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Uso de la simulación para la evaluación

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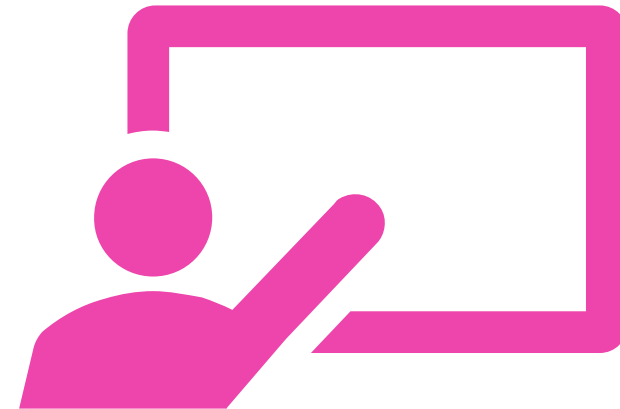
Miembro del comité nacional de simulación clínica - ASCOFAME

Universidad Tecnológica de Pereira.



Conflicto de interés

No declaro ningún conflicto de interés con la siguiente presentación.



Agenda propuesta

Introducción

La simulación clínica

La evaluación

Aspectos que se pueden evaluar

Algunos recursos disponibles

Conclusiones



Objetivos

Reconocer algunos conceptos relacionados con la evaluación a través de la simulación clínica.

Establecer aspectos de la formación médica que pueden evaluarse a través de la simulación clínica.

Revisar algunas propuestas de evaluación, formatos y recursos en línea de utilidad para los académicos.



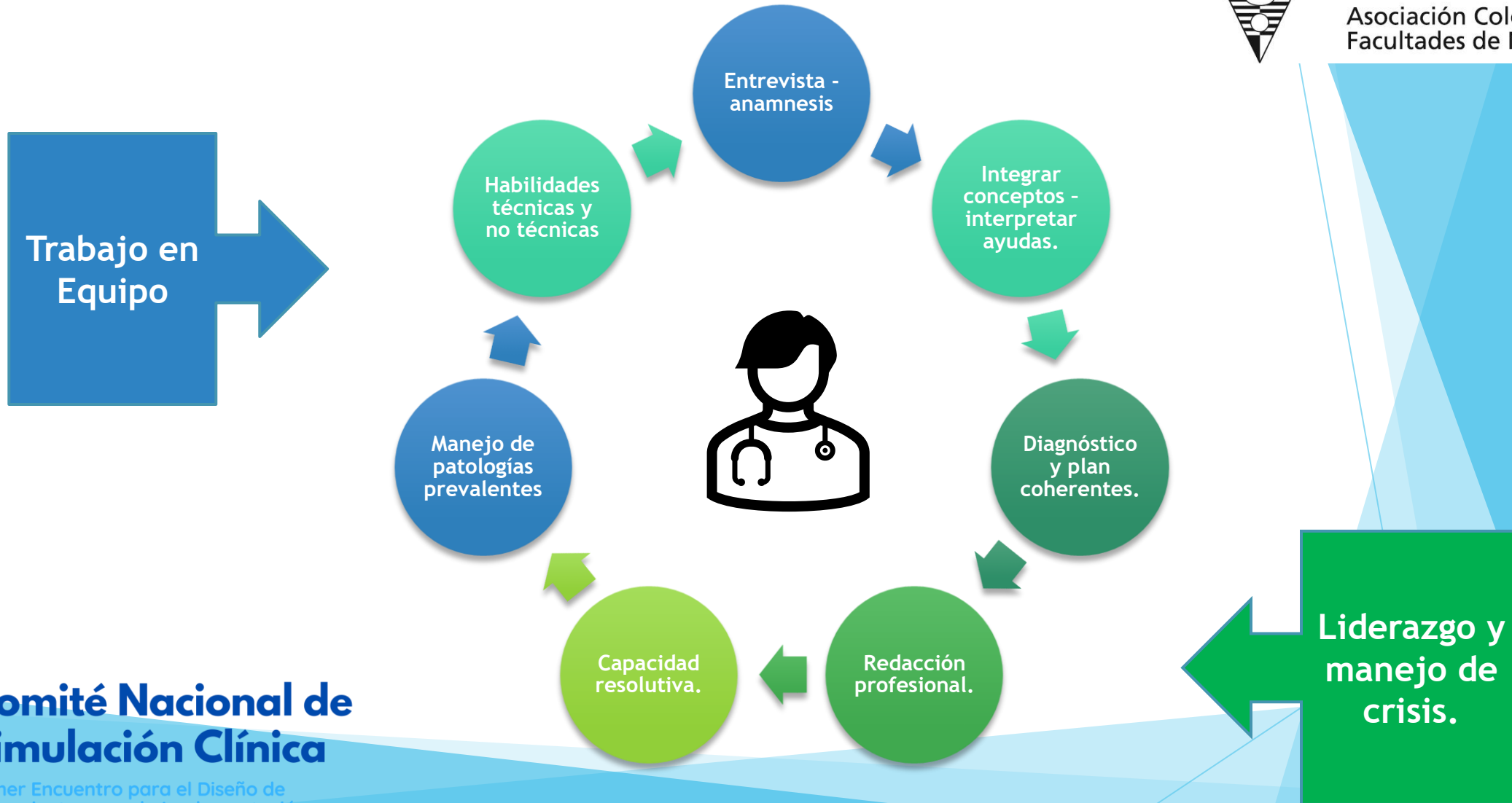
Partiendo del problema





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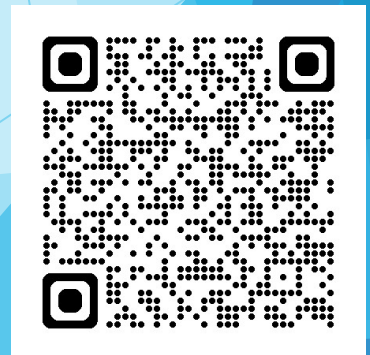
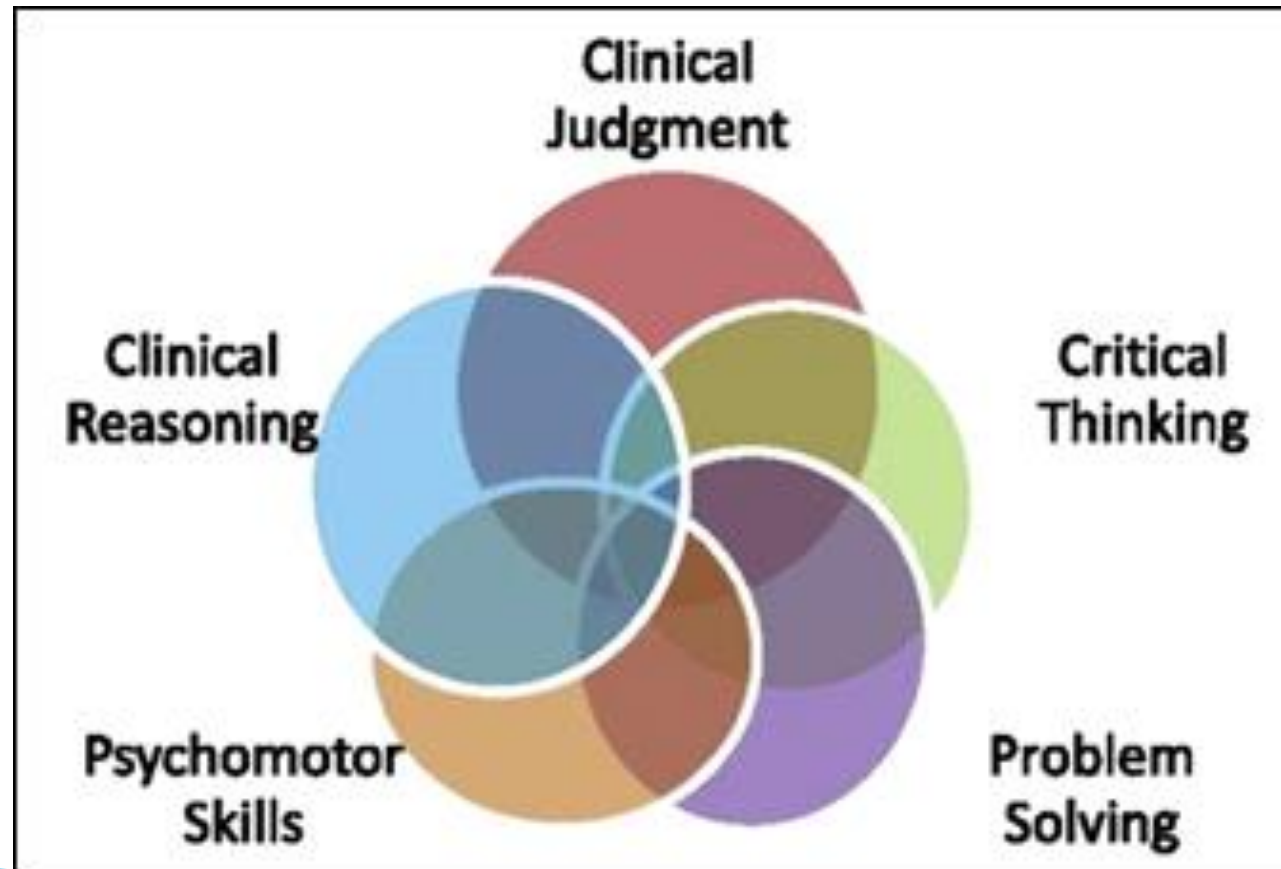




