

# *In situ* simulation in the operating room.

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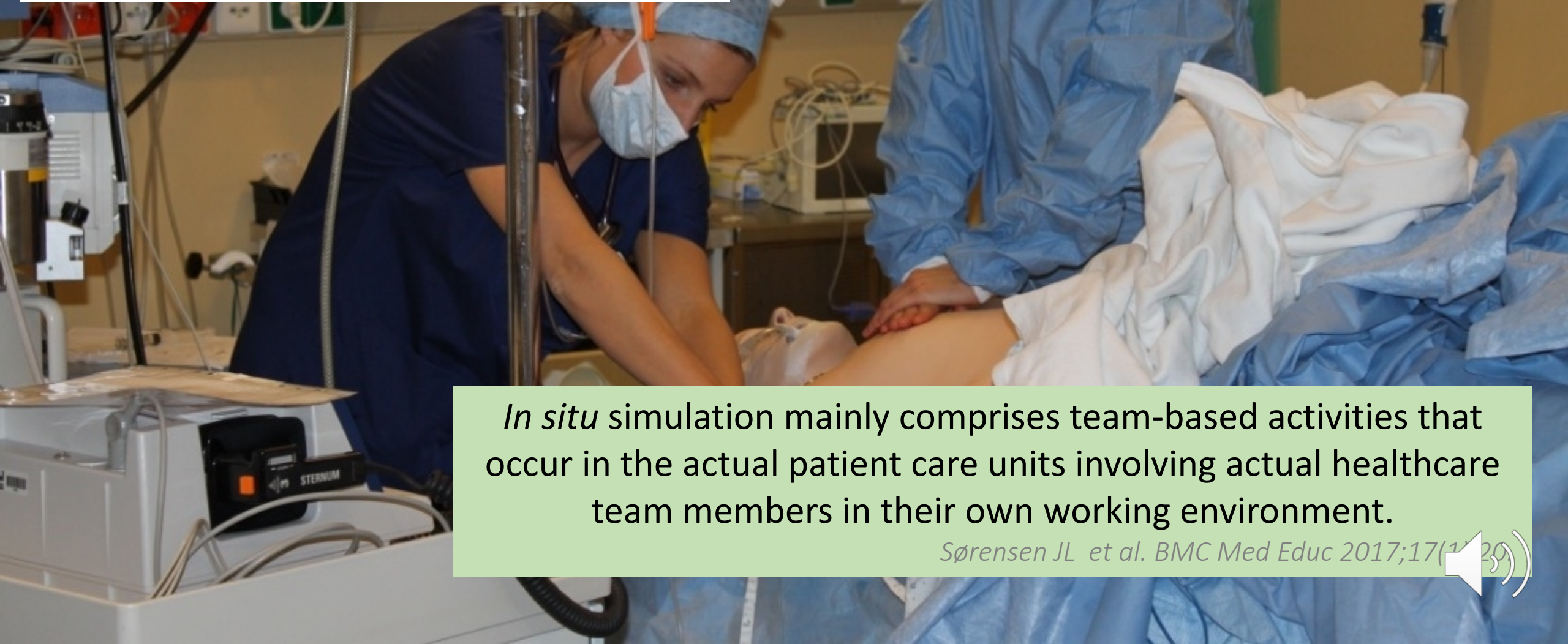
- No conflict of interest to declare.



(Acta Anaesth. Belg., 2014, 65, 61-71)

Is the “in situ” simulation for teaching anesthesia residents a lower cost, feasible and satisfying alternative to simulation center ? A 24 months prospective observational study in a university hospital

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*In situ* simulation mainly comprises team-based activities that occur in the actual patient care units involving actual healthcare team members in their own working environment.

Sørensen JL et al. BMC Med Educ 2017;17(1):20





# Interprofessional education



Members or students of two or more professions associated with health or social care, engaged in learning with, from and about each other.

*Bridges DR et al. Medical Education Online 2011, 16: 6035*



A close-up photograph of several people's hands clasped together in a supportive gesture. The hands are of various skin tones and are positioned in a way that suggests a group hug or a collective effort. The background is blurred, focusing attention on the hands.

