# Congresso Nazionale IRC

# 2019

## 11 · 12 OTTOBRE

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IRC | Italian Resuscitation Council

Congresso Nazionale IRC
2019
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# LA SIMULAZIONE NEONATALE E PEDIATRICA: ATTUALITA' E PROSPETTIVE

*Marco Binotti, MD, PhD*

*Terapia Intensiva Neonatale e Pediatrica*

*Centro di Simulazione SIMNOVA*

*Novara- Università del Piemonte Orientale*

UPO

IRC Italian Resuscitation Council

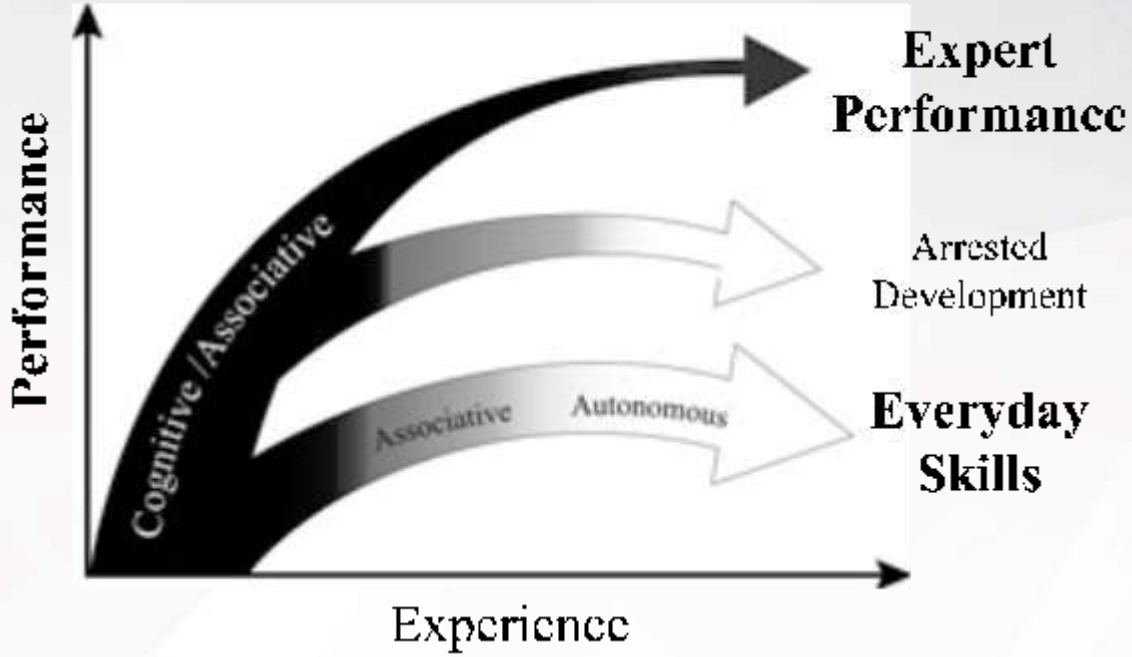
# La simulazione è una tecnica non è una tecnologia

(Gaba, 2004)

# Deliberate Practice and Acquisition of Expert Performance: A General Overview

K. Anders Ericsson, PhD

Traditionally, professional expertise has been judged by length of experience, reputation, and perceived mastery of knowledge and skill. Unfortunately, recent research demonstrates only a weak relationship between these indicators of expertise and actual, observed performance. In fact, **observed performance does not necessarily correlate with greater professional experience**. Expert performance can, however, be traced to active engagement in deliberate practice (DP)




ACADEMIC EMERGENCY MEDICINE 2008; 15:988–994 

# Technology-Enhanced Simulation and Pediatric Education: A Meta-analysis

Adam Cheng et al

With changes in both training and practice environments, simulation has emerged as an integral tool in health professions education.

Simulation permits mastery learning through deliberate practice of high-risk and/or low-frequency events or procedures **without compromising patient safety.**

*Pediatrics* 2014;133:e1313–e1323

# Policy Statement—Principles of Pediatric Patient Safety: Reducing Harm Due to Medical Care

**Adverse drug events occurred 3 times more frequently among pediatric patients than among adults** and serious errors occurred more often in critical care setting.

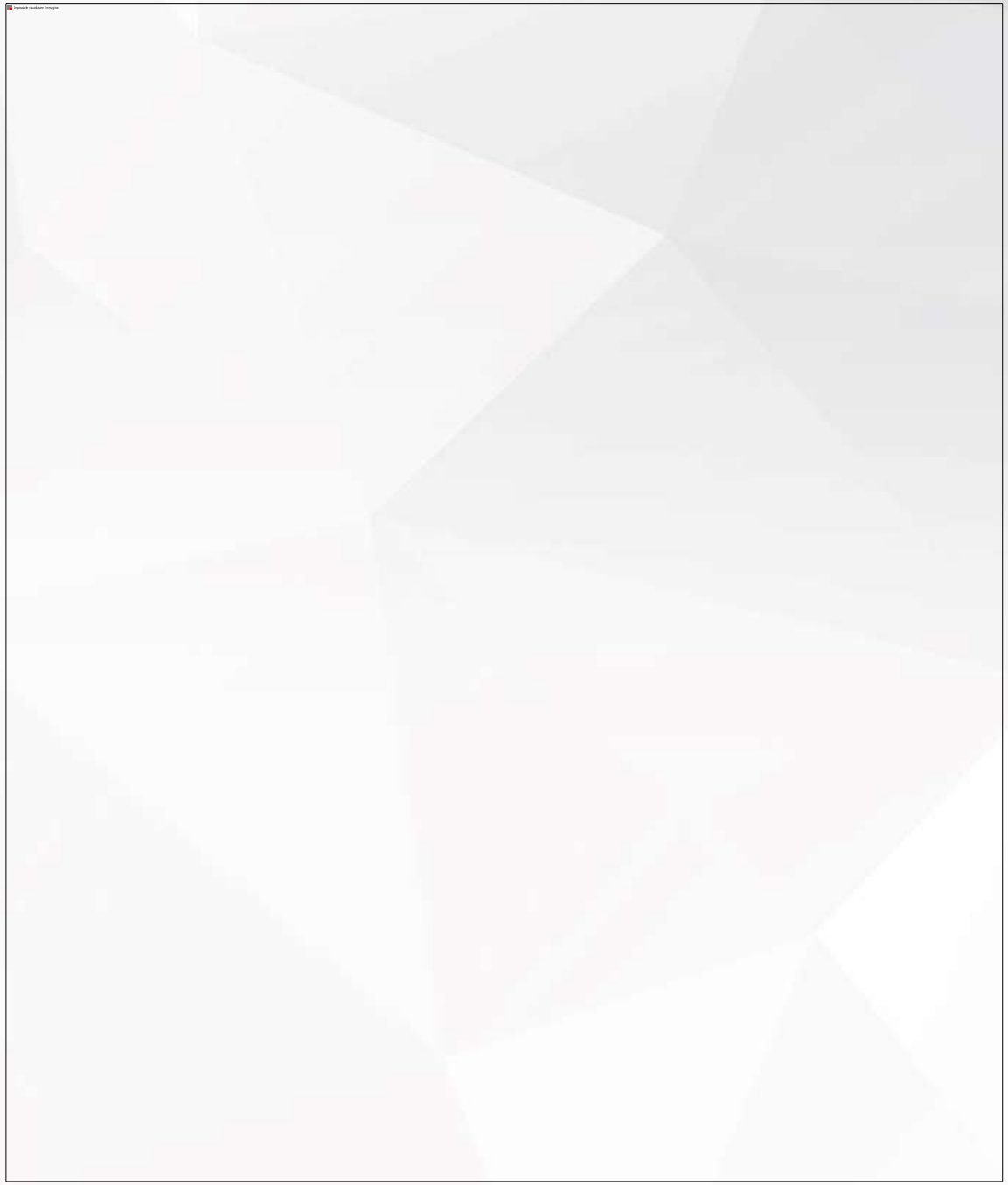
In a Canadian pediatric ED, 100 prescribing errors and 39 medication-administration errors occurred per 1000 patients.