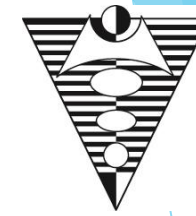
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Desarrollo de habilidades y juicio clínico



INACSL Standards Committee (2016, December). INACSL standards of best practice



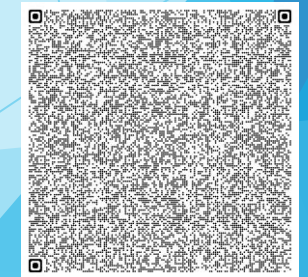
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La Simulación Clínica

- ▶ **La simulación clínica se define como una técnica (no una tecnología) que reemplaza o amplifica experiencias reales con experiencias guiadas que evocan o replican aspectos sustanciales del mundo real de una manera totalmente interactiva.**
- ▶ **En los últimos años, su uso ha crecido significativamente, tanto como herramienta de aprendizaje como de evaluación para la acreditación. Ejemplo de ello es el hecho de que la simulación es parte integral de los planes de estudio de la educación médica en el extranjero. Algunos autores la han citado como una necesidad ineludible o como un imperativo ético.**
- ▶ **La simulación clínica complementa otras estrategias tradicionales y no reemplaza la práctica con pacientes reales ni las actividades hospitalarias.**

Gaba DM. Improving anesthesiologists' performance by simulating reality. *Anesthesiology* 1992; 76 (4): 491-4.





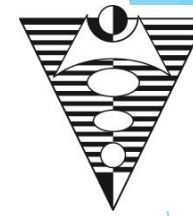
¿Qué no es la evaluación?

La aplicación de una infinidad de test y pruebas al final de un curso.

Una herramienta para medir el grado de adquisición de conocimientos por el estudiante.

▶ Un proceso que genera estrés y tensión constante y que no atiende a la diversidad.

▶ La evaluación no es el fin de la educación.

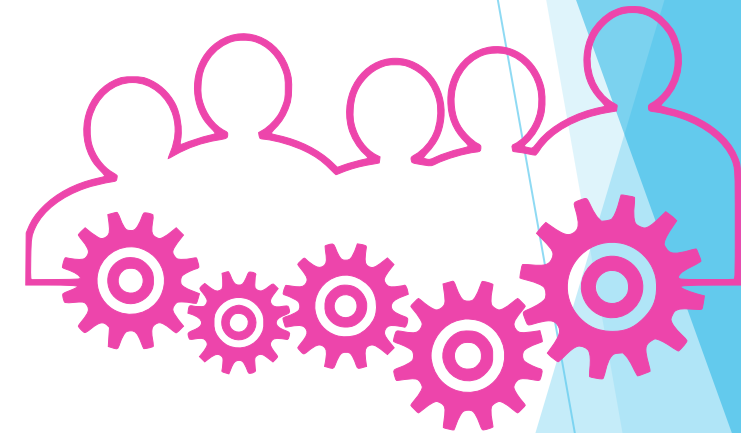


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¿Qué es la evaluación?

- ▶ **Evaluación:** “Los procedimientos empleados para adquirir información sobre el aprendizaje del estudiante, y la formación de juicios de valor respecto al proceso de aprendizaje ...” (Miller, 2012).
- ▶ **Calificación o medición:** “Descripción numérica del grado en el cual un individuo posee una característica particular”. (Miller, 2012).



Ascofame.



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Funciones de la evaluación

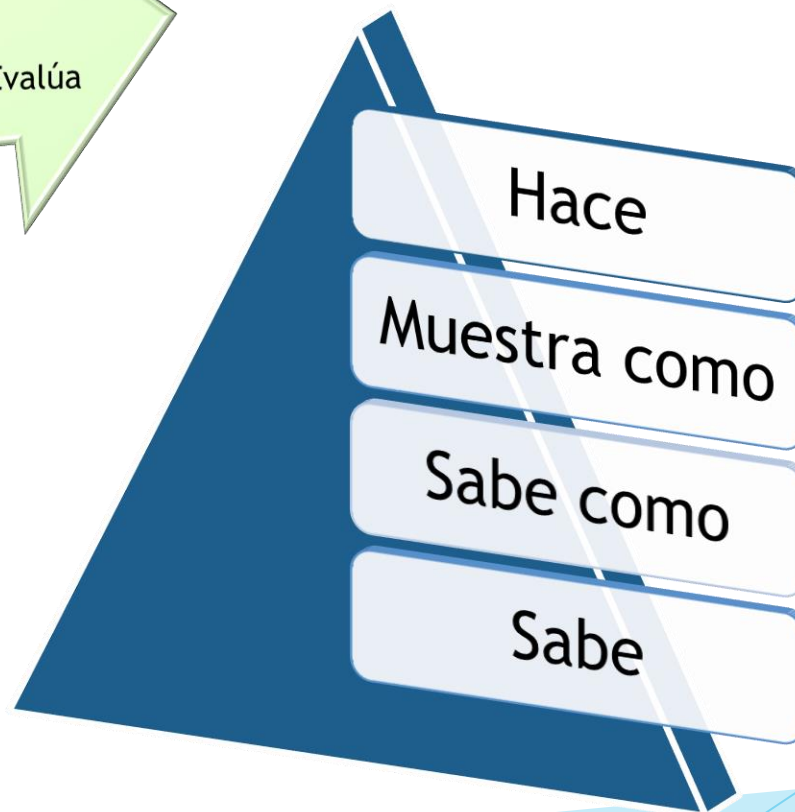
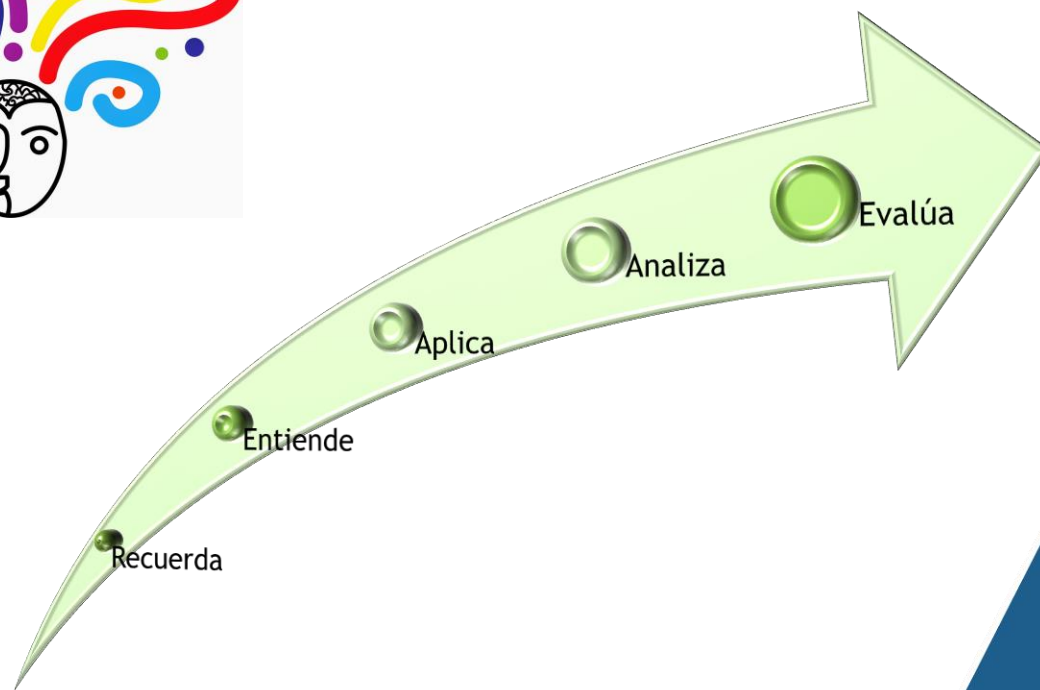


