CCC: Milestone Descriptions for 21 Sub-Competencies

A. PATIENT CARE

1. *Gather essential and accurate information about the patient*

❖ Either **gathers too little information or exhaustively gathers information following a template** regardless of the patient's chief complaint, with each piece of information gathered seeming as important as the next. Recalls clinical information in the order elicited,7 with the ability to gather, filter, prioritize, and connect pieces of information being limited by and dependent upon **analytic reasoning** through basic pathophysiology alone.
❖ Clinical experience allows linkage of signs and symptoms of a current patient to those encountered in previous patients. Still relies primarily on **analytic reasoning** through basic pathophysiology to gather information, but the ability to link current findings to prior clinical encounters allows information to be filtered, prioritized, and synthesized into **pertinent positives and negatives** as well as **broad diagnostic categories**.
❖ Advanced development of pattern recognition leads to the **creation of illness scripts**, which allow information to be gathered while it is simultaneously filtered, prioritized, and synthesized into **specific diagnostic considerations**. Data gathering is driven by **real-time development of a differential diagnosis early** in the information-gathering process.8
❖ **Well-developed illness scripts** allow essential and accurate information to be gathered and **precise diagnoses to be reached with ease and efficiency** when presented with most pediatric problems, but still relies on analytic reasoning through basic pathophysiology to gather information when presented with complex or uncommon problems.
❖ **Robust illness scripts** and instance scripts (where the specific features of individual patients are remembered and used in future clinical reasoning) lead to **unconscious gathering of essential and accurate information in a targeted and efficient manner** when presented with all but the most complex or rare clinical problems. These illness and instance scripts are robust enough to enable discrimination among diagnoses with subtle distinguishing features.

2. *Organize and prioritize responsibilities to provide patient care that is safe, effective, & efficient*

❖ **Struggles to organize** patient care responsibilities, leading to focusing care on **individual patients** rather than multiple patients; **responsibilities are prioritized** as a **reaction to unanticipated needs** that arise (those responsibilities presenting the most significant crisis at the time are given the highest priority); even **small interruptions in task often lead to a prolonged or permanent break in that task** to attend to the interruption, making return to initial task difficult or unlikely.
❖ Organizes the simultaneous care of a **few patients** with efficiency; **occasionally prioritizes** patient care responsibilities **to anticipate future needs**; **each additional patient or interruption in work** leads to **notable decreases in efficiency and ability to effectively prioritize**; permanent breaks in task with interruptions are less common, but **prolonged breaks in task are still common.**
❖ Organizes the simultaneous care of **many patients** with efficiency; **routinely prioritizes** patient care responsibilities **to proactively anticipate future needs**; additional care responsibilities lead to decreases in efficiency and ability to effectively prioritize **only when patient volume is quite large or there is a perception of competing priorities**; **interruptions in task are prioritized** and only lead to prolonged breaks in task when workload or cognitive load is high.
❖ **Organizes** patient care responsibilities **to optimize efficiency**; provides care to **a large volume of patients** with marked efficiency; patient care **responsibilities are prioritized to proactively prevent those urgent and emergent issues** in patient care that can be anticipated; interruptions in task lead to only **brief breaks in task in most situations.**
❖ Serves as a **role model of efficiency**; patient care responsibilities are **prioritized to proactively prevent interruption by routine aspects** of patient care that can be anticipated; unavoidable interruptions are prioritized to **maximize safe and effective multitasking** of responsibilities in essentially all situations.

3. *Provide transfer of care that ensures seamless transitions*

❖ Demonstrates **variability in transfer of information (content, accuracy, efficiency, and synthesis)** from one patient to the next. Frequent errors of both omission and commission in the handoff.
❖ **Uses a standard template** for the information provided during the handoff. Unable to deviate from that template to adapt to more complex situations. **May have errors of omission or commission**, particularly when clinical information is not synthesized. Neither anticipates nor attends to the needs of the receiver of information.