PEDIATRICS Volume 127, Number 6, June 2011


*November 1999*

*"Health care in the United States is not as safe as it should be--and can be.* ***At least 44,000 people, and perhaps as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented****, according to estimates from two major studies. "*

***" use of simulation for training novice practitioners, problem solving, and crisis management, especially when new and potentially hazardous procedures and equipment are introduced."***



# Airliner Accidents Per 1 Million Flights 1977-2017

Statistics are based on all worldwide commercial (passenger) fatal accidents involving civil aircraft with a minimum capacity of 14 passengers, from the ASN Safety Database
https://aviation-safety.net/

ORIGINAL RESEARCH

# Pediatric Emergency Medicine Residency Experience: Requirements Versus Reality

Matthew R. Mittiga, MD
Hamilton P. Schwartz, MD
Srikant B. Iyer, MD, MPH
Javier A. Gonzalez del Rey, MD, MEd

TABLE 3 **Percentage of Residents Evaluating at Least 5 Patients in Each Accreditation Council for Graduate Medical Education Disorder Category**

| Disorder Category | Percentage of Residents Evaluating at Least 5 Patients in Category |
|---|---|
| Cardiopulmonary arrest | 0 |
| Shock | 0 |
| Bowel obstruction | 9 |
| Coma/altered mental status | 9 |
| Sepsis | 9 |
| Diabetic ketoacidosis | 11 |
| Burns | 17 |
| Poisoning/ingestion | 69 |
| Appendicitis | 74 |
| Respiratory failure | 80 |
| Foreign body inhalation/ingestion | 89 |
| Major trauma | 89 |
| Childhood exanthems | 91 |
| Physical/sexual abuse | 94 |
| Abscess drainage | 97 |
| Pyelonephritis | 97 |
| Asthma | 100 |
| Chronic disease—acute problems | 100 |
| Dehydration | 100 |
| Fever | 100 |
| Head trauma | 100 |
| Minor trauma | 100 |
| Psychiatric/behavioral | 100 |
| Respiratory infection | 100 |
| Seizures | 100 |
| Skin disorders | 100 |

Journal of Graduate Medical Education, December 2010

L'esperienza clinica diretta sul paziente spesso non è sufficiente a garantire un livello adeguato di formazione in emergenza pediatrica

**Nel settore della Pediatria di Urgenza:**

Lo specializzando deve:

- Seguire con crescente autonomia e responsabilità diretta n° 150 bambini ricoverati per problemi acuti di Pediatria Generale Specialistica.
- Seguire con crescente autonomia e responsabilità diretta n° 30 bambini ricoverati in reparti di Terapia Intensiva Pediatrica.
- Eseguire con responsabilità diretta e progressiva autonomia:
  - almeno 500 visite di Pronto Soccorso Pediatrico, di cui almeno
  - 100 per problemi traumatologici.
- Partecipare alla gestione di almeno 10 bambini con compromissione critica dei parametri vitali.
- Acquisire abilità nello svolgimento delle seguenti procedure:
  - Incannulazione venosa periferica
  - applicazione di accesso intraosseo
  - somministrazione di ossigeno
  - rianimazione cardiorespiratoria di base
  - ventilazione in maschera
  - cardioversione/defibrillazione
  - manovra di Heimlich
  - aspirazione delle vie aeree
  - applicazione di collare cervicale
  - immobilizzazione di fratture
  - riduzione di lussazione del capitello radiale
  - rimozione di corpo estraneo dall'orecchio e dal naso
  - irrigazione dell'occhio
  - sutura e medicazione di ferite superficiali

**ALLEGATO**

**ORDINAMENTI DIDATTICI**
**SCUOLE DI SPECIALIZZAZIONE**
**DI**
**AREA SANITARIA**

# Simulation-based medical training for paediatric residents in Italy: a nationwide survey

| | Numero | Frequenza media approssimata per studente |
|---|---|---|
| Ventilazione con ambu | 139 | 1 ogni 2 anni |
| Intubazione endotracheale | 32 | 1 ogni 9 anni |
| Cardioversione/defibrillazione | 0 | 0 |
| Massaggio cardiaco | 22 | 1 ogni 12 anni |
| Accesso venoso centrale | 71 | 1 ogni 4 anni |
| Accesso intraosseo | 0 | 0 |
| Puntura lonbare | 167 | 1 ogni 18 mesi |

Numero di procedure eseguite nella pratica clinica
in 12 mesi da un campione di 274 specializzandi italiani in pediatria

Binotti *et al. BMC Medical Education* (2019) 19:161
https://doi.org/10.1186/s12909-019-1581-3

**“L'ora miracolosa che almeno una volta tocca a ciascuno. Per questa eventualità vaga, che pareva farsi sempre più incerta col tempo, uomini fatti consumavano lassù la migliore parte della vita.”**

