



Improvement of Patient Safety by CRM Training

Heikki Teriö, Ph.D

Karolinska University Hospital, Huddinge



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Sea Safety: Expect the Unexpected

”When anyone asks me how I can best describe my experience of nearly forty years at sea, I merely say uneventful.

Of course there have been winter gales and storms and fog and the like, but in all my experience, I have never been in an accident of any sort worth speaking about. I have seen but one vessel in distress in all my years at sea...

I never saw a wreck and have never been wrecked, nor was I ever in any predicament that threatened to end in disaster of any sort.”
From presentation by E.J. Smith, 1907

On April 14th 1912, the RMS Titanic sank with the loss of 1500 lives...

One of which was its Master, Captain E.J. Smith





Patient Safety

Case cont.

54-year old male was operated on his hip joint. He got atrial arrhythmia in combination with high ventricular frequency during the operation.

When he was transferred to the up-wake after the operation he still had these problems and the doctor in charge decided to convert the heart electrically.

More experience doctor was called to conduct the procedure.

There was two different defibrillators – an old one and a new.

They used the old one and thought that it worked as the new one.

They stopped the patients heart and it took 20 minutes before they managed to start it again.

Patient Safety

The human factor is the cause of, or contributes to 90% of all accidents.

The shortcomings in education of the staff contribute very often to the accidents, since the education dose not follow the development of technology.

The demands of the tasks that have to be carried out should match the competence of the individual who is going to carry out the particular task; otherwise there is a risk of an incident or accident.

But, the staff must also realize their own responsibility in their work, provided that they have the qualification to do so, i.e. right education and training.

Investigation routines

- There must be an adequate routine to analyse the causes of the accident or incident.
- The results from these analyses are important in prevention of similar cases in the future.
- The departments of biomedical and clinical engineering should have a central role to work together with the health care staff at the hospitals to fulfil these tasks.

Safety Commission

Aim:

"The human mistakes are not prevented by punishing".

The overall aim of this commission was to increase the knowledge of the basic reasons to the incidents and accidents that has happened in order to prevent occurrence of them.



Safety Commission

It is important that the commission have a broad representation

The members of the commission:

Senior Doctor

Chair

Secretary

The Chief Doctor of the Hospital

Human factor investigator

Swedish Accident Investigation Board

Chief nurse

Emergency department

Chief nurse

Anaesthesiology

Doctor, specialist

Anaesthesiology

Doctor, specialist

Dialysis department

Specialist

Biomedical Engineering



Safety Commission

The Commission has to consider three main questions

- What happened?
- Why it happened?
- How can we avoid that it happens again?

Advise:

- Keep the investigation “bread” in the beginning and go in to the details later, but not too early
- It is important that people thrust on the investigators.



Safety Commission

The Safety Commission's work methodology

- Fact collection phase
- Analysis phase
- Rapport phase
- Follow up

Safety Commission

Case cont.

The Safety Commission investigated the cases and found that the doctor did not use the “sync”-function in a correct way.

She was offered help by a male nurse who knew how to use the old equipment, but she did not accept this help.

She used wrong paddles on the defibrillator, which probably cause the monitoring equipment failure.

The investigation showed that the medical equipment used worked as intended.

It was not possible to clarify exactly what information the doctor got and how it was communicated.

CRM Training

CMR = Cockpit/Crew Resource Management

“ The use and co-ordination of all the skills, knowledge experience and resources available to the crew to accomplish or achieve established goals of safety and efficiency”



CRM Training

Principal ways of achieving the CMR goal

- Learning how people function in accidents
- Focusing on attitudes
- Learning new ways of behaving



CRM Training

Factors that prevent the use of all skills and knowledge in the crew and cause errors:

Individual

- Human errors (slips, mistakes, violations)
- Performance deterioration due to stress
- Decision-making deficiencies
- Perceptual and attention variations (illusions, fatigue)



CRM Training

Factors that prevent the use of all skills and knowledge in the crew and cause errors:

Group

- Group processes (group development stage)
- Group pressure
- Communication
- Group related attitudes
- Prestige



Center for advanced Medical **S**imulation **S**tockholm - for good patient safety



Kandidatundervisning



Prof. Torsten Wredmark och
Socialstyrelsens chef
Kerstin Wikzell



Simulering av operation



Till vänster
Överläk/prefekt, Li Tsai

CRM Training

The simulation / the scenario

- The purpose should be to train CRM – not to check individuals
- The scenario should be realistic
- All situations experienced by the crew should be handled as in real life
- The instructor is “not present” during the simulation, and will not interfere in any way
- The exercise should be recorded on video/pc as a tool for the debrief
- There shall be a debrief



Thank you
for
your attention

