarify the condition(s) they are addressing with their orders/prescriptions.
   - Has a parsimonious, reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests).
   - Routinely reflects on how the results of a test will influence clinical decision making and, conversely, on the potential consequences of not doing a test.
   - Articulates the risks and benefits of what they are ordering (e.g., drugs, tests).
2. **PC 5:** Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
   - Recognizes patterns and takes into account the "big picture" when ordering diagnostics and/or therapeutics.
   - Uses treatment guidelines and algorithms consistently but recognizes or asks for help when the patient's condition requires deviation from them.
   - Responds to the EHR's safety alerts and understands the rationale for them.
3. **PC 6:** Develop and carry out patient management plans
   - Can adapt plan based on the patient's unique demographic, cognitive, physical, cultural, socioeconomic, or situational needs.
4. **SBP 3:** Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
   - Considers the costs of their orders and the patient's ability and willingness to proceed with the plan.
5. **PBLI 1:** Identify strengths, deficiencies, and limits in one's knowledge and expertise
   - Demonstrates flexibility in thinking; accepts questions as learning opportunities and considers other possibilities.
   - Recognizes limitations and seeks help in a manner that places the needs of patients above one's own sense of autonomy.
6. **PBLI 7:** Use information technology to optimize learning and care
   - Uses electronic resources to fill in gaps in knowledge and inform safe order writing and entry (e.g., drug-drug interactions, treatment guidelines).
7. **ICS 1:** Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
   - Considers patient's preferences in placing orders.

- Communicates recommendations to patients, families, and the health care team.
- Engages in bidirectional communication with patients, their families, and members of the health care team.

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EPA 5: Document a clinical encounter in the patient record

Key Features: This EPA focuses on the ability to provide accurate, focused, and context-specific documentation of a clinical encounter in either written or electronic formats. Performance of this EPA is predicated on the ability to obtain information through history, using both primary and secondary sources, and physical exam in a variety of settings (e.g., office visit, admission, discharge summary, telephone call, email). Documentation is a critical form of communication that supports the ability to provide continuity of care to patients and allows all health care team members and consultants to:

- Understand the evolution of the patient's problems, diagnostic work-up, and impact of therapeutic interventions.
- Identify the social and cultural determinants that affect the health of the patient.
- View the illness through the lens of the patients and family.
- Incorporate the patient's preferences into clinical decision making.

The patient record is a *legal document* that provides a record of the transactions in the patient-physician contract.

Functions:

- Filter, organize, and prioritize information.
- Synthesize information into a cogent narrative.
- Record a problem list, working and differential diagnosis and plan.
- Choose the information that requires emphasis in the documentation based on its purpose (e.g., emergency department visit, clinic visit, admission history and physical examination).
- Comply with requirements and regulations regarding documentation in the medical record.
- Verify the authenticity and origin of the information recorded in the documentation (e.g., avoids blind copying and pasting).
- Record documentation so that it is timely and legible.
- Accurately document the reasoning supporting the decision making in the clinical encounter for any reader (e.g., consultants, other health care professionals, patients and families, auditors).
- Document patient preferences to allow their incorporation into clinical decision making.

Assessment Plan:

Direct and indirect observation with review of documentation by supervisor

Assessment form will collect data on:

- Document: emergency department visit, clinic visit, admission history and physical examination
- Copy and paste used: yes, no

- Case mix: Internal Medicine, Surgery, Pediatrics, Ob & Gyn, Family Medicine.

Basis for formal entrustment decisions:
- Collect 2 observations of achievement from each of the major specialties (see above).
- At least 1 different observer from each specialty
- At least 2 different types of documents

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:
1. **PC 4:** Interpret laboratory data, imaging studies, and other tests required for the area of practice
   - Documents clinical reasoning in notes, and interpretation of laboratory values is typically accurate.
2. **PC 6:** Develop and carry out patient management plans
   - Engages in help-seeking behavior to fill gaps in knowledge, skill, and experience, enabling the development and documentation of management plans aligned with the patient's needs.
3. **ICS 1:** Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
   - Adjusts and adapts communication and documentation to audience, context, or purpose.
4. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
   - Provides documentation that is comprehensive and contains important information without unnecessary details or redundancies.
   - Provides documentation that includes institutionally required elements (e.g., date, time, and signature).
5. **ICS 5:** Maintain comprehensive, timely, and legible medical records
   - Enters documentation in a timely manner to make it readily available to other team members.
   - Creates legible handwritten documentation
6. **P 4:** Demonstrate accountability to patients, society, and the profession
7. **SBP 1:** Work effectively in various health care delivery settings and systems relevant to their clinical specialty
   - Communicates in a bidirectional manner, allowing solicitation of patient preferences, which are recorded in the note.
   - Demonstrates a general understanding of documentation systems that leads to the identification of opportunities to engage with others in system improvement.