- ▶ Formadora: el alumnado aprende durante el proceso de evaluación.
- ▶ Reguladora: permite mejorar cuestiones referentes al proceso de enseñanza - aprendizaje, tanto para el alumnado como para el profesorado.
- ▶ Pedagógica: permite conocer el progreso del alumnado.
- ▶ Comunicadora: Se produce un feedback entre alumnado-profesorado, profesorado-profesorado y alumnado-alumnado.
- ▶ Ambientadora: crea un ambiente escolar determinado.



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Niveles de evaluación de Kirkpatrick

Level 4 Outcomes
 (Impact of the training program, i.e. on patient safety)
T-3 results improve patient outcomes

Example
 Reduced infection rates
 (Cohen, et al, 2010)

Level 3 Behavior
 (Capability to perform learned skills while on the job)
T-2 results carry over into patient care setting

Example
 Changes in clinical practice
 (Meyer, et al, 2011)

Level 2 Learning
 (Extent to which the learners gained knowledge and skills)
T-1 results demonstrated in simulation lab

Psychomotor

Skill check list

Cognition

Knowledge exam

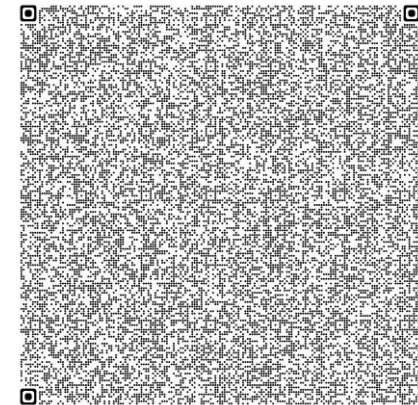
Affective

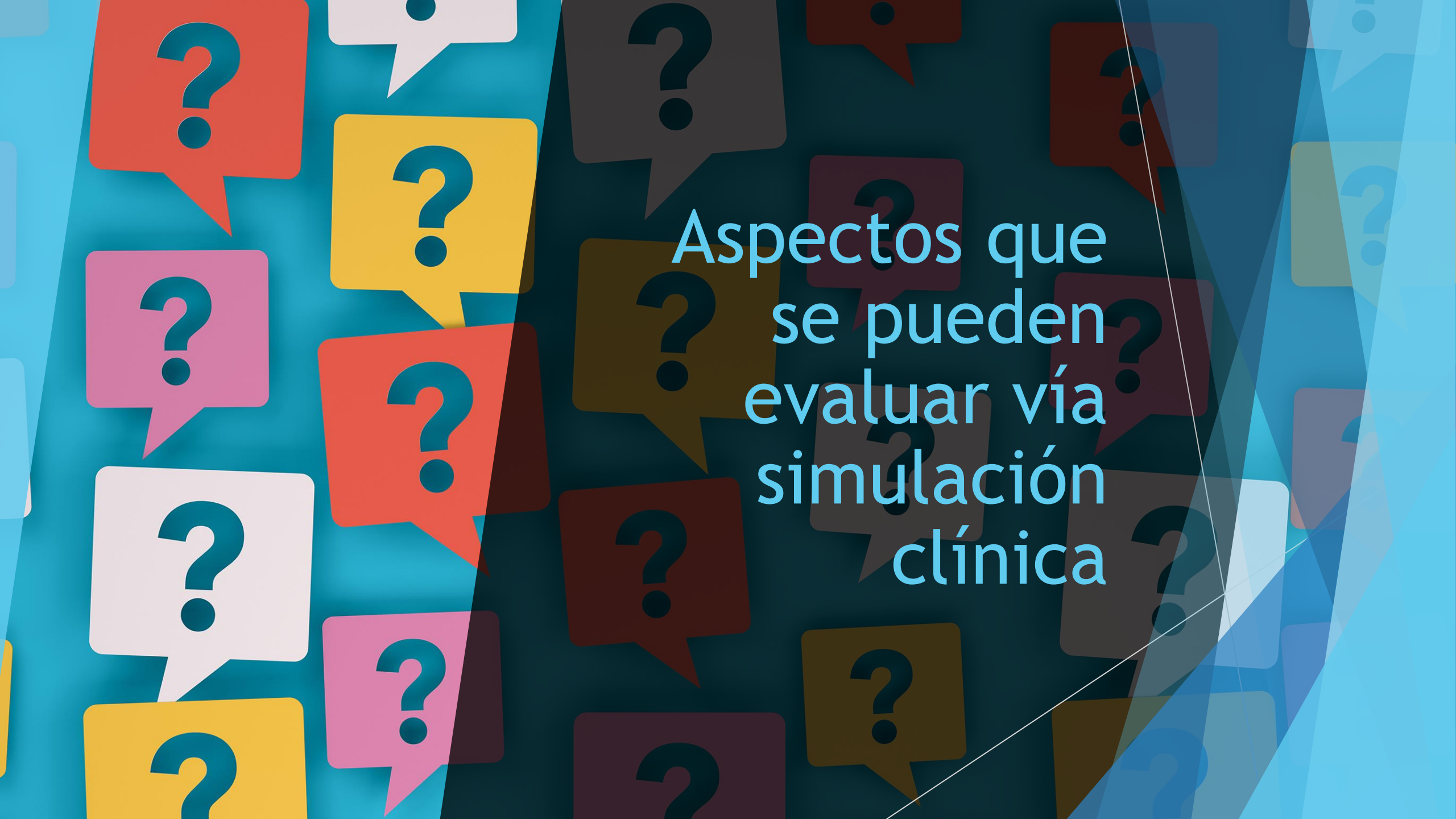
Caring, cultural sensitivity survey

Self-confidence survey

Level 1 Reaction
 (How learners reacted to the learning process)
 (Boulet, et al, 2011)
T-0 not applicable to translational research

