

SIMZINE

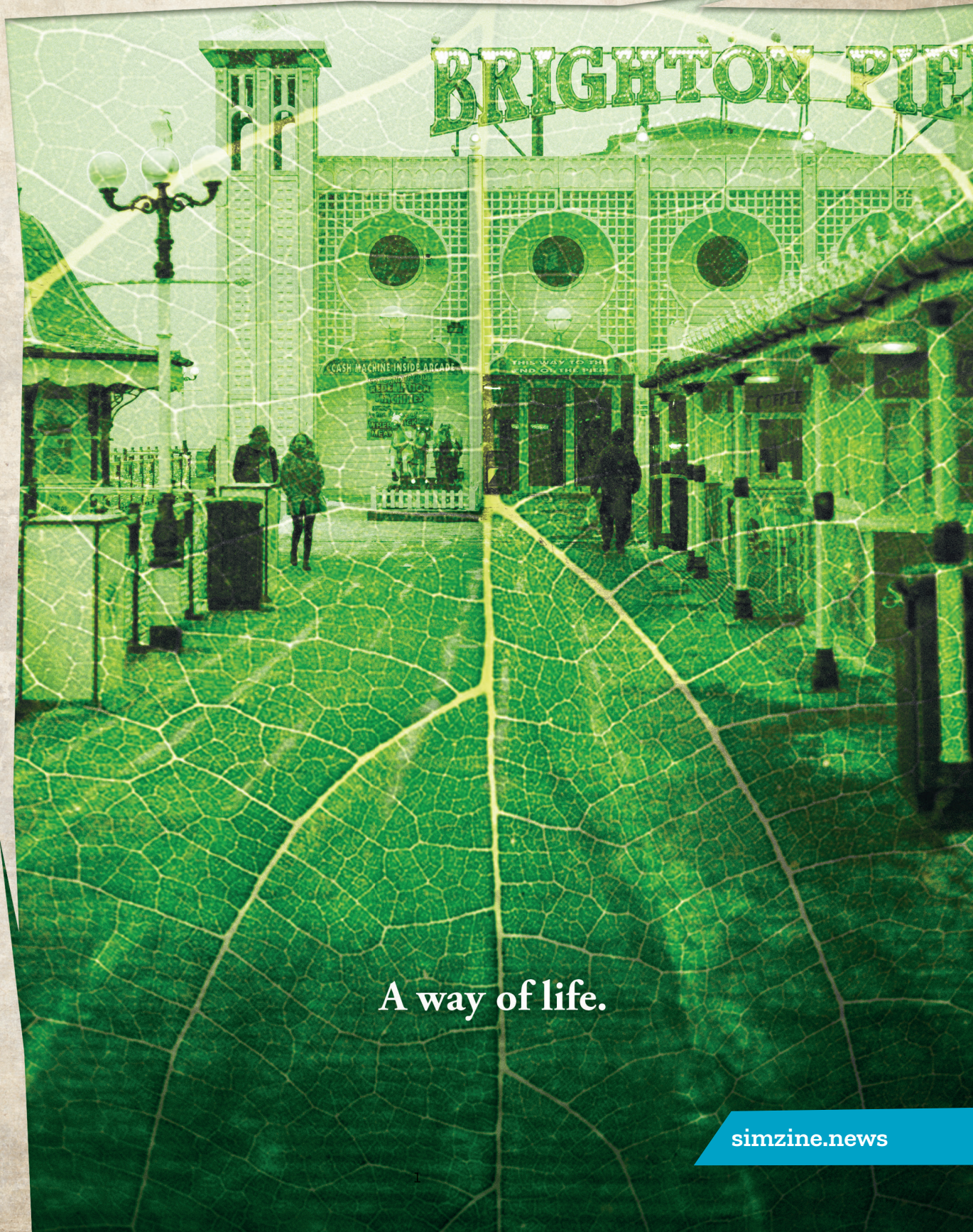
ENG

ESP

ITA

SIMulation maga**ZINE**

n.11 - November/Noviembre/Novembre 2023



A way of life.

simzine.news

BODY INTERACT™
VIRTUAL PATIENTS

**PRACTICE WITH
VIRTUAL PATIENTS,
SAVE REAL LIVES.**



AVKIN®
Bring Simulation to Life

**BRINGS YOUR
SIMULATIONS
TO LIFE.**

SIM 

**VR SIMULATED PATIENT
ENCOUNTERS.**



EXCLUSIVE DISTRIBUTOR IN ITALY

nume+

Via Panciatichi 40/11
50127 Firenze
nume.plus
info@nume.plus

SUMMARY

p.5	EDITORIAL	Sharing is caring, especially in simulation	P.L. Ingrassia
p.6	SIMtalks	A talk with Colette Laws-Chapman, President of ASPiH	Redazione
p.8	SIMcorner	Effective Teaching: The Impact of Physiology Modelling	S. Monk
p.10	SIMgeek	Sala de disección virtual en el Metaverso	M.A. R. Florido
p.12	SIMgeek	What is a Simulationist?	Redazione
p.13	SIMface	Victoria Brazil, simulationist, technophile and much more	Redazione
p.15	SIMspace	La Seguridad del Paciente, eje de la Simulación en Universidad CEU San Pablo-Madrid	A. T. Ramos
p.16	SIMgeek	Toward an objective score for matching simulators to programs	H. Azevedo - W. van Meurs
p.18	SIMdebate	Can Simulation Be Sustainable?	Redazione
p.20	DID you know...	Simulazione in Pediatria: crescere con l'innovazione	E. Poratelli - E. Macrì L. Testa - M. Zappia
p.22	SIMcorner	FioNA, el simulador nacido para ser pinchado	E.A. Mateos
p.24	SIMcorner	SimX and Laerdal: A Pioneering Partnership in Healthcare Simulation	Redazione
p.26	DID you know...	Simulation? More Than You Think	B. Berrak
p.28	SIMvoices	6 Pillars for any simulation leader	Y. Zidoun
p.29	SIMnurse	Utilizing the Healthcare Simulation Standards of Best Practice™: The Beginning.	D. A. Diaz - A. Franklin - L. Gonzalez
p.30	SIMvoices	¿Qué hace una actriz en un contexto de salud?	T. Bustamante
p.32	DID you know...	Connecting Narrative Medicine and Patient Simulation	T. Errichetti
p.34	DID you know...	Emergency Team Competencies Tool, per il debriefer dell'emergenza	G. Lorenzini - A. Zamboni
p.36	SIMspace	SIMU, where mistakes are welcomed	M. Kosinova - T. Skrisovska P. Stourac - J. Travenec
p.36	SIMtalks	El rol del Técnico de Simulación en España: entrevista a Javier Mora	V. Mendez
p.38	SIMgarage	The Future of Simulation in Nursing Education	A. Scalogna
	Cover	Graphic by	P. Cordini - C. Tizzi



SIMPEOPLE

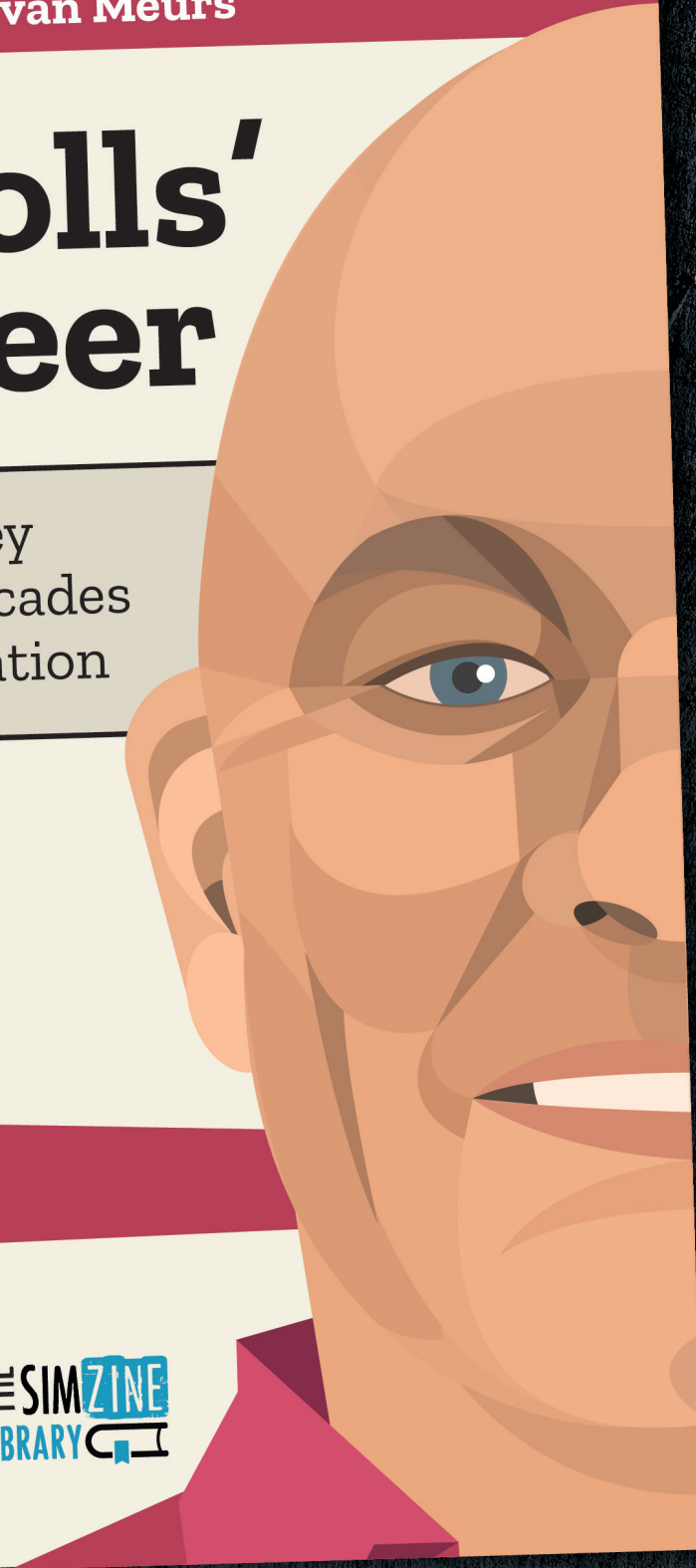
Willem van Meurs

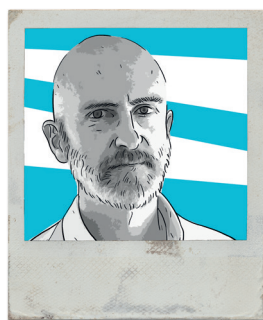
The dolls' engineer

A personal journey
through three decades
of medical simulation

THE SIMZINE
LIBRARY

get your copy
on simzine.news





EDITORIAL

Sharing is caring, especially in simulation

Learning amazing new things about simulation is a delight. And sharing that knowledge with others is even better. As always we bring you a mix of articles where we present practical solutions, share tips from other fellows, let you know more about people at the forefront of making simulation work for patient safety, and describe simulators through the voice of their own inventors or those who have tried them.

One of the greatest global health threats of the 21st century is climate change. And we felt a moral obligation to raise awareness toward a more sustainable simulation. That is why we wanted to dedicate our SIM Debate to sustainability to mitigate ecological harm. And we found that many scientific societies are doing the same. We met Colette Laws-Chapman, President of ASPIH who even chose sustainable simulation as the theme of the annual congress. And to both the theme and the congress we wanted to dedicate our cover page.

This issue includes a conversation with Victoria Brazil, from Australia, one of the most inspiring voices in simulation, who talks with us about her relationship with tech devices and social media, her vision of simulation future, and her love for experiential learning. We also met Tamara Andrea Bustamante Gómez from Chile, who tells us what it means to be an actress in clinical simulation. And we wanted to know what simulation means for the new generation of healthcare professionals through the words of a medical student, Busranur Berrak from Turkey.

We present an overview of the Healthcare Simulation Standards of Best Practice™ of the International Nursing Association for Clinical Simulation and Learning (INACSL) which provide the guidelines to make simulation-based learning experiences consistent around the globe.

Continuing our effort to share advice by experienced colleagues from around the globe, take a look at the key tips for building a strong educational institution provided by Youness Zidoun from the United Arab Emirates. And we are also proud to share an innovative proposal to help educators choose the device best suited to their teaching needs: a practical score which matches simulators to training programs based on trainable elementary skills. How to relieve instructors of constant monitoring and allow them to engage more with learners? Stefan Mönk emphasized the role of physiological modeling in this regard.

Spanish pathologist Eduardo Alcaraz Mateos described his invention, a fine needle aspiration simulator that celebrates its tenth anniversary this year. And continue our insights into the metaverse by bringing you some examples of how the increasingly promising technology is being used in different areas of training in health care. Today we present a virtual cadaver in a virtual anatomical dissection room where students can learn about human anatomy through dissection.

In just a few months, the artificial intelligence (AI) program ChatGPT has become extremely popular. Many concerns, however, are about how ChatGPT will change the news industry, including scientific publishing. Can an AI program become an author? In a recent study, abstracts created by ChatGPT were submitted to academic reviewers, who detected only 63% of these fakes. And would you be able to recognize an article written by AI and one written by a human? Give it a try by giving your opinion on the article What is a simulationist?