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EPA 6: Provide an oral presentation of a clinical encounter

Key Features: This EPA focuses on the ability to concisely present a summary of a clinical encounter to one or more members of the health care team (including patients and families) to achieve a shared understanding of the patient's current condition. A prerequisite for the ability to provide an oral presentation is synthesis of the information, gathered into an accurate assessment of the patient's current condition.

Functions:

- Present information that has been personally gathered or verified, acknowledging any areas of uncertainty.
- Provide an accurate, concise, and well-organized oral presentation.
- Adjust the oral presentation to meet the needs of the receiver of the information.
- Assure closed-loop communication between the presenter and receiver of the information to ensure that both parties have a shared understanding of the patient's condition and needs.

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Audience: health care team, patient(s), family(is)

Basis for formal entrustment decisions:

- Collect 4 observations of achievement.
- At least 4 different observers

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 2:** Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
    - Can filter, synthesize, and prioritize information and recognize patterns, resulting in a concise, well organized, and accurate presentation.
2. **PBLI 1:** Identify strengths, deficiencies, and limits in one's knowledge and expertise
3. **ICS 1**: Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
    - Engages in bidirectional communication that ensures a shared understanding of a presentation.
    - Avoids medical jargon.
4. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies

- Adjusts the presentation for the receiver of information (e.g., faculty, patient/family, team members) and for the context of the presentation (e.g., emergent versus ambulatory).
- Can efficiently tell a story and make an argument to support the plan.

5. **P 1:** Demonstrate compassion, integrity, and respect for others
   - Respects patient privacy and confidentiality by demonstrating situational awareness when discussing patients.
6. **P 3:** Demonstrate respect for patient privacy and autonomy
   - Actively engages patient, family, and other team members in the presentation.
   - Does not shy away from difficult or stressful issues in obtaining or presenting the information.
7. **P 2:** Practice flexibility and maturity in adjusting to change with the capacity to alter behavior
   - Reflects on areas of uncertainty and seeks additional information.
   - Acknowledges gaps in information without becoming defensive or confabulating information.
8. **P 4:** Demonstrate self-confidence that puts patients, families, and members of the health care team at ease
   - Acknowledges gaps in knowledge base and/or skills in managing a given patient presentation or condition and seeks help.
   - Demonstrates a level of confidence commensurate with knowledge and skills that puts others at ease (e.g., less certain in emergent settings and more comfortable in an ambulatory setting

Medical internship

EPA 7: Form clinical questions and retrieve evidence to advance patient care

Key Features: This EPA focuses on the ability to identify key clinical questions in caring for patients, identify information resources, and retrieve information and evidence that will be used to address those questions.

Day 1 residents should have basic skills in critiquing the quality of the evidence and assessing applicability to their patients and the clinical context. Underlying the skill set of practicing evidence-based medicine is the foundational knowledge an individual has and the self-awareness to identify gaps and fill them.

Functions:

- Develop a well-formed, focused, pertinent clinical question based on clinical scenarios or real-time patient care.
- Demonstrate basic awareness and early skills in appraisal of both the sources and content of medical information using accepted criteria.
- Identify and demonstrate the use of information technology to access accurate and reliable online medical information.
- Demonstrate basic awareness and early skills in assessing applicability/generalizability of evidence and published studies to specific patients.
- Demonstrate curiosity, objectivity, and the use of scientific reasoning in acquisition of knowledge and application to patient care.
- Apply the primary findings of one's information search to an individual patient or panel of patients.
- Communicate one's findings to the health care team (including the patient/family).
- Close the loop through reflection on the process and the outcome for the patient.

Assessment Plan:

Direct observation by supervisor

Assessment form will collect information on:

- Case mix: Internal Medicine, Surgery, Pediatrics, Ob & Gyn, Family Medicine.

