AIRWAY MANAGEMENT ACADEMY

EAMS European Airway Management Society

Airway Management simulation

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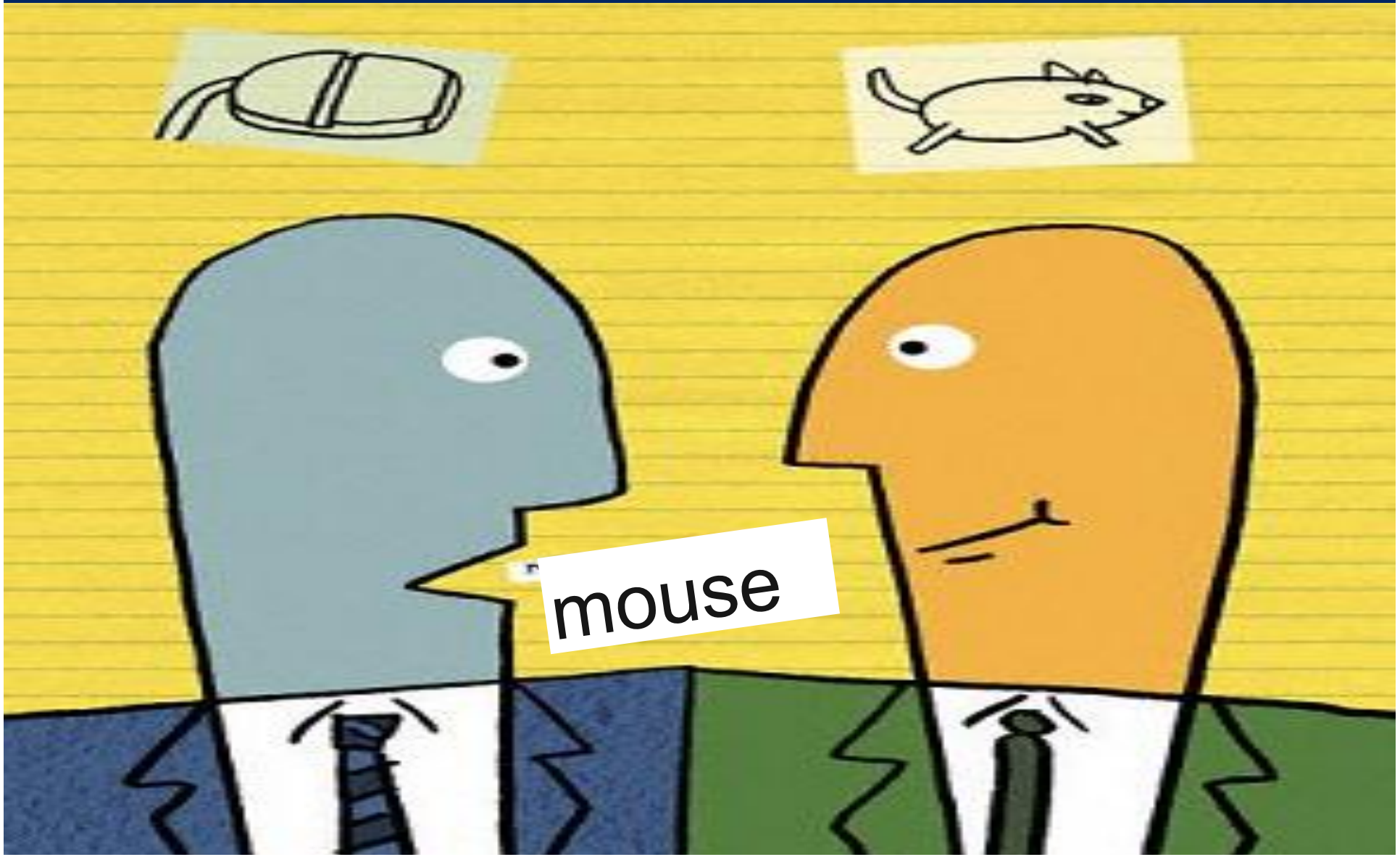
Simulation: one word…



Role of simulation for airway management training

- **Knowledge based learning**
  - Preprocedure assessment, anatomic knowledge, safety and limitations of airway devices
- **Task analysis**
  - Procedure can be split into different steps
- **Training in a laboratory environment**
  - Improved psychomotor skills
- **Transfer of (non technical) skills to the real environment**

Team work and decision making

Different learning goals, different simulation methods

Learning goals

- Task training
- Drills
- Difficult airway algorithm
- CRM
- Teamtraining
- Teach the teacher

- Is it important for learning to simulate the clinical scenario as realistic as possible?

