Diagnostic Competency During Simulation (DCDS) Based Learning Tool[1]

Step 1: Gather your team of instructors and discuss components of the specific simulation case.

What is the patient's primary/ presenting problem?	
What are key features of the patient's central problem? • *Historical, epidemiological, clinical, and psychosocial*	
What is the correct, prioritized differential diagnosis?	
Are there any atypical, subtle, or complex disease presentations that the learner needs to take into account?	
What are the critical, "can't miss" diagnoses?	
What are critical components of the diagnostic plan?	
What are common pitfalls in the diagnostic plan that should be avoided?	

Step 2: Decide if any individual items are not observable within the specific simulation case. Instructors do not need to rate non-observable, "n/o" items.

Step 3: Rate learner cases.

> To be placed at a specific rating for an item, the learner should meet all behaviors of that score. If the learner meets expectations for only some behaviors, then consider a lower rating.

Step 4: Assess learner behaviors, identifying trends and asymmetry between competencies, to prepare for feedback conversation.

Step 5: Provide the learner individualized feedback, specially focusing on behaviors that will foster student progress to the next rating.

[1]*Burt L, Olson A. Development and psychometric testing of the Diagnostic Competency During Simulation-based (DCDS) learning tool. J Prof Nurs. 2023;45:51-59. doi:10.1016/j.profnurs.2023.01.008*

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Competency 1: **Accurately and efficiently collect key clinical findings needed to inform diagnostic hypotheses. Use these tools appropriately and efficiently in the diagnostic process: Effective interpersonal communication skills, history-taking, the physical examination, and record review; diagnostic testing; and the electronic health record and health IT resources**				
	N/O	**Minimal**	**Partial**	**Complete**
1-Opening statement		○ Provider gives opening statement ○ Elicits incomplete list of concerns	○ Elicits the opening statement using a combination of provider and patient words ○ Patient expresses a partial list of concerns	○ Allows the patient to complete opening statement in their own words ○ Facilitates patient expression of comprehensive list of concerns
2-Jargon		○ Primarily speaks in medical jargon when communicating with patient and/or family	○ Uses some jargon when communicating with patient and/or family ○	○ Avoids jargon when communicating with patient and/or family ○
3-Active listening		○ Does not react to patient speaking ○ Ignores non-verbal cues ○ Fails to ask clarifying questions and does not summarize information ○	○ Inconsistently reacts to the patient speaking. ○ Receptive to some non-verbal clues ○ Clarifies and/or or summarizes some, but not all, information.	○ Actively listens throughout the encounter. ○ Perceives relevant non-verbal cues ○ Asks clarifying questions and summarizes all key information ○
4- Hypothesis driven interview		○ Begins the interview with close ended questions ○ Questioning pattern does not demonstrate narrowing of focus with added information ○ No clear focus on potential diagnoses, without efficiency	○ Begins the interview with a mix of open ended and close ended questions ○ As information in obtained, applies some (but not all) information to narrow focus ○ Questions generally reflective of potential diagnoses, but some less relevant or tangential questions impair efficiency	○ Begins the interview with open ended questions, narrowing focus as additional information is gathered ○ Efficiently interviews the patient in a prioritized, hypothesis driven manner
5-Hypothesis driven physical exam		○ Physical examination not influenced by patient history and without clear focus on potential diagnoses	○ Physical examination generally reflective of potential diagnoses, but some less relevant or tangential maneuvers	○ Physical examination informed by patient history, targeting patient complaints in hypothesis driven manner. ○
6-Physical exam maneuvers		○ Physical examination lacks skill and efficiency. ○ Does not follow logical sequence. ○ Without regard to patient comfort and privacy	○ Physical examination performed with inconsistent skill ○ Sequence sometimes lacking logic ○ Inconsistent consideration to patient comfort and privacy	○ Physical examination performed skillfully ○ Follows logical sequence ○ Consistent consideration to patient comfort and privacy ○
7-Secondary sources		○ Gathers information without pursuing relevant secondary sources (i.e., medical records, family members and/or caregivers)	○ Seeks, obtains, and integrates some relevant data from secondary sources (i.e., medical records, family members and/or caregivers)	○ Seeks, obtains, and integrates all relevant data from secondary sources (i.e., medical records, family members and/or caregivers)
8-Information verification		○ Does not verify important information first-hand to confirm key findings (i.e., does not verify vital signs if appropriate)	○ Verifies most important information first-hand but may fail to verify or question some key findings, including those in the health record	○ Verifies important information first-hand, confirming key findings
9-Test interpretation		○ Unable to identify and/or interpret basic and/or specialty-specific diagnostic tests ○ Fails to recognize the need to seek (or not seek) guidance in diagnostic test interpretation.	○ Inconsistently identifies and/or understands some but not all implications of basic and/or specialty-specific diagnostic tests ○ Recognizes the need to seek (or not seek) expert guidance in some complex diagnostic test interpretation.	○ Proficiently identifies and/or interprets basic and/or specialty-specific diagnostic tests ○ Recognizes the need to seek (or not seek) expert guidance in complex diagnostic test ordering and interpretation.