Basis for formal entrustment decisions:

- Collect 2 observations of achievement from each specialty listed above.
- At least 2 different observers

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **MK 3:** Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care
    - Develops well-formed, focused, pertinent clinical question based on clinical

scenarios, real-time care of a patient or a panel of patients.

2. **MK 4:** Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention and health promotion efforts for patients and population
    - Maintains a sufficient biophysical, clinical, epidemiological, and social-behavioral scientific knowledge base that can be translated to patient care activities.
3. **PBLI 1:** Identify strengths, deficiencies, and limits in one's knowledge and expertise
    - Routinely identifies the need to ask for help or seek new information in the context of the clinical setting, based on awareness of one's own knowledge gaps and patient needs.
4. **PBLI 3:** Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes
    - Is able to focus cognitive processes on discerning relevant factors, identifying the unknowns, and developing knowledge for generating a solution via just-in-time-learning.
    - Reflects on the process by which questions are identified and answered and seeks to improve (may need guidance in understanding subtleties of the evidence).
5. **PBLI 6:** Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
    - Demonstrates curiosity, objectivity, scientific reasoning.
    - Demonstrates awareness and early skill in appraisal of sources and content of medical information.
6. **PBLI 7:** Use information technology to optimize learning and care
    - Uses info technology to gather and assess information.
    - Acquires a manageable volume of information.
    - Assesses applicability/generalizability of the information.
7. **PBLI 9:** Obtain and use information about individual patients, populations of patients, or communities from which patients are drawn to improve care
8. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
    - Applies findings by communicating with team and with patient, and changes approach to patient care if necessary.

Medical internship

EPA 8: Give or receive a patient handover to transition care responsibility

Key Features: Effective and efficient handover communication is critical for patient care. Handover communication ensures that patients continue to receive high-quality and safe care through transitions of responsibility from one health care team or practitioner to another. Handovers are also foundational to the success of many other types of interprofessional communication, including discharge from one provider to another and from one setting to another. Handovers may occur between settings (e.g., hospitalist to PCP; pediatric to adult caregiver; discharges to lower-acuity settings) or within settings (e.g., shift changes).

Functions for transmitter of information:

- Conduct handover communication that minimizes known threats to transitions of care (e.g., by ensuring you engage the listener, avoiding distractions).
- Document—and update—an electronic handover tool.
- Follow a structured handover template for verbal communication.
- Provide succinct verbal communication that conveys, at a minimum, illness severity, situation awareness, action planning, and contingency planning.
- Elicit feedback about the most recent handover communication when assuming primary responsibility of the patients.
- Demonstrate respect for patient privacy and confidentiality.

Functions for receiver of information:

- Provide feedback to transmitter, to ensure informational needs are met.
- Ask clarifying questions.
- Repeat back to ensure closed-loop communication.
- Ensure that the health care team (including patient/family) knows that the transition of responsibility has occurred.
- Assume full responsibility for required care during one's entire care encounter.
- Demonstrate respect for patient privacy and confidentiality.

Assessment Plan:

Direct or indirect observation with documentation review by supervisor

Assessment form will collect data on:

- Type of handover: hospitalist to PCP; pediatric to adult caregiver; discharges to lower-acuity settings, shift changes, complex clinical verbal communication.

Basis for formal entrustment decisions:

- Collect 2 observations of achievement from each major specialty.
- At least 2 different observers
- From different handover events

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 8:** Provide appropriate referral of patients including ensuring continuity of care throughout transitions between providers or settings, and following up on patient progress and outcomes
    - Consistently transfers information regarding content, accuracy, efficiency, and synthesis.
    - Organizes and prioritizes information for handover communications.
    - Provides key aspects of the ideal handover to the recipient, including verbalizing the patient's illness severity and/or providing action planning and/or contingency planning.
    - Demonstrates situation awareness of both the team's total work load and the circumstances of the individual to whom one is transferring care.
    - Demonstrates awareness of known threats to handover communication (e.g., interruptions and distractions) by paying attention to the timing and location of the handover communication
2. **PBLI 5:** Incorporate feedback into daily practice
3. **PBLI 7:** Use information technology to optimize learning and care
4. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
    - Uses a template for the handover communication but can adapt based on patient, audience, setting, or context, including patient disabilities or language barriers.
    - Generally documents patient information without errors of omission and/or commission.
5. **ICS 3:** Work effectively with others as a member or leader of a health care team or other professional group
6. **P 3:** Demonstrate respect for patient privacy and autonomy

Medical internship

EPA 9: Collaborate as a member of an interprofessional team

Key Features: Effective teamwork is necessary to achieve the competencies for care that is safe, timely, effective, efficient, and equitable. Introduction to the roles, responsibilities, and contributions of individual team members early in professional development is critical to fully embracing the value that teamwork adds to patient care outcomes.

