

Simulation & Patient Safety

The Human Factor in health care



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That's me...



SESAM DSSH

19TH ANNUAL MEETING OF THE SOCIETY IN EUROPE FOR SIMULATION APPLIED TO MEDICINE

PARIS, FRANCE



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The Human Factor(s) in health care




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The Human Factor in health care

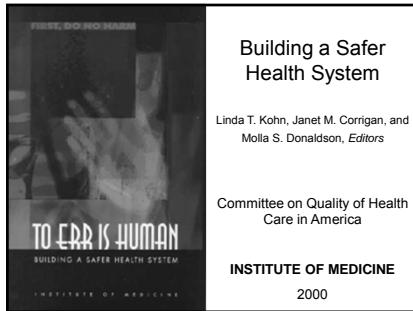


Simulation, CRM & Patient Safety

The Human Factor in health care



...so why talking about Human Factors?



USA 2000 Institute of Medicine Report

Top 10 list "causes of death"

- Sepsis 100.000-200.000
- **Medical errors 48.000 – 96.000**
- Mamma Ca 42.000
- HIV 16.000

To Err is Human, Building a Safer Health System, LT Kohn, JM Corrigan, and MS Donaldson, Editors, Committee on Quality of Health Care in America, Institute of Medicine 2000



Causes of incidences in healthcare

70% due to "Human Factors"

- **no** lack of knowledge
- rather a problem with the **knowledge transfer** into reality
- Teamwork / Communication

M.Rall

Conclusions

- new safety culture
- Introduction of simulation training as often as possible
- Crisis Resource Management (CRM)

To Err is Human, Building a Safer Health System, LT Kohn, JM Corrigan, and MS Donaldson, Editors, Committee on Quality of Health Care in America, Institute of Medicine 2000

M.Rall

Crisis Resource Management (CRM)

Definition

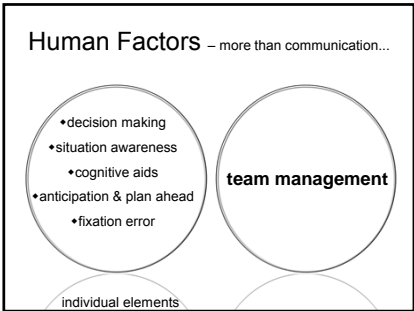
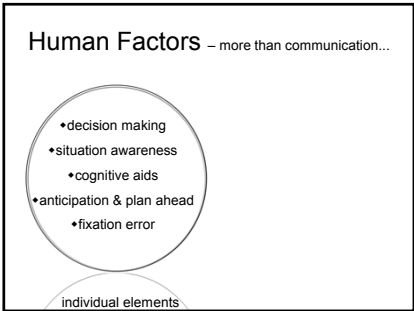
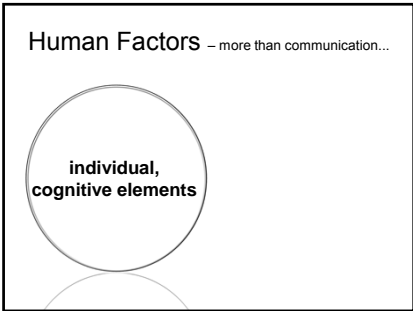
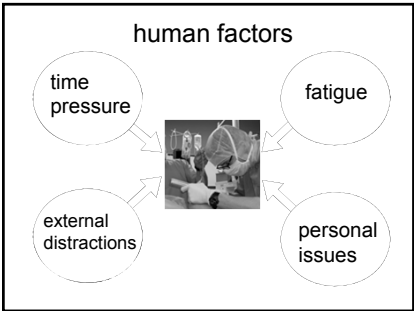
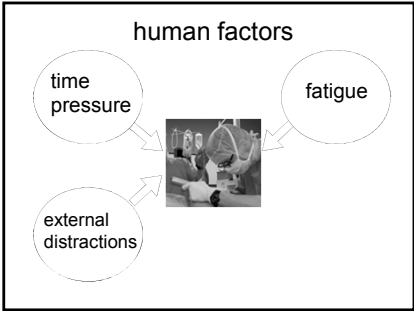
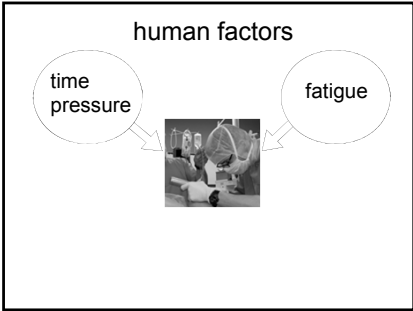
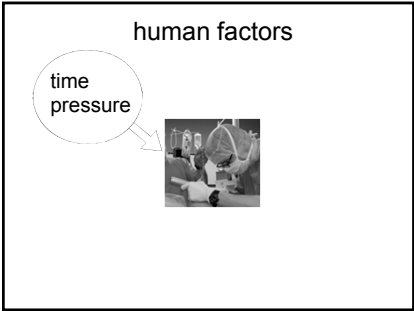
„The ability to **translate** the **knowledge** of what needs to be done **into effective team activity** in the complex and ill-structured real world of medical treatment“

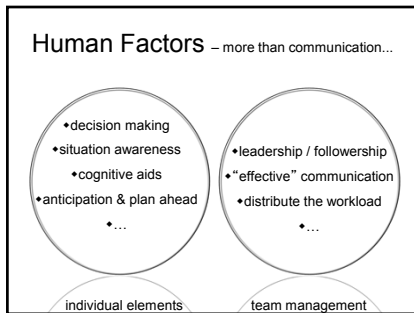
David Gaba, Stanford



Human Factors – more than communication...

