



HOLLYWOOD

Bringing crisis resource management principles to life

Using (Hollywood) movies to make people think about CRM

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DIMS
Dansk Institut for Medicinsk Simulering

TuPASS
Tübinger Patienten-
Sicherheits- und
Simulations-Zentrum

Main Focus: Patient Safety

- Work and Organisational Psychology
- Since 1999 Simulation and Simulators
 - Center-based, In-Situ
 - Instructor Training
 - Ph.D. on using simulation for training
- Human Factors and Human Error
- Crisis Resource Management
- Incident Reporting and Analysis

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SESAM
Society for Medical Simulation

Overview

- 20 min • Introduction
- 40 min • Video Example 1
Master and Commander
- 30 min • Video Example 2
Let's go Springfield
- 30 min • Reflection and Discussion

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Basic ideas for the workshop

- Experience a method to learn about CRM
- Reflect how it works
- Get ideas to apply the method in your own teaching

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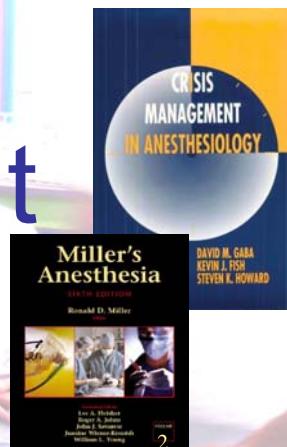
Basic Procedure



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Crisis Resource Management (CRM)



ADVANCE COPY

To Err Is Human
Building a Safer Health System

Linda T. Kohn, Janet M. Corrigan, and
Molla S. Donaldson, *Editors*

Committee on Quality of Health Care in America

INSTITUTE OF MEDICINE

IOM

NATIONAL ACADEMY PRESS
Washington, D.C.

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USA 2000 IOM-Report

Institute of Medicine

- **44.000 bis 100.000 death/y due to error in medicine**
- Errors a leading cause of death

- several measures required:
- National Center for Patient Safety
- New Reporting-Systems
- **New Safety Culture**
- **Use of Simulation whenever possible**

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Causes of accidents in medicine

70 % due to „Human Factors“ (preventable?)

- Not a lack of medical knowledge
- But Problems with transferring theoretical knowledge into actions under the real world conditions of a hospital setting
 - Problems with complexity
 - Team, Communication

These issues are addressed ~ 0%
in medical school and continuous training!

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Crisis Resource Management

(Gaba, Howard & Fish, 1992; Rall & Gaba, 2005)

- Know the environment
- Anticipate and plan
- Call for help early
- Exercise leadership and followership
- Distribute the workload
- Mobilize all available resources
- Communicate effectively
- Use all available information
- Prevent and manage fixation errors
- Cross (double) check
- Use cognitive aids
- Re-evaluate repeatedly
- Use good teamwork
- Allocate attention wisely
- Set priorities dynamically

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Components of CRM

Individual, cognitive Elements

- Limitations of Human Factors (“Allocation of Attention”, cognitive aids checklists)
- Dynamic Decision Making
- Planing & Antizipation
- Use all available Informations
- Fixation error

Team Management and Communication

- Leadership & followership
- “Assertiveness”
- Effective Communication (!)
- Distribution of workload
- Call for help early
- Use all available resources

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CRM \neq Simulation

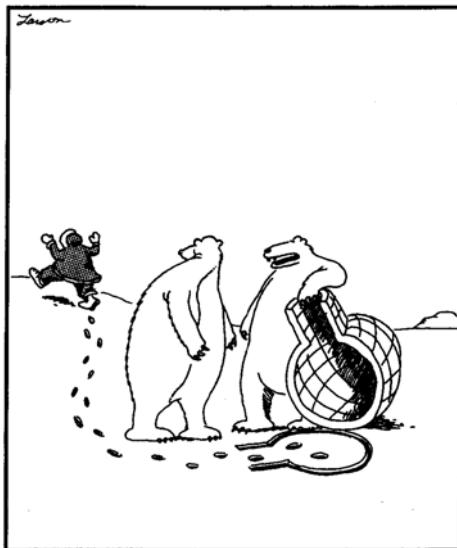
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Typical way to „teach“ CRM

- Presenting principles in overview
 - Explaining what is meant
 - All principles
 - Factual reduction to 3-4 principles
 - Communication
 - Leadership and Followership
 - Teamwork
 - Fixation Error
 - Ambiguous descriptions
 - Instructors do not always have clear picture of what is meant
 - Sticking to single examples
- ➔ Center-specific CRM versions (re-definition)?