« Experts do not necessarily combine  
to make an expert team. »

*Burke CS et al. Qual Saf Health Care. 2004;13(Suppl 1):i96-104.*



# Team competencies



COMMUNICATION



COLLABORATION



COORDINATION



SITUATIONAL  
AWARENESS





## Category Scores for Each Observation of Gastric Bypass Surgery

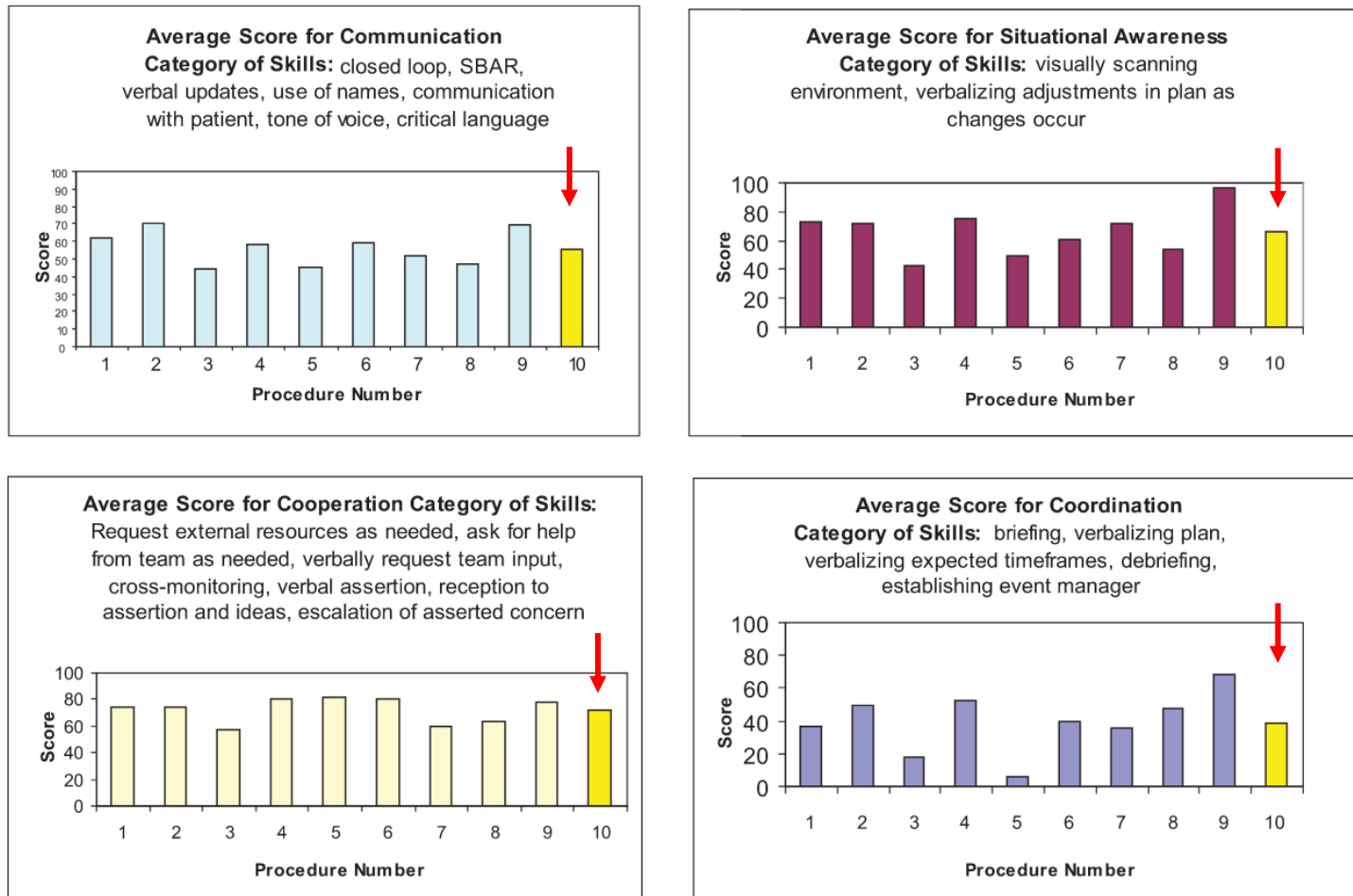


Figure 3. Behaviors comprising each category are listed. The bar on the far right (10) is an overall average of the nine observations. SBAR, situation-background-assessment-recommendation.