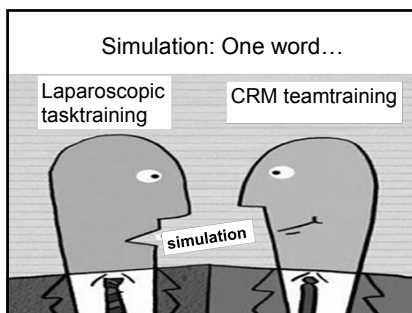
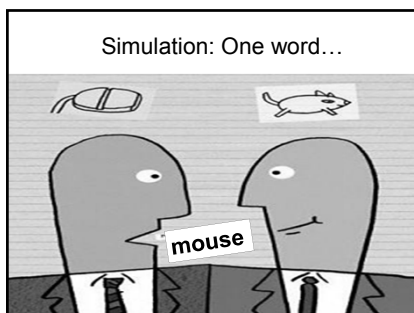
human factors





safety culture

training culture



Anesthesia simulation – ADAM simulationgroup, VUmc Amsterdam



Anesthesia simulation – ADAM simulationgroup, VUmc Amsterdam



Anesthesia simulation – ADAM simulationgroup, VUmc Amsterdam



TEAM simulation – ADAM simulationgroup, VUmc Amsterdam



In-situ simulation

TEAM simulation – ADAM simulationgroup, VUmc Amsterdam



Train the teams who work together!

video debriefing



CRM key principles

- | | |
|----------------------------|----------------------------------|
| 1. Know the environment | 9. prevent/manage fixation error |
| 2. Anticipate and plan | 10. cross (double) check |
| 3. Call for help early | 11. use cognitive aids |
| 4. Exercise leadership | 12. re-evaluate repeatedly |
| 5. Distribute the workload | 13. use good teamwork |
| 6. Mobilize all resource | 14. allocate attention wisely |
| 7. Communicate effectively | 15. set priorities dynamically |
| 8. Use all available info | |

Caba, Rall in: Miller, Anesthesia 6th edition

Leadership
Communication
Decision making
Situation awareness

Does simulation work?



Does it (simulation) work?

CHEST

Simulation-Based Education Improves Quality of Care During Cardiac Arrest Team Responses at an Academic Teaching Hospital^a

A Case-Control Study


BMC J

Research article
Hands-on:
the process:
simulator-based trial

David R. Wagner, MD, Andrew D. Williams, MD, Jon F. England, PhD, Steven J. Finkels, BA, Jeffrey B. Boren, MD, and William C. McGeehan, PhD

Subina Hunziker¹, Franziska Tschann², Norbert K. Semmer³, Roger Zobrist⁴, Martin Speycher⁵, Marc Breuer⁶, Patrick R. Hunziker⁷ and Stephan C. Manck^{1*}

Simulation improves
teamperformance!!!



Simulation-Team-Training

"...no industry in which human lives depend on the skilled performance of responsible operators has waited for unequivocal proof of the benefits of simulation (or CRM) before embracing it... Neither should anesthesiology (health care)"

We can't wait any longer!

David Gaba, Anesthesiology 76:491-494, 1992




Medical Team Simulation –
to improve patient safety!



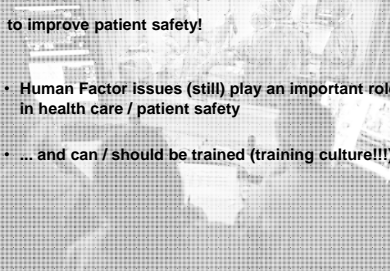
Medical Team Simulation –
to improve patient safety!

- Human Factor issues (still) play an important role in health care / patient safety



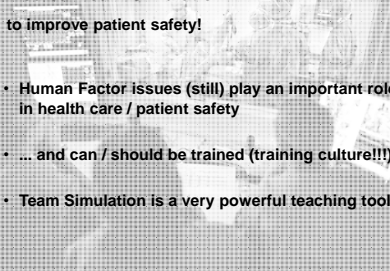
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- ... and can / should be trained (training culture!!!)



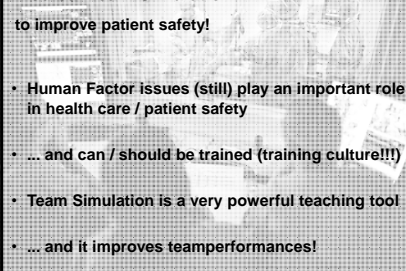
Medical Team Simulation –
to improve patient safety!

- Human Factor issues (still) play an important role in health care / patient safety
- ... and can / should be trained (training culture!!!)
- Team Simulation is a very powerful teaching tool



Medical Team Simulation –
to improve patient safety!

- Human Factor issues (still) play an important role in health care / patient safety
- ... and can / should be trained (training culture!!!)
- Team Simulation is a very powerful teaching tool
- ... and it improves teamperformances!





Let's wake up!

...to **H**uman **F**actors in medicine

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IMSH 2013 Planning Committee Co-chairs:
Adam Cheng, MD, FRCP, FAAP Ralf Krage, MD,
DEAA KT Waxman, DNP, MBA, RN, CNL

SSH
IMSH 2013
ORLANDO

To register visit <https://ssih.org>

Большое спасибо!

thank you very much

hartstikke bedankt

vielen Dank

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VU medisch centrum