Functions:

- Identify team members' roles and the responsibilities associated with each role.
- Establish and maintain a climate of mutual respect, dignity, integrity, and trust.
- Communicate with respect for and appreciation of team members and include them in all relevant information exchange.
- Use attentive listening skills when communicating with team members.
- Adjust communication content and style to align with team-member communication needs.
- Understand one's own roles and personal limits as an individual provider and seek help from the other members of the team to optimize health care delivery.
- Help team members in need.
- Prioritize team needs over personal needs to optimize delivery of care.

Assessment Plan:

Direct observation by supervisor

Use the Assessment form.

Basis for formal entrustment decisions:

- Collect 1 observation of achievement from at least 2 specialties.

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **ICS 3:** Work effectively with others as a member or leader of a health care team or other professional group
    - Acts as an active and integrated member of the team who in most situations prioritizes team goals over one's own professional goals.
    - Understands the roles of other team members, seeks their counsel, actively listens to their recommendations, and incorporates them into practice.
2. **ICS 7:** Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions
    - In most situations, can read one's own emotions and anticipates and reads the emotions of others.
3. **P 1:** Demonstrate compassion, integrity, and respect for others
4. **SBP 2:** Coordinate patient care within the health care system

5. **ICS 2:** Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust
6. **ICS 2:** Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of the patients and populations served
7. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
8. **ICS 2:** Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations
    - Typically communicates in a bidirectional manner and keeps all team members informed and up to date.
    - Modifies and adapts communication content and style based on audience, venue, receiver preference, or type of message.
    - Maintains a professional demeanor in all but the most trying of circumstances.
    - Actively engages with the patient and other team members to coordinate

Medical internship

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management

Key Features: The ability to promptly recognize a patient who requires urgent or emergent care, initiate evaluation, and management, and seek help is essential for all physicians. New residents are often among the first responders in an acute care setting, or the first to receive notification of an abnormal lab or deterioration in a patient's status. Early recognition and intervention provide the greatest chance for optimal outcomes in patient care. This EPA often calls for simultaneously recognizing need and initiating a call for assistance. Examples of conditions for which first-day interns might be expected to recognize, initiate evaluation and management, and seek help include the following:

- chest pain
- mental status changes
- shortness of breath and hypoxemia
- fever
- hypotension and hypertension
- tachycardia and arrhythmias (e.g., SVT, AFIB, heart block)
- oliguria, anuria, urinary retention
- electrolyte abnormalities (e.g., hyponatremia, hyperkalemia)
- hypoglycemia and hyperglycemia

Functions:

- Recognize normal vital signs and variations that might be expected based on patient- and disease-specific factors.
- Recognize severity of a patient's illness and indications for escalating care.
- Identify potential underlying etiologies of the patient's decompensation.
- Apply basic and advanced life support as indicated.
- Start initial care plan for the decompensating patient.
- Engage team members required for immediate response, continued decision making, and necessary follow-up to optimize patient outcomes.
- Understand how to initiate a code response and participate as a team member.
- Communicate the situation to responding team members.
- Document patient assessments and necessary interventions in the medical record.
- Update family members to explain patient's status and escalation-of-care plans.
- Clarify patient's goals of care upon recognition of deterioration (e.g., DNR, DNI, comfort care).

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Case mix: chest pain, mental status changes, shortness of breath and hypoxemia, fever,

hypotension/hypertension, tachycardia/arrhythmias (e.g., SVT, AFIB, heart block), oliguria, anuria, urinary retention, electrolyte abnormalities (e.g., hyponatremia, hyperkalemia), hypoglycemia/hyperglycemia.
- Basic/advanced life support applied: yes, no
- Patient's goals of care upon recognition of deterioration: DNR, DNI, comfort care, N/A

Basis for formal entrustment decisions:
- Collect 2 observations of achievement.
- At least 2 different observers