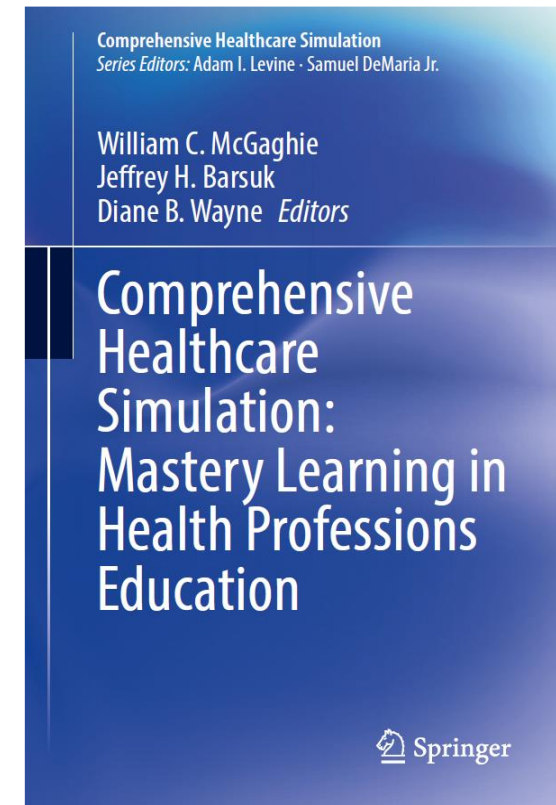
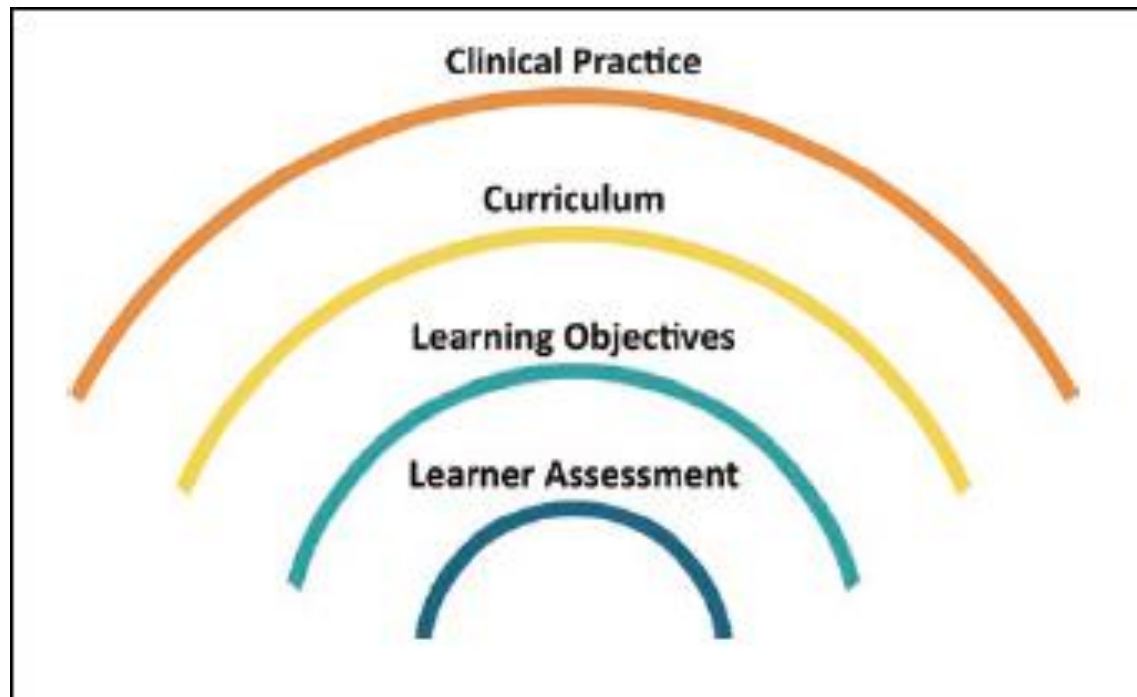
Satisfaction survey



The background of the slide is a dark teal color, densely populated with numerous speech bubbles of various colors (red, yellow, pink, white, brown, purple, blue) and sizes. Each speech bubble contains a large, dark blue question mark. The bubbles are scattered across the entire frame, creating a sense of inquiry and uncertainty. A thin white diagonal line runs from the bottom right towards the center of the slide.

Aspectos que
se pueden
evaluar vía
simulación
clínica

La evaluación del alumno debe tener en cuenta los objetivos de aprendizaje, el currículo y la práctica clínica



Evaluación de competencias

Área competencial	Porcentaje
Anamnesis	15
Aspectos éticos-legales y profesionalismo	6
Exploración clínica	15
Habilidades técnicas y procedimientos	15
Habilidades de comunicación	5
Juicio clínico, plan de manejo diagnóstico y terapéutico	24
Prevención y promoción de la salud	12
Relaciones interprofesionales	8

P: patología; PMQ: enfermedad médico quirúrgica.
Tipo de estación: EOE: examen oral estructurado; MP: maniquí/procedimiento; PE: paciente estandarizado.

Educ Med. 2019;**20(S1)**:29---36

Habilidades y destrezas procedimentales

Evaluación en el desarrollo de habilidades y destrezas en la atención segura de pacientes.

Desarrollo de Competencias: La simulación clínica ayuda a desarrollar competencias en los estudiantes de medicina y ciencias de la salud, incluyendo el saber, saber hacer y ser, preparándolos para enfrentar situaciones reales de manera competente.



Medical Education 2014; 48: 375-385 doi:[10.1111/medu.12391](https://doi.org/10.1111/medu.12391)

Acad Med 2011;86:706-11.

Clinical Simulation in Nursing (2011) 7, S3-S7. doi:10.1016/j.ecns.2011.05.005.

Habilidades y destrezas procedimentales



INNOVATIONS IN EDUCATION

Simulation Technology for Skills Training and Assessment in Medical Education

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Medical education during the past decade has witnessed a significant increase in the use of simulation technology for teaching and assessment. Contributing factors include: changes in health care delivery and academic environments that limit patient availability as educational opportunities; worldwide attention focused on the problem of medical errors and the need to improve patient safety; and the paradigm shift to outcomes-based education with its requirements for assessment and demonstration of competence. The use of simulators addresses many of these issues; they can be readily available at any time and can reproduce a wide variety of clinical conditions on demand. In lieu of the customary (and arguably unethical) system, whereby novices carry out the practice required to master various techniques—including invasive procedures—on real patients, simulation-based education allows trainees to hone their skills in a risk-free environment. Evaluators can also use simulators for reliable assessments of competence in multiple domains. For those readers less familiar with medical simulators, this article aims to provide a brief overview of these educational innovations and their uses; for decision makers in medical education, we hope to broaden awareness of the significant potential of these new technologies for improving physician training and assessment, with a resultant positive impact on patient safety and health care outcomes.

KEY WORDS: medical education; simulation technology; competency assessment.

J Gen Intern Med 2007;22(1):46-9
DOI: 10.1007/s11606-007-0283-4
© Society of General Internal Medicine 2007

INTRODUCTION

Irrespective of our clinical specialty or health care profession, we encounter new medical technologies in nearly every facet of modern practice, from diagnostic imaging and laboratory testing techniques to therapeutic devices. The potential for these technologies to improve health care delivery and patient outcomes—as well as the disappointments or failures to deliver these benefits—frequently captures attention in the scientific literature (not to mention the lay press). Perhaps less recognized, however, are the ways that technological advances impact on the fundamental process underlying all clinical practice: that of medical education. Simply witness the

widespread use of medical continuum of lifelong lectures online or via stored in personal digital patient management decisioners receive continuum teleconferences broadcast resent another form of test increasingly employed in provide a general overview and their uses for training in anatomic regions, or clinical life circumstances in which discussion here may use broad sense includes at situations (such as mass patient [SP] encounters), theme (and space limited) will focus more narrowly simulation devices. These range from low to high fidelity users to simulations for classification scheme group categories: part task tasks, and virtual reality.