I hope you'll enjoy the magazine as much as we've enjoyed creating it for all the simulation community. And don't forget to check out our shop.

P.L.I.

Website

www.simzine.news

Contacts:

amministrazione@simedita.it
redazione@simzine.it
ads@simzine.it

Editor SIMedita srls

Pier Luigi Ingrassia, Presidente
Giacomo Gensini, Consigliere
Via Panciatichi 40/11 - 50127 Firenze

Printing

Cartografia Toscana - Via Mammiense Nord - 51017 Pescia (PT)

Cover image made by

Pietro Cordini.

Registration at the Civil Court of Florence on 29/9/2021, nr. 6151

Whoever finds errors, omissions and inaccuracies in the materials, data and information published, or believes that such materials, data, information violate their rights, you can send an email to Simedita Srls: info@simzine.it

Director

Pier Luigi Ingrassia

Project Manager

Lucia Pampana

Graphic by

Pietro Cordini - Carlo Tizzi

Web Developer

Vincenzo Garofalo

Social Media Manager

Gianluca Nepi

External relations

Giacomo Gensini

Digital Marketing Specialist

Lucia Pampana

Regional Editor Spain

Veronica Mendez

Authors of this issue:

Hugo Azevedo
Busranur Berrak
Tamara Bustamante
Desiree Diaz
Tony Errichetti
Ashley Franklin
Laura Gonzalez
Pier Luigi Ingrassia
Martina Kosinova
Gabriele Lorenzini
Elena Macri
Eduardo Alcaraz Mateos
Stefan Monk
Willem van Meurs
Edoardo Poratelli
Miguel Angel Rodriguez-Florida
Antonio Scalogna
Tamara Skrisovska
Petr Stourac
Luca Testa

Jiri Travenec
Alvaro Trampal Ramos
Maia Zappia
Alberto Zamboni
Youness Zidoun



A talk with Colette Laws-Chapman, President of ASPiH

In this issue we meet Colette Laws-Chapman, the first nurse to become president of ASPiH who is set to accompany the association in the celebration of its upcoming 15th anniversary in 2024. She shares with us her expectations and plans for the society's growth



Colette Laws-Chapman

Registered Nurse for 34 years, she has been working within simulation for 14 years.

Member of the ASPiH Executive Committee; 6 years as Conference Director and Standards working group, she has been President for 6 months.

✉ colette.laws-chapman@gstt.nhs.uk

🌐 in/colette-laws-chapman-89a8a425

🐦 www.twitter.com/@MillieColette

In this issue we meet Colette, president of the Association for Simulated Practice in Healthcare (ASPiH). Registered nurse with an intensive care specialty background, passionate about education, training, and quality improvement, she calls herself a simulation specialist; although it is not a real job title, it describes well what she does now after a 34-year career. First nurse to become president of ASPiH, she is set to accompany the association in the celebration of its upcoming 15th anniversary in 2024. She shares with us her expectations and plans for the society's growth.

Hi Colette, thanks for agreeing to share some time and thoughts with us. Would you like to briefly share your bio??

I've been a registered nurse for over 30 years with an intensive care specialty background, I have always had a passion for education, training, and

quality improvement. My nursing career evolved from practice development and teaching sister roles in intensive care through to corporate nursing positions in two of London's teaching hospitals, supporting educa-

tion and training initiatives for post graduate colleagues and undergraduate nurses whilst on placement. In 2009 I co-developed an interprofessional Foundation in Patient Safety programme for junior doctors and newly qualified nurses and midwives. I became fully employed within a Simulation service for acute & community care in 2013 and to develop my facilitation skills I completed my simulation instructor course at Center for Medical Simulation in 2016 and my Master Debriefing course with The Debriefing Academy in 2021. In the last decade I have been involved in designing and delivering educational and transformative simulation-based activities supporting patient safety in the workplace. I co-chaired the South London Simulation Network 2014-16 and led the faculty development programme for my organisation for the past five years. In that time, I have been involved at a national level working on faculty development





projects and on the ASPIH Executive committee.

A brief bio but a lot of achievements, congratulations! In your LinkedIn profile you wrote "Simulation specialist". So, how did you become interested in simulation?

I wanted to find ways to help healthcare practitioners develop their team skills and create a space where they could consider how they work more collaboratively. Simulation, with structured learner-led debriefing, seemed the ideal way to do

that. Joining the medical education team in 2013, I developed my facilitation and course design skills with the support of two amazing mentors Peter Jaye & Gabe Reedy. For one project we worked alongside Performing Medicine, a specialist group of artists, developing a model of compassionate human factors called the Circle of Care. Drawing on techniques from the arts we combined clinical and human factor skills with a focus on self and compassionate care, building this into our course designs.

I'll be honest: I'm not sure that I

should be using that title officially. But I was trying to describe myself because I don't think my job title does that. I have significant experience of designing and implementing realistic simulations at the micro and macro level of organisations, using a wide range of simulation modalities. I'm an expert in the speciality of simulation within health and care services. And so, in that sense I am a Simulation Specialist.

Currently, in what state is healthcare simulation in your country?

Simulation across the UK is in a positive transition phase, in my opinion. Commissioners and providers are collaborating and national programmes for faculty development are available. Hospital-based centres are building virtual simulation capacity. Alongside a more traditional manikin and simulated practitioner or patient-based learning events, our university colleagues are utilising digital simulation, and we are all building on our experiences during the pandemic and expanding formats, modalities, and roles. As our Nursing and Midwifery Council has endorsed the opportunity for 600 hours of nurses training to be simulated practice, there is a welcome drive to guide and influence high quality simulation-based practice. We envisage this will enhance both the learner experience and education opportunities that we predict will directly improve patient and public safety. We're also seeing a significant expansion of the use of transformative and translational simulation to assist in system design across all health and care sectors and professions which, at ASPIH, we fully endorse ...





SIM CORNER

ADVERTORIAL

Effective Teaching: The Impact of Physiology Modelling

Stefan Mönk, Chief Medical Officer at CAE Healthcare, talks about how modeled physiology accurately simulates patient vital signs, making teaching more efficient by relieving instructors of constant monitoring and allowing them to engage more with learners



Stefan Mönk

Dr. Stefan Monk is an anesthesiologist, emergency medicine specialist, educator and director who began his career with CAE Healthcare in 2010. In his role as Chief Medical Officer, Stefan collaborates with global authorities, key opinion leaders (KOLs) and subject matter experts (SMEs) to build and manage strategic relationships with stakeholders in healthcare, while spreading awareness of the CAE mission to make healthcare safer.

Stefan is a member of the German Anaesthesia Society, the European Anaesthesia Society, the Society in Europe for Simulation Applied to Medicine (SESAM), of which he is a former president, and the Society for Simulation in Healthcare (SSH).

✉ stefan.monk@cae.com

in [in/stefanmonk/](https://www.linkedin.com/in/stefanmonk/)

next move based on your choice.

In essence, algorithms are valuable because they enable us to focus on what truly matters to us. While you may not be interested in the inner workings, all you need to know is how to reach your destination. To ensure a positive user experience, it's crucial to have a user-friendly algorithm that efficiently accomplishes its task, delivers the desired results, and spares you from delving into complex technical details, such as intricate mathematics or internal workings.

A similar correlation can be drawn to the value of modeled physiology in medical simulation. Accurately simulating a patient's vital signs based on real-world behavior can be a matter of life or death.

This is where challenges arise.

Consider a condition like pregnancy, which exhibits a distinct pattern of

Algorithms are a set of mathematical instructions used to either solve a problem or perform a task.

And while algorithms can seem boring and are often associated with math enthusiasts or data aficionados, a significant portion of our daily experiences is more enjoyable thanks to algorithms.

Do you enjoy streaming videos? Chances are, your service provider employs algorithms to help you discover content you'll like, and additional algorithms ensure smooth streaming.

Or perhaps you use a navigation system to find your way around? For most people, it's a resounding yes, as finding your way with a paper map, if you can even find one, is hardly more fun.

The real value of having algorithms in place lies in their ability to relieve you of mundane tasks, allowing you to concentrate on more meaningful endeavors. In the context of navigation, it's about savoring the journey and the scenery, rather than fretting over when to make the next left turn.

Let's delve deeper. A navigation

system's algorithm doesn't just take the burden of figuring out how to get from point A to B; it can also adapt your route based on changes in your surroundings and your driving decisions. So, when you decide to make that left turn ahead of its suggestion, it's already recalibrating your



vital signs and responses to interventions. Pregnancy unfolds in stages, with each stage manifesting uniquely in different individuals. Some of the physiological changes during pregnancy include intravascular volume, extravascular volume, cardiac contractility, oxygen consumption, CO₂ setpoint, and shunt fraction, among others.

Each stage and condition evolves distinctly, with varying rates of change over time.

Who would understand these patterns, say, between months 3 and 8? This is relevant because ventilation management and volume control differ between these two periods. Similarly, responses to apnea and bleeding vary. Now, envision an intervention like inducing general anesthesia (which involves apnea) in the presence of bleeding. Moreover, different drug effects are contingent on changes in cardiac output and distribution volume.

Allow me to pause here, as the message becomes clearer: in a dynamically changing physiological context, coupled with complications and interventions, as an instructor in a simulation center, predicting and controlling the real-time development of vital signs can become increasingly challenging.

At CAE Healthcare, modeled physi-



ology is provided to support learners in their educational journey. By eliminating the need for manual replication of real-world physiological responses, modeled physiology grants instructors the freedom to focus on observing and engaging with learners, identifying behavioral patterns, and preparing for debriefing sessions. In simpler terms, teaching becomes demanding when the constant monitoring of vital signs consumes our attention.

Just as algorithms are to naviga-

tion, the model of physiology is to medical simulation. When the model of physiology is readily accessible, it enhances the user experience, delivers precise vital signs, and promotes effective teaching.



**EVERY ARTICLE IS AVAILABLE IN 3 LANGUAGES:
ENGLISH, SPANISH AND ITALIAN.
SCAN THE QR CODE AT THE TOP OF EACH
ARTICLE TO READ IT IN YOUR LANGUAGE OR
COMPLETE THE READING ONLINE.**

Everywhere on your device! simzine.news



SIM GEEK

Sala de disección virtual en el Metaverso

Un cadáver virtual en una sala de disección anatómica digital donde los estudiantes pueden aprender sobre anatomía humana. Un ejemplo de enfoque del metaverso para las ciencias de la salud



Miguel Angel Rodriguez-Florida

Físico, Doctor en Tecnología de las Telecomunicaciones, Coordinador del Laboratorio de Simulación y Formación basada en Tecnología del Complejo Hospitalario Universitario Insular Materno Infantil de Canarias, Coordinador técnico de la Cátedra de Tecnologías Médicas de la Universidad de Las Palmas de Gran Canaria, Coordinador de la plataforma FAST (Formación Avanzada en Sanidad con Tecnología) de la Fundación Canaria Agora

✉ marf@motivando.me

in [in/miguelangelrodriguezflorido](https://www.instagram.com/miguelangelrodriguezflorido)

están trabajando para la enseñanza y formación de la anatomía.

Hola Miguel Angel y gracias por aceptar esta invitación para compartir tu experiencia en educación innovadora. Puedes describir brevemente a qué te dedicas y qué hace el centro en el que trabajas.

Hola!, gracias a ustedes por difundir lo que hacemos en nuestro grupo. En el plan de innovación tecnológica MOTIVA y nuestra plataforma FAST (Formación Avanzada en Sanidad con Tecnología) nos dedicamos a formar en toda la cadena educativa de la medicina, desde los estudiantes, pasando por los residentes a los especialistas. Para nuestro grupo, la educación es el hilo conductor que une todos estos eslabones de la cadena y que acompaña a los médicos desde que entran en la facultad de medicina hasta su retiro

La palabra metaverso ya es de uso común. Sin embargo, aún no está claro para todos qué significa realmente y cuáles pueden ser sus aplicaciones. Hemos pedido a Miguel Ángel Rodríguez-Florida, Coordinador técnico de

la Cátedra de Tecnologías Médicas de la Universidad de Las Palmas de Gran Canaria, y Coordinador de la plataforma FAST (Formación Avanzada en Sanidad con Tecnología) de la Fundación Canaria Ágora que nos cuente en qué



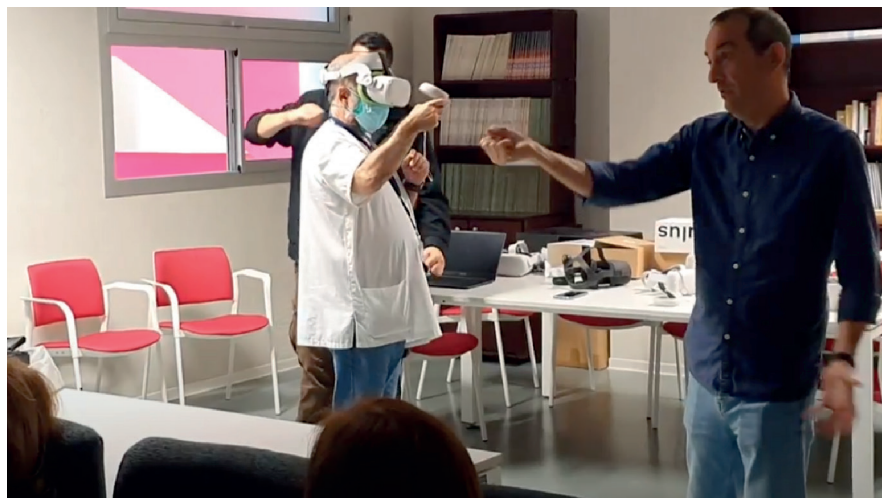
¿Qué es el Proyecto AVRIR?