Technology-Enhanced Simulation for Health Professions Education

A Systematic Review and Meta-analysis

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Context Although technology-enhanced simulation has widespread appeal, its effectiveness remains uncertain. A comprehensive synthesis of evidence may inform the use of simulation in health professions education.

Objective To summarize the outcomes of technology-enhanced simulation training for health professions learners in comparison with no intervention.

Data Source Systematic search of MEDLINE, EMBASE, CINAHL, ERIC, PsychINFO, Scopus, key journals, and previous review bibliographies through May 2011.

Study Selection Original research in any language evaluating simulation compared with no intervention for training practicing and student physicians, nurses, dental design features or study quality.

Conclusion In comparison with no intervention, technology-enhanced simulation training in health professions education is consistently associated with large effects for outcomes of knowledge, skills, and behaviors and moderate effects for patient-related outcomes.

JAMA. 2011;306(9):978-988 www.jama.com

ucts, and human cadavers.

Although technology-enhanced simulation has widespread appeal and many assert its educational utility,[1] such beliefs presently lack empirical support. Despite the large volume of research on simulation, its effectiveness remains uncertain in part because of the difficulty in inter-

CI, 0.34-0.66) for direct effects on patients (n=32). Subgroup analyses revealed no consistent statistically significant interactions between simulation training and instructional design features or study quality.

Conclusion In comparison with no intervention, technology-enhanced simulation training in health professions education is consistently associated with large effects for outcomes of knowledge, skills, and behaviors and moderate effects for patient-related outcomes.

JAMA. 2011;306(9):978-988 www.jama.com

Examples airway simulation

Task training

- Surgical airway
- Videolaryngoscopy
- Bag mask ventilation

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Examples

Learning with “stop and go” simulation

decision making, team work, algorithms

Stop and go

- Stopping during scenario, discuss and decide, then continue, debrief

HR
126
16
21
ABP
114/62
(79)
83
0.0
113/60
(78)
32
39.6
Laerdal Video Client
File Settings Help
129
114/63
(80)
83
0.0
39.6
Sound
View
Connections
Room: Room 1
Select Room
Recording
Record
Time:
00:00:00
Exit

Examples…

- Learning as a team with scenario-based simulation

briefing

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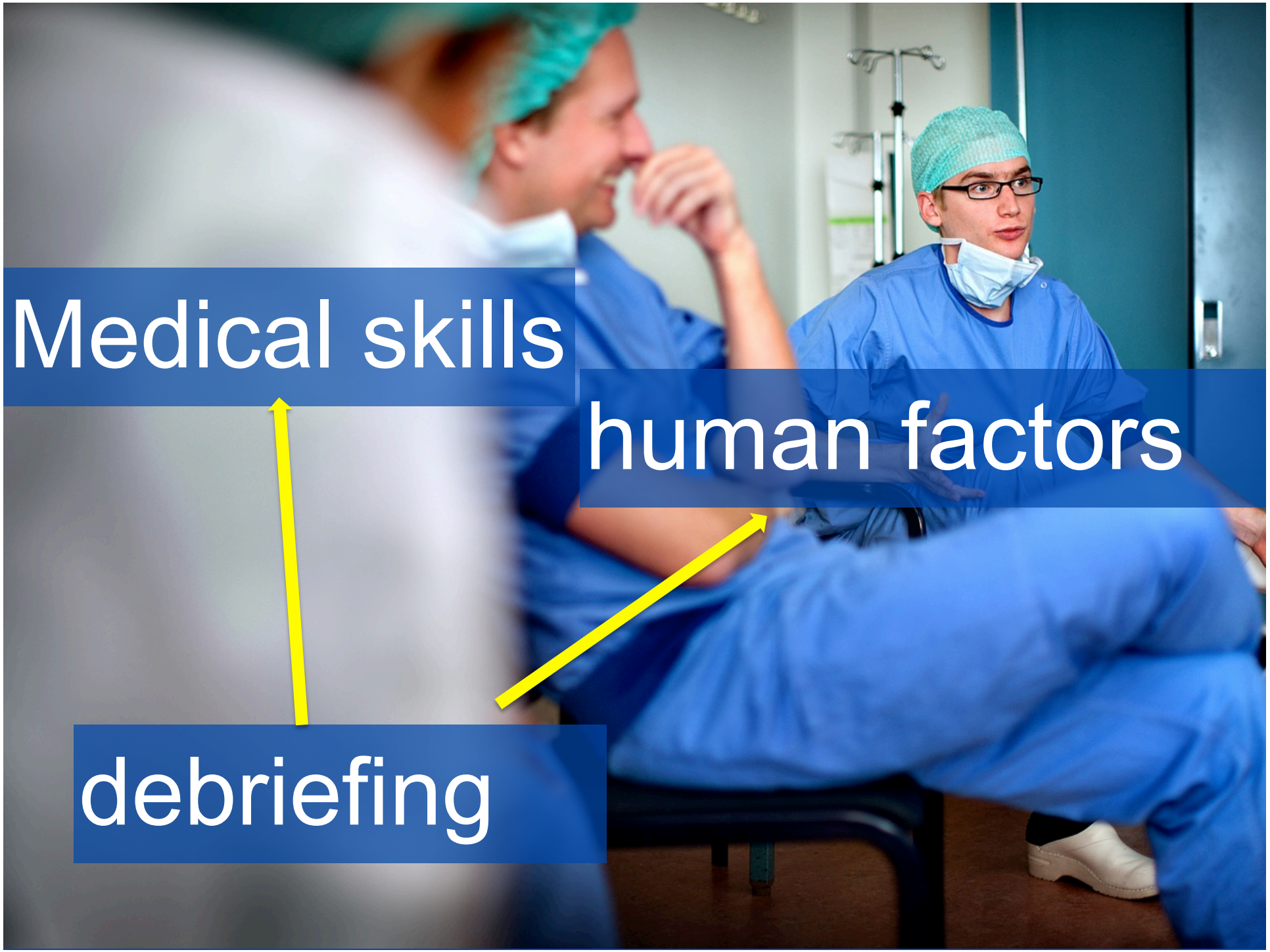
scenario