SIMULATOR

Part task trainers consist regions with functional a particular skills, such as suturing. In most cases, it (i.e., the device is examine with little more than radiolator). Although more sophisticated computerized them from computer-enhanced the latter reproduce not or pathophysiological function user is more often active the simulator response will (for example, heart rate and laterately depending on the do intravenously). Training a tors can focus on individ

FEATURE ARTICLE

The Efficacy of High-fidelity Simulation on Psychomotor Clinical Performance Improvement of Undergraduate Nursing Students

MARY ANNE VINCENT, PhD
SUSAN SHERIFF, PhD
SUSAN MELLOTT, PhD

Ever since the Institute of Medicine (IOM)¹ recommended that simulation be used to improve patient safety, high-fidelity simulation (HFS) has been a rapidly growing educational modality among institutions of higher learning as well as patient care centers. A National Council of State Boards of Nursing survey revealed that more than half of their respondents require students to use simulation at some point in the program.² Faculty in BSN programs have increased their use of HFS and other types of simulation in response to the need for additional quality clinical experiences for their students. Nursing schools have made substantial investments toward the resources necessary for implementing clinical simulation in undergraduate nursing education. Recently, a number of researchers have explored the impact of HFS on teaching and evaluating the skills of BSN students.³⁻¹⁰ A few researchers^{3,11} report that there is not yet any support for HFS use in nursing education; however, most investigators agree that further research is necessary and find that simulation may offer some advantage over other methods in clinical teaching.

The purpose of this integrative review and meta-analysis was to explore the direct measurable impact of HFS on improving the psychomotor clinical performance of BSN students. The focus is on what researchers have found in

High-fidelity simulation has become a growing educational modality among institutions of higher learning ever since the Institute of Medicine recommended that it be used to improve patient safety in 2000. However, there is limited research on the effect of high-fidelity simulation on psychomotor clinical performance improvement of undergraduate nursing students being evaluated by experts using reliable and valid appraisal instruments. The purpose of this integrative review and meta-analysis is to explore what researchers have established about the impact of high-fidelity simulation on improving the psychomotor clinical performance of undergraduate nursing students. Only eight of the 1,320 references met inclusion criteria. A meta-analysis using Hedge's *g* to compute the effect size and direction of impact yielded a range of -0.26 to $+3.30$. A positive effect was shown in seven of eight studies; however, there were five different research designs and six unique appraisal instruments used among these studies. More research is necessary to determine if high-fidelity simulation improves psychomotor clinical performance in undergraduate nursing students. Nursing programs from multiple sites having a standardized curriculum and using the same appraisal instruments with established reliability and validity are ideal for this work.

KEY WORDS

Computer simulation • Clinical skills • Nursing education research • Nursing students • Psychomotor performance

terms of whether HFS measurably improves the clinical performance of BSN students in the psychomotor domain. Also, the direction of that measurable impact will

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The authors have disclosed that they have no significant relationship with, or financial interest in, any commercial companies pertaining to this article.

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DOI: 10.1007/s11606-007-0283-4

Razonamiento clínico y resolución de problemas



Development and psychometric testing of a Clinical Reasoning Evaluation Simulation Tool (CREST) for assessing nursing students' abilities to recognize and respond to clinical deterioration

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ARTICLE INFO

Keywords:
Clinical reasoning
Clinical deterioration
Simulation
Assessment development

ABSTRACT

Background: The development of clinical reasoning skills in recognising and responding to clinical deterioration is essential in pre-registration nursing education. Simulation has been increasingly used by educators to develop this skill.
Objective: To develop and evaluate the psychometric properties of a Clinical Reasoning Evaluation Simulation Tool (CREST) for measuring clinical reasoning skills in recognising and responding to clinical deterioration in a simulated environment.
Design: A scale development with psychometric testing and mixed methods study.
Participants/Settings: Nursing students and academic staff were recruited at a university.
Method: A three-phase prospective study was conducted. Phase 1 involved the development and content validation of the CREST. Phase 2 included the psychometric testing of the tool with 15 second-year and 15 third-year nursing students who undertook the simulation-based assessment. Phase 3 involved the usability testing of the tool with nine academic staff through a survey questionnaire and focus group discussion.
Results: A 10-item CREST was developed based on a model of clinical reasoning. A content validity of 0.93 was obtained from the validation of 15 international experts. The construct validity was supported as the third-year students demonstrated significantly higher ($p < 0.001$) clinical reasoning scores than the second-year students. The concurrent validity was also supported with significant positive correlations between global rating scores and almost all subscale scores, and the total scores. The predictive validity was supported with an existing tool. The internal consistency was high with a Cronbach's alpha of 0.92. A high inter-rater reliability was demonstrated with an intraclass correlation coefficient of 0.88. The usability of the tool was rated positively by the nurse educators but the need to ease the scoring process was highlighted.
Conclusion: A valid and reliable tool was developed to measure the effectiveness of simulation in developing clinical reasoning skills for recognising and responding to clinical deterioration.

1. Introduction

Failure to recognize and respond to patient deterioration is a global problem in acute healthcare settings (Watkinson and Tarasenko, 2012), with research reporting that this results in 23% of patient safety-related hospital deaths (Domaldsson et al., 2014). In contemporary

healthcare, there are increasing numbers of older and acutely ill patients with complex health problems who are at risk of adverse events, being cared for in general wards (Kyriacou et al., 2011). Adverse events are defined as unintended complications and injuries that lead to cardiopulmonary arrests, unplanned intensive care unit admissions, and mortality (Loeferer et al., 2011). These adverse events are often

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0260-6917/© 2017 Published by Elsevier Ltd.

Domain/Item	Questioning (Q)/ Observation(O)	1	2	3	4	5	Score
Considering patient situation							
1) Interpretation of patient's current situation from case information	Q: How have you interpreted the given information?	Unable to interpret relevant case information	Limited attempt to interpret relevant case information	Interprets case information to reveal some important patterns or deviations	Interprets case information to reveal most important patterns or deviations	Interprets case information thoroughly to reveal all important patterns or subtle deviations	
Collecting cues							
2) Performs physical assessment to gather cues	O: Observe performance of physical assessment	Unable to collect important cues relevant to the case	Collects a limited number of cues relevant to the case	Collects important cues relevant to the case with limited use of a systematic approach	Collects important cues relevant to the case using a systematic approach	Collects important cues relevant to the case using a thorough systematic approach	
Processing information							
3) Recognizes and interprets patient abnormalities	O: Observe through "think aloud" on the recognition and interpretation of abnormalities	Unable to recognize obvious abnormalities	Limited ability to recognize abnormalities	Recognizes patient abnormalities with limited interpretation	Recognizes patient abnormalities with some interpretation	Recognizes all patient abnormalities with clear interpretation	
4) Clusters cues together to identify relationships among them	Q: How do you link the signs and symptoms of the patient together?	Unable to make connections between cues	Limited ability to make connections between cues	Clusters main cues together with limited reasoning	Clusters main cues together with sound reasoning	Able to cluster main cues together with thorough reasoning	
Identifying problem/ issue							
5) Identifies appropriate problem(s) with reasoning	Q: What do you think had happened to the patient?	Unable to identify appropriate problems	Limited ability to identify appropriate problems	Identifies appropriate problems with limited reasoning	Identifies appropriate problems with sound reasoning	Identifies appropriate problems with thorough reasoning	
Establishing goals							
6) States desired patient outcomes	Q: What did you aim to do for the patient and why?	Unable to identify desired outcomes	Identifies limited desired outcomes	Identifies desired outcomes with limited reasoning	Identifies desired outcomes with sound reasoning	Identifies desired outcomes with thorough reasoning	
Domain/ Item	Questioning (Q)/ Observation(O)	1	2	3	4	5	

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Manejo de crisis y trabajo en equipo



BRIEF REPORT

“Hot Seat” Simulation to Teach Conflict Management Skills to Residents

Karen P. Barr, MD
Maria R. Reyes, MD
Sara Kim, PhD

ABSTRACT

Background Conflict management is an important leadership skill for residents to develop, yet it is a challenging skill to practice.