AVRIR es el acrónimo en español de "Aprendiendo con VR Interactiva y Remota" y tecnológicamente pretende aproximar el concepto de metaverso a las ciencias de la salud, en concreto, a la medicina. Se trata de un proyecto de innovación educativa de la Universidad de Las Palmas de Gran Canaria, cofinanciado por la Unión Europea a través de los fondos NextGenerationEU, dentro del Plan de Recuperación, Transformación y Resiliencia, que implementa una sala de disección anatómica virtual en la que los estudiantes pueden disponer de un cadáver virtual sobre el cual aprender, mediante la disección, las distintas asignaturas asociadas a la anatomía humana. El cadáver es el recurso tradicionalmente utilizado para enseñar medicina, pero no es de fácil acceso y mantenimiento. La tecnología inmersiva nos puede ayudar a utilizarlo de forma segura, eficiente y sostenible, y esto es lo que persigue el proyecto AVRIR.

Entonces habéis desarrollado un metaverso para enseñar la anatomía. ¿Puedes explicarnos de forma sencilla qué son los cadáveres virtuales?

Sí, aunque el concepto de metaverso es mucho más extenso, en este proyecto nos hemos aproximado a él creando un aula docente en la que los estudiantes y el docente se introducen para desarrollar su actividad educativa.

Cómo comentaba anteriormente, el uso del cadáver no siempre está al alcance de todos los estudiantes y con la frecuencia que se desearía, al tiempo que su uso rutinario no es precisamente saludable. Por tanto, un cadáver virtual es un modelo virtual de la anatomía humana que representado en un escenario VR interactivo y mul-



tiusuario, emula la situación real que se plantea en una sala de disección.

¿Cuáles son las ventajas de una sala de disección virtual?

La sala de disección virtual permite que los estudiantes tengan acceso infinito a este recurso, que no tengan que estar expuestos a sustancias de conservación nocivas para la salud, ni a normas de seguridad sanitaria y jurídica asociadas, así como que el sistema, al ser sintético, pueda ser monitorizado y utilizado para obtener métricas objetivas sobre la actividad realizada, al tiempo que, aprovechando la capacidad propia de la tecnología que lo implementa, incorporar herramientas de guía en su educación.

Para el docente se trata de una herramienta cómoda de uso, que le permite evaluar los conocimientos de los estudiantes, hacer uso de los escenarios que considere oportunos y adaptarlos a los contenidos de su asignatura.

¿Sustituirá a la práctica tradicional de la anatomía o la complementará?

:-) siempre que se introduce una

nueva capacidad tecnológica, el ser humano tiende a pensar en términos sustitutivos y no complementarios :-). Así pasa con la misma Inteligencia Artificial, que, por cierto, estamos planteando su uso para resolver algunos problemas técnicos que surgen en la disección virtual...pero, esta es otra conversación :-).

Con esto, lo que quiero decir, es que ningún avance es sustitutivo, salvo que así lo queramos hacer, sino que sólo aporta una capacidad adicional a lo que ya existe. Ahora mismo los estudiantes de medicina no usan cadáveres en la docencia o, al menos, no se usan como los docentes quisieran y la alternativa puede ser aún más costosa. Por tanto, disponer de herramientas como estas sólo puede ayudar. No es lo mismo acceder directamente a un recurso limitado, como es el cadáver, o un maniquí hiperrealista del cuerpo humano, sin ningún tipo de conocimiento, que acceder habiendo practicado precisamente con un recurso virtual sintético (el cadáver virtual). Por ello, su uso podría ser complementario o, por el contrario, exclusivo, según se quisiera o pudiera en cada situación particular.

¿Cuáles fueron las dificultades para realizarlo?

La primera dificultad fue encontrar...





SIM GEEK

What is a Simulationist?

Can you tell the difference between an AI-generated article and one that was written by a human? Read this article about *the simulationist* to find out

The term "simulationist" has emerged as a defining force in the healthcare industry, shaping the future of medical training, research, and patient care. This article delves into the multifaceted role of the simulationist, their impact on healthcare practices, and the transformative potential of simulation technology.

The simulationist is a healthcare professional with specialized expertise in simulation techniques and technology. They possess a deep understanding of healthcare processes, medical scenarios, and patient care protocols. Through their expertise, they harness the power of simulation to create realistic and controlled environments for training and educational purposes.

Simulationists revolutionize medical training by providing immersive and hands-on experiences to aspiring healthcare professionals. Using advanced simulators, virtual reality, and interactive scenarios, they enable trainees to practice clinical skills, decision-making, and critical thinking in a safe yet lifelike setting. This prepares them to handle complex situations with confidence and competence in real-life patient care settings.

Effective teamwork and communication are crucial elements of successful healthcare delivery. Simulationists design interdisciplinary scenarios that bring together physicians, nurses, paramedics, and other healthcare providers. Through these simulations, they instill a sense of unity and foster better communication among team members, ensuring seamless

coordination during critical situations.

Simulationists play a pivotal role in driving continuous quality improvement in healthcare. By meticulously analyzing simulation data and per-

patient outcomes.

Simulationists are at the forefront of integrating technological advancements into healthcare education. They continuously explore innovative tools such as augmented reality, artificial intelligence, and sophisticated simulation software. By embracing these technologies, simulationists push the boundaries of traditional medical training, making education more engaging, efficient, and effective.

Conclusion:

As simulation technology continues to evolve, the simulationist's role in healthcare becomes increasingly indispensable. Their expertise in simulation techniques, dedication to education, and commitment to improving patient care make them key drivers of healthcare advancements. The simulationist's ability to create a safe yet realistic learning environment empowers healthcare professionals to achieve

excellence in their field. By harnessing the transformative potential of simulation, the simulationist stands at the forefront of shaping the future of healthcare delivery and patient well-being.



formance metrics, they identify areas of improvement, potential errors, and system weaknesses. The insights gained from simulation-based research aid in refining protocols, enhancing patient safety, and optimizing healthcare processes.

Beyond training, simulationists design assessment scenarios to evaluate the competence and skills of healthcare professionals. Objective assessments using simulations provide a standardized and fair evaluation process. This ensures that medical practitioners meet required standards and remain up-to-date with best practices, contributing to better

What do you think?
Was this article written
by a human or by the AI?

Let us know your opinion by
leaving a comment in the web
article

simzine.news



Victoria Brazil, simulationist, technophile and much more

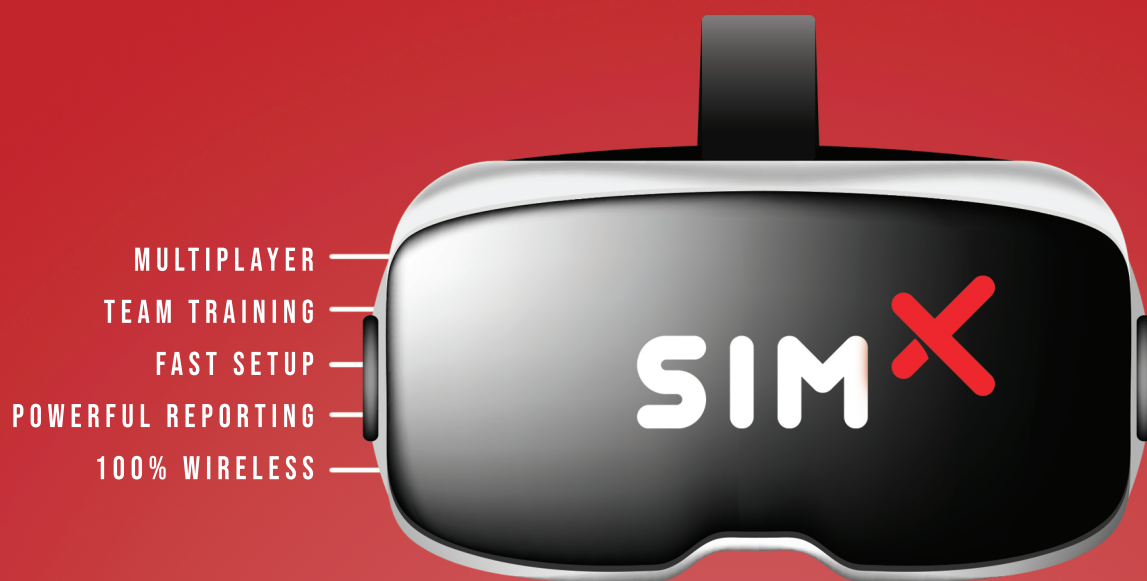
Victoria Brazil is one of the most inspiring voices in simulation and talks with us today

It's time to get to know Victoria Brazil. Emergency physician, medical educator, professor, director, editor and also entrepreneur, she is a serial keynote speaker with more than 100 presentations to national and international meetings. Enthusiast for social media, podcasting and FOAM

world, her aim is to bring healthcare 'tribes' together for better patient care. Running is her version of meditation - when problems seem to solve themselves. Victoria's so busy, but she took a minute to speak with us and talk about her relationship with tech devices and social media, her vision

of simulation future, and her love for experiential learning

Read our interview with her to find out more on simzine.news



GET REAL WITH VIRTUAL REALITY



WWW.SIMXVR.COM



SIMZINE



SIM SPACE



La Seguridad del Paciente, eje de la Simulación en Universidad CEU San Pablo-Madrid

Álvaro Trampal Ramos nos cuenta cómo opera la Unidad de Simulación Clínica de Enfermería de la Universidad CEU San Pablo de Madrid

En el corazón de la Facultad de Medicina de la Universidad CEU San Pablo de Madrid, se encuentra la Unidad de Simulación Clínica de Enfermería (USCE), equipada con cuatro laboratorios de Simulación Clínica y cuatro salas polivalentes de trabajo. La USCE es un referente de aprendizaje práctico y avanzado para estudiantes de enfermería.

Metodología docente

La Unidad de Simulación, realiza una transición por las SimZones de Roussin, una metodología que sumerge a los estudiantes en un proceso de aprendizaje integral, siguiendo la Simulación Clínica como herramienta transversal en el aprendizaje. Comienza con una inmersión en la "zona 0" de autoaprendizaje, donde los estudiantes exploran los conceptos y habilidades esenciales en su propio ritmo, antes de avanzar a la "zona 1". En esta SimZone, los estudiantes participan en seminarios lo más prácticos posibles, con grupos reducidos y una ratio de dos alumnos por cada Task Trainer. Este enfoque permite una atención individualizada y, a través de los checklist de habilidades, intentamos que los alumnos integren las "Best practices" de forma ordenada y sistemática para poder aplicarlas de forma eficiente en sus prácticas clínicas y en el futuro, en su actividad profesional.

La Magia de la Simulación

Tras haber simulado en la Zona 1, recibiendo feedback del instructor, es la hora de pasar a la Zona 2 de las SimZones de Roussin. Este es el punto culminante del proceso de aprendizaje en la USCE, la realización de escenarios de simulación con los si-

muladores de alta tecnología o con pacientes estandarizados, actores y actrices que participan en los escenarios de simulación. Aquí, los estudiantes se sumergen en situaciones clínicas realistas y desafiantes. La USCE dispone de unidades de hospitalización completamente equipadas, una unidad de cuidados intensivos para pacientes adultos y otra para pa-



cientes pediátricos, con incubadoras, simuladores de alta tecnología desde prematuros hasta pacientes geriátricos y un largo etcétera.

Estos escenarios permiten a los estudiantes aplicar sus conocimientos y habilidades en un entorno seguro y controlado, sin poner en riesgo la salud de los pacientes reales. Tras finalizar la simulación, se realiza un debriefing de lo que ha sucedido en el escenario, siendo el alumno el protagonista del análisis, intentando por parte de los Facilitadores, que el alumno encuentre herramientas de mejorar para poder "llevar en su mochila" y aplicarlas en su trabajo diario.

Docentes como Facilitadores del conocimiento

La excelencia en la enseñanza de la

simulación clínica no sería posible sin docentes altamente capacitados. Los profesores de la USCE reciben formación anual en simulación clínica, innovación y herramientas para utilizar con los alumnos. Esta formación continua, garantiza que los docentes estén a la vanguardia de las mejores prácticas en educación sanitaria y puedan desarrollar una simulación con los estudiantes de forma efectiva, aplicando las diferentes fases y herramientas de la simulación.

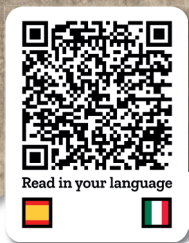
Priorizando la Seguridad del Paciente

En la USCE, la seguridad del paciente es una preocupación central. En todos los escenarios clínicos, se integran de manera transversal conceptos y prácticas relacionadas con la seguridad del paciente. Esto incluye la identificación activa, el traspaso de información utilizando el método

SBAR, la comunicación efectiva con el equipo, herramientas del CRM, y la implementación de Team STEPPS, entre otros. Sin dejar de lado la **humanización** en todos los escenarios, piedra angular junto a la seguridad del paciente de todos los profesionales de enfermería.