Competency 2: **Formulates, or contributes to, an accurate problem representation expressed in a concise summary statement that includes essential epidemiological, clinical, and psychosocial information.**				
	N/O	**Minimal**	**Partial**	**Complete**
1-Central problem		○ History and physical examination fail to identify the central problem, missing key findings and/or including extraneous information	○ History and physical examination reflect correct organ system but lack accuracy of specific diagnosis	○ Identifies the patient's central problem accurately as evident in the history and physical examination
2-Data synthesis		○ Does not identify and synthesize relevant clinical historical, physical examination, epidemiological, and psychosocial information to central problem. ○ Includes extraneous information and misses relevant information	○ Identifies and synthesizes most relevant historical, physical examination, epidemiological, and psychosocial information to inform central problem. ○ May include some extraneous information or may miss some relevant information.	○ Identifies and synthesizes relevant key clinical historical, physical examination, epidemiological, and psychosocial information to inform central problem ○ Includes only relevant information
3-Summary statement content		○ Summary statement inaccurate ○ Lengthy, lacks semantic qualifiers and does not translate findings into descriptive medical terminology	○ Summary statement accurate, but may be lengthy, or may fail to include semantic qualifiers or translate findings into descriptive medical terminology	○ Summary statement accurate ○ Concisely contains essential information, articulated using semantic qualifiers and descriptive medical terminology
4-Summary statement use		○ Fails to use summary statement in professional communication (consultations, speaking with patient, transitions of care, oral presentations, and/or note-writing)	○ Inconsistently utilizes summary statement across professional communication (consultations, speaking with patient, transitions of care, oral presentations, and/or note-writing)	○ Utilizes summary statement across professional communication (consultations, speaking with patient, transitions of care, oral presentations, and/or note-writing) ○

Competency 3: Produce, or contribute to, a correctly prioritized, relevant differential diagnosis, including can't miss diagnoses				
	N/O	**Minimal**	**Partial**	**Complete**
1-Diagnostic accuracy		○ Inaccurate diagnosis, missing key elements and/or including extraneous information and/or not focused to patient problem ○ Does not offer corresponding rationale and/or rationale lacks evidence-base	○ Accurate differential diagnosis, but may be ranked incorrectly and/or include most but not all key elements ○ Offers corresponding rationale, but rationale may be incomplete	○ Focused, accurate, and prioritized differential diagnosis ○ Offers corresponding rationale as indicated by situation
2-Considers "Can't miss"/worse case		○ Communication of the differential diagnosis excludes relevant "can't miss" diagnoses.	○ Communication includes most relevant "can't miss" diagnoses but misses key diagnoses	○ Communication of the differential diagnosis acknowledges and addresses relevant "can't miss" diagnoses, offering corresponding rationale as indicated by situation.
3-Comprehensive		○ Differential diagnosis lacks information synthesis. Does not consider atypical, subtle, or complex disease presentations. Key features excluded.	○ Differential diagnosis synthesizes some relevant information, but may exclude some atypical, subtle, or complex disease presentations or key features.	○ Differential diagnosis cohesively synthesizes all relevant information, considering atypical, subtle, and complex disease presentations as well as key features.
4-Diagnostic next steps		○ Diagnostic "next steps" do not address prioritized differential diagnosis. ○ Fails to triage urgency ○ Includes irrelevant and non-essential testing	○ Diagnostic "next steps" align with prioritized differential diagnosis. ○ May fail to triage urgency. ○ May include relevant but non-essential testing	○ Diagnostic "next steps" align with prioritized differential diagnosis. ○ Diagnostic plan triages urgency, distinguishing situations where a working diagnosis needs to be established more urgently versus less urgently. ○ Includes relevant and essential testing
5-Patient communication		○ Fails to communicate accurate information to patient regarding differential diagnosis. ○ Does not address diagnostic uncertainty or potential "can't miss" diagnoses ○ If prompted, unable to provide appropriate rationale ○ Does not verify patient (and family) understanding and answers questions.	○ Communicates accurate but incomplete information to patient. ○ Fails to address all potential "can't miss" diagnoses, or diagnostic uncertainty. ○ If prompted, provides mostly appropriate rationale that may include too little or too much detail ○ Inconsistently verifies patient (and family) understanding and answers questions.	○ Communicates accurate, thorough information to patient. ○ Includes potential "can't miss" diagnoses and addresses diagnostic uncertainty. ○ If prompted, provides appropriate rationale for prioritization without too little or too much detail. ○ Actively verifies patient (and family) understanding and answers questions.