Objective We developed and evaluated a workshop that teaches conflict resolution skills to physical medicine and rehabilitation residents in a group setting with real-time faculty coaching and peer feedback.

Methods A 4-step model for handling work-related conflicts was taught, and then residents practiced their skills during a realistic simulated conflict with a trained actor. A faculty coach supported the participant, and peers gave feedback and suggestions in real time as the scripted conflict unfolded. Immediate post-session survey results were analyzed.

Results Workshops were conducted in 2015, 2017, and 2019. A total of 36 residents participated and completed evaluations out of a possible 40 residents in the cohort (90% participation rate). Post-session surveys showed that 100% of participants agreed the session content was relevant to their training and they would use the skills in the future. Ninety-seven percent (35 of 36) felt prepared to manage conflict following the session.

Conclusions This experiential workshop helped cultivate an appreciation of the importance of conflict management skills in residents' professional development and confidence in their ability to apply a conflict management framework to real-world situations.

Introduction

The ability to manage conflict so that effective communication occurs is a key competency in graduate medical education.¹ It has been recommended that these types of skills be treated as “verbal procedures” that residents must be able to demonstrate by the end of their training.² Conflict management training has been shown to improve the work environment, decrease stress, increase confidence in managing conflict, and gain appreciation for the positive aspects of addressing conflict.³ However, methods to teach conflict management skills to residents have been under-researched, with only a few published descriptions of lectures and case discussions.^{1,4,5}

One method to teach conflict resolution is the Shannon-Kim 4-Step Conflict Dialogue Model taught via “hot seat” simulation training.⁶ This technique improves performance, compared to an untrained control group on key conflict management skills.⁶ It includes active skills practicing in a group setting, while receiving real-time faculty coaching and peer feedback.

The purpose of this study was to evaluate whether it is feasible to incorporate this teaching method into a residency program's conference schedule, and whether residents perceive this training as acceptable and relevant to their professional development.

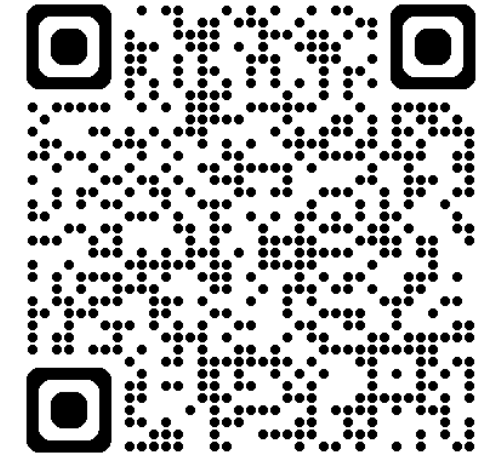
Methods

A workshop to teach conflict management to physical medicine and rehabilitation (PM&R) residents was developed (TABLE 1) and presented in 2015, 2017, and 2019. This is an urban, university-based program with 8 to 10 residents per year. In 2015 and 2019, postgraduate year 4 (PGY-4) residents participated in the workshop. Because of additional curricular time in 2017, PGY-2, PGY-3, and PGY-4 residents participated.

The 2-hour workshop began with a lecture about conflict management as a leadership skill essential for team function and to prevent medical errors. A 4-step model to address conflict was presented (TABLE 2).^{6,7} A scripted conflict from the residents' perspective was presented. The group discussed the issues presented in the scenario and the cost to team functionality if the conflict went unaddressed. Three scenarios were developed by the authors based on their personal knowledge of common workplace conflicts. Scenarios were written to be multidimensional, highlight power differentials, and be slightly emotionally charged. A

DOI: <http://dx.doi.org/10.4300/JGME-D-19-00594.1>

Editor's Note: The online version of this article contains details of the curriculum and the survey used in the study.



Manejo de crisis y trabajo en equipo



EDUCATIONAL INNOVATION

A Simulation-Based Workshop to Improve Residents' Collaborative Clinical Practice

Scott B. Crawford, MD
Stormy M. Monks, PhD, MPH, CHES
Melissa Mendez, MD

Dale Quest, PhD
Zuber D. Mulla, PhD, CPH
Sanja Kupescic Plavsic, MD, PhD

ABSTRACT

Background The Accreditation Council for Graduate Medical Education expects residents to attain competency in systems-based practice by advocating for quality patient care, working in interprofessional teams, and implementing system solutions to prevent errors. Diabetes in pregnancy was identified as an area for improvement through comprehensive interdisciplinary and interprofessional care.

Objective An interdisciplinary and interprofessional workshop was created by 3 regional academic institutions to improve collaborative practice, clinical knowledge, and clinical judgment of residents.

Methods A workshop consisting of 4 clinical simulation stations for ultrasound assessment, glycemic control, hyperglycemic emergencies, and macrosomia complications was designed to address gaps in quality of care. Workshop participants were residents from 6 programs and students in nursing, pharmacy, and sonography. Attitude and clinical knowledge were measured preworkshop and postworkshop, and at 3-month and 6- to 7-month follow-up.

Results There were increases in average clinical knowledge scores across time points from residents: 56.4% preworkshop, 64.8% postworkshop, 66.0% at 3-month follow-up, and 68.1% at 6- to 7-month follow-up. Additionally, participants reported positive attitudes toward interprofessional education and indicated high overall satisfaction.

Conclusions Residents demonstrated improved knowledge and attitudes toward interprofessional training after participating in a large-scale simulation workshop focused on the care of patients with diabetes in pregnancy.

Introduction

The Accreditation Council for Graduate Medical Education expects residents to participate in quality improvement (QI) and performance improvement (PI) initiatives and to train in interprofessional care.¹ The Triple Aim, proposed in 2008 as a direction for US health care delivery reform, unequivocally connects interprofessional health care teams to the provision of better health care services that will eventually lead to improved health outcomes.^{2,3} Because of the educational interest and overlap of care associated with gestational diabetes mellitus (GDM), this was selected as a target for interprofessional care training.

Gestational diabetes mellitus is defined as glucose intolerance with onset or diagnosis during pregnancy.⁴ Gestational diabetes mellitus increases the risk of preeclampsia, stillbirth, large for gestational age infants, and shoulder dystocia.⁵ Data from the US Pregnancy Risk Assessment Monitoring System reported the prevalence of GDM as 12.1% and 6.8% in Hispanic and non-Hispanic whites, respectively.⁶ A local study found that GDM affected 8.6% of

pregnancies in El Paso, Texas, which has an 80% Hispanic population.⁷

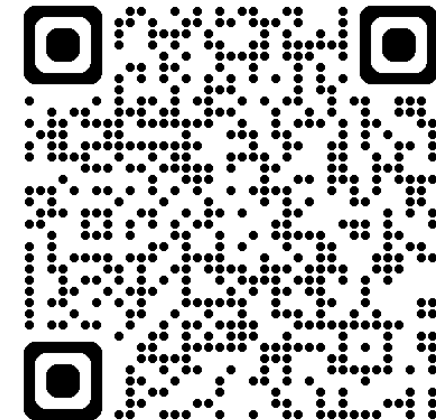
Given the significance of GDM and its elevated prevalence in El Paso, an interdisciplinary and interprofessional workshop was developed. The feasibility and acceptability of the workshop as well as interprofessional readiness and knowledge acquisition were evaluated across several specialties.