Conclusión

En la Unidad de Simulación Clínica de Enfermería de la Facultad de Medicina de la Universidad CEU San Pablo de Madrid realizamos un enfoque integral, que involucra tecnología avanzada y un gran compromiso con la seguridad del paciente. La USCE prepara a los estudiantes de enfermería para enfrentar los desafíos del mundo real con confianza y competencia.



63

SIM GEEK

Toward an objective score for matching simulators to programs

A practical score which matches simulators to training programs based on trainable elementary skills. An innovative proposal

The challenge

Finding the right simulator for a particular training program is a challenge. Especially for the more general programs, there are often many available solutions. In this article we focus on programs that can best be trained on patient simulators or part-task trainers, rather than on simulated patients. We also focus on training goals, and not on cost aspects and preferred providers.

Proposed method and preliminary results

The proposed method is based on analyzing a program in terms of elementary skills in the four categories described in the already published article "System theory for simulationists", namely: physical exam, manual interventions, monitoring, and device-based interventions. In this section we give an example of the application of the method to Nasco



Healthcare simulators. The first column in Table 1 lists the elementary skills required from lay rescuers, as specified in the 2015 American Heart Association (AHA) guidelines for adult Basic Life Support (BLS) (the

work was carried out in 2017).

Note that additional manual elementary skills required from healthcare providers trained in BLS, such as bag-mask ventilation or administration of naloxone, are not listed. Then a number of Nasco Healthcare simulators are characterized in terms of trainable elementary skills. In the last three columns a "1" is entered if the skill is considered trainable on the considered device: Brad Adult, ALS trainer, and Smart STAT, respectively. A matching score for a particular simulator is calculated by summing the 1s in a column, and dividing the resulting number by 8, the number of considered elementary skills in this category and for this program. The Brad Adult allows for training of 50% of the elementary skills in the manual interventions category, the ALS trainer for 88%, and the Smart STATs allows for training them all. The exercise is then repeated for the other three categories of elementary skills: physical

Table 1. Elementary skills in the manual interventions category of the AHA adult BLS program, and trainable skills on selected Nasco Healthcare simulators.

	Brad Adult 100-2801	ALS trainer 101-081FB	Smart STAT 101-8001
abdominal thrust		1	1
bag-mask ventilation		1	1
chest compressions	1	1	1
chest thrust	1	1	1
head tilt-chin lift (if confident)	1	1	1
mouth-to-mouth rescue breathing (if able)	1	1	1
mouth-to-nose rescue breathing (if able)		1*	1*
mouth-to-stoma rescue breathing (if able)			1*
Matching score	0.50	0.88	1.00

* not necessarily advisable over sanitary conditions.

exam, monitoring, and device-based interventions, resulting in an overall matching score ranging from 0 (none of the elementary skills in all four categories can be trained on the device) to 1 (all elementary skills can be trained on the device).

Discussion

The advantages of the proposed method include:

- That it is based on the intuitive concept of "elementary skill", and on rigorous analytical methods for characterizing training programs and training devices.
- The resulting matching score is easy to compute and interpret.

Potential limitations include:

- Extracting elementary skills from existing program guidelines requires a competent professional.
- Characterizing a simulator in terms of "trainability" of elementary skills should be done in an objective, independent way, so ideally not by the manufacturer.

For now, elementary skills contribute in a binary way to the score, but certain skills, such as chest compressions in a BLS program could be given a different weight. Binary trainability could also be expanded into a multi-level scale. Integrative skills, including thinking about relationships

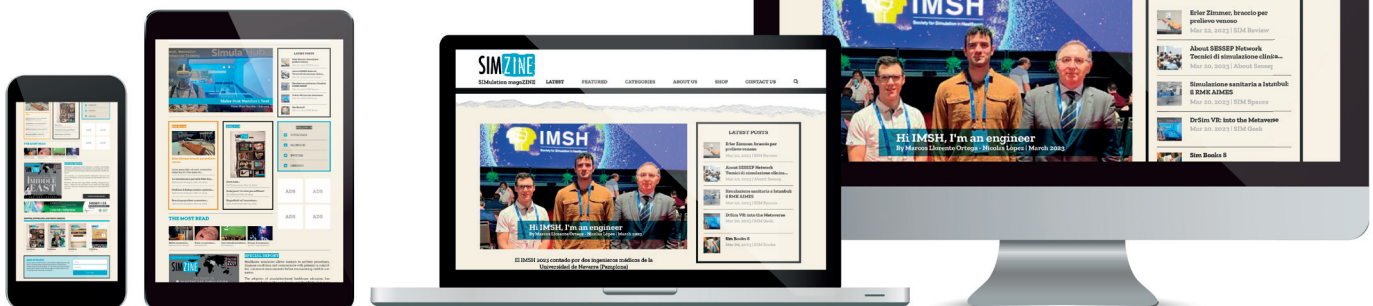


between evolving clinical quantities, and communication with team members about the simulated patient are currently not included in the proposed score. Besides for matching simulators to programs, the proposed method also holds promise for market research and for design of new simulators, also see Design and commercialization of a neonatal ECMO simulator.

We presented a rigorous, data-based method for matching simulators to programs. Formal application of this method will require further work, but the presented insights can already be applied practically when looking at available devices.



Read **SIMZINE** anywhere from your device and **follow us** on our social media!



simzine.news



Can Simulation Be Sustainable?

Raising awareness toward a more sustainable simulation is critical. Our panelists discuss how to acquire the managerial skills to do so.

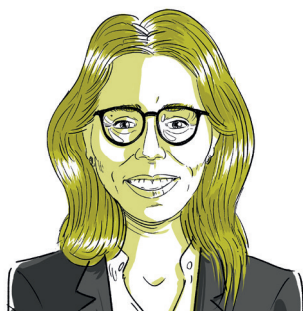


Pier Luigi Ingrassia

The debate

The World Health Organization (WHO) has identified climate change as "the greatest global health threat of the 21st century". Therefore, also health simulationists, educators, organizations, industry bodies and leading experts in the simulation field have a moral duty to act in terms of taking responsibility for managing the planet and its resources. Simulation is, in fact, a rapidly growing field, and this implies the need for sustainable and cost-effective methods to facilitate clinical simulation. Some scientific societies have established

special interest groups on sustainability that reflect the commitment of our scientific community. As a recently published article showed, simulation centers are already implementing sustainable simulation activities, such as reusing consumables such as IV tubing, IV solution bags, and drug bags, and some are recycling some of them. But is there more to be done, and how? We asked our panelists



Carolina Sambuceti Núñez

Emergency Nurse, Simulation Educator, Master of Education in Health Sciences. Currently serving as the Academic Director at the University of San Sebastián, Chile, she leads innovation in healthcare simulation.



Carla Sa-Couto

Clinical Simulation Educator and Research Lead at CINTESIS@RISE, Community Medicine, Information and Decision Sciences Department (MED-CIDS), Faculty of Medicine, University of Porto (FMUP); Chair of the Steering Committee of the European Simulation Research Network (SiReN@SESAM); Member of the Executive Committee and Conference Director of the Association for Simulated Practice in Healthcare (ASPiH)



Heather Baid

Heather Baid is a registered nurse specializing in intensive care who works as a Principal Lecturer at the University of Brighton. She has a keen interest in sustainability issues, including reducing the environmental footprint of healthcare practices with financial and social co-benefits.

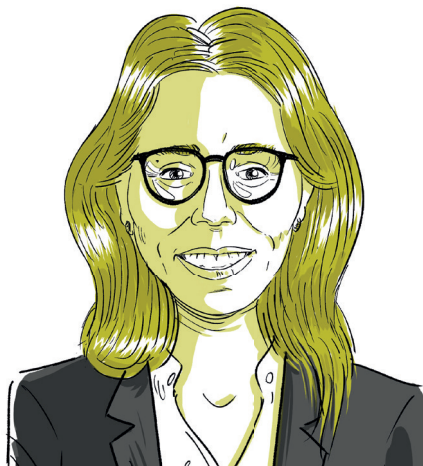
Which are the main measures that we, as simulationists, should adopt to impact the environment on a global level?

Carolina Sambuceti Núñez: As educators in clinical simulation, we can take meaningful steps to mitigate our environmental impact. Clinical

simulation, a potent educational methodology, necessitates resource management, from supplies to simulators and biomedical equipment, all of which have an environmental footprint. It is pertinent to design sustainable scenarios, harnessing virtual simulation to reduce the need for physical resources. Recycling and re-

using simulators and supplies when safe to do so is advisable. Promoting energy conservation by selecting efficient consumption systems and opting for clean energy technologies is paramount. Minimizing waste generation by choosing reusable products and educating our students is essential. Furthermore, collaborat-

ing with simulation educators to share best practices and adopt more eco-friendly technologies is crucial. Finally, advocating for institutional policies that promote sustainability, including working with environmentally-friendly materials for simulation and simulation spaces, encouraging constructions with improved natural lighting and ventilation.



Heather Baid: The healthcare sector now strives to be more environmentally sustainable, with some countries, such as the UK, working towards net zero targets to minimise healthcare's environmental footprint. Simulation-based education must catch up with this sustainability movement to mitigate ecological harm from a sense of planetary health stewardship and to maintain authentic simulation



scenarios and settings. If hospitals and community settings are reducing their impact on global crisis issues such as climate change, biodiversity

loss and water, air and land pollution, then simulation replicating this healthcare practice must follow suit. To improve environmental impact at a global level, all staff and learners involved with simulation need the capability, opportunity and motivation to change their behaviours for a widespread cultural shift, enabling simulation to reflect the principles of sustainable clinical practice (prevention, patient self-care, lean service delivery and low-carbon alternatives) focusing on a healthier approach to procurement, resource use and waste management.

Carla Sa-Couto: I believe that there are several simple measures we can adopt to make a positive environmental impact. Hereby some ideas:



- Develop and implement policies on the recycling of the pseudo-clinical waste generated by the simulation activities.
- Balance the need to create authenticity and immersive environments with the use of disposable personal protective equipment and real clinical material/equipment. Implement practices that minimize the use of disposable medical supplies in simulations and encourage the repurposing of simulation materials and equipment to minimize waste.
- Promote sustainable and accessible simulation-activities, such as virtual training sessions and telesimulations and teledebriefing (if educationally appropriate), to reduce the use of disposable supplies and equipment and the carbon footprint associated with travels.

- Integrate sustainability principles into simulation curricula to educate healthcare professionals about environmentally responsible practices, extending the impact beyond the simulation-activities.

Although our individual contribution and commitment is essential, these actions should be regulated and adopted at an institutional level, to promote adherence, a standardised implementation, and organisation accountability.

Which features should an environmentally accountable simulation center have?

Heather: An environmentally accountable simulation center should have the physical setting and operationalised practices based on circular economy and systems thinking principles. A circular economy aims to prevent a 'throw-away' culture, particularly environmentally and financially costly clinical waste management, focusing on the 'Rs' of the resource cycle: reduce, reuse, repair, refurbish, remanufacture, repurpose, recycle and recover. Simulation practice can also use expired products or continue reusing clinical items that may not be suitable in a real-life healthcare situation involving patients but could still be used in simulated scenarios. Systems thinking considers the interconnectivity of all micro, meso and macro systems involved in a process to explore the wider context of resource use and all the people involved. Simulation sustainability starts with resource utilization and waste management in the room but continues beyond through clear communication and collaboration with others in estates, procurement and external stakeholders.

Carla: Ideally, an environmentally accountable healthcare simulation center should prioritize the implementation of several key features. These include a sustainable infrastructure...





DID YOU KNOW...



Simulazione in Pediatria: crescere con l'innovazione

Alcuni esempi virtuosi di simulazione in pediatria proposti dagli studenti ingegneri del corso "Simulazione in medicina" dell'Università di Genova

"La pediatria è una branca della medicina che si occupa dello sviluppo fisiologico e della cura delle malattie dei soggetti in età evolutiva", definisce così la disciplina pediatrica il dizionario Treccani. La pediatria è quindi quel ramo della medicina che si pone come obiettivo quello di curare, studiare e, qualora possibile, prevedere condizioni croniche, stati patologici ed emergenziali di pazienti minorenni: si tratta in tutto e per tutto di una medicina in miniatura. Le criticità che vanno affrontate sono tutt'altro che banali. Infatti, a differenza di altre discipline, il pediatra si occupa della cura dell'intera persona, di un paziente in continuo mutamento, e raramente può basarsi su trattamenti specifici e consolidati della medicina per adulti, in quanto non sempre rappresentano una soluzione adatta e necessitano di diverse rivisitazioni. È proprio in queste sottigliezze che si inserisce la simulazione che, grazie alla sua versatilità, diviene strumento necessario alla formazione, garantendo un ambiente sicuro in cui preparare adeguatamente i pediatri, affinché possano affinare le proprie abilità, aumentando la qualità delle cure fornite.