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The principles
read easy but
are not so easy
to apply.



"I lift, you grab. ... Was that concept
just a little too complex, Carl?"

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General Idea



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Cognitive Friction

Deeper analysis

Alternative methods to teach CRM

The „bringing CRM to life series“

- Lecture, Reading
- Specialized video clips
- Interactive computer-based training
- Story telling
- Asking questions, facilitated group discussions
- **(Hollywood) Movies**
- Practical exercises
- Observational tasks

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Analysis

- Description
 - What happens during this scene?
 - Who is involved in the decision to “beat to quarters” (alarming the ship)?
- Analysis
 - How does the crew on board influence the decision of the leaders?
- Application
 - In the movie the pirate’s ship hidden in the fog can be a picture for “dangerous spots” in complex systems. Which examples do you know from running debriefings that also show such spots?

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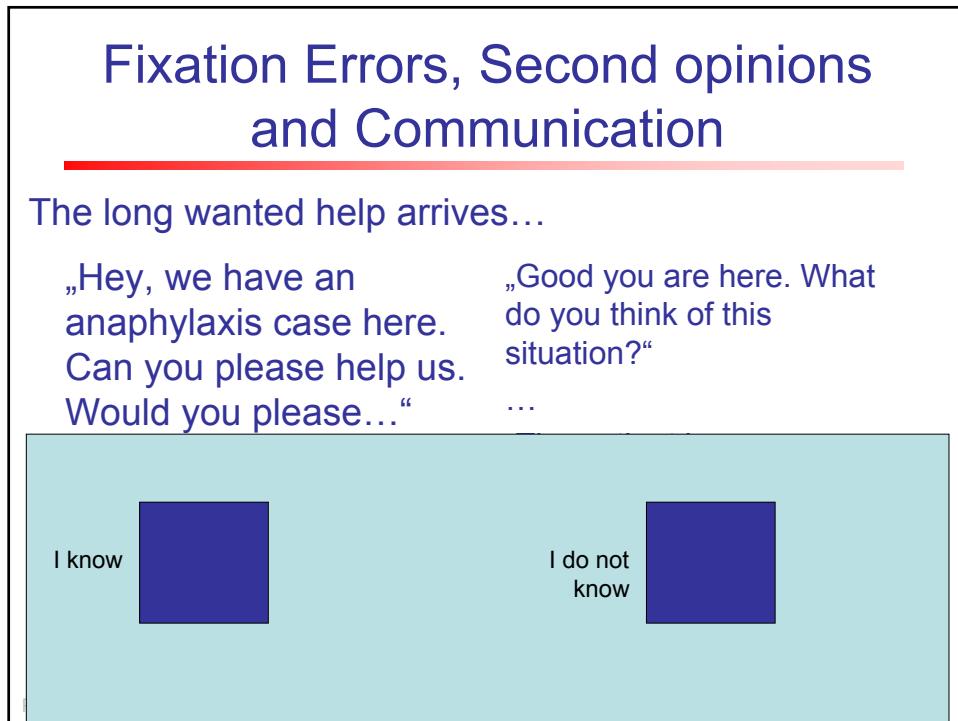
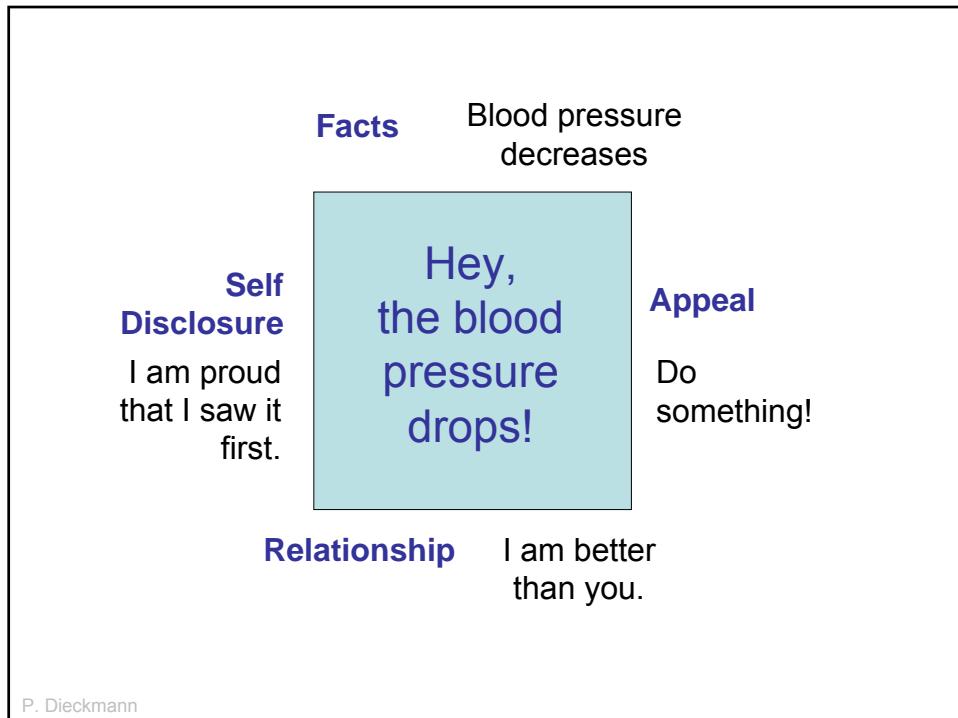
More Communication