*Dino Buzzati, Il deserto dei Tartari*

# Simulation-based medical training for paediatric residents in Italy: a nationwide survey

**Table 1** Technical skills' teaching methods reported by the 274 respondents to the survey

| | SBMT | Bedside | Other methods | Not taught or not evaluated |
|---|---|---|---|---|
| Mask ventilation % (*n*) | 29% (79) | 33% (90) | 11% (31) | 27% (75) |
| Endotracheal intubation % (*n*) | 33% (90) | 19% (52) | 6% (17) | 42% (115) |
| Difficult airway management % (*n*) | 21% (58) | 7% (20) | 5% (13) | 67% (183) |
| Chest compressions % (*n*) | 45% (124) | 17% (47) | 6% (16) | 32% (87) |
| Cardioversion/defibrillation % (*n*) | 36% (99) | 3% (8) | 3% (8) | 58% (159) |
| Central venous access % (*n*) | 7% (18) | 24% (67) | 4% (10) | 65% (179) |
| Umbilical venous access % (*n*) | 9% (25) | 54% (148) | 7% (19) | 30% (82) |
| Intraosseous access % (*n*) | 30% (82) | 7% (19) | 3% (8) | 60% (165) |
| Lumbar puncture % (*n*) | 7% (19) | 39% (107) | 16% (43) | 38% (105) |
| Chest tube placement % (*n*) | 8% (23) | 12% (32) | 4% (11) | 76% (208) |

Binotti *et al. BMC Medical Education* (2019) 19:161
https://doi.org/10.1186/s12909-019-1581-3

Simulation-Based Medical Education in Pediatrics

*Joseph O. Lopreiato, MD, MPH; Taylor Sawyer, DO, MEd*

**All of these factors have conspired to create an ideal environment for the growth of simulation in pediatrics today:**

- the increasing focus in medicine on patient safety and the ability that SBME provides for trainees to make mistakes and learn from them without the fear of harming patients.
- the continued need for skill acquisition and practice in the face of limitations in clinical exposures as a result of duty-hour restrictions.
- the desire for training program directors to acquire measureable learning outcomes on their trainee's performance and the need to provide just- in-time training.

# Simulation in Pediatric Emergency Medicine Fellowships

Cara B. Doughty, MD, MEd[a], David O. Kessler, MD, MSc[b], Noel S. Zuckerbraun, MD[c], Kimberly P. Stone, MD[d], Jennifer R. Reid, MD[d], Christopher S. Kennedy, MD[e], Michele M. Nypaver, MD[f], Marc A. Auerbach, MD, MSc[g]

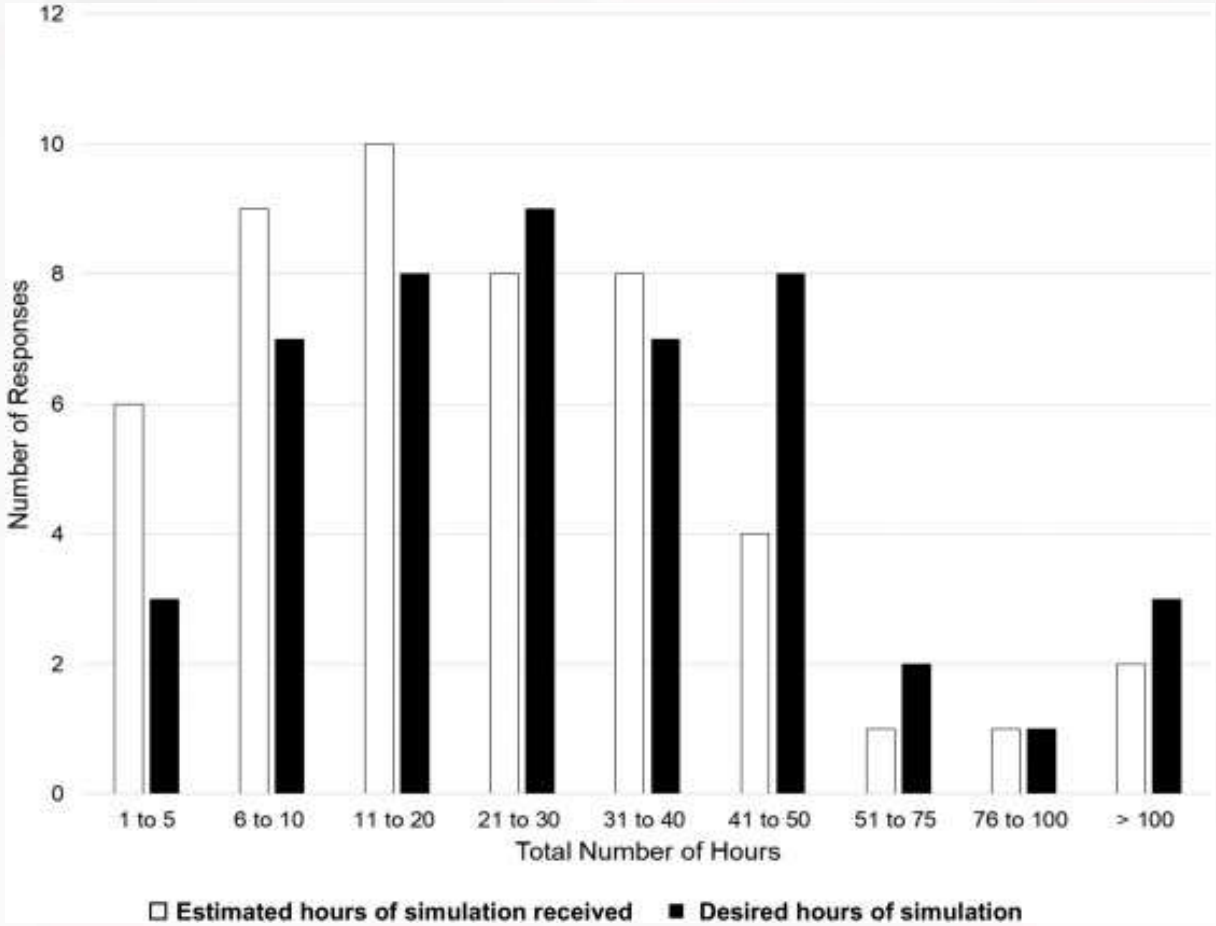
| | |
|---|---|
| Hours spent annually by PEM fellows | |
| 0–10 h | 12/63 (19) |
| 11–20 h | 28/63 (44) |
| >20 h | 23/63 (37) |

**TABLE 3** Simulation Applications in PEM Fellowship Programs

| Application | *n*/*N* Respondents (%) |
|---|---|
| Technical skills | |
| Intubation | 45/59 (76) |
| Bag-mask ventilation | 42/59 (71) |
| Difficult airway | 36/59 (61) |
| Intraosseous placement | 40/58 (69) |
| Chest tube placement | 29/60 (48) |
| Central venous access | 34/60 (57) |
| Additional applications | |
| Evaluate procedural competency | 23/63 (37) |
| Evaluate resuscitation competency | 25/63 (40) |
| Psychosocial issues | 32/66 (49) |
| Teamwork/communication/crisis resource management | 38/66 (58) |
| Teaching debriefing | 32/51 (63) |
| Simulation case development | 33/51 (65) |
| Simulation-based research | |
| Research tool used in PEM division | 35/63 (56) |
| Simulation-based research for fellows' scholarly activity | 21/63 (33) |

PEDIATRICS Volume 136, number 1, July 2015

# Simulation in Neonatal-Perinatal Medicine Fellowship Programs




Sawyer et al. Am J Perinatol, 2019

The majority (51%) of fellows received 20 hours of simulation training or less during their 3 years of fellowship. The majority of PDs (63%) wanted fellows to receive >20 hours of simulation during their 3-year fellowship.