❖ **Adapts and applies a standardized template, relevant to individual contexts, reliably and reproducibly**, with minimal errors of omission or commission. Allows ample opportunity for clarification and questions. **Beginning to anticipate potential issues for the transferee**.
❖ **Adapts and applies a standard template to increasingly complex situations** in a broad variety of settings and disciplines. Ensures open communication, whether in the receiver- or provider-of-information role through **deliberative inquiry,** including but not limited to read-backs, repeat-backs (provider), and clarifying questions (receivers).
❖ **Adapts and applies the template without error and regardless of setting or complexity.** Internalizes the **professional responsibility** aspect of handoff communication, as evidenced by formal and explicit sharing of the conditions of transfer (e.g., time and place) and communication of those conditions to patients, families, and other members of the health care team

4. Make informed diagnostic and therapeutic decisions that result in optimal clinical judgment

❖ Recalls and presents clinical facts in the history and physical in the order they were **elicited without filtering, reorganization, or synthesis**. Analytic reasoning through **basic pathophysiology** results in a list of all diagnoses considered rather than the development of working diagnostic considerations, making it **difficult to develop a therapeutic plan.**
❖ Focuses on features of the clinical presentation, making a unifying diagnosis elusive and leading to a **continual search for new diagnostic possibilities**. Largely using **analytic reasoning** through basic pathophysiology in diagnostic and therapeutic reasoning; often reorganizes clinical facts in the history and physical examination to help decide on clarifying tests to order rather than to develop and prioritize a differential diagnosis. This often results in a **myriad of tests and therapies and unclear management plans, since there is no unifying diagnosis.**
❖ Abstracts and reorganizes elicited clinical findings in memory, using **semantic qualifiers** (such as paired opposites that are used to describe clinical information [e.g., acute and chronic]) to compare and contrast the diagnoses being considered when presenting or discussing **a case. The emergence of pattern** recognition in diagnostic and therapeutic reasoning often results in a **well-synthesized and organized assessment of the focused differential diagnosis and management plan**.
❖ Reorganized and stored clinical information (illness and instance scripts) leads to **early directed diagnostic hypothesis testing** with subsequent history, physical examination, and tests used to confirm this initial schema. **Well-established pattern recognition** leads to the ability to **identify discriminating features** between similar patients and to avoid premature closure. **Therapies are focused and based on a unifying diagnosis**, resulting in an effective and efficient diagnostic work-up and management plan tailored to address the individual patient.

5. Develop and carry out management plans

❖ Develops and carries out management plans **based on directives from others**, either from the health care organization or the supervising physician. **Unable to adjust plans** based on individual patient differences or preferences. **Communication about the plan is unidirectional** from the practitioner to the patient and family.
❖ Develops and carries out management plans based on one's **theoretical knowledge and/or directives** from others. Can **adapt plans to the individual patient,** but only within the framework of one's own theoretical knowledge. Unable to focus on key information, so conclusions are often from **arbitrary, poorly prioritized, and time-limited information gathering**. Management plans based on the **framework of one's own assumptions and values.**
❖ Develops and carries out management plans **based on both theoretical knowledge and some experience**, especially in managing common problems. Follows health care institution directives as a matter of habit and good practice rather than as an externally imposed sanction. Able to more effectively and efficiently **focus on key information**, but still may be limited by time and convenience. **Plans begin to incorporate patients' assumptions and values through more bidirectional communication.**
❖ Develops and carries out management plans **based most often on experience**. Effectively and **efficiently focuses on key information** to arrive at a plan. **Incorporates patients' assumptions** and values through **bidirectional communication** with **little interference from personal biases.**
❖ Develops and carries out management plans, even for complicated or rare situations, based primarily on **experience that puts theoretical knowledge into context**. Rapidly **focuses on key information** to arrive at the plan and augments that with available information or seeks new information as needed. Has **insight into one's own assumptions and values** that allow one to filter them out and focus on the patient/family values in a bidirectional conversation about the management plan.

B. MEDICAL KNOWLEDGE

1. *Locate, appraise, & assimilate evidence from scientific studies related to patients' health problems*