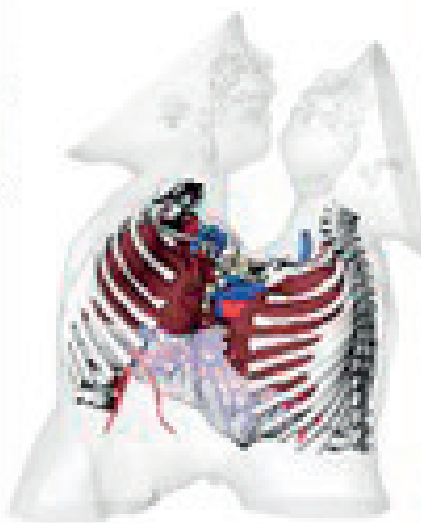
La simulazione in pediatria è tutt'oggi in fase di sviluppo e solo recentemente sta mostrando una propensione verso simulazioni di casi particolari e tecniche innovative di divulgazione ed insegnamento. Il Meyer Health Campus, esempio virtuoso di simulazione pediatrica in Italia, fornisce una vasta gamma di eventi e corsi di simulazione pediatrica di diverso tipo, come la simulazione di urgenze neuropsichiatriche in pediatria, o workshop come il POCUS - pediatric Point Of Care Ultrasound.

Durante il corso in *Simulazione in medicina*, insegnamento del corso di laurea triennale in Ingegneria Biomedica presso l'Università degli Studi di Genova, tenuto dalla Prof.ssa Serena Ricci, abbiamo potuto approfondire alcune interessanti sperimentazioni di simulazioni in chirurgia pediatrica come il caso della separazione dei gemelli congiunti, intervento particolarmente raro, nonché delicato, e la risoluzione chirurgica della labio-palatoschisi (nota come labbro leporino), intervento di chirurgia plastica compiuto nel primo anno di vita del

bambino.

Riguardo ai gemelli congiunti, nel 2013, presso il Children's Hospital di Philadelphia, è stata creata una simulazione ad alta fedeltà dell'intervento di separazione al fine di preparare tutto il personale che sarebbe intervenuto durante l'intervento. Al fine di aumentare il realismo, è stato creato un manichino ad-hoc. Più recentemente, presso l'ospedale Bambino Gesù di Roma, è stato sviluppato un modello anatomico di gemelli congiunti, al fine di facilitare la pianificazione dell'intervento di separazione. La complessa anatomia è stata replicata con tecniche di stampa 3D in seguito a segmentazione che permette di estrarre e identificare strutture o regioni specifiche da immagini diagnostiche. In fase di modellazione e stampa 3D, le strutture più delicate, quali vasi sanguigni, sono state differenziate utilizzando colori diversi.

Parlando del labbro leporino, è interessante citare due soluzioni: un simulatore aptico sviluppato circa 20 anni fa presso l'università di Stanford, e SIMPeds Cleft Trainer, simulatore





a media fedeltà sviluppato presso il Boston Children's Hospital. Il primo combina un software ad un dispositivo aptico, al fine di ricreare la sensazione tattile e quindi allenare le abilità manuali, con particolare enfasi sulla precisione di taglio e sutura. Grazie ad un algoritmo, il software fornisce una valutazione attraverso un sistema di punteggio in funzione del tempo di esecuzione e della validità dei punti scelti per effettuare le incisioni.

Il secondo, invece, è un modello fisico di testa di bambino che, grazie alla fedeltà di tessuti e ossa, mostra un'adeguata resistenza al taglio, e permette di allenare le skill manuali in un ambiente realistico.

Questi due esempi mostrano quanto la simulazione in pediatria necessiti di soluzioni nuove, specifiche e spesso tecnologicamente avanzate. Tuttavia, il futuro di questa disciplina, va

ricercato non solo nel progresso tecnologico, ma anche nella diffusione e nella portabilità delle simulazioni, che devono essere fruibili ovunque, anche laddove non si ha disponibilità di spazi o in paesi in via di sviluppo. In questo modo crescerà l'interazione della comunità sanitaria con la simulazione, dando vita a studi di efficacia che riconosceranno sempre più la simulazione come strumento utile e ottenendo quindi fondi e visibilità che ne permetteranno l'ulteriore progresso.

BIBLIOGRAFIA

Insera, Alessandro, et al. "Advanced 3D "Modeling" and "Printing" for the surgical planning of a successful case of thoraco-omphalopagus conjoined twins separation." *Frontiers in Physiology* 2020

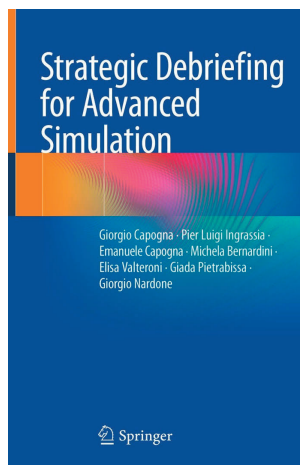
Rogers-Vizena, Carolyn R., et al. "A new paradigm in cleft lip procedural excellence: creation and preliminary digital validation of a lifelike simulator." *Plastic and Reconstructive Surgery* 2018

Schendel, Stephen, et al. "A surgical simulator for planning and performing repair of cleft lips." *Journal of Cranio-Maxillofacial Surgery* 2005

Simpao, Allan F., et al. "From simulation to separation surgery: a tale of two twins." *Anesthesiology* 2014

GET REGISTERED AND RECEIVE THE BOOK

SIMZINE wants to give 2 copies of the book 'Strategic Debriefing for Advanced Simulation' to its readers. To get the book, register on simzine.news and send an email to redazione@simzine.it with the subject 'Practical Guide to Simulation'. If you like, send us a couple of lines about who you are and why you are interested in the subject.





SIM CORNER

FioNA, el simulador nacido para ser pinchado

FioNA es el primer simulador de punción aspiración con aguja fina. Desde la idea hasta su décimo cumpleaños a través de la voz de su inventor



Eduardo Alcaraz Mateos

Patólogo General y Citopatólogo con especial interés en Citología, Dermatopatología y Patología Digital. Implicado en Educación Médica y Simulación Clínica. Inventor de simulador en PAAF FioNA (TM)

✉ edusqo@hotmail.com

📷 /edusqo

📱 /edusqo

por ello requiere de entrenamiento, a ser posible, en un entorno seguro. Y ahí es donde encontré esa carencia, la de un simulador para poder enseñar y entrenar la punción, pues no existía. Decidí que todo estudiante que viniese a nuestro centro hospitalario debía aprender la técnica; una técnica que realizamos los patólogos, pero que también hacen radiólogos, internistas, endocrinos, etc. Consideraba, por ello, que era importante, tanto si finalmente decidían especializarse en una de estas especialidades como si acababan siendo médicos peticionarios de esta técnica, para conocer el potencial de la misma.

Dándole muchas vueltas a la idea y haciendo uso de algunas habilidades manuales adquiridas herencia de mis abuelos, ambos mecánicos de profesión, comencé a diseñar con madera y un sistema de globos un phantom de

Diez años hace ya de la incorporación de los estudiantes de medicina a nuestra institución. Tenía muy claro por aquel entonces (y sigo pensando lo mismo) que unas prácticas hospitalarias deben ofrecer al estudiante la oportunidad, no sólo de ver lo que hacen los profesionales en su ámbito correspondiente, sino también poder desarrollar habilidades por ellos mismos. Se acabó ser meros espectadores, "macetas" o "plantas", como se dice por aquí. De modo que "las manos fuera de los bolsillos y nada de brazos cruzados", ¡aprendizaje activo! Así me lo propuse y me concentré en un apartado de la patología en el que los patólogos interactuamos con el paciente y realizamos un procedimiento sobre el mismo. Pese a la falsa creencia de que los patólogos únicamente estamos diagnosticando al microscopio, manejando muestras o incluso haciendo autopsias, la técnica de punción aspiración con aguja fina (PAAF) sigue siendo una actividad habitual diaria, en la que realizamos directamente, por palpación, o bien con ecógrafo, punciones sobre el cuerpo

de los pacientes, sobre lesiones o tumores, para obtener muestras y lograr su diagnóstico, sin tener que realizar métodos más invasivos como una biopsia. Se trata esta punción de un método mínimamente invasivo, pero no está exento de complicaciones y



Prototipos utilizados desde los cursos 2013/14 al 2017/18. Detalle del sistema de globos que se pone bajo la superficie de los simuladores.



FioNA, el simulador comercializado para la realización de punción aspiración con aguja fina.

cabeza y cuello con lesiones en región laterocervical y tiroidea y con este simulador fue con el que comenzamos las prácticas en el curso 2013/2014. Más tarde decidí ampliar y crear un torso que incluiría lesiones en axila, región mamaria, abdomen y área inguinal. De este modo, y haciendo uso de contextos clínicos distintos para cada estudiante, la habilidad es enseñada, considerando todos los aspectos: desde la correcta presentación y explicación del procedimiento hacia el paciente, las adecuadas medidas de asepsia y antisepsia, hasta la realización correcta del procedimiento, incluyendo la hemostasia. Además, cada caso clínico es concluido con los hallazgos microscópicos que nos permiten el diagnóstico del paciente, utilizando preparaciones microscópicas digitalizadas.

Pues bien, tras implementar este prototipo, decidí recopilar la percepción de los estudiantes y la experiencia en sí misma y presentar los resultados en congresos de patología (ICC, Yokohama 2015, USCAP, Seattle 2016, ECP, Colonia 2016, y, como no, también en España), educación y simulación médica (AMEE, Barcelona 2016, SESAM, Paris 2017, SESSEP, Madrid 2016, entre otros) y redactar un primer artículo. Entre tanto, realicé

el registro o patente de la idea y comencé a contactar con las empresas que conocía: Laerdal, Limbs & Things, Nasco-Simulaid... pero no resultó una tarea fácil. Fue entonces cuando, participando en el congreso anual HPSN (Human Patient Simulation Network) en Florida en 2017, el personal de CAE me habló de Sawbones, de Seattle. Contacté con ellos y tras varias conversaciones mostraron interés. Fue entonces cuando iniciamos una intensa fase de diseño, donde participé junto a los ingenieros para, tras un año de esfuerzos, lanzar a FioNA (por Fine Needle Aspiration), el primer simulador de punción aspiración con aguja fina. Tras su salida al mercado, fue publicado un segundo artículo incorporando la metodología de evaluación tipo OSATS (doi: 10.1002/dc.24105) y realizamos un estudio de validación, donde se puso de manifiesto una validez aparente, de contenidos y constructiva, observando di-

ferencias según el grado de experiencia del profesional, cuando se emplea esta herramienta de entrenamiento estandarizado.

Actualmente, **FioNA se encuentra en más de 40 instituciones, incluyendo hospitales y universidades de todo el mundo:**

en Estados Unidos, como UCSF (San Francisco), UPenn (Philadelphia), o BIDMC-Harvard (Boston). En Europa también está en centros de Portugal, Dinamarca, Suecia y, como no, en España. Incluso está en algunos centros en Asia y Sudamérica.

Como no tenía ningún tipo de ambición económica, decidí ceder mis royalties como inventor a la Sociedad Española de Anatomía Patológica para destinarlos a actividades de enseñanza para estudiantes y médicos residentes.

Es ahora, en el 10º aniversario del nacimiento de esta idea, cuando puedo como profesional, encontrarme satisfecho con esta herramienta que hace que los aprendices puedan entrenar en un entorno seguro y sin realizar la técnica por primera vez sobre una pieza de fruta (sí, así es como se entrenaba, lo creáis o no) o, lo que es peor, sobre el paciente.



Prácticas de PAAF con estudiantes de medicina.



SIM CORNER

ADVERTORIAL

SimX and Laerdal: A Pioneering Partnership in Healthcare Simulation

SimX and Laerdal's groundbreaking collaboration promises to reshape medical training, merging immersive VR experiences with hands-on simulation techniques

In the rapidly evolving world of medical simulation, two industry leaders have come together to redefine the future of healthcare training. SimX, a leader in virtual reality (VR) medical simulation, and Laerdal, one of the main players in the healthcare education industry, have kicked off a groundbreaking partnership in Europe. This collaboration promises to revolutionize the way medical professionals are trained, combining the best of both virtual and physical simulation worlds.

The immersive experiences enabled by Virtual Patient Encounter are an additional training method that fits perfectly between skills training and high-fidelity simulations performed with a full-body simulator in a dedicated room, equipped with AV systems and debriefing software. Dr. Tyler Andre, Director of Business Development at SimX encapsulated the essence of this collaboration, stating, «The collaboration with Laerdal shows that learning and training are ideally a continuous and multimodal activity where the students are challenged with different learning approaches and technologies. The integration and close collaboration will ensure that the instructors can base their training on a seamless, integrated curriculum without having to re-think their approach for every different technology they have purchased».

Laerdal, with its rich history and commitment to helping save lives, sees this partnership as a step forward in its mission. The company's CEO, Alf-Christian Dybdahl, remarked, «Laerdal will always represent a legacy of helping save lives. And to have the biggest impact, we will continuously evolve and utilize immersive solutions (...) Our two organizations have a shared commitment to continuous innovation, like advancing VR simulation, to empower healthcare professionals».



This sentiment was echoed by Martijn Boosman, an experienced innovator in XR for emergency response who recently joined SimX. Reflecting on his vast experience, Boosman noted: «Having been involved in emergency and disaster medical simulation for over 25 years, it is very good

to see Laerdal has decided to embrace and expand virtual learning. The SimX solution is a logical next step in Laerdal's portfolio which has started virtually with their vSim® and vrClinicals® solutions».

