

IN PRACTICE

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"CHEST PAIN IN SIMULATION IS ALWAYS AN MI" - DEVELOPING DIAGNOSTIC REASONING AND DISPELLING SIMULATION MYTHS WITH FOUNDATION TRAINEES

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Introduction: Clinical reasoning is an essential skill for doctors to reduce the risk of diagnostic error [1]. Diagnoses typically stem from a thorough patient history and physical examination; however, an increasing dependence on laboratory testing may suggest a compensatory measure for poor history taking and examination skills [2] and therefore, diminished clinical reasoning. Clinicians can learn diagnostic reasoning effectively if "teachers provide guidance on the cognitive processes involved in making diagnostic decisions" [3] and "competence in clinical reasoning is acquired by supervised practice with effective feedback" [3].

Methods: In Withybush General Hospital, the medical education team have developed a simulation programme

to promote diagnostic reasoning. The simulation scenarios centre around a common presenting complaint e.g., chest pain, with a specific learning objective to identify a list of differential diagnoses using a focussed history. During the simulation, the learners only have access to “immediate” diagnostic tests such as observations, ECG, ABG and portable CXR. The simulation is facilitated for foundation doctors with an advocacy-enquiry style debrief discussing diagnostic reasoning and post-simulation feedback from the learners.

Results: Quantitative ratings out of 5 for educational value and written comments were collected for results. 100% of the foundation doctors who attended the simulations and completed the feedback rated the educational value of the sessions as 5 out of 5 (excellent). Written comments include the following: “it was good exposure for clinical judgement and decision making for complex patient presentations” and “made me increase my list of differentials”.

Discussion: This simulation programme illustrates the potential to use simulation as a tool to develop diagnostic reasoning through specific cases that encourage the learner to develop a list of differential diagnoses without relying on laboratory testing.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

1. Murray H, Savage T, Rang L, Messenger D. Teaching diagnostic reasoning: using simulation and mixed practice to build competence. *Canadian Journal of Emergency Medicine*. 2018;20(1):142–145.
2. Epner PL, Gans JE, Graber ML. When diagnostic testing leads to harm: a new outcomes-based approach for laboratory medicine. *BMJ Quality & Safety*. 2013;22(suppl 2):ii6–ii10.
3. Pinnock R, Welch P. Learning clinical reasoning. *Journal of Paediatrics and Child Health*. 2014;50(4):253–257.