❖	**Explains basic principles** of EBM, but relevance is limited by lack of clinical exposure. **Example:** *The senior resident asks each member of the inpatient team to answer a clinical question that he raised during rounds and to be prepared to discuss it the next morning. The learner goes to a more senior colleague for help, since he cannot work through a case or article using the critical appraisal approach, mainly due to lack of clinical context to work from.*
❖	Recognizes the importance of using current information to care for patients and **responds to external prompts** to do so. Able to **formulate questions with some difficulty,** but **not yet efficient with on-line searching**. Starting to learn critical appraisal skills. **Example:** *In response to a clinical question raised during rounds and the senior resident's request that everyone answer the question, the learner is able, with some difficulty, to frame the question in a PICO format. He has searching capability, but the search and the steps of analyzing and applying the evidence are time intensive so he is not prepared to discuss his findings on rounds the next morning.*
❖	**Able to identify knowledge gaps as learning opportunities. Makes an effort** to ask answerable questions on a regular basis and is becoming **increasingly able to do so.** Understands varying levels of evidence and can utilize advanced search methods. **Able to critically appraise a topic** by analyzing the major outcomes; however, may need guidance in understanding the subtleties of the evidence. **Begins to seek and apply evidence when needed**, not just when assigned to do so. **Example:** *In response to the clinical question raised during rounds, develops an answerable clinical question in PICO format and efficiently searches for best evidence. Volunteers to present on rounds the next day and demonstrates effective analytic skills and the ability to apply his findings to the current patient. Has a bit of difficulty interpreting and applying some of the secondary outcomes and, in the context of this discussion, another question is raised, which he volunteers to search and answer.*
❖	**Increasingly self-motivated to learn more,** as exhibited by **regularly formulating answerable questions**. Incorporates use of clinical evidence in rounds and **teaches fellow learners.** Quite capable with advanced searching. Able to **critically appraise topics** and does so regularly. Shares findings with others to try to improve their abilities. **Practices EBM** because of the benefit to the patient and the desire to learn more rather than in response to external prompts. **Example:** *In response to the clinical question raised during rounds, presents a second question that he has already researched in a PICO format as well as a critique of the evidence and its applicability to the current patient. He was motivated to be proactive by his interest in learning as well as the needs of his patient. He shares his tactics with team members by teaching them the steps he engaged in to learn and apply this information.*
❖	**Teaches critical appraisal of topics to others.** Strives for change at the organizational level as dictated by best current information. **Able to easily formulate answerable clinical questions and does so with majority of patients as a habit**. Able to effectively and efficiently search and access the literature. Seen by others as a **role model** for practicing EBM. **Example:** *An EBM practitioner, as observed by conversations during rounds, whom others try to emulate. He enjoys teaching colleagues how to become EBM practitioners by role modeling. He helps team members develop and refine their skills using his expertise to make a difficult task practical and doable.*

C. PRACTICE-BASED LEARNING AND IMPROVEMENT

1. *Identify strengths, deficiencies, and limits in one's knowledge and expertise*

❖	The learner **acknowledges external assessments**, but understanding of his performance is **superficial and limited to the overall grade** or bottom line; there is little understanding of how the performance measure relates in a meaningful way to their specific level of KSA. Example: During a semiannual review a learner is unable to describe in any specific terms how he has performed when asked to do so by his mentor. In response, the mentor reviews and interprets the learner's evaluations and then asks the learner to reflect on the discussion. The learner repeats the language used and recites the overall score/grade without interpretation of further meaning or inference regarding the reported performance assessment.
❖	Assessment of performance is seen as **being able** to do or not do the task at hand **without appreciation for how well it is done** and **whether there is a need to improve** the outcome. Example: The learner seeks external assessment of performance as ability "to do" or "not able to do" with little understanding of what the assessment means. "Are these orders written correctly?" "Did I do that correctly?" Seeks feedback approval on whether KSA were "right" or "wrong." Does not seek "How?" or "Why?" as part of request for feedback to assist identification of KSA.

❖	**Prompts for understanding specifics of level of performance are internal** and may be identified in response to uncertainty, discomfort, or tension in completing clinical duties. Evidence of this stage demonstrated by **active questioning** and **application of knowledge** in developing a rationale for care plans or in teaching activities. Example: Learner requests elaboration, clarification, or expansion on patient-care related task. "Why would we use this antibiotic for this condition?" or "The patient has underlying condition x. Does that alter therapy y for this patient?" or "I think we should order study w for this patient, since sometimes this disease presents with underlying condition z."
❖	Prompted by anticipation or contemplation of potential clinical problems, the **learner self-identifies gaps in KSA** through reflection that assesses current KSA versus understanding of underlying basic science or pathophysiologic principles to **generate new questions about limitations or mastery of KSA**. Evidence of this stage can be determined by the advanced nature and level of questioning or **resource seeking**. Example: In caring for a patient with an illness not previously encountered, this practitioner says, "I have experience taking care of patients with this acute illness but have never had a patient with this acute illness who also had this particular underlying condition and wonder if the chronic condition might alter his clinical course?"
❖	Prompted by a **self-directed goal of improving the professional self**, the practitioner anticipates hypothetical clinical scenarios that build on current experience and **systematically addresses identified gaps** to enhance the level of KSA. **Elaborate questioning** occurs to further explore gaps and strengths. Example: In caring for a patient a practitioner becomes aware of a gap in KSA, and in response (with *or without consultation from a mentor) seeks to understand more about the identified KSA gap. A **PICO-formatted question** (P = Patient, I = Intervention, C = Comparison, O = Outcome) is constructed, followed by a process of identification of learning needed.*