Adapted from Schulz von Thun (2001)

In every utterance there are four messages.



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Questions (not) asked...

- She is ill:
 - What are symptoms?
 - When did it start?
 - How did it develop?
 - What is the differential diagnosis?
 - What could we do?
- She made an error:
 - What exactly did happen?
 - Where did the error have its roots?
 - What type of error was it?
 - What can we learn systematically from this error?

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Simpsons...deleted scenes...



Analysis

- Description
 - What is going on in this scene?
- Analysis
 - Which CRM-principles do you see here? Please describe observable behaviours.
 - Focus on communication: which strategy is used to convince the president? Which effects does it have?
 - Which strategy would you have chosen? Why?
- Application
 - Which similar situation do you know in clinical or simulation practice? What did you or others do then? How did it work?
 - What can you take out of this scene?

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CRM in debriefing

- Sticking with description of what happens
 - Especially for positive aspects
- Little analysis
 - How did this principle influence...?
 - How did you see this?
- Superficial discussions
 - Yes, communication was important for you... (How? Why?)
- Fear of „all positive“- scenarios
 - What to say then?
- Application discussion is often missing
 - What can you do to apply/ improve/ repeat positive aspects?
 - How can this principle help you? What can you do?
- Perceived difference between CRM and practice of medicine

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Critique of CRM

- (Too) many
 - Working memory: 7 +/- 2 chunks
 - Practical focus on 3-4 topics (communication, leadership, fixation error, call for help)
- Overlaps
 - Difference between leadership and teamwork
- Too easy
 - No cognitive friction → shallow processing
- Abstract
 - Application in specific context is not easy
 - Psychological reality sometimes different (e.g. leadership and followership)?
 - What is missed?

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Reflection: Using Hollywood Movies to teach CRM

- Goals
 - Focus on specific principles
 - Show aspects very clearly
 - Discuss emotional side
- Points to consider
 - The movie is only one part
 - Analysis equally/more important
 - Relate metaphores in the movie to the acutal situation of participants
- Conduction
 - Watch and discuss
 - Leading questions
 - Group work?
 - Same principle in different movies
 - Show scene and ask participants to continue
 - To make it better
 - To make it worse
 - Cut pictures form the movie to focus discussion
 - Assingments for finding movie sequences for CRM principles

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