# Simulation-based medical training for paediatric residents in Italy: a nationwide survey

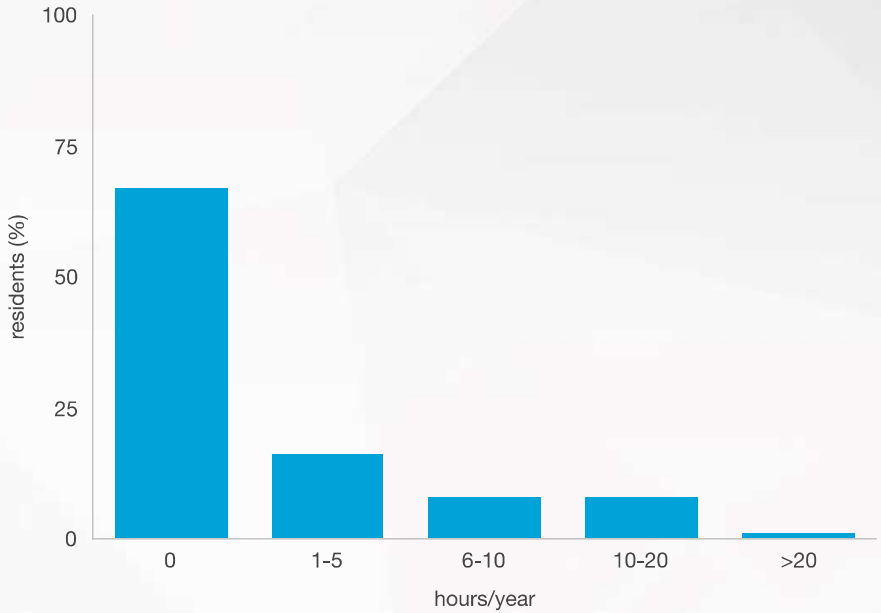



**Fig. 1** Simulation activity of Italian paediatric residents in the 2015-2016 academic year. The graph shows the percentage of Italian paediatric residents respectively spending 0, 1–5, 6–10, 10–20, > 20 h in simulation activities during 2015–2016

Binotti *et al. BMC Medical Education* (2019) 19:161
https://doi.org/10.1186/s12909-019-1581-3

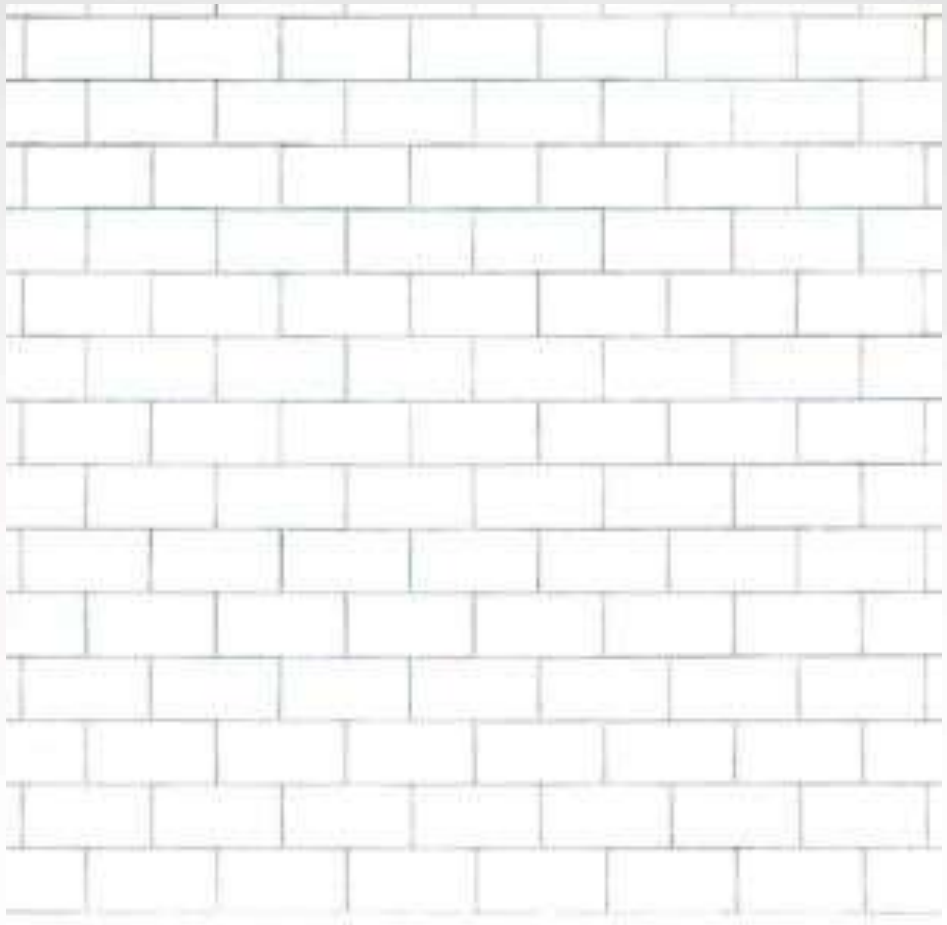
# Simulation in Neonatal-Perinatal Medicine Fellowship Programs

Reported barriers to simulation use in fellowship programs included:

- lack of protected faculty time (56%),
- limited faculty simulation experience (44%),
- limited funding (39%),
- lack of written curriculum (37%),
- limited access to simulation center (33%),
- lack of time for fellows to participate (21%).