2. *Identify and perform appropriate learning activities to guide personal and professional development*

❖ Sets learning activities **based on readily available curricular materials**, **irrespective of learning style**, preferences, appropriateness of activity, or any outcome measures. **Example**: *After realizing a need to better understand what medications should be used in the management of a clinic patient with moderate asthma, the learner asks a peer who is working with him in clinic rather than pursuing the references suggested by his clinic preceptor.*
❖ **Well-defined goals** are mapped to appropriate learning activities and resources **based on assigned curriculum**. Assignment may be part of a teacher-constructed curriculum or part of a prescribed curriculum offered by others or sought by the learner in response to performance gap. **Example:** *A learner reads cases assigned for primary care in advance of coming to a scheduled clinic session where a discussion of the cases is to take place. Others have not read the case, and after the session the resident is left wondering about the case and its relevance to overall learning. The case is part of a core curriculum with learning goals and objectives. Later, in clinic a patient presents with a problem similar to last week's case discussion, and the learner is able to go back to that case to glean further information on how to manage the patient.*
❖ Learning resources are **sought based on analysis of learning needs assessment** and constructed goals and with consideration of *nature* of learning content and method. **Example:** *Having failed at intubation in the delivery room, the learner goes back to the simulation lab to receive further training on intubation with the manikin (and does not simply reread the Neonatal Resuscitation Protocol*
❖ Consideration of choice of activities is **based on instructional methods that are known to be effective in the development of the relevant knowledge content**, application of that knowledge, and development of skills or behaviors. Learning takes place through **collaborative interface with experts** in which learning activities sought are ones that allow for constant course correction and interactive sharing of alternative perspectives and differing lenses. **Example:** *A learner is planning an advocacy workshop for parents of children with complex medical needs to improve their skills with managing medical devices. In the process of preparing for this workshop, he discovers that there is an in-service for parents of hospitalized patients in how to care for devices and participates in this learning activity. Through this in-service, he identifies written resources, models useful for demonstrations, and video-recorded illustrations of anticipated complications with device use. He chooses to conduct a practice rehearsal with some families in the inpatient setting, with course correction from the hospital's nurse-educator.*
❖ Seeking resources to learn is undertaken with **high efficiency and effectiveness**, with open and flexible inclusion of the **influences from outside sources** (including regulatory and oversight groups). Fruitful pathways and resources for learning are readily shared with peers and self-assessment of learning drives further resource seeking. **Example:** *Seeks to expand the types of devices discussed in the workshop and looks to the work published by the Institute of Medicine Committee on Safe Medical Devices for Children.*[11] *Decides to pursue resources (experts in the field) to see if it would be possible to learn how to provide the instructional materials, plans, and workshops to parents throughout the state.*

3. *Systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement*

❖ Unable to gain insight from encounters due to a **lack of reflection on practice**. **Does not understand the principles of quality improvement methodology** or change management. Is **defensive when faced with data on performance** improvement opportunities within one's practice.
❖ Able to **gain insight from reflection on individual patient encounters,** but potential improvements limited by **lack of systematic improvement strategies and team approach. Dependent upon external prompts to define improvement opportunities** at the population level.
❖ Able to **gain insight** for improvement opportunities **from reflection on both individual patients and populations. Grasps improvement methodologies** enough to apply to populations. **Still reliant on external prompts to inform and prioritize improvement opportunities** at the population level.
❖ Able to use both individual encounters and population data to drive improvement using improvement methodology. **Analyzes one's own data on a continuous basis**, without reliance on external forces, to prioritize improvement efforts. Uses that analysis in an **iterative process for improvement**. Able to **lead a team in improvement**.
❖ In addition to demonstrating continuous improvement activities and appropriately utilizing quality improvement methodologies, **thinks and acts systemically to try to use one's own successes to benefit other practices, systems, or populations**. **Open to analysis** that at times requires **course correction to optimize improvement.**