The medical community's feedback has been instrumental in shaping this partnership. There's been a growing demand for alternative training methods that not only develop but also refine the skills of healthcare professionals. This collaboration is a direct response to that call, aiming to provide a comprehensive training experience that leverages the strengths of both organizations. Another benefit brought about by this cooperation is a huge boost to research on medical simulation; SimX and Laerdal both support and endorse investigation in this field, in order to get a better understanding of the role of simulation-based training in improving quality of training and reducing clinical errors.

The partnership will be formally announced at the ASPiH conference,





whose theme this year is 'Sustainability in Simulation', aimed at making simulation a more environmentally-conscious and mindful practice. Emily Cutts, Marketing Manager at Laerdal UK stated: «This year's conference theme has been selected to help all of us focus on becoming more aware of how we develop, use and plan our healthcare simulation services». There could not have been a better occasion to inform the SIM community about this disruptive and forward-thinking collaboration.

The advantages of this collaboration are manifold. By integrating VR into the training process, medical professionals, irrespective of their experience level, can refine their decision-making skills through simulated cases. They can also hone their skills proficiency through efficient and repeatable practice. Dybdahl elaborated on this, saying, «This partnership advances users which we measure through our approach to training, the Circle of Learning. Utilizing **virtual reality** helps medical professionals

of varying experience refine decision-making via simulated cases and build *skills proficiency* through efficient and repeatable practice».

The strategic vision for this partnership goes beyond just the integration of VR. Dybdahl highlighted the broader goals, stating, «Our strategy is grounded in collaborative initiatives that deliver innovation like this partnership as well as enabling technologies, like the digital solutions we will jointly develop to improve decision-making».

By combining the immersive capabilities of VR with the hands-on experience of traditional simulation, SimX and Laerdal are setting a new benchmark for medical training. This collaboration promises to equip healthcare professionals with the tools, techniques, and experiences they need to excel in their fields and save lives, ultimately leading to better patient outcomes and the continued advancement of medical simulation.





DID YOU KNOW...

Simulation? More Than You Think

«Simulation instills self-confidence when meeting with real patients». Simulation through the words of a medical student

In addition to basic theoretical education, clinical skills practices have a critical importance in medical education. At the point where theoretical knowledge and skills are combined with the clinical practice after the theoretical training, the necessary qualifications are gained through simulations without communicating with real patients. In this way, students are given clinical skills by preparing for the field without encountering the patient, with the awareness of "first do no harm and protect patients".

Simulation training, which is included in the curriculum of many university institutions in Turkey, is processed through scenarios in their simplest form. Dokuz Eylul University Faculty of Medicine, where I am studying, has adopted the PBL (Problem-Based Instruction) education system with the vision of raising good physicians who are successful in the clinical field. Discussion sessions are held in small groups of 10 students, in which everyone can express themselves easily and comfortably, and share opinions on the diagnosis, examina-

tions and planning the treatment in the scenario. Each scenario takes 2 or 3 sessions, each of which includes 3 lecture hours. There is an educational guide that allows the flow of the scenario to progress but does not directly participate in the solution of the problem, and assumes a facilitating function for the students with the questions. Thus, students can brainstorm in a healthy way and a positive

“first do no harm and protect patients”

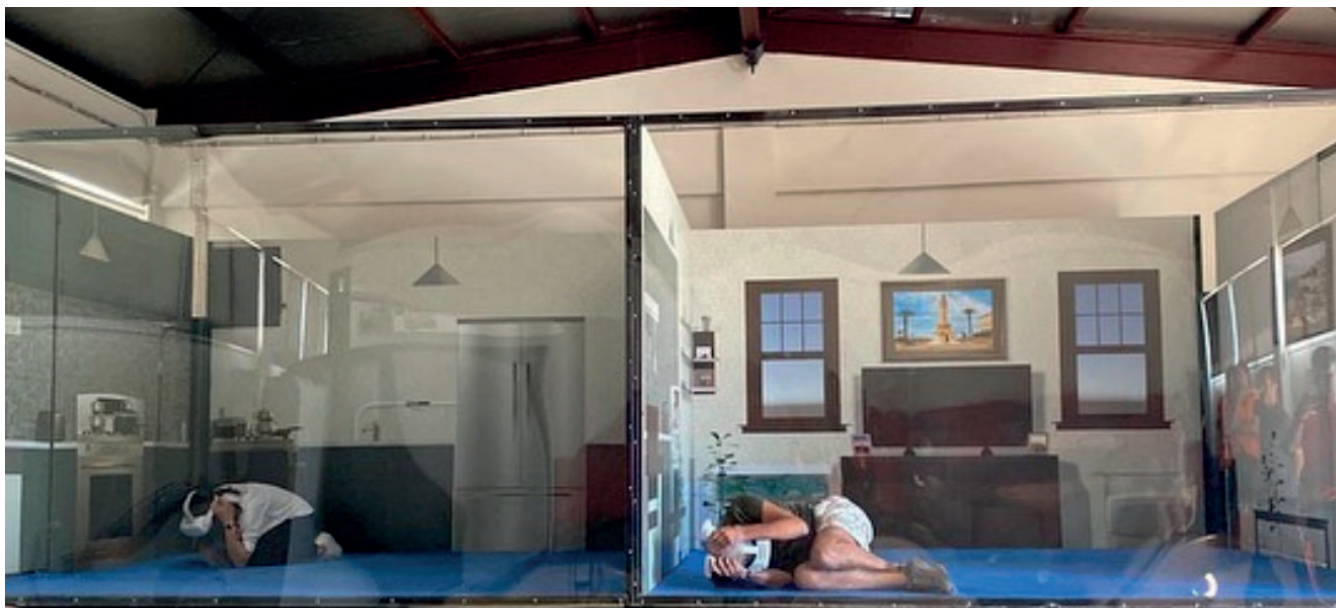
educational environment is provided. During each session, hypotheses are created and some of them are refuted as the scenario progresses and the necessary diagnostic tests are carried out. While trying to solve the problem by questioning, the students use their existing knowledge and when the knowledge limit is reached, the learning goal is determined. Until the next session, academic research on learning objectives is carried out during independent study hours and new information learned during the new session is shared with group mates. At the same time, with peer educa-

tion, students achieve new gains from each other's research. During these activities, students begin to enter academic life by learning from which source and how to reach the right information, by reading articles and by improving them. Following these discussion session scenarios, examination lessons related to diseases are played by simulated patients.

We, the students, who not only improve our practical skills with simulated patients through scenarios, but also learn to conduct research and create a positive discussion environment with peer education, see how the theoretical knowledge we learn will be reflected in practice and the clinic.

Medical skills and practices are one of the golden parts of medical education. Even if your theoretical knowledge is very good, you cannot be considered a good general practitioner if you cannot put your practical skills into practice. In our medical skills courses, which make us feel like doctors and are very enjoyable, complaints are listened to by simulated





patients, and we are asked to perform appropriate examinations for them. These patients, who simulate any disease without a technological simulation, provide an enjoyable and productive learning space for us students, and prepare us for real life.

We are doing similar simulations in the Turkish Emergency Medicine Association for All training, which I am involved in as current general secretary. We simulate various accidents and emergencies that require first aid in the "My Emergency Neighbor – First Aid" training. The information learned becomes more permanent with the simulations we create using both participant individuals and various models.

The association, which also works in the field of emergency medicine, provides earthquake and fire simulations and disaster preparedness training. With the virtual reality-based earthquake simulation developed by the Izmir Metropolitan Municipality Fire Brigade Department, the 7.0 magnitude earthquake shaking is experienced by the participants through virtual reality. In the virtual scenario, the participant, who can create a life triangle during the concussion alongside a suitable item, successfully completes the simulation.

During my voluntary intern research at DEU Department of Trans-

lational Oncology, which is the first and only one in Turkey, I took part in projects aiming to discover ligands (drugs) with high efficacy and drug feasibility with molecular dynamics simulations and various oncoinfor-

mechanical analysis, simulations and drug production stages gain incredible speed. Computer-based in-silico research gives a lot of information before moving on to laboratory research and in-vivo studies and makes the work of researchers easier. Simulations can do more than we can imagine.

“simulation training not only provides knowledge and practical experience, but also instills self-confidence when meeting with real patients.”

matic tools. In our work that progresses with reverse docking, pharmacophore modeling, forward docking, ADME-Tox analysis, molecular dynamics simulations and molecular



As both a medical student and a volunteer educator, I can say that simulation training not only provides knowledge and practical experience, but also instills self-confidence when meeting with real patients. I believe that rather than just theoretical academic knowledge, that knowledge should be translated into a practical skill. I would like to state that the best method for this will be through simulation. Hoping that science and technology will come to the best places for the benefit of humanity!





SIM VOICES

6 Pillars for any simulation leader

How to build a strong educational institution? Here are some tried and tested tips



Youness Zidoun

Simulation Center Director and a researcher. Healthcare simulation expert with almost a decade of experience in this field with a Ph.D in Mobile Learning from Hassan II university of Casablanca. Consultant with many educational institutions and leading healthcare simulation industry, Dr. Youness helped design several simulation centers in different countries. He has a strong knowledge in healthcare simulation and computer science focused on technology integration in education, game-based learning, and artificial intelligence. He is the author of several scientific presentations and papers.

✉ youness.zidoun@gmail.com

in [in/youness-zidoun](https://www.linkedin.com/in/youness-zidoun)

Creating and running high-performance simulation centers is no easy feat. You must have a clear understanding of the local culture, learning style, and educational vision of the area or region your sim center serves to achieve success. Otherwise, your efforts could fall short. Thankfully, we are here to help. Take a look at these key tips for building a strong educational institution.

1. Build a diverse strong team

Creating a successful healthcare simulation program requires a team of professionals with diverse abilities, skills, and experiences. The simulation team should include healthcare professionals, educators, and simulation technologists who can bring different perspectives to the program. In addition to their respective areas of expertise, team members' diverse backgrounds can help ensure that the simulation program is well-rounded and capable of tackling a range of issues. A team that includes members from different cultures, genders, and ethnicities will bring unique perspectives and insights to the program. They help ensure that the simulation program is culturally sensitive and inclusive, making it more effective and engaging for a diverse range of learners.

2. Collaborate with all your stakeholders

Collaboration with stakeholders is essential for the success of a healthcare simulation program. Stakeholders might be healthcare providers, educators, administrators, and learners. Collaborating with these stakeholders will help ensure that the simulation program aligns with the needs and expectations, making it more relevant and engaging for them.

Engaging stakeholders in the development and implementation of the simulation program can lead to an increase of the adoption and utilization of your program. When stakeholders are involved in the process, they are more likely to feel invested in your program's success and will be more likely to participate in the simulation activities.

3. Focus on your communication

Effective communication is a vital component of healthcare simulation. It is necessary not only for the successful execution of simulation activities but also for providing effective patient care training. As a healthcare simulation team leader, it is our responsibility to emphasize the importance of clear and healthy communication among team members. Clear communication is necessary to ensure that team members understand their roles and responsibilities, leading to a more efficient and effective simulation experience.

Offering training to help team members become more effective communicators will most certainly improve the overall quality of the simulation program. Techniques like active listening, and conflict resolution can be very helpful.

4. Stay up to date with the latest technology and research

Being on top of the simulation field requires a lot of research and lifelong learning. Both simulation technology and the healthcare sector are changing. To make a simulation program as realistic and productive as possible, it is crucial for directors to stay current with the most recent research and technology. Trends and best practices are continuously evolving; therefore, we must keep up with any new development to seek the best way to embed it in an efficient way.

5. Foster a culture of innovation

As a simulation director, it is essential to cultivate a culture of innovation and experimentation within our team. Encouraging team members to think outside the box and explore new ideas, technologies, and approaches to healthcare simulation can help keep the program fresh, engaging, and effective. Fostering an innovative culture can inspire the team to take risks and try new things, which can lead to exciting breakthroughs in simulation training. Additionally, it can help them stay engaged and motivated in their work by providing opportunities for creative problem-solving and experimentation. Team members should feel comfortable sharing their thoughts and suggestions. Resources and support should also be provided for team members to pursue innovative projects, such as training on new technologies or funding.

6. Continuously evaluate and improve

Evaluating the effectiveness of our simulation program is crucial to its success. The evaluation process should be an ongoing effort that is designed to identify areas of strength and weakness and find ways to continuously improve them.

As simulation directors, we should set clear goals and objectives for the program and regularly assess whether these goals are being met. Identifying areas for improvement will help us allocate resources more effectively and prioritize changes that will have the greatest impact. It can help demonstrate the program's value to stakeholders as well.



SIMZINE



SIM NURSE



Utilizing the Healthcare Simulation Standards of Best Practice™: The Beginning.

An overview of the Healthcare Simulation Standards of Best Practice™ of the International Nursing Association for Clinical Simulation and Learning (INACSL)



The Healthcare Simulation Standards of Best Practice™ (HSSOBP™, the "Standards") advance the science of simulation, share best practices, and provide evidence-based guide-

international simulation experts and healthcare organizations, provides evaluation and makes recommendations for enhancing the Standards.