Only 26% of programs reported that the faculty had protected FTE to conduct simulation training. However, 58% of programs reported that faculty involved in simulation training received credits toward **academic advancement and promotion for their simulation work.**

Sawyer et al. Am J Perinatol, 2019



# Simulation-based medical training for paediatric residents in Italy: a nationwide survey

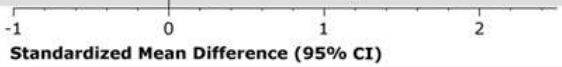
| | Response Percent | Response Count (n/274) |
|---|---|---|
| Lack of experts in simulation based training | 57,3% | n=157 |
| Lack of support from the school Director | 56,2% | n=154 |
| Lack of time by experienced personnel in SBMT | 32,5% | n=89 |
| Lack of personnel interested in SBMT | 24,5% | n=67 |
| Lack of organization in planning simulation center courses | 42,0% | n=115 |
| Lack of teaching materials | 42,0% | n=115 |
| Lack of simulation center | 33,6% | n=92 |
| Lack of support staff (secretary, simulation technician, etc.) | 25,5% | n=70 |
| Presence of other training programs | 3,3% | n=9 |

Binotti *et al. BMC Medical Education* (2019) 19:161
https://doi.org/10.1186/s12909-019-1581-3

# Technology-Enhanced Simulation and Pediatric Education: A Meta-analysis

Adam Cheng et al

| Feature | Subgroup | No. Studies (No. Partic.) | Favors No Instruction | Favors TES | Standardized Mean Difference (95% CI) | *P* (subgroup interaction) |
|---|---|---|---|---|---|---|
| All studies | | 27 (1027) | | | 1.23 (0.95, 1.51) | |
| Design | Posttest-only, 2-group | 3 (144) | | | 0.81 (-0.02, 1.64) | |
| | Pretest-posttest, 2-group | 4 (86) | | | 1.13 (0.48, 1.78) | |
| | Pretest-posttest, 1-group | 20 (797) | | | 1.32 (0.99, 1.65) | |
| Design | Randomized | 4 (144) | | | 0.76 (0.11, 1.41) | .32 |
| | Nonrandomized 2-group | 3 (86) | | | 1.31 (0.46, 2.16) | |
| Participants | Physician trainees | 18 (697) | | | 1.19 (0.84, 1.54) | |
| | Physicians in practice | 7 (490) | | | 0.75 (0.36, 1.13) | |
| | Nurses/nursing students | 8 (297) | | | 1.00 (0.60, 1.41) | |
| | Other | 5 (168) | | | 1.30 (0.64, 1.95) | |
| Age | Neonates | 6 (251) | | | 1.05 (0.41, 1.70) | |
| | Pediatric | 22 (845) | | | 1.24 (0.93, 1.56) | |
| | Adolescent | 1 (23) | | | 0.43 (-0.02, 0.88) | |
| Simulated setting | Office-based | 2 (108) | | | 1.45 (1.16, 1.75) | |
| Assessment | Blinded | 11 (307) | | | 0.69 (0.37, 1.01) | .001 |
| | Not blinded | 16 (720) | | | 1.51 (1.12, 1.90) | |
| Quality: NOS | High ≥4 | 6 (204) | | | 0.81 (0.33, 1.30) | .07 |
| | Low | 21 (823) | | | 1.35 (1.02, 1.67) | |
| Quality: MERSQI | High ≥12 | 9 (212) | | | 0.94 (0.49, 1.40) | .15 |
| | Low | 18 (815) | | | 1.37 (1.02, 1.72) | |
| ES estimate | Precise | 19 (544) | | | 1.21 (0.92, 1.50) | |




TES for pediatrics is associated with **large favorable effects in comparison with no intervention.** Unfortunately, the current literature does little to help identify the optimal method of delivering simulation-based education for pediatrics because of a paucity of comparative studies

*Pediatrics* 2014;133:e1313–e1323

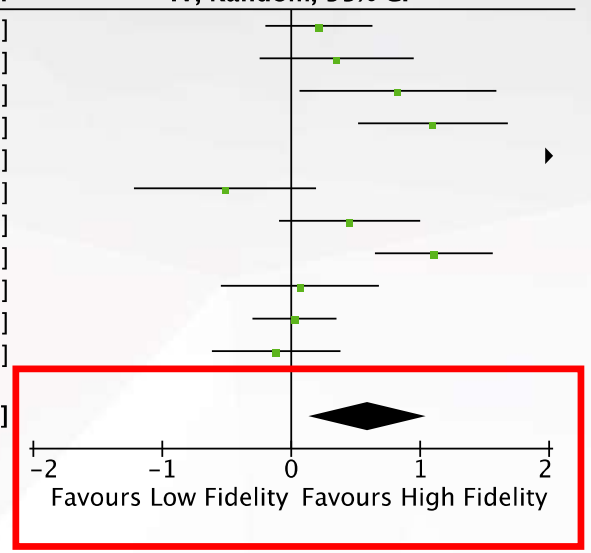
Review article

# The use of high-fidelity manikins for advanced life support training—A systematic review and meta-analysis☆

Adam Cheng[a,*], Andrew Lockey[b], Farhan Bhanji[c], Yiqun Lin[d], Elizabeth A. Hunt[e], Eddy Lang[f]

| Study or Subgroup | High Fidelity Simulation Mean | SD | Total | Low Fidelity Simulation Mean | SD | Total | Weight | Std. Mean Difference IV, Random, 95% CI |
|---|---|---|---|---|---|---|---|---|
| Cheng 2013 | 7.9 | 2.4 | 45 | 6.4 | 9.5 | 45 | 9.8% | 0.21 [-0.20, 0.63] |
| Cherry 2007 | 101.7 | 27.6 | 23 | 93 | 20.1 | 21 | 9.1% | 0.35 [-0.25, 0.95] |
| Coolen 2012 | 68.8 | 9.63 | 15 | 60.86 | 9 | 14 | 8.3% | 0.83 [0.06, 1.59] |
| Curran 2014 | 10.3 | 0.25 | 21 | 10 | 0.28 | 35 | 9.1% | 1.10 [0.52, 1.68] |
| Donoghue 2009 | 11.1 | 1.8 | 25 | 4.8 | 1.7 | 26 | 7.6% | 3.55 [2.64, 4.45] |
| Finan 2012 | 72.7 | 9 | 16 | 78.2 | 11.7 | 16 | 8.5% | -0.51 [-1.22, 0.19] |
| Hoadley 2009 | 26.12 | 2.51 | 29 | 24.7 | 3.68 | 24 | 9.3% | 0.45 [-0.10, 1.00] |
| Lo 2011 | 41.5 | 5.58 | 45 | 35 | 6.09 | 41 | 9.7% | 1.11 [0.65, 1.56] |
| Owen 2006 | 0.5 | 1.28 | 21 | 0.41 | 1.33 | 20 | 9.0% | 0.07 [-0.54, 0.68] |
| Settles 2011 | 98.45 | 7.43 | 73 | 98.24 | 9.21 | 73 | 10.2% | 0.02 [-0.30, 0.35] |
| Thomas 2010 | 72.4 | 9.09 | 31 | 73.4 | 7.65 | 31 | 9.5% | -0.12 [-0.62, 0.38] |
| **Total (95% CI)** | | | **344** | | | **346** | **100.0%** | **0.59 [0.13, 1.05]** |