scenario

Observation

Video debriefing

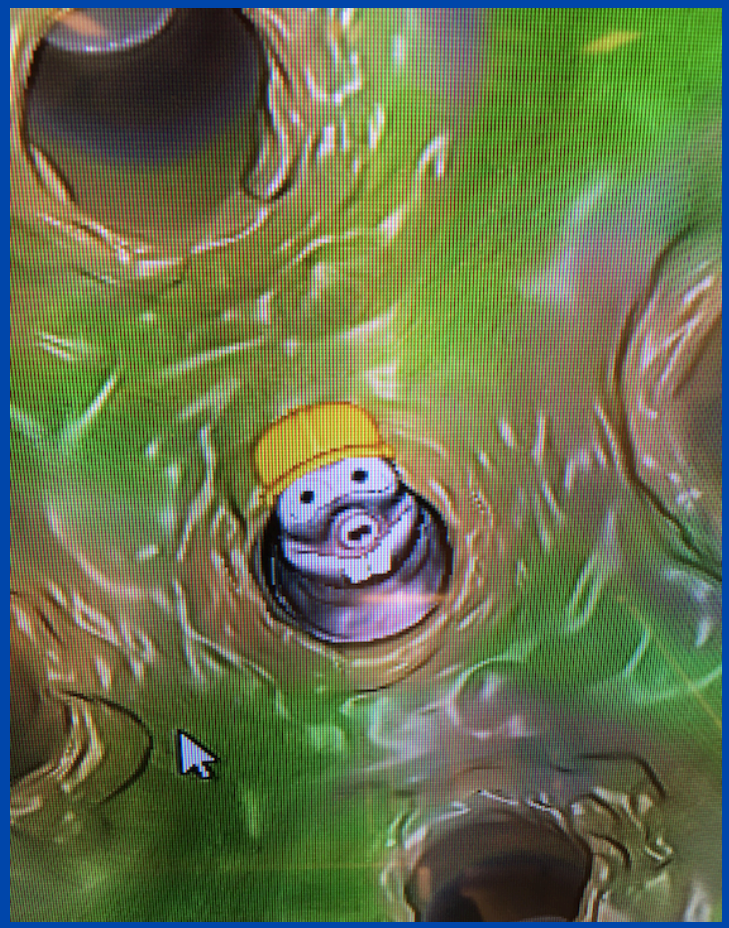

Medical skills
human factors
debriefing

Other examples

- Difficult airway mannikins
- Simulate difficult intubation: case description around airway head
- Use Isim with sounds
- ORSIM virtual navigation

It’s all about the learning
goal and learning should be safe!

And it should be fun



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Advanced Airway Management in Amsterdam...

SAMT

Simulation based Airway Management Training in Anesthesiology and Intensive Care

VU university medical center

Virtual stop and go simulation

Cognitive aids and non technical skills

Conclusion

- There is a method of simulation for every goal
- Combining different methods can increase learning experience
- CU AT STATION 9A and B

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