Methods

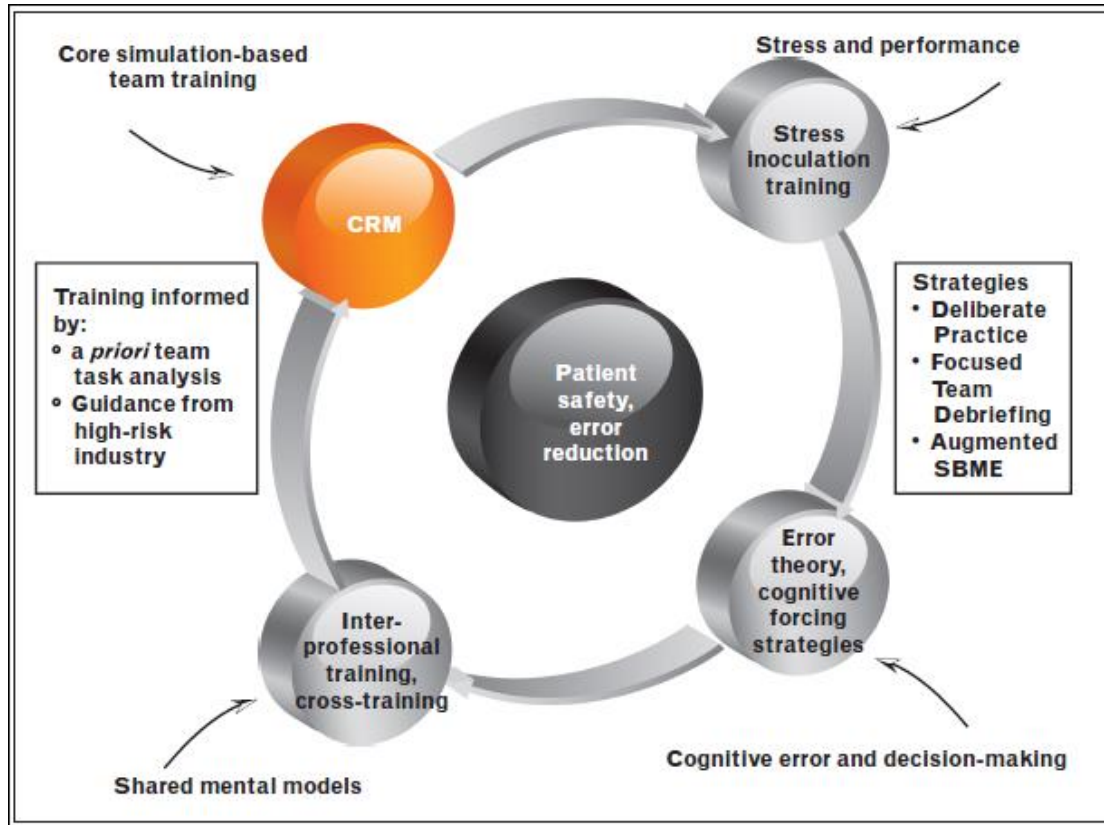
Faculty and educators from 3 regional academic institutions along the US-Mexico border who have special interests in interprofessional education (IPE) were invited to participate in the needs assessment and planning of an interprofessional workshop aimed to improve performance and quality of care in a clinical simulation environment. The team comprised 22 educators and 12 support staff (4 program coordinators and 8 health care simulation technology specialists to operate and support the training activities). The scenario design and diverse scheduling needs required planning 6 months in advance. Participants were from 6 residency programs: obstetrics and gynecology, emergency medicine, radiology, pediatrics, surgery, and family medicine. Students in nursing, pharmacy, and diagnostic medical sonography from 3 institutions also attended.

DOI: <http://dx.doi.org/10.4300/JGME-D-18-00209.1>

Editor's Note: The online version of this article contains a figure detailing the content and objectives for all stations and substations in the workshop.



Manejo de crisis y trabajo en equipo



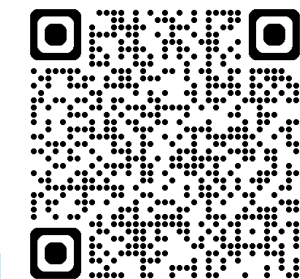
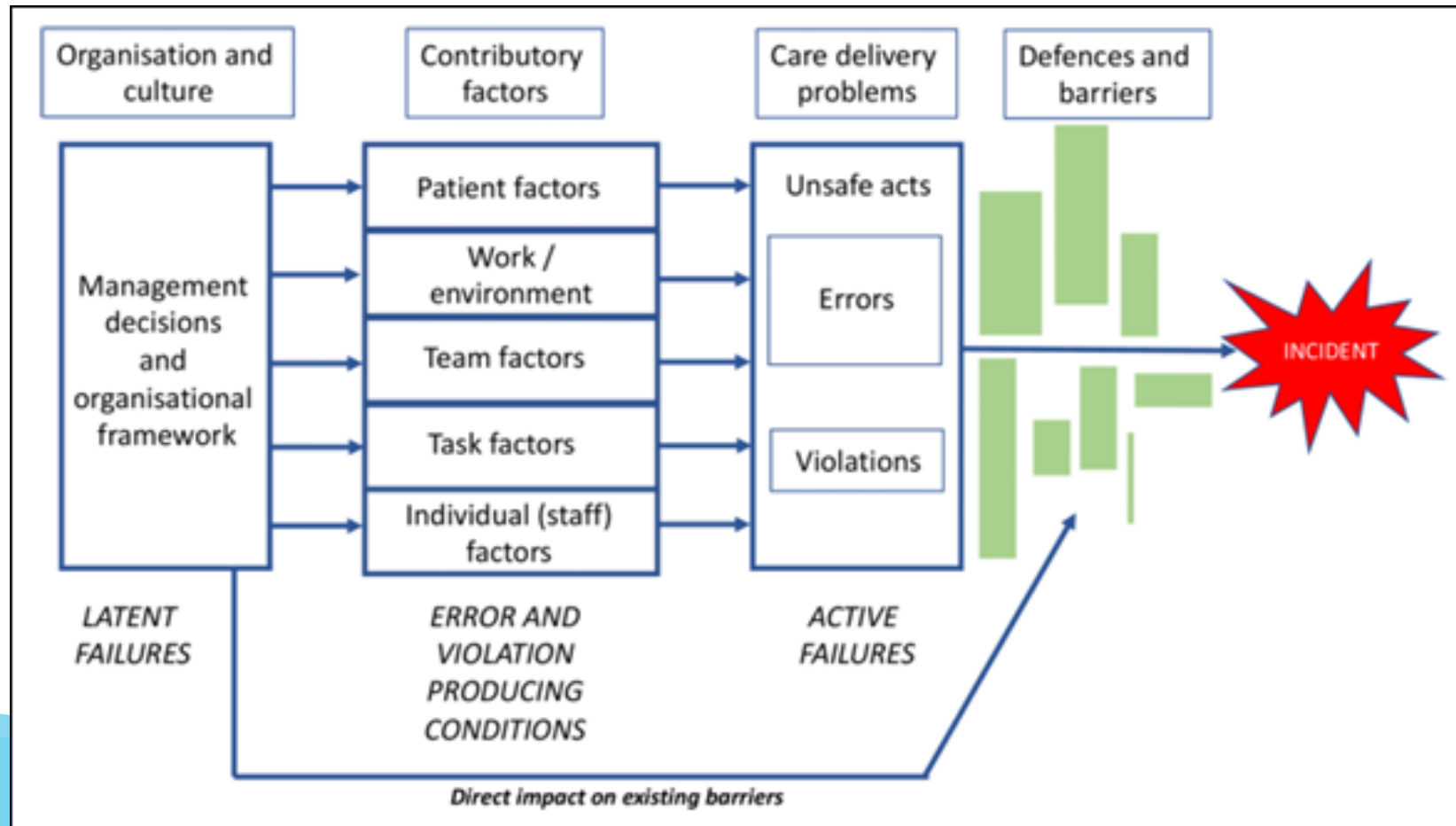
CRISIS MANAGEMENT



Curr Opin Anesthesiol 2013, 26:699–706



Evaluación organizacional en eventos adversos.