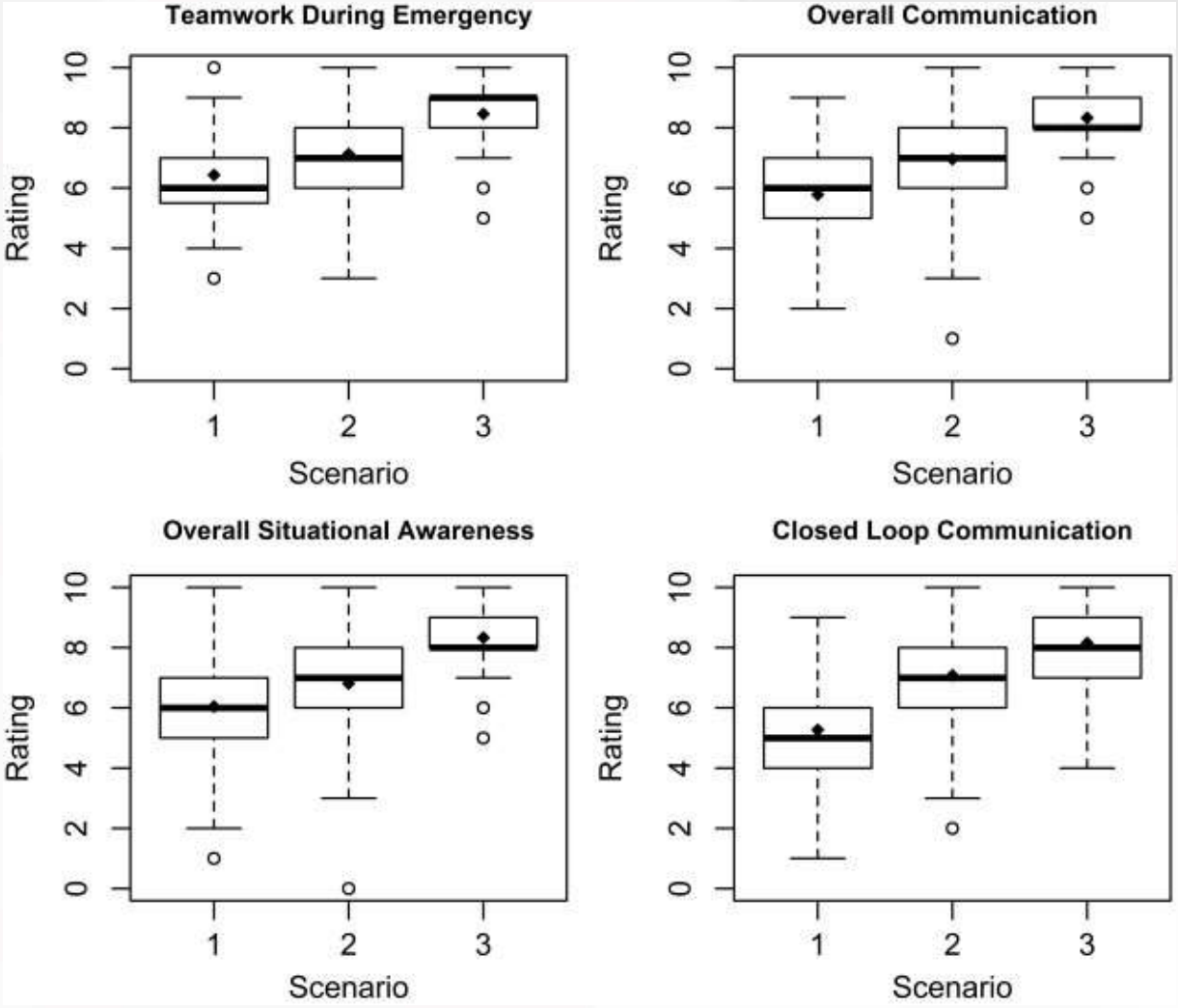
Heterogeneity: $Tau^2 = 0.51$; $Chi^2 = 80.26$, df = 10 ($P < 0.00001$); $I^2 = 88\%$
Test for overall effect: Z = 2.53 (P = 0.01)




Resuscitation 93 (2015) 142–149

# Simulation-Based Team Training Improves Team Performance among Pediatric Intensive Care Unit Staff

Nora Colman[1,2,3] Janet Figueroa[2] Courtney McCracken[2,3] Kiran Hebbar[1,2,3]




In a 3-month period, 30 simulation sessions were conducted and 165 staff members, including physicians, nurses, and respiratory therapists, were trained. Regression analysis showed a statistically significant improvement in team performance ($p < 0.0001$).

**Fig. 2** Trends in scores of clinically significant teamwork skills.

J Pediatr Intensive Care 2019;8:83–91.


human
error
factors
Human
accidents
Error
Accidents
Warnings
Factors
people
perception
medical
blame
make
Color
individual
world
product
etc
Police
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abilities
Medical
attributed
causes
Time
Warning
often
Property
design
Intellectual
devices
eyewitness
study
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limitations
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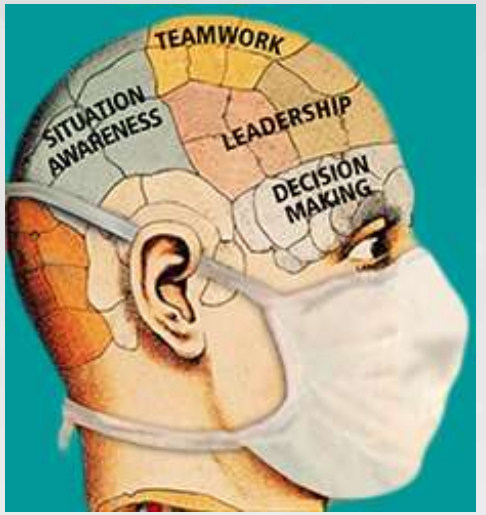
# The Joint Commission