4. *Incorporate formative evaluation feedback into daily practice*

❖ Difficulty in considering others' points of view when they differ from her own, leading to **defensiveness and inability to receive feedback and/or avoidance of feedback; limited incorporation of formative feedback** into daily practice.
❖ **Dependent on external sources of feedback** for improvement; beginning to acknowledge other points of view, but **reinterprets** feedback in a way that serves her own need for praise or consequence avoidance rather than informing a personal quest for improvement; **little to no behavioral** change occurs in response to feedback (e.g., listens to feedback but takes away only those messages she wants to hear).
❖ Understands others' points of view and changes behavior to **improve specific deficiencies that are noted by others** (e.g., understands that the perceptions of others are important even when those perceptions are different from her own, such as when a nurse interprets a response as abrupt when it was not intended to be, causing her to examine what prompted this perception).
❖ Internal sources of feedback allow for insight into limitations and engagement in **self-regulation; improves daily practice based on both external formative feedback and internal insights** (e.g., is able to point out what went well and what did not go well in a given encounter, and makes positive change in behavior as a result.
❖ Professional maturity and deep emotional commitment that lead to **deliberate practice** and result in the **habits** of continuous **reflection, self-regulation, and internal feedback** that lead to **continuous improvement beyond a focus solely on deficiencies.**

D. INTERPERSONAL AND COMMUNICATION SKILLS

1. Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds

❖ Uses **standard medical interview template** to prompt all questions. **Does not vary the approach** based on a patient's unique physical, cultural, socioeconomic, or situational needs. May feel intimidated or **uncomfortable asking personal questions** of patients.
❖ Uses the medical interview to **establish rapport** and focus on **information exchange** relevant to a patient's or family's primary concerns. **Identifies** physical, cultural, psychological, and social **barriers to communication, but often has difficulty managing them**. Begins to use **nonjudgmental questioning scripts** in response to sensitive situations.

❖ Uses the interview to effectively establish rapport. **Able to mitigate** physical, cultural, psychological, and social **barriers in most situations**. Verbal and nonverbal communication skills **promote trust, respect, and understanding**. Develops **scripts to approach most difficult communication scenarios.**
❖ Uses communication to establish and maintain a **therapeutic alliance**. Sees beyond stereotypes and works to **tailor communication to the individual**. A wealth of experience has led to development of **scripts for the gamut of difficult communication scenarios**. **Able to adjust scripts ad hoc** for specific encounters.
❖ Connects with patients and families in an **authentic manner that fosters a trusting and loyal relationship. Effectively educates** patients, families, and the public as part of all communication. **Intuitively handles the gamut of difficult communication** scenarios with grace and humility.

2. *Demonstrate the insight and understanding into emotion and human response to emotion that allow one to appropriately develop and manage human interactions*

❖ **Does not accurately anticipate or read others' emotions** in verbal and nonverbal communication. Is **unaware of one's own emotional and behavioral cues** and **may transmit emotions in communication** (e.g., anxiety, exuberance, and anger) that can **precipitate unintended emotional responses** in others. **Does not effectively manage strong emotions** in oneself or others.
❖ Begins to **use past experiences to anticipate and read** (in real time) the **emotional responses** in herself and others across a **limited range of medical communication scenarios,** but **does not yet have the ability or insight to moderate her behavior to effectively manage the emotions**. **Strong emotions in oneself and others may still become overwhelming**.
❖ **Anticipates, reads, and reacts to emotions in real time** with appropriate and **professional behavior in nearly all typical medical communication scenarios**, including those evoking very **strong emotions**. Uses these abilities to **gain and maintain therapeutic alliances** with others.
❖ **Perceives, understands, uses, and manages emotions** in a **broad range of medical communication scenarios** and **learns from new or unexpected emotional experiences**. Effectively **manages her own emotions** appropriately in **all situations**. Effectively and consistently**uses emotions to gain and maintain therapeutic alliances** with others. Is perceived as a **humanistic provider**.
❖ **Intuitively perceives, understands, uses, and manages emotions** to improve the health and well-being of others and to **foster therapeutic relationships** in any and **all situations**. Is seen as an **authentic role model of humanism** in medicine.

E. PROFESSIONALISM

1. Humanism

❖ Sees the patients in a "we versus they" framework and is **detached** and not sensitive to the human needs of the patient and family.
❖ Demonstrates **compassion for patients in selected situations** (e.g., tragic circumstances such as unexpected death) but has a pattern of conduct that demonstrates a lack of sensitivity to many of the needs of others.
❖ Demonstrates consistent understanding of patient and family expressed needs and a desire to meet those needs on a regular basis. Is **responsive** in demonstrating kindness and compassion.
❖ Is altruistic and goes beyond responding to expressed needs of patients and families; **anticipates the human needs** of patients and families and works to meet those needs as part of his skills in daily practice.
❖ Is a **proactive advocate** on behalf of individual patients, families and groups of children in need.