The ten Healthcare Simulation Standards of Best Practice™ are the cornerstone for great, evidence-based simulation implementation. **Topics include writing outcomes and objectives, prebriefing, facilitation, debriefing, simulation design, operations, professional development, professional integrity, simulation-enhanced interprofessional education, and evaluating learning and performance.** The Standards establish the level of quality and, more specifically, nuances of an interdisciplinary community of practice where simulation improves patient outcomes and

according to participants' previous experience. Strategies used across prebriefing, scenario implementation and debriefing are noted within the Facilitation Standard.

The Prebriefing Standard helps facilitators consider preparation materials and briefing before a scenario starts, balancing participants' cognitive load and increasing the effectiveness of their learning, debriefing, and reflection. Prebriefing can create a shared mental model before simulation and help participants anticipate obstacles and identify goals and safety concerns so participants can achieve learning outcomes successfully.

“the Standards are a living document applicable to simulation in academic and practice settings and across manikin, Standardized Patient actor, and distance modalities

lines to make simulation-based learning experiences consistent around the globe. Informed by interprofessional and international perspectives, **the Standards are a living document applicable to simulation in academic and practice settings and across manikin, Standardized Patient actor, and distance modalities.** The Standards have been translated into French, Korean, Japanese, Spanish, Chinese, and Polish, to name a few (<https://www.inacsl.org/healthcare-simulation-standards-of-best-practice--in-multiple-languages>). The HSSOBP™ underpins simulation professional development and endorsement programs offered worldwide by the International Nursing Association for Clinical Simulation and Learning (INACSL). The Standards are updated cyclically in consultation with healthcare librarians and in response to a needs assessment, environmental scan, and comprehensive literature review. An advisory panel, representing diverse,

transforms lives.

The Professional Integrity Standard is a logical place to start and aligns with the Healthcare Simulationist Code of Ethics (SSH, 2018). The Professional Integrity Standard helps simulation facilitators reflect on, build consensus about, and operationalize core values including transparency, mutual respect, professionalism, accountability, and quality improvement in order to create and maintain a safe simulation learning environment. The Professional Integrity Standard emphasizes the responsibility of the facilitator to lead a positive simulation culture by example.

The Facilitation Standard outlines a step-wise approach to guiding a scenario, starting with identifying the competencies required of facilitators. Facilitator skills include leveling cues provided and simulation lifesavers



REFERENCES:

INACSL Standards Committee. (2021). *Healthcare Simulation Standards of Best Practice™. Clinical Simulation in Nursing*. <https://doi.org/10.1016/j.cens.2021.08.018>.

Society for Simulation in Healthcare (SSH) (2018). *Healthcare Simulationist Code of Ethics*. <https://www.ssih.org/SSH-Resources/Code-of-Ethics>





¿Qué hace una actriz en un contexto de salud?

Tamara nos cuenta qué significa ser una actriz en simulación clínica



Tamara Andrea Bustamante Gómez

Actriz en salud y educación. Durante diez años, ha sido Clown de hospital en Santiago, visitando servicios pediátricos a diario. Además, es actriz en simulación clínica, contribuyendo en la formación y desarrollo de las habilidades comunicativas y manejo psicoemocional de estudiantes de pregrado en salud. Actualmente, coordina actores en la Universidad de Santiago de Chile. Desde el año 2022, es socia fundadora de SOCHIIHS, sociedad que busca un modelo sociosanitario centrado en la dignidad de las personas en todas sus dimensiones.

✉ tamarabustamantegomez@gmail.com

in/tamara-andrea-bustamante

Como actriz, he cambiado el escenario y el público al cual me dirijo. Hoy mi cuerpo y mi voz son instrumentos que están a disposición de la simulación clínica para el aprendizaje de los estudiantes.

En mi experiencia en pedagogía teatral, clown de hospital y actriz en simulación clínica he podido observar la relevancia de desarrollar y potenciar las habilidades psicoemocionales en los profesionales de la salud. Comenzando desde el pregrado, para de esta manera integrar conociemien-

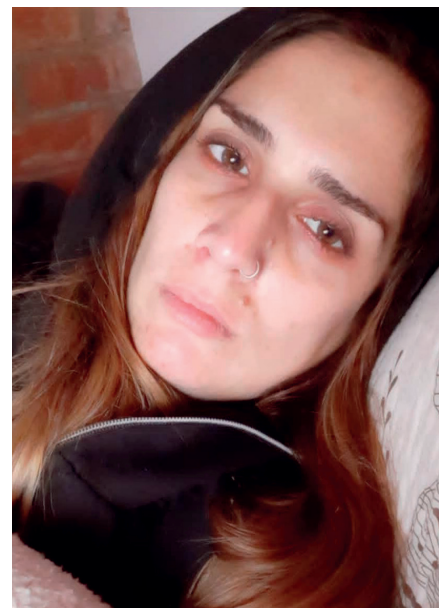
“Hoy mi cuerpo y mi voz son instrumentos que están a disposición de la simulación clínica para el aprendizaje de los estudiantes.”

tos teóricos como también habilidades blandas como el trabajo en equipo, comunicación efectiva y afectiva, escucha activa, empatía, buen uso de la voz, manejo de las emociones, corporalidad, entre otras fundamentales herramientas que gene-

ran una gran diferencia en la atención al usuario. De esta manera en conjunto a las ciencias la pedagogía y el arte se contribuye a un cambio y mejora en el actual mo-

delo de salud en donde lo biomédico pase a uno biopsicosocial, con la finalidad de proporcionar una atención centrada en la persona, más cercana y humanizada.

En la práctica, la pedagogía teatral es una metodología activa en el aula que relaciona el arte del teatro con la educación. A través de esta busca en el teatro y en el juego dramático un nuevo recurso de aprendizaje, que desarrolle la capacidad expresiva y afectiva, que también sea una instancia de desarrollo personal y creativo.





Como actriz, me acerqué a la simulación clínica allá por 2017 para diferentes carreras sanitarias. Hoy soy Coordinadora de actores en la Universidad de Santiago de Chile. Mi cargo consiste en la búsqueda del perfil de actor/actriz que mejor se ajuste al requerimiento del caso según rango etario, contextura (altura, peso), manejo de idiomas (si es necesario), dominio en complejidad de simulación. Como también, y un punto muy importante, el actor o actriz en cuestión sea capaz y tenga los conocimientos y herramientas apropiadas para entregar y compartir un buen debriefing hacia los estudiantes.

Para desarrollar de manera eficiente, real y profesional cada caso y personaje en cuestión es fundamental estudiar muy bien el texto con toda la descripción del caso, estructura del personaje, motivo de consulta, sintomatología, estudiar y entender conceptos clínicos para por ejemplo ver si el personaje requerirá moulage o alguna caracterización específica.

El trabajo de actor en simulación es en conjunto a otros actores por lo que el poder de la creatividad e improvisación es un gran aliado cuando por ejemplo no hay acceso a los recursos materiales para hacer una simulación lo más real posible



(por ejemplo apósito, férula, cuello ortopédico, etc.) o cuando un actor o actriz de último momento no puede presentarse a la mañana siguiente a la simulación. Esa es una problemática que hay que resolver rápidamente, en equipo, buscar reemplazo o acomodar horarios, pero la simulación debe hacerse sí o sí. Pues sin ella, no hay clase o hasta podría no haber evaluación durante un examen como el ECOE. La buena noticia es que todo tiene solución (o casi todo).

Si bien no existe la carrera profesional de "Actor en Salud" o "Actor en Simulación Clínica" podría decir que es una especialidad que uno va adquiriendo y desarrollando mediante los años de experiencia práctica, talleres y cursos de certificación como Actor en simulación clínica que se pueden cursar por ejemplo en [@paciente-simuladoscl](#).



DID YOU KNOW...

Connecting Narrative Medicine and Patient Simulation

Narrative medicine and patient simulation employ distinct methodologies but they can complement each other in medical education and practice. A few reflections

I tend to gravitate toward fields that require explanations and elevator pitches to outsiders. "What do you mean by patient simulation?", "You facilitate narrative medicine workshops? What is that?"

More recently, I have been asked to explain the connection between these two distinct but interconnected learning approaches that aim to enhance healthcare professionals' skills, empathy, and understanding of patient experiences.

My elevator pitch: "Narrative medicine is an approach that emphasizes the importance of personal narratives in medicine. And patient simulation provides the practice for mindfully listening and responding to patient narratives."

Rita Charon, a physician and literary scholar, started the discipline of narrative medicine. She says that ef-

fective practice of medicine requires "narrative competence," that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others.

Narrative medicine recognizes the distinction between the biomedical disease process and how patients talk about their illness experiences. It aims to close that gap. The business model of medicine, however, with its emphasis on objective data gathering and short visits, often precludes listening to a patient's story of sickness. There is often no time for genuine

in full detail. Moreover, they are likely to be surprised that you even asked.

A central method of narrative medicine is the "close reading" of written, graphic, and musical texts. We read not so much to derive the meaning the writer or artist intended but to wring out every nuance of form and content for ourselves. We collaborate in the co-construction of meaning. We listen to the thoughts of others and build upon them.

The question often arises: Why use

“ if clinicians speak in prose, patients speak in poetry.

empathic inquiry. If you ask a patient, "Tell me what's most important for me to know about you" they may tell you

art to learn how to talk to and listen to patients? One answer is that if clinicians speak in prose, patients speak





Listening to Every Word

in poetry. Poems are often used in narrative medicine workshops because they are challenging to figure out. They are as daunting as a patient's narrative, which can both tell and obscure a truth through symbolism and metaphor. Learning to close read a text is like learning to read a patient.

While narrative medicine and patient simulation employ distinct methodologies, they can complement each other in medical education and practice:

Empathy and communication:

Combining the two approaches can help healthcare professionals better understand patients' perspectives. The practice of "narrative competence", followed by applying that narrative understanding in simulated scenarios, enhances their communication skills and empathy.

Holistic care:

Narrative medicine reminds healthcare providers of the holistic nature of patient care. This mindset

can be incorporated into simulation scenarios, encouraging providers to consider not just the medical aspect but also the emotional and psychological aspects of patient care.

Interprofessional collaboration:

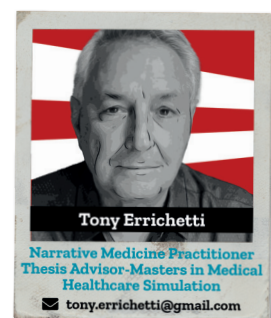
Simulation training prepares interprofessional teams to work together to solve problems and deal with complex issues. Likewise, in narrative medicine, close reading and perspective-taking in a group can prepare us to think creatively and act as a team.

Realistic scenarios: Simulated scenarios can be designed based on patients' real-life narratives, making the scenarios more authentic and relevant. This approach allows providers to practice responding to the diverse situations they might encounter.

Diversity, equity, and inclusion:

Using diverse global texts can help us better appreciate the diversity of patients' gender, culture, religious beliefs, and socioeconomic status, dimensions built into authentic patient simulation scenarios.

In essence, while narrative medicine focuses on understanding patients' stories to foster empathy and communication skills, patient simulation allows for applying those skills in realistic clinical settings. When used together, these approaches can contribute to developing well-rounded and compassionate healthcare professionals.





DID YOU KNOW...

Emergency Team Competencies Tool, per il debriefer dell'emergenza

Emergency Team Competencies Tool è uno strumento per il debriefer di scenari d'emergenza che unisce nella stessa tassonomia Technical e Non-Technical skills

L'ultimo scenario, prima della pausa caffè, è ambientato in area critica: sono presenti inizialmente un medico e un infermiere di PS.

Istruttore: Pronti? Inizio scenario!

E' appena arrivato in sala, portato dall'ambulanza del 118, un paziente con astenia generalizzata e dolore addominale diffuso. All'ingresso in triage, i parametri vitali non sono male, a parte una lieve bradicardia. Il medico (**MED A**) chiede al collega Infermiere (**INF**) di preparare per un ECG a 12 derivazioni, un accesso venoso e gli esami del sangue. Nel frattempo intervista il paziente per comprendere che cosa sia successo. I fattori di rischio non mancano: il Sig. Marcello fuma 2 pacchetti di sigarette al giorno e la sua dieta non è il massimo. Dopo aver osservato in silenzio il tracciato ECG,

l'**INF** si allarma nel vedere, insieme al **MED A**, un BAV di 2° grado Mobitz II. Ma non è tutto: il tratto ST è sopraelevato in alcune derivazioni. **INF** e **MED A** si dividono i compiti: "impacchettare" il paziente, contattare l'emodinamica e decidere il percorso. L'**INF** prepara il monitor ed estrae dei materiali, tra i quali i farmaci e le piastre del defibrillatore. Dopo aver somministrato la terapia indicata dal cardiologo dell'emodinamica, l'**INF** inizia a posizionare tutti i presidi per il monitoraggio dei parametri vitali.

Il **MED A** lo guarda e dice: cosa fai?

INF: preparo le piastre, saturimetro e sfigmomanometro, così lo "impacchettiamo" prima di portarlo su...

MED A: metti un saturimetro, il resto non serve, tanto tra 5' è in sala.

INF: ma dal tracciato vedo che c'è un BAV di 2° grado su STEMI.