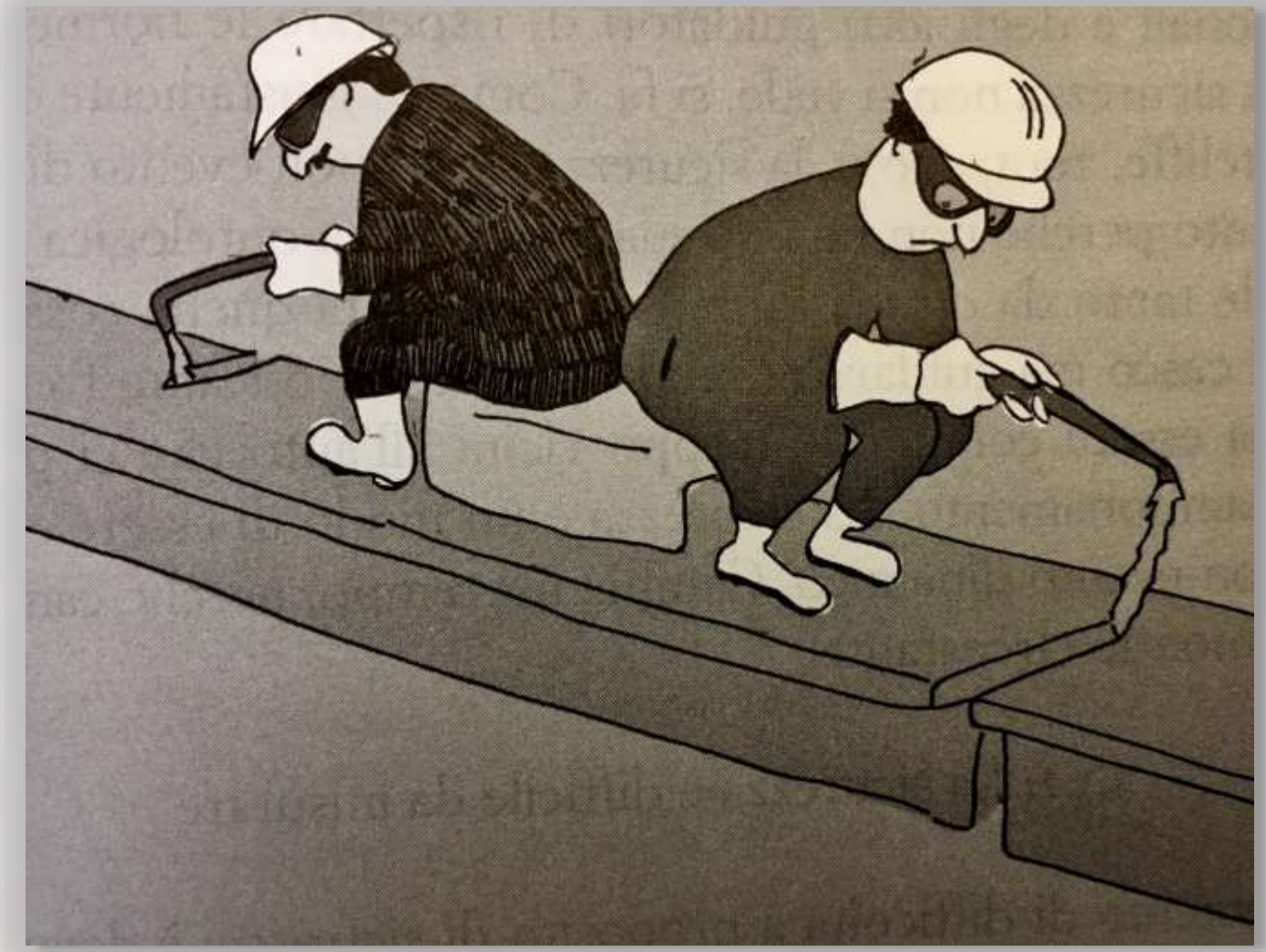



## Most Frequently Identified Root Causes of Sentinel Events Reviewed by The Joint Commission by Year

| 2011 (N=1243) | | 2012 (N=901) | | 2013 (N=887) | |
|---|---|---|---|---|---|
| Human Factors | 899 | Human Factors | 614 | Human Factors | 635 |
| Leadership | 815 | Leadership | 557 | Communication | 563 |
| Communication | 760 | Communication | 532 | Leadership | 547 |
| Assessment | 689 | Assessment | 482 | Assessment | 505 |
| Physical Environment | 309 | Information Management | 203 | Information Management | 155 |
| Information Management | 233 | Physical Environment | 150 | Physical Environment | 138 |
| Operative Care | 207 | Continuum of Care | 95 | Care Planning | 103 |
| Care Planning | 144 | Operative Care | 93 | Continuum of Care | 97 |
| Continuum of Care | 137 | Medication Use | 91 | Medication Use | 77 |
| Medication Use | 97 | Care Planning | 81 | Operative Care | 76 |

Joint Commission

# SITUATIONAL AWARNESS NE ABBIAMO?



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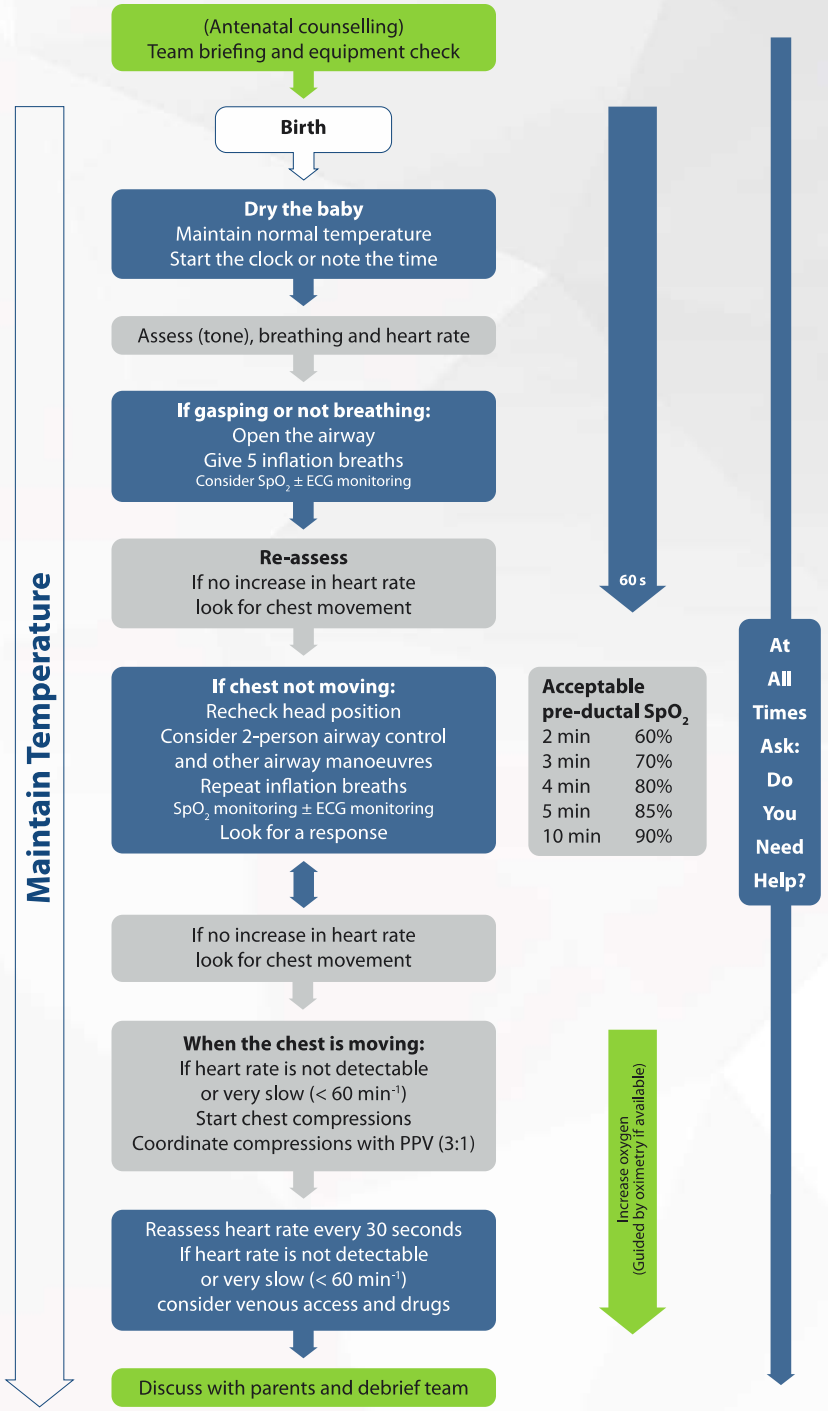
(Antenatal counselling)
Team briefing and equipment check
Birth
Dry the baby
Maintain normal temperature
Start the clock or note the time
Assess (tone), breathing and heart rate
If gasping or not breathing:
Open the airway
Give 5 inflation breaths
Consider SpO2 ± ECG monitoring
Re-assess
If no increase in heart rate
look for chest movement
If chest not moving:
Recheck head position
Consider 2-person airway control
and other airway manoeuvres
Repeat inflation breaths
SpO2 monitoring ± ECG monitoring
Look for a response
If no increase in heart rate
look for chest movement
When the chest is moving:
If heart rate is not detectable
or very slow (< 60 min-1)
Start chest compressions
Coordinate compressions with PPV (3:1)
Reassess heart rate every 30 seconds
If heart rate is not detectable
or very slow (< 60 min-1)
consider venous access and drugs
Discuss with parents and debrief team
60 s
Acceptable pre-ductal SpO2
2 min 60%
3 min 70%
4 min 80%
5 min 85%
10 min 90%
Increase oxygen
(Guided by oximetry if available)
Maintain Temperature
At All Times Ask: Do You Need Help?