2. Professionalization

❖ Appears to be interested in learning pediatrics but **not fully engaged and involved** as a professional, which results in an observational or passive role.
❖ Although he appreciates the role in providing care and being a professional, at times has **difficulty in seeing self as a professional,** which may result in not taking appropriate primary responsibility.
❖ **Demonstrates understanding and appreciation of the professional role** and the gravity of being the "doctor" by becoming fully engaged in patient care activities. Has a sense of duty. Rare lapses into behaviors that do not reflect a professional self-view.

❖ Has **internalized and accepts full responsibility** of the professional role and develops fluency with patient care and professional relationships in caring for a broad range of patients and team members.
❖ **Extends professional role** beyond the care of patients and sees self as a professional who is contributing to something larger (e.g., a community, a specialty, or the medical profession.

3. Professional Conduct

❖ There are **repeated lapses** in professional conduct wherein responsibility to patients, peers and/or the program are not met. These lapses may be due to an apparent lack of insight about the professional role and expected behaviors or other conditions or causes (e.g., depression, substance use, poor health).
❖ Under conditions of **stress or fatigue, there are documented lapses** in professional conduct that lead others to remind, enforce, and resolve conflicts. There may be some insight into behavior but there is an inability to modify behavior when placed in stressful situations.
❖ In nearly all circumstances, **conducts interactions with a professional mindset,** sense of duty and accountability. Has insight into his/her own behavior as well as likely triggers for professionalism lapses and is able to use this information to remain professional.
❖ Demonstrates an in-depth understanding of professionalism that allows him to **help other team members and colleagues with issues of professionalism.** Able to identify potential triggers and uses this information to prevent lapses in conduct as part of his duty to help others.
❖ Others look to this person as a **model of professional conduct**. Smooth interactions with patients, families, and peers. Maintains high ethical standards across settings and circumstances. Excellent emotional intelligence about human behavior and insight into self and uses this information to promote and engage in professional behavior as well as to prevent lapses in others and self.

4. Self-awareness of one's own knowledge, skill, and emotional limitations that leads to appropriate help-seeking behaviors.

❖ The lack of insight into limitations results in **the need for help going unrecognized, sometimes resulting in unintended consequences.**
❖ Concern that limitations may be seen as weaknesses that will negatively impact evaluations results in **help-seeking behaviors typically only in response to external prompts** rather than internal drive.
❖ **Recognizes limitations,** but perception that autonomy is a key element of one's identity as a physician and the need to emulate this behavior to belong to the profession **may interfere with internal drive to engage in appropriate help-seeking behavior.**
❖ **Recognizes limitations** and has matured to the stage where a personal value system of help- seeking for the sake of the patient supersedes any perceived value of physician autonomy, resulting in **appropriate requests for help when needed.**
❖ Beyond recognizing limitations, the personal drive to learn and improve results in the **habit of engaging in help-seeking behaviors** and **explicitly role modeling** and encouraging these behaviors in trainees.

5. Trustworthiness that makes colleagues feel secure when responsible for the care of patients.

❖ Has **significant knowledge gaps** or is **unaware** of knowledge gaps and demonstrates **lapses in data-gathering or in follow-through of assigned tasks**. May **misrepresent** data (for a number of reasons) or **omit** important data, leaving others uncertain as to the nature of the individual's truthfulness or awareness of the importance of attention to detail and accuracy. (overt lack of truth-telling is assessed in a professionalism competency) **Example:** *An individual calls her supervisor at home to present a patient that she admitted. Key laboratory results are missing in the presentation and the supervisor requests that she seek this critical information and report back. Several hours later on rounds, the individual is again questioned about the laboratory values and reports that the results are normal but she is unable to locate those results in her paperwork.*