## Defining critical and non-critical moments in the operating room: a modified Delphi consensus study

### La définition des moments critiques et non critiques en salle d'opération : une étude de consensus Delphi modifiée

Sylvain Boet, MD, PhD · Cole Etherington, PhD · Agnes Crnic, MD, MSc · Julie Kenna, RN ·  
James Jung, MD, PhD · Martin Cairns, RN · Glen Posner, MDCM ·  
Teodor Grantcharov, MD, PhD

**Table 6** Final list of critical moments in the OR

- 
- Induction of anesthesia
  - Emergence from anesthesia
  - Surgical safety checklist step 1: preoperative (before patient anesthetized)
  - When team member(s) make(s) the final counts at the end of surgical procedure
  - Any anesthesiologist- or surgeon-relevant intraoperative event (e.g., bleeding, hypotension)
  - Handover between colleagues of the same specialty/profession (e.g., nurse to another nurse or anesthesiologist to another anesthesiologist)
  - High-risk surgical procedures/moments (e.g., moments specific to each procedure that are high risk for failure/consequences/alteration to patient vitals, such as release of vascular clamps, coming off bypass, CO<sub>2</sub> insufflation; OR moments when changes in surgical plan may occur, such as surgeon converting from minimally invasive to open surgery; when the surgeon conducts anastomosis, such as visceral or vessel; delicate dissection close to big vessels)
  - Crisis resource management situations (e.g., call for help from an OR team member during a life-threatening emergency)
  - Medication and equipment preparation
  - Key medication administration (e.g., antibiotics, heparin, methylene blue)
- 

CO<sub>2</sub> = carbon dioxide; OR = operating room





# Simulation-based Training Improves Physicians’ Performance in Patient Care in High-stakes Clinical Setting of Cardiac Surgery

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**Table 3.** ANTS Performance

	Task Management	Team Working	Situation Awareness	Decision-making
Pretest				
Seminar group	2.50 ± 0.13	2.6 ± 0.16	2.45 ± 0.11	2.40 ± 0.12
Simulation group	2.65 ± 0.13	2.6 ± 0.16	2.80 ± 0.11	2.55 ± 0.12
Posttest				
Seminar group	2.85 ± 0.14	2.95 ± 0.12	3.05 ± 0.11	2.95 ± 0.11
Simulation group	3.60 ± 0.14*	3.45 ± 0.12*	3.75 ± 0.11*	3.50 ± 0.11*
Retention test				
Seminar group	2.90 ± 0.11	2.85 ± 0.17	2.90 ± 0.10	3.00 ± 0.11
Simulation group	3.55 ± 0.11*	3.35 ± 0.17*	3.55 ± 0.10*	3.65 ± 0.11*

All values are expressed as mean ± standard error.  
\* *P* < 0.01 compared with the seminar group (same time, same Anesthesiologist’s Nontechnical Skills [ANTS] subscale).





Original Article

Impact of a large interprofessional simulation-based training course on communication, teamwork, and safety culture in the operating theatre: A mixed-methods interventional study



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46 970 communication episodes

The rate of communication failures

8117/28 303 (29%) before training vs. 3868/18 667 (21%) after training;  $P < 0.01$ .

Teamwork scores

8.1 (7.2–8.7) before training vs. 8.6 (8.0–9.2) after training;  $P < 0.01$ .

Checklist adherence

17% (0–35 %) before training vs. 44% (26–57 %) after training;  $P < 0.01$ .



# To conclude

- Interprofessional education develops team competencies such as communication, collaboration, coordination and situational awareness.
- *In situ* simulation is a tool used in interprofessional education and helps to develop these team competencies.
- A hope ... to expand training to more than 2 professions.





# Questions ?

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