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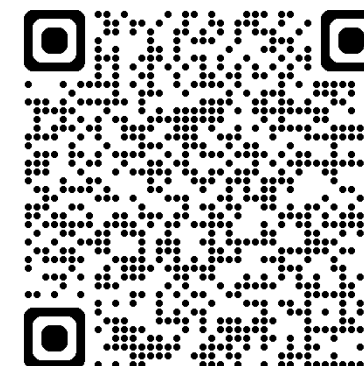
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ASSESSMENT of REASONING TOOL



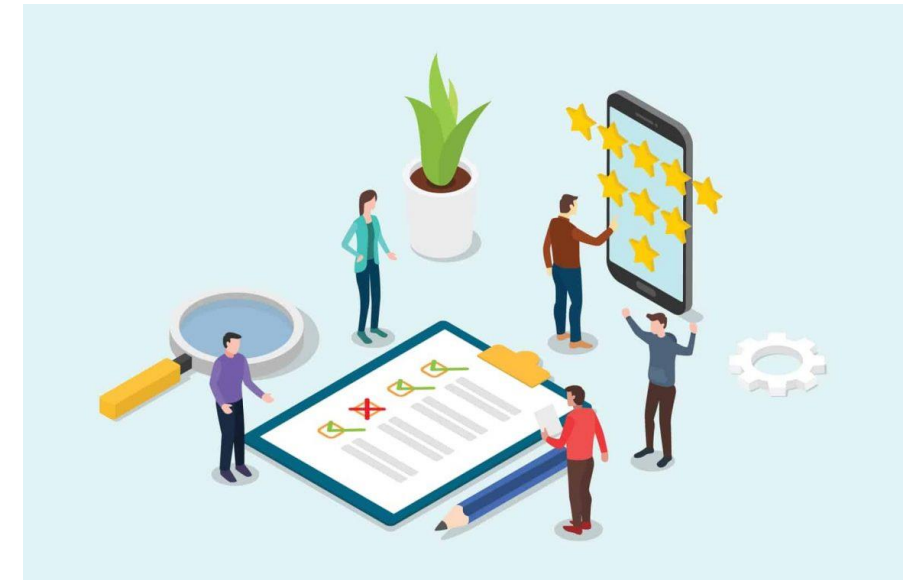
Learner: _____ Evaluator: _____

Did the Learner...	Assessment		
	Minimal	Partial	Complete
Collect/report history and examination data in a hypothesis-directed manner?	<ul style="list-style-type: none"> Non-directed in questioning and exam Asked questions without clear focus on potential diagnoses 	<ul style="list-style-type: none"> Questioning and exam generally reflective of potential diagnoses, but some less relevant or tangential questions 	<ul style="list-style-type: none"> Followed clear line of inquiry, directing questioning and exam to specific findings likely to increase or decrease likelihood of specific diagnoses
Articulate a complete problem representation using descriptive medical terminology?	<ul style="list-style-type: none"> Included extraneous information Missed key findings Did not translate findings into medical terminology 	<ul style="list-style-type: none"> Generally included key clinical findings (both positive and negative) but either missed some key findings or missed important descriptive medical terminology 	<ul style="list-style-type: none"> Gave clear synopsis of clinical problem Emphasized important positive and negative findings using descriptive medical terminology
Articulate a prioritized differential diagnosis of most likely, less likely, unlikely, and "can't miss" diagnoses based on the problem representation?	<ul style="list-style-type: none"> Missed key elements of differential diagnosis, including likely diagnoses or "can't miss" diagnoses 	<ul style="list-style-type: none"> Gave differential diagnosis that included likely and "can't miss" diagnoses but either missed key diagnoses or ranked them inappropriately 	<ul style="list-style-type: none"> Gave accurately ranked differential diagnosis including likely and "can't miss" diagnoses
Direct evaluation/treatment towards high priority diagnoses?	<ul style="list-style-type: none"> Directed evaluation and treatment toward unlikely/unimportant diagnoses Did not evaluate or treat for most likely/"can't miss" diagnoses 	<ul style="list-style-type: none"> Major focus of evaluation and treatment was likely and "can't miss" diagnoses but included non-essential testing 	<ul style="list-style-type: none"> Efficiently directed evaluation and treatment towards most likely and "can't miss" diagnoses Deferred tests directed towards less likely or less important diagnoses
Demonstrate the ability to think about their own thinking (metacognition)? <i>Consider asking: Is there anything about the way you are thinking or feeling about this case that may lead to error?</i>	<ul style="list-style-type: none"> Not able to describe the influence of cognitive tendencies or emotional/situational factors that may have influenced decision-making 	<ul style="list-style-type: none"> Can name one cognitive tendency or emotional/situational factor that may have influenced decision-making 	
OVERALL ASSESSMENT	NEEDS IMPROVEMENT <input type="checkbox"/>	MEETS COMPETENCY <input type="checkbox"/>	EXCELLENCE <input type="checkbox"/>
Comments:			



Múltiples rúbricas en ECOE

ECOE DE RESIDENTES HOJA DE EVALUACIÓN				
COMPETENCIA	VAD			
ITEMS	Conceptos	Si	No	Puntuación
1	Recogida de información (Historia clínica)			
	1 Anamnesis (pregunta al paciente)			
	2 Anamnesis (pregunta a la enfermera)			
	3 Exploración (evalúa predictores de VAD)			
	4 Pruebas complementarias (Rx tórax)			
	5 Antecedentes (consulta Historia antigua)			
2	Habilidades de comunicación y trabajo en equipo			
	1 Pide ayuda antes de decidir la intubación			
	2 Comunica en voz alta el plan establecido			
	3 Da órdenes precisas (ej: prepara un tubo del 8, carga 20 ml de...)			
3	Toma de decisiones			
	1 Sube FIO2 del ventimask como primera medida de tto.			
	2 Ventila con bolsa y mascarilla cuando la sat O2 <85%			
	3 Indica conectar la bolsa (ambú) al O2			
	4 indica colocar reservorio al ambú			
	5 Indica intubación cuando la Sat O2 no sube de 85%			
	6 Anticipación: prepara material VAD antes de la 1ª IOT			
	7 Indica método alternativo antes de intentar una 4ª IOT			
	8 Ventila con bolsa y mascarilla entre intentos fallidos			
4	Habilidades técnicas y procedimientos			
	1 Ventila correctamente con bolsa y mascarilla			
	2 Realiza o manda realizar maniobra Sellick correctamente			
	3 Utiliza fiador convencional durante la primera intubación			
	4 Realiza o manda realizar maniobra de BURP			
	5 Utiliza técnica alternativa correctamente (airtraq, fastrach...)			
				Puntuación máxima
				Puntuación TOTAL



Conclusiones

La simulación clínica puede considerarse una estrategia muy valiosa para fortalecer los procesos formativos en ciencias de la salud.

Es importante y recomendable la inclusión de estrategias de simulación clínica basadas en los recursos disponibles en las IES, dentro de los planes curriculares y los procesos de evaluación.

Es recomendable que en Colombia y cada una de las regiones se avance en proyectos de investigación alrededor de la temática para llenar los vacíos en el conocimiento y fortalecer los procesos de evaluación vía simulación clínica.



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