❖ Has a **solid foundation in knowledge and skill** but is not always aware of or seeks help when confronted with limitations. Demonstrates **lapses in follow-up or follow-through with tasks**, despite awareness of the importance of these tasks. Follow-through can be partial, but limited due to inconsistency or yielding to barriers. When such barriers are experienced, no escalation occurs (such as notifying others or pursuing alternative solutions). **Example:** *On hand-over of patients from the day team to the night team, several tasks are identified as needing follow-up or completion during the next shift. The following day, when the service is handed back over to the original individual, several of these tasks were either incomplete or not completed as specified in the signed-out. When questioned about these tasks, the night-float individual indicated that things were busy, she forgot, or she gives another excuse indicating that she was aware of the expectation but failed to complete the tasks.*
❖ Solid foundation in knowledge and skill with **realistic insight into limits with responsive help seeking**. **Data-gathering is complete** with consideration of anticipated patient care needs, careful consideration of high risk conditions first and foremost. **Little prompting is required for follow-up.** **Example:** *Presentation of a patient consultation is done in a comprehensive manner, without the need for prompting. Questions posed by the individual allow the consultant to appreciate the individual's understanding of the disease process and the individual's awareness of gaps in her knowledge. Careful attention to detail and accuracy are evident in the history and physical examination that is presented. The next day, the service is busy and the individual needs reminding to re-check the send-out labs.*
❖ Has a **broad scope of knowledge and skill** and assumes **full responsibility** for all aspects of patient care, anticipating problems and demonstrating vigilance in all aspects of management. **Pursues answers to questions** and communications include open, transparent expression of uncertainty and limits of knowledge. **Example:** *An individual possesses the KSA to lead the team on rounds, asking for pertinent data not presented by other team members (assertive inquiry). Constant review and vigilance of patient status uncovers unexplained findings on laboratory or physical examination. Findings are reported to supervisors as change with un-identified meaning (and potential concern).*
❖ As above, but any **uncertainty brings about rigorous search for answers** and conscientious and ongoing review of information to address the evolution of change**. May seek the help of a master** in addition to primary source literature. **Example:** *This is the practitioner who leaves no stone unturned. Colleagues are confident when handing-off a patient that he will receive exemplary care. In fact, when there is a complex patient colleagues are relieved when this practitioner is on call because she typically invests much time and energy in searching for needed answers and meticulously reports back on all important developments.*

6. The capacity to accept that ambiguity is part of clinical medicine and to recognize the need for and to utilize appropriate resources in dealing with uncertainty.

❖ Feels **overwhelmed** and **inadequat**e when **faced with uncertainty** or ambiguity. **Communications** with patients/families and development of therapeutic plan are **rigid and authoritarian**, with assumption that the patient can manage information and participate in decision-making; **patient/family numeracy presumed**. Seeks only self or self-available resources to manage response to this uncertainty, resulting in a **response characterized by their (individual) preexisting state of risk aversion or risk taking**. Does not regard patient need for hope; feels compelled to make sure that patients understand full potential for negative outcome (defensive/protective of physician).
❖ Recognizes uncertainty and feels tension/pressure from not knowing or knowing with limited control of outcomes. **Explains** situation **to the patient in framework most familiar to the physician,** rather than framing it with terms, graphics, or analogies familiar to the patient. Seeks rules and statistics and feels **compelled to transfer all information to the patient immediately**, **regardless of** patient readiness, patient goals, and **patient ability to manage information**.
❖ **Anticipates** and focuses on **uncertainty**, looking for resolution by **seeking additional information**. Aims to inform the patient of the more optimal outcome(s), framed by physician goals. Does not manage overall balance of patient/family uncertainty with quality of life, need for hope, and ability to adhere to therapeutic plan. **Focuses on own risk management position for a given problem** and does not suggest that more or less risk taking (different from physician's position) could be chosen. Still seeks patient/parent recitation of uncertainty/morbidity as proof that patient/family understands the uncertainty. **Unresolved balance of expectations with physician expectations taking precedence**.
❖ Anticipates that uncertainty at the time of diagnostic deliberation will be likely. Uses such uncertainty or larger ambiguity as a prompt/motivation to seek information or understanding of unknown (to self or world). **Balances delivery of diagnosis with hope, information, and exploration of individual patient goals**. Concepts of risk versus hope are worked through **using conceptual framework** that **includes cost** (e.g., suffering, lifestyle changes, financial) **versus benefit; framed by patient health care goals**. Expresses openness to patient position and patient uncertainty about his/her position and response.

❖ **Is aware of and keeps own risk aversion** or risk-taking position in check**. Seeks to understand patient/family goals for health** and their capacity to achieve those goals, given the uncertain treatment options. Engages in discussion with **high sensitivity towards numeracy**, emphasizing patient/family control of choices with initial plan development and ongoing information sharing through changes as knowledge and patient health status evolve. Remains flexible and committed to engagement with the patient/family throughout the patient's illness, serving as a **resource to gather information so that degree of uncertainty is minimized**. Openly and comfortably discusses strategies and outcomes anticipated with the patient/family, emphasizing that all plans are subject to the imperfect knowledge and state of uncertainty. **Constant revisiting of knowledge, uncertainty, and developed plans is balanced with acceptance of what is unknown**; transparent communication of limits of treatment plan outcomes.