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:
1. **PC 1:** Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice
2. **PC 2:** Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
   - Recognizes age appropriateness of, trends in, and variations of patients' vital signs.
   - Gathers, filters, prioritizes, and connects pieces of information (e.g., vital signs, focused physical exam, pertinent medical history, recent test or procedures, medications) to form a patient-specific differential diagnosis, initiate interventions, and drive testing decisions.
3. **PC 3:** Organize and prioritize responsibilities to provide care that is safe, effective, and efficient
4. **PC 4:** Interpret laboratory data, imaging studies, and other tests required for the area of practice
   - Initiates interventions and tests with frequent reassessment to determine level of help needed and to anticipate next steps.
   - Interprets common test results to anticipate and respond to early clinical deterioration.
5. **PC 5:** Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
6. **PC 6:** Develop and carry out patient management plans
   - Adheres to institutional procedures and protocols regarding escalation of patient care.
7. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
   - Actively listens to and elicits feedback from team members (e.g., nursing, family members) regarding concerns about patient deterioration to determine next steps.

- Uses the health care team members according to their roles and responsibilities to increase task efficiency in dealing with urgent or emergent patient conditions.
- Understands and recognizes personal limitations, emotions, and personal biases and seeks help when needed.
- Demonstrates bidirectional communication with health care team and family regarding goals of care and treatment plan that leads to shared decision making.
- Provides a focused and concise presentation of accurate patient information to responding members of the health care team.
- Completes documentation in the medical record of the clinical encounter.
- Seeks guidance and feedback from supervisors after the clinical encounter

8. **ICS 6:** Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g., about sensitive issues such as death, end-of-life, adverse events, bad news, disclosure of errors)

Medical internship

EPA 11: Obtain informed consent for tests and/or procedures

Key Features: All physicians must be able to perform patient care interventions that require informed consent. From day 1, residents may be in a position to obtain informed consent for interventions, tests, or procedures they order or perform (e.g., immunizations, central lines, contrast and radiation exposures, blood transfusions).

Functions:

- Describes the indications, risks, benefits, alternatives, and potential complications of the procedure.
- Communicates with the patient/family and ensures their understanding of the indications, risks, benefits, alternatives, and potential complications.
- Creates a context that encourages the patient/family to ask questions.
- Enlists interpretive services when necessary.
- Documents the discussion and the informed consent appropriately in the health record.
- Displays an appropriate balance of confidence with knowledge and skills that puts patients and families at ease.
- Understands personal limitations and seeks help when needed.

Of note, residents on day 1 should not be expected to obtain informed consent for procedures or tests for which they do not know the indications, contraindications, alternatives, risks, and benefits.

Assessment Plan:

Direct observation with review of documentation by supervisor
Use Assessment form.

Basis for formal entrustment decisions:

- Collect 2 observations of achievement.
- At least 2 different observers

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 3:** Organize and prioritize responsibilities to provide care that is safe, effective, and efficient
    - Understands the importance of informed consent to rapport building and shared decision making.
    - Demonstrates an understanding of the elements of informed consent generally (indications, contraindications, risks, benefits, alternatives) and the specifics of these elements for the procedures for which consent is being sought.
2. **PC 6:** Develop and carry out patient management plans

3. **PC 7:** Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making
    - Provides complete information to patients and families.
4. **ICS 1:** Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
    - Avoids medical jargon in communicating with patients and families.
    - Uses bidirectional communication to both inform patients and families and seek their input and questions.
    - Solicits patient/family preferences to engage them in shared decision making.
5. **ICS 5:** Maintain comprehensive, timely, and legible medical records
    - Documents the informed consent in a complete and timely fashion.
6. **ICS 7:** Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions
    - Recognizes emotional cues in others (e.g., fear, anger, anxiety) and can address them in real time or seek help from others on the health care team.
    - Demonstrates confidence commensurate with skills.
    - Seeks guidance from superiors around areas of uncertainty.
7. **SBP 3:** Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
8. **PPD 7:** Demonstrate self-confidence that puts patients, families, and members of the health care team at ease

Medical internship

EPA 12: Perform general procedures of a physician

Key Features: All physicians need to demonstrate competency in performing a few core procedures on completion of medical school to provide basic patient care. These procedures include:

- Basic cardiopulmonary resuscitation (CPR)
- Bag and mask ventilation
- Venipuncture
- Inserting an intravenous line

Functions:

- Demonstrate the technical (motor) skills required for the procedure.
- Understand and explain the anatomy, physiology, indications, risks, contraindications, benefits, alternatives, and potential complications of the procedure.
- Communicate with the patient/family to ensure pre- and post-procedure explanation and instructions.
- Manage post-procedure complications.
- Demonstrate confidence that puts patients and families at ease.

