



Crew Resource Management in the Cab

5 Principles for Safe Response & Return

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What are we going to talk about?

Crew Resource Management

- What it is.
- Where it came from.
- How it works.
- Why we should use it.
- How we know it works.



What Is CRM?

- Force multiplier
- Uses all resources
- Enhances supervision
- Improves safety
- Raises level of awareness for those engaged



Where Did It Come From?

- Aviation Community
- Air Crashes Dominated Industry Attention
- Technology Only Went So Far
- 1970's –Dr. Robert Helmreich and CVRs



How Does It Work?

Five Principles

- Communication
- Decision-Making
- Task Allocation
- Teamwork
- Situational Awareness
- Debrief*



Communication

Barriers and bias block effective communication

BARRIERS

Physical

Mental

BIAS

Influences

Communications



Communication Axioms

- Standard language benefits all.
- Practice “active” listening.
- Divide duties to prevent overload.
- Minimize distractions.
- Inquiry/Advocacy
 - Clear, Concise, Complete
 - Respectful
 - Bishop’s Assertive Statement



Communications in the Cab

- Maintain a “sterile” cab.
- Keep AM/ FM radios turned off.
- Do not use cell phones or iPods while in vehicles.
- When possible, use noise filtering hearing protection.
- If hand signals are used, make sure everyone knows what they are.
- Use standard language. No slang for operations.

Decision Making

Axioms

- Recognize problems
- “Drive the truck”
- “Arrive Alive”
- Maintain SA
- Accept input
- Make a decision

Method

- Recognition Primed
- Naturalistic
- Cue Based



Decision Making in the Cab

- Pre-plan travel routes.
- If you are going to overshoot a turn, make the next available turn or u turn instead of trying to make the turn.
- Engage crew.
- Process information, don't just react.



Decision Making Exercise I

Situation:

You are dispatched for an automatic alarm at a commercial structure that has activated at the same time for the last 4 days.

Decision Options:

- Respond emergency? (Why)
- Proceed routine? (Why)



Decision Making Exercise II

Situation:

90 minutes before shift change you are dispatched for “frequent flyer” sick person. Patient insists on being transported to hospital. Round trip back to quarters will take over 2 hours if you transport routine. Transport emergency and you get back in 45 minutes.

Decision Options:

- Transport emergency
- Transport routine



Task Allocation

- Know your limits
- Know your crew's limits
- Capitalize on strengths
- “Eat the elephant one bite at a time”



Task Allocation in the Cab

- Driver drives, officer operates devices.
 - Driver: accelerator, steering wheel, brake.
 - Officer: sirens, air horns, radio, generator starts*.
- Have crews look for hydrants, addresses.



Teamwork

Leadership

- **Authority**
 - Mandated by rank
 - Derived through respect
- **Mentoring**
 - Lead by example
 - Admit mistakes
 - Be technically competent
 - Share knowledge
- **Conflict Resolution**
- **Mission Analysis**

Followership

- **Self-Assessment**
- **Respect authority**
- **Promote leader success**
- **Ego in check**
- **Balance assertiveness**
- **Accept orders**
- **Admit errors**
- **Provide feedback**
- **Adapt**

Teamwork in the Cab

- Officer sets tone for operations.
- The more eyes and ears the better.
- Remind all they have a vested interest in arriving and returning alive.
- Provide atmosphere that promotes speaking up.



Situational Awareness

Point where perception and reality collide

- Reality **always** wins
- Beware of loss factors
 - Ambiguity
 - Distraction
 - Fixation
 - Overload
 - Complacency
 - Unresolved discrepancy



Maintaining SA in the Cab

- Periodically check:
 - What do I know that they need to know?
 - What do they know that I need to know?
 - What do we all need to know?
 - Is the ride smooth?
 - Develop checklists.
 - Seat belts buckled?
 - Running route clear?
 - Warning lights on?
 - “Sterile” Cab?



Debrief

- Pre-Brief
 - Topic
 - Decorum
- Facilitate
- Analyze
 - Operations
 - Human Behaviors



Why Should We Use CRM?

- Still dying and getting injured at steady rate.
- Vehicle incidents # 2 killer of firefighters.
- Proven success in multiple industries with similar structure.



How Do We Know It Works?

- 5th Generation in Aviation Industry
- U. S. Marine Corps Adopting as Basic Operating Philosophy
- Significant Reductions in Injuries and Error
 - Commercial Aviation Industry
 - U.S. Coast Guard
 - U.S. Navy
 - U.S. Air Force
 - Veterans' Administration Hospital System

Review

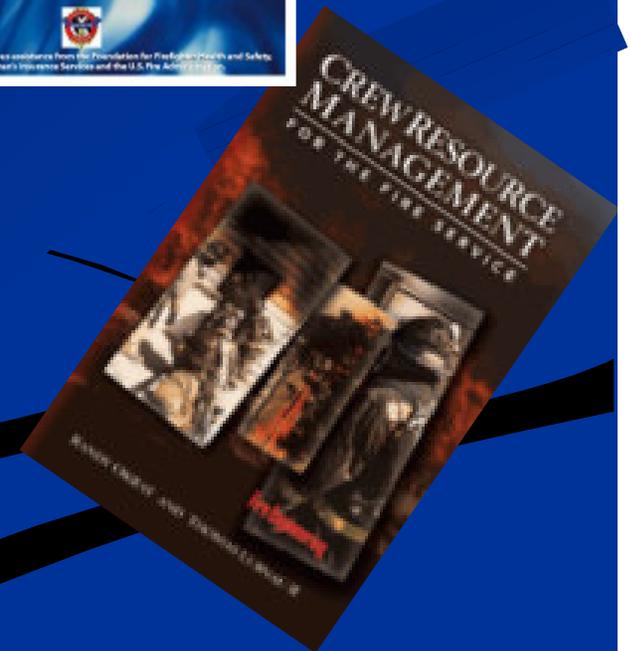
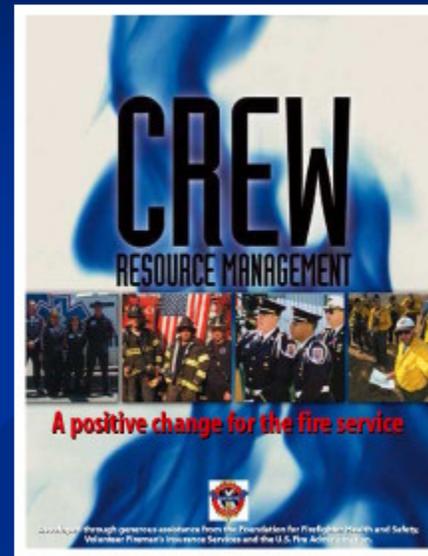
- What CRM is
- Where it came from
- How it works
- Why we should use it
- How we know it works



For more information on CRM

- <http://www.iafc.org/associations/4685/files/CRM%20Manual.pdf>
(free downloadable manual)

- Okray and Lubnau, Crew Resource Management for the Fire Service. Penwell Publishing



www.firefighternearmiss.com

- 427 Reports on Vehicle Incidents. (05/ 09/ 09)
- Rich source of case studies to improve driving knowledge, skills and abilities.
- Resources Page contains safe driving information as well.



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Returning Home at
the End of Every
Shift is Priority 1.

QUESTIONS?