F. SYSTEMS-BASED PRACTICE

1. *Coordinate patient care within the health system relevant to their clinical specialty*

❖ Performs the role of medical decision-maker, **developing care plans and setting goals of care independently**. The patient/family is informed of the plan. **No written care plan** is provided. Makes referrals, requests consultations and testing with **little or no communication with team members or consultants. Not involved in the transition of care** between settings (e.g., outpatient and inpatient, pediatric and adult); **little or no recognition of social/educational/cultural issues** affecting the patient/family.
❖ **Begins to involve the patient/family** in setting care goals and some of the decisions involved in the care plan. A **written care plan** is occasionally made available to the patient/family. The **care plan does not address key issues**. **Variable communication with team members and consultants** regarding referrals, consultations, and testing. **Patient/family questions are answered** regarding results and recommendations. May **inconsistently be involved in the transition of care** between settings (e.g., outpatient and inpatient, pediatric and adult). Makes **some assessment of social/educational/cultural issues** affecting the patient/family and applies this in his interactions.
❖ **Recognizes the responsibility to assist families in navigation of the complex healthcare system.** The **patient/family is frequently involved in decisions** at all levels of care, setting goals, and defining care plans. A **written care plan** is frequently made available to the patient/family and to appropriately authorized members of the care team. **The care plan omits few key issues.** There is **good communication with team members and consultants.** Results and recommendations are consistently discussed with the patient/family. **Routinely involved in the transition of care** between settings (e.g., outpatient and inpatient, pediatric and adult). **Social, educational and cultural issues are considered** in most care interactions.
❖ **Actively assists families in navigating the complex healthcare system. Communication is open**, facilitating trust in the patient-physician interaction. Goals are developed and decisions are made jointly with the patient/family (**shared-decision-making**). A **written care plan** is routinely madeavailable to the patient/family and to appropriately authorized members of the care team. The **care plan is thorough, addressing all key issues**. Facilitates care through consultation, referral, testing, monitoring and follow-up, helping the family to interpret and act on results/recommendations. **Coordinates seamless transitions of care** between settings (e.g., outpatient and inpatient, pediatricand adult; mental and dental health; education; housing; food security; family-to-family support). **Builds partnerships that foster family-centered, culturally effective care, ensuring effective communication and collaboration along the continuum of care.**

2. *Advocate for quality patient care and optimal patient care systems*

❖ Attends to medical needs of individual patient(s). Wants to take good care of patients and **takes action for the individual patient's** health care needs. *For example, sees a child with a firearm injury and provides good care.*
❖ Demonstrates **recognition that an individual patient's issues are shared** by other patients, that there are systems at play, and that there is a need for quality improvement of those systems. Acts on the observed need to assess and improve quality of care. *For example, a physician notes on rounds, "We have sent home four to five firearm-injury patients and one has come back with repeated injury. We need to do something about that."*
❖ **Acts within the defined medical role** to address an issue or problem that is confronting a cohort of patients. May enlists colleagues to help with this problem. *For example, the physician works with colleagues to develop an approach, protocol, or procedure forimproving care for penetrating trauma injury in children and measures the outcomes of system changes.*
❖ Actively participates in hospital-initiated quality improvement and safety actions. Demonstrates a desire to have an **impact beyond the hospital walls**. *For example, attends a hospital symposium on gun-related trauma and what can be done about it and then arranges to speak on gun safety at the local meeting of the parent-teachers association.*
❖ Identifies and **acts to begin the process of improvement** projects both **inside the hospital and within one's practice community.** *For example, upon completion of quality improvement project works on new proposed legislation and testifies in city council.*

3. ***Work in inter-professional teams to enhance patient safety and improve patient care quality***

❖ Seeks answers and **responds to authority from only intraprofessional colleagues**. **Does not recognize other members of the interdisciplinary team** as being important or making significant contributions to the team. Tends to **dismiss input from other professionals** aside from other physicians.
❖ **Beginning** to have an **understanding of the other professionals on the team**, **especially their unique knowledge base**, and is open to their input. However, **still acquiesces to physician authorities to resolve conflict** and provide answers in the face of ambiguity. This individual is **not dismissive** of other health care professionals, **but** she is **unlikely to seek out those individuals** when confronted with ambiguous situations.
❖ **Aware of the unique contributions** (knowledge, skills, and attitudes) **of other health care professionals**. **Seeks their input** for appropriate issues**.** As a result, is an **excellent team player.**
❖ In addition to the above features, individuals at this stage **understand the broader connectivity of the professions and their complementary nature**. Recognizes that quality patient care only occurs in the context of the interprofessional team. Serves as a **role model for others in interdisciplinary work** and is thus an **excellent team leader.**