MED A: non serve, dai, facciamolo portare su in fretta.

INF: Ok, allora dimmi tu cosa vuoi che faccia adesso.

Nel frattempo, entra il **MED B** che, vedendo la scena, commenta:





MED B qui avete finito? Avete messo le piastre?

Le piastre vengono quindi applicate e il paziente viene rilasciato per essere trasportato in sala.

Istruttore: OK grazie, fine scenario!

Inizia il debriefing.
Sono presenti: l'istruttore/Debriefing, il **MED A**, il **MED B** e l'**INF**.

Debriefing: bene ragazzi, com'è andata?

MED A: Bene, no? Beh, direi che abbiamo fatto tutto.

Debriefing (rivolto all'**INF**): e tu?

INF: Mentre MED A parlava con il cardiologo volevo mettere le piastre... sapevo che andasse fatto, così mi stavo preparando a farlo...

MED A ...appunto, siccome stava per andare su non era il caso di aspettare... comunque per me va bene come abbiamo fatto... alla fine abbiamo risolto, siamo stati un team, vero?

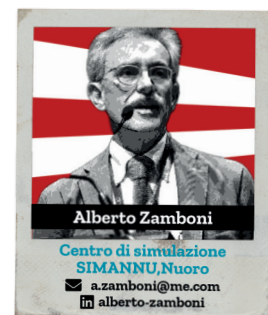
Debriefing: Certo, avete in poco tempo dato una risposta alle esigenze cliniche, e questo sulla lavagna lo scriviamo nei PLUS, però in questi casi - guardando l'**INF** - avreste potuto usare una migliore assertività... E da parte tua - guardando il **MED A** - invece era preferibile avere un decision making più esplicito e strutturato... queste due annotazioni le mettiamo nei DELTA... l'importante comunque è che le cose vengano fatte prima o poi. Se non abbiamo altro da dirci, ci prendiamo un caffè?

È il momento della pausa caffè, ma sarà un caffè un po' amaro per tutti. Il **MED A**, davanti alla macchinetta si chiede cosa sia in pratica un "decision making esplicito e strutturato". Anche l'**INF**, pensoso, si chiede come fare ad avere un "migliore assertività". E per parte sua, l'Istruttore/Debriefing si chiede quanto sia stato efficace nel far passare i messaggi durante il suo debriefing.

In sintesi: **tutto** è andato bene ma **nessuno** è soddisfatto!

Si poteva fare qualcosa di diverso? Certamente si poteva fare qualcosa di diverso, la domanda è: **Come?** In letteratura sono presenti diverse metodologie di conduzione del debriefing. Si parla spesso delle fasi del debriefing, di mettere a proprio agio il discente, di discutere delle azioni fatte e non fatte. Tuttavia, esiste un modo per strutturare questa fase fi-

nale della simulazione così importante e tanto sensibile? Uno strumento utile al debriefing potrebbe essere lo schema descritto nell' "Emergency Team Competencies Tool" (ETCt) (<https://janesthanalgcritcare.biomedcentral.com/articles/10.1186/s44158-023-00109-3>), costruito per gli operatori dei setting di emergenza. Studiata per delineare in modo sintetico e user-friendly le competenze tecniche e non tecniche fondamentali, esso è facilmente utilizzabile anche all'interno della pratica clinica quotidiana. In particolare, l'"ETC tool" rappresenta un passo in avanti nella formazione continua del personale, poiché unisce nella stessa tassonomia Technical Skills e Non-Technical skills, superando un dualismo ormai obsoleto per virare verso un più coerente concetto di "Competenze professionali". L'obiettivo ultimo della simulazione infatti è traslare le conoscenze e le abilità apprese in formazione in solide competenze che il professionista può esercitare nell'attività clinica quotidiana. Lo strumento ETC consente di supportare la crescita professionale degli operatori dei team di emergenza-urgenza, dando le "parole giuste" da usare al "momento giusto" per incentivare l'autoanalisi, facilitare il debriefing e favorire il confronto fra pari su basi oggettive a valle dei comportamenti osservati.





SIM SPACE

SIMU, where mistakes are welcomed

SIMU is a hub for simulation-based medical education. With its 8000m² it is one of the largest simulation centres in Europe, concentrating simulation education across almost all medical disciplines into one cool-looking and newly-designed building. State-of-the-art simulation technologies and innovative teaching approaches ensure each student receives a personalised training

The Simulation Centre of the Faculty of Medicine at Masaryk University in Brno, the Czech Republic, stands as one of the most advanced simulation facilities in Europe, concentrating simulation education across the medical disciplines into one place. This impressive 5-storey building offers a wide range of learning opportunities for both pre and postgraduate participants, making it a hub for medical education. Recently, the centre celebrated its 1000th day since opening, yet it feels like we have only just begun.



The building

Let us delve into the remarkable features of this new building, which was built with financial support of the European Union and the Ministry of Education, Youth and Sport of the Czech Republic, and which has been supervised by prof. Stourac from the initial concept until today. On the ground floor, an emergency room, complete with an outdoor simulation area and a fully equipped ambulance car. The second floor is fully dedicated to dentistry, providing 10 rooms for practical training. Moving up the floors, you will find 2 operation theatres,

2 intensive care units, 2 inpatient care rooms, and 8 specialised rooms for teaching via virtual 3D simulations. Additionally, there are teaching and seminar rooms designed for collaborative learning methods. A heliport situated on the rooftop allows for the training of patient transport. Altogether SIMU provides 55 rooms for simulation-oriented teaching for a total of 8000m².

Teaching methods

In light of the advanced facilities, it became apparent long before the building's completion, which was primarily for the needs of undergraduate teaching, that changes to the curriculum were necessary. We are thrilled that every general medicine, dentistry, emergency services, nursing, or midwifery student at Masaryk University will have the opportunity to experience the benefits of SIMU during

their studies.

The range of courses spans from the use of virtual and standardised patients, low-fidelity First Aid and propaedeutics sessions and European Resuscitation Council courses to Team-Based Learning courses and complex high-fidelity scenarios. The general medicine program alone accommodates over 4000 students in a 6 year study programme. To ensure each student receives a personalised approach, the academics initiated a unique project: "Student as a Teacher." This remarkable initiative encompasses a three-step educa-



tion process where student teachers are taught to lead low-fidelity-based training sessions under the supervision of content experts and academic staff. This program spans over a year and demands deep dedication from both the academics and the student's teachers, fostering a supportive and progressive learning environment.

The staff

Every simulation centre needs a functional, dedicated and well-established team to be viable. In our case, it consists of academics, teaching technicians, AV/IT technicians and administrative staff. The commitment



of every single person to maintain high standards is evident, and it plays a crucial role in the centre's seamless operation.

To ensure uniformity and efficiency in teaching, all academic teachers involved in post-graduate courses undergo an in-house debriefing course and course about adult learning theories. This ensures that the entire team speaks the same simulation language, facilitating effective communication and enhancing the overall learning experience for the participants.

The technicians are the heart and soul of the centre, working to address any technical issues that may arise. Their extensive knowledge of the equipment and proficiency in co-lecturing are valuable assets. Many of these technicians possess a medical background in nursing or midwifery, which proves advantageous, especially in handling complex high-fidelity simulations.

A key component to maintain a simulation centre of such a size is a dedicated AV and IT team which ensures that the technology works in favour of teaching, not against. Also, that enables SIMU to be part of technical innovations, creating models and exercise equipment using 3D printing and silicone moulding, developing and evaluating software solutions, creating visual learning materials, and many others.

Beyond the simulations

SIMU goes beyond education; it also offers a unique doctorate program: "Healthcare Simulation". At present, the program hosts 10 students, including one international.



The first PhD students are about to graduate within the upcoming year, marking a significant milestone for the program.

And as the simulation community continues to grow and the field continues to evolve, we felt the need to share and discuss common topics with academic colleagues not only across our country every year and that is how SIMPO - simulation symposium, was born and is held at SIMU for the second time in 2023. Receiving a full SESAM accreditation this



year reflects the everyday work of the entire SIMU team. The accreditation process was thorough, yet definitely worth undertaking. The questions we answered during the application helped us to reflect on our teaching methods, standardise feedback evaluation and establish new friendships within the medical education community.

In conclusion, we invite you to dive into the experience of a medical student at Masaryk University, as SIMU is a place to choose.

Martina Kosinova

Department of Simulation Medicine, Faculty of Medicine, Masaryk University, Brno, Czech Republic
✉ kosinova@med.muni.cz

Tamara Skrisovska

Department of Simulation Medicine, Faculty of Medicine, Masaryk University, Brno, Czech Republic
✉ skrisovska@med.muni.cz

Petr Stourac

Department of Simulation Medicine, Faculty of Medicine, Masaryk University, Brno, Czech Republic
✉ stourac@med.muni.cz

Jiri Travenec

Simulation Centre, Faculty of Medicine, Masaryk University, Brno, Czech Republic
✉ travenec@med.muni.cz

SIMU in numbers

MORE THAN

1000

SIMULATORS

8000

SQUARE METRES

139

DIFFERENT
UNDERGRADUATE
SUBJECTS

30

UNIQUE
POSTGRADUATE
COURSES



AREC e DANTE – Le sale di simulazione a SIMNOVA

Il nostro Tecnico di simulazione Antonio Scalogna ci racconta le scelte che ha fatto per l'allestimento delle sale di simulazione del Centro di Simulazione SIMNOVA

I sistemi audio - video consentono di registrare le simulazioni per scopi didattici e di revisione successiva. Questo permette agli operatori sanitari di analizzare le proprie performance, identificare aree di miglioramento e migliorare le competenze cliniche. In generale, l'integrazione di sistemi audio e video nelle simulazioni mediche crea un ambiente di apprendimento immersivo, migliorando l'efficacia della formazione e preparando gli operatori sanitari a gestire situazioni complesse e critiche nella pratica reale. Esistono tantissime aziende specializzate nella registrazione e streaming di scenari di simulazioni, aggiungendo tante funzioni in più oltre ai due scopi principali.

Dovendomi occupare dell'allestimento delle sale di simulazione del Centro di Simulazione SIMNOVA ho preso una scelta abbastanza drastica, ovvero non affidarmi a quelle aziende, per due motivi: tecnici ed economici.

Il primo è per non essere relegato ad una scelta dei prodotti come videocamere, mixer e quant'altro, e anche per non affidarmi totalmente al software; il secondo è per avere un sistema essenziale senza la necessità di abbonamenti o licenze per dispositivo. In particolare, sotto consiglio della ditta Prase, mi sono affidato ad AREC e DANTE, il primo è un marchio che produce telecamere, encoder e decoder; il secondo è un protocollo, acronimo di Digital Audio Network Through Ethernet, il che è abbastanza esplicativo, ovvero trasmissione audio attraverso la rete.

AREC

Come da titolo, in questo articolo scriverò riguardo streaming e registrazione delle sale, e in questo campo mi sono affidato ad AREC, marca consigliata dall'azienda Prase, su cui sta investendo tanto.

Mi sono informato molto riguardo questa ditta e devo dire che mi è piaciuta molto, perché il tutto si può riassumere facilmente in due dispositivi: encoder e decoder.

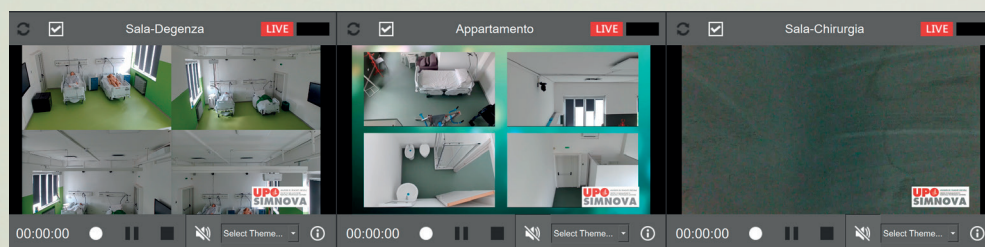
Ciò che differenzia i dispositivi l'uno dall'altro sono:

- quantità di ingressi
- modalità di interazione
- tipologia di ingressi
- tipologia di output

Funzionalità

Tutte le mediastation sono dotate di 3 sezioni:

- **Administrator:** permette di personalizzare e gestire ogni aspetto della mediastation, dall'inserimento dei vari ingressi video, alla gestione dell'output, temi e configurazione del sistema.
- **Online Director:** attraverso questa sezione è possibile personalizzare l'output del video mixato, ovvero quello con tutti gli ingressi necessari, il layout e il tema scelto.
- **Video Manager:** all'interno di essa possiamo rivedere il video registrato, compresa ogni sorgente registrata separatamente, per comodità è possibile attivare un backup dei video direttamente su Google Drive.



SIMBOARD



HTIC 2024

22-24 February 2024
Fez (Morocco)

www.morocosim.org



INACSL Congress

12-15 June 2024
Raleigh NC (USA)

www.inacsl.org



SESAM Congress

19-21 June 2024
Prague (Czech Republic)

www.sesam-web.org



SOCHISIM Congress

7-8 November 2024
Puerto Montt, Universidad
San Sebastian Patagonia
(Chile)

www.sochisim.org

SIMZINE



Send your
contribution to

redazione@simzine.it



simzine.news