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# MAPPA


G. Bateson, 1984
M Bernardini 2019

# TERRITORIO

G. Bateson, 1984
M Bernardini 2019

La simulazione non è altro

che la scusa

per fare un

buon *debriefing*

Peter Weinstock


Centro SIMNOVA, PSE 2019

SPECIAL FEATURE

# Post-event debriefings during neonatal care: why are we not doing them, and how can we start?

T Sawyer[1,2], D Loren[1] and LP Halamek[3,4]

"**Post-event debriefings are a foundational behavior of high performing teams**. A recent meta-analysis found that organizations can improve individual and team performance by up to 25% by conducting effective debriefings.

In simulation-based studies, debriefing has been associated with **enhancements in team performance, and improvements in both technical and behavioral skills** "


Journal of Perinatology (2016) 36, 415–419

# I fondamenti dell'Andragogia

- Un adulto ha costruito la propria immagine e identità attraverso complessi equilibri che ha bisogno di riconfermare continuamente
- Simulando si mette in discussione davanti ad altri
- Questa disponibilità va rispettata, valorizzata e protetta

Quando si accetta di "giocare" nella simulazione molti schemi (filtri difensivi) vengono temporaneamente messi da parte per indossare i "panni del discente". Ciò rende l'adulto più vulnerabile.


| | |
|---|---|
| **Defusing** | Fai descrivere l'impatto emotivo dello scenario a cui hanno partecipato, con lo scopo di ridurne l'ansia e lo stress, derivanti dallo scenario appena concluso, e dalla consapevolezza di essere stati osservati |
| **Discovering** | Conduci l'osservazione riflessiva e l'individuazione dei modelli mentali sottostanti («i perché») attraverso la narrazione dei partecipanti, le domande e le affermazioni su problemi rilevanti e sulle situazioni avvenute nello scenario simulato |
| **Deepening** | Fai sintetizzare ai partecipanti quello che hanno appreso circa la gestione del caso clinico svolto nello scenario simulato e di facilitare la connessione degli elementi emersi nelle fasi precedenti con i modelli mentali dei partecipanti e di fornire suggerimenti per l'implementazione pratica di quanto emerso |

| **Plus**<br>**Cosa è andato bene** | **Video (min)** | **Delta**<br>**Aree da migliorare** |
|---|---|---|
| | | |

***“ Le organizzazioni in cui la vita umana dipende da performance qualificate hanno adottato le tecniche di simulazione ancor prima di avere l’evidenza scientifica della loro validità “***

*David Gaba, MD*

Congresso Nazionale IRC
2019
11 • 12 OTTOBRE
Centro Congressi Veronafiere


## SAVE THE DATE

# 04 MARZO

**Nuovo Campus Perrone**
Università del Piemonte Orientale
Via Perrone, 18 – Novara

Un pomeriggio rivolto a tutti i professionisti che si prendono cura della salute di bambini e neonati, un'occasione di incontro con opinion leader della pediatria italiana ed internazionale per un aggiornamento su temi clinici di grande attualità.

**RESPONSABILI SCIENTIFICI**

**Marco Binotti**
Terapia Intensiva Neonatale e Pediatrica
Novara (Simnova)

**Silvia Bressan**
Dipartimento per la salute della donna e del bambino
Padova (SimDream)

**Marco De Luca**
Dipartimento Emergenza Accettazione Ospedale Meyer
Firenze (SimMeyer)

**Pierluigi Ingrassia**
Centro Interdipartimentale di Didattica Innovativa e di Simulazione in Medicina e Professioni Sanitarie (Simnova)

**Luca Tortorolo**
Terapia Intensiva Pediatrica Policlinico Gemelli
Roma (Tree Education Center)

La partecipazione è gratuita, ma la registrazione è obbligatoria sul sito https://simnova.uniupo.it/

**SEGRETERIA ORGANIZZATIVA**
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AMIETIP


## SAVE THE DATE

# 05|06 MARZO

**Centro SIMNOVA | Novara**
Università del Piemonte Orientale
Via Lanino 1 | Piano quarto

**Quinta edizione** del primo evento nazionale di simulazione rivolto a specializzandi in Pediatria. Non si tratta di una competizione, ma di due giornate dedicate al miglioramento della cura di neonati e bambini attraverso la **formazione basata sulla simulazione**. Due giornate di esperienza e confronto nei quali si concentrano le competenze di quattro importanti centri di simulazione pediatrica.

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Italian Resuscitation Council

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SESAM MILAN 2020
DESIGNING THE FUTURE

17-19 JUNE 2020
26TH ANNUAL MEETING OF
SOCIETY FOR SIMULATION IN EUROPE

## SESAM Milan 2020

Registration will be announced soon!


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