Assessment Plan:

Direct observation by supervisor

Assessment form will collect data on:

- Procedure: Basic cardiopulmonary resuscitation (CPR), Bag and mask ventilation, Venipuncture, Inserting an intravenous line

Basis for formal entrustment decisions:

- At least one of each procedure

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **PC 1:** Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice
    - Demonstrates the necessary preparation required for performance of procedures.
    - Demonstrates and applies understanding of key issues in performing procedures, such as: Patient-specific factors, Indications, Contraindications, Risks, Benefits, Alternatives.
    - Knows and takes steps to mitigate complications of procedures.
    - Demonstrates reliable mechanical skills in performing procedures in most situations and knows when to seek help for procedures or situations beyond the learner's abilities.
    - Uses universal precautions and aseptic technique consistently.

2. **PC 7:** Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making
    - Demonstrates patient-centered skills in performing procedures:
        - Avoids medical jargon such that patients can verbalize understanding of the procedure.
        - Participates in shared decision making with patients about procedures.
        - Has confidence commensurate with level of knowledge and skill that puts patients at ease.
        - Simultaneously pays attention to both the procedure and the patient
3. **ICS 5:** Maintain comprehensive, timely, and legible medical records
4. **ICS 6:** Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g., about sensitive issues such as death, end-of-life, adverse events, bad news, disclosure of errors)
5. **P 4:** Demonstrate a commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations
6. **SBP 3:** Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
7. **P 4:** Demonstrate self-confidence that puts patients, families, and members of the health care team at ease

Medical internship

EPA 13: Identify system failures and contribute to a culture of safety and improvement

Key Features: This EPA is critical to the professional formation of a physician and forms the foundation for a lifelong commitment to systems thinking and improvement.

Functions:

- Understand systems and their vulnerabilities.
- Identify actual and potential ("near miss") errors in care.
- "Speak up" in the face of real or potential errors.
- Use system mechanisms for reporting errors (e.g., event reporting systems, chain of command policies).
- Recognize the use of "workarounds" as an opportunity to improve the system.
- Participate in system improvement activities in the context of rotations or learning experiences (e.g., rapid-cycle change using plan-do-study-act cycles; root cause analyses; morbidity and mortality conferences; failure modes and effects analyses; improvement projects).
- Engage in daily safety habits (e.g., universal precautions, hand washing, time-outs).
- Admit one's own errors, reflect on one's contribution, and develop an improvement plan.

Assessment Plan:

Direct and indirect observation with review of documentation by supervisor

Assessment form will collect data on:

- Type of clinical safety event: actual error, "near miss", "Speak up", time-out.
- System improvement activity: rapid-cycle change using PDSA, root cause analyses, morbidity and mortality conferences, improvement project.
- Error reported: yes, no.

Basis for formal entrustment decisions:

- At least one System improvement activity

When is unsupervised practice expected to be achieved: 12 months of training.

Relevant Tasks:

1. **MK 1:** Demonstrate an investigatory and analytic approach to clinical situations
2. **PBLI 4:** Systematically analyze practice using quality-improvement methods and implement changes with the goal of practice improvement
   - Identifies real and potential errors.
   - Performs common safety behaviors (e.g., universal precautions, hand washing).
   - Understands the importance of error prevention both to individual patients and to systems.

3. **PBLI 10:** Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes
    - Still relies on external sources of information to understand one's population of patients.
4. **ICS 2:** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
5. **P 4:** Demonstrate accountability to patients, society, and the profession
    - Takes responsibility for one's role in errors.
    - Takes time to "slow down" and reflect on one's work.
6. **SBP 4:** Advocate for quality patient care and optimal patient care systems
7. **SBP 5:** Participate in identifying system errors and implementing potential systems solutions
    - Reports real and/or potential errors when they occur using the system reporting structure.
    - Participates in improvement activities voluntarily.
    - Speaks up when concerned about a potential error, even if that means questioning or challenging a supervisor.
    - Recognizes one's own symptoms of fatigue and moderates behavior or seeks help.


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