Competency 4: **Explain and justify the prioritization of the differential diagnosis by comparing and contrasting the patients' findings and tests results with accurate knowledge about prototypical or characteristic disease manifestations and atypical presentations, and considering pathophysiology, disease likelihood, and clinical experience**				
	N/O	**Minimal**	**Partial**	**Complete**
1-Diagnostic justification		○ Fails to explain prioritization of differential diagnosis ○ Lacks rationale of why certain diagnoses were considered or excluded	○ Explains prioritization of differential diagnosis in relation to most appropriate diseases ○ Rationale of why certain diagnoses were considered or excluded is stated when indicated but may contain extraneous information or may miss some key features.	○ Explains prioritization of differential diagnosis in relation to all appropriate diseases. ○ Rationale of why certain diagnoses were considered or excluded is clearly stated when indicated
2-Patient communication		○ Does not explain diagnostic reasoning and diagnostic "next steps" to patient (and/or family); fails to verify understanding ○ May communicate inaccurate information	○ Explains diagnostic reasoning and diagnostic "next steps" to patient (and/or family) but fails to verify understanding and answer questions. ○ Usually communicates accurate information	○ Explains diagnostic reasoning and diagnostic "next steps" to patient (and/or family). Actively verifies understanding and answers questions. ○ Communicates accurate information

Competency 5: **Use decision support tools, including point-of-care resources, checklists, consultation, and second opinions to improve diagnostic accuracy and timeliness.**				
	N/O	**Minimal**	**Partial**	**Complete**
1-Decision support tools		○ Does not use decision support tools.	○ Inconsistently employs decision support tools. May not be able to leverage findings to increase diagnostic accuracy in challenging, complex, and ambiguous clinical situations	○ Employs decision support tools as indicated to support diagnostic accuracy, including in challenging, complex, and ambiguous clinical situations.
2-Consultations and expert opinions		○ Fails to seek out or inappropriately seeks out consultations and/or expert second opinions	○ With prompting may seek out appropriate consultations and/or second/expert opinions ○ At times, may seek out inappropriate or excessive consultations ○ May omit key clinical findings when discussing clinical situation with consultant. With support, integrates recommendations into diagnostic plan, including communicating to team members.	○ Appropriately seeks out consultations and/or second/expert opinions. ○ If observe, able to discuss clinical situation with consultant and integrate recommendations into diagnostic plan, including communicating to team members.

Competency 6: **Use reflection, surveillance, and critical thinking to improve diagnostic performance and mitigate detrimental cognitive bias throughout the clinical encounter. Discuss and reflect on the strengths and weaknesses of cognition, the impact of contextual factors on diagnosis, and the challenges of uncertainty. Demonstrate awareness of atypical presentations, information that is missing, and key findings that don't 'fit'.**				
	N/O	**Minimal**	**Partial**	**Complete**
1-Cognitive strategies		○ Does not integrate strategies to mitigate cognitive biases and/or encourage critical thinking.	○ With prompting, integration of strategies to mitigate cognitive biases and/or encourage critical thinking	○ Purposeful integration of strategies to mitigate cognitive biases and/or encourage critical thinking. (Strategies might include diagnostic time-outs, diagnostic rounds, purposeful reflection, self-explanation, and/or others.)
2-Evolving diagnosis		○ Fails to follow-up on testing results and/or acknowledge significance of new information that could alter diagnosis.	○ Receptive to some (but not all) information that could change the diagnosis. ○ Needs support to integrate new information into the diagnostic plan. ○ When indicated, may not consistently communicate emerging data to team members.	○ Receptive to evidence that could change the diagnosis. ○ Integrates new information into the diagnostic plan. ○ When indicated, communicates emerging data to team members.
3-Contextual factors		○ Does not acknowledge provider and/or contextual factors which may impact diagnostic accuracy and efficiency	○ Acknowledges but does mitigate provider and/or contextual factors which may impact diagnostic accuracy and efficiency	○ Acknowledges and mitigates provider and/or contextual factors which may impact diagnostic accuracy and efficiency. ○ For example, learner may take steps to minimize environmental distractions, may acknowledge biasing psychosocial challenges of patient, or may acknowledge limitations of current healthcare setting
4-Diagnostic uncertainty plan		○ Fails to acknowledge and address diagnostic uncertainty	○ Develops a plan to address diagnostic uncertainty, however, plan may lack evidence base or be incomplete	○ Develops a plan to address diagnostic uncertainty that incorporates patient needs and clinical evidence base.
5-Communication of diagnostic uncertainty		○ Does not address diagnostic uncertainty with patient	○ When communicating with patient, acknowledges but does not explain diagnostic uncertainty. ○ May falsely reassure and/or or fail to confirm that the patient understands diagnostic plan.	○ When communicating with patient, addresses and explains diagnostic uncertainty. ○ Avoids false reassurances and explicitly confirms that patient understands diagnostic plan.
6-Communication of thought process		○ Does not participate in "talking it out" from team members or answering questions ○ Does not sufficiently answer questions of team members ○ May talk down to team members based on role or stage in training and/or engages in penal culture	○ When prompted by team members, engages in "talking it out." ○ Answers questions when asked by others but does encourage questions ○ Engages in neutral culture	○ Engages in "talking it out" with team members ○ Encourages questions from all members of the diagnostic team regardless of role or stage in training ○ Fosters non-punitive culture