



FIREFIGHTER CARDIOVASCULAR HEALTH & SAFETY RESEARCH SUMMIT 2010

Policy

*“Field implementation of the knowledge gained
through research.”*

Chief C. A. Haigh
Hanover Park Fire Department & Illinois Fire Service Institute



Goal of Fire Service Research

Enhanced Knowledge



Training



Changed Behavior

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Internal Policy Development

Support of Labor

The Process of Research Implementation

Enhanced Knowledge

Acceptance by standard setting/review organizations (NFPA, State Fire Marshal, OSHA, UL, NIOSH, etc.)

Cultural Change

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Support of local organizations (County Fire Associations, MABAS, etc.)

Chiefs & Command Staff)

Training

Acceptance & buy in of City/County/District Administration

Acceptance & buy In of Elected Officials and their willingness and ability to pay.

Changed Behavior

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Limitations of Local Departments to Implement Research Driven Change

1. **Lack of visionary leadership.**
2. **Lack of strong labor / management relations.**
3. **Failure to maintain priorities:**
 1. **Service to community**
 2. **Limit line-of-duty deaths and injuries**
4. **Lack of fire service support by elected officials and community.**
5. **Lack of financial resources.**

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Fire Service Downfall

The Fire Service in general does a poor job of looking beyond the walls of our organizations to find workable solutions to complex problems. To successfully implement change that is driven by today's research, departments must think globally and be willing to change tradition in order to address current concerns.

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Example

**Research driven change
utilizing non-traditional
solutions.**

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Line-of-Duty Death and Illness

❖ **Between 1995–2008:**

- ◆ **649 Firefighters died due to Cardiac or Cerebrovascular Related Events.**
- ◆ **Cardiac or Cerebrovascular events account for 40%-50% of all annual line of duty deaths.**
- ◆ **An additional 700-1000 annual cardiac or cerebrovascular events occur that do not result in a LODD.**

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Line-of-Duty Death and Illness

Decreased number of fires, yet firefighter fatalities and illnesses due to cardiovascular/cerebrovascular incidents remain relatively constant.

Bottom line:
WE HAVE PROBLEM

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Heat Stress - Contributing Factor

Heat stress coupled with:

- ◆ **Work performed**
- ◆ **Protective Equipment**
- ◆ **Thermal Environment**
- ◆ **Health Status**
- ◆ **Fitness Level**
- ◆ **Hydration Level**

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The Role of Rehab

Rehab when implemented properly can reduce the detrimental effects of heat stress and lesson the potential for a cardiovascular/cerebrovascular incident.

The Question: How to do this with limited human and financial resources?

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Partnership Opportunities

- ❖ Utilize CERT to develop a volunteer response team (Fire Corps) trained and equipped to provide on-scene rehab services.



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Fire Corps

❖ 5-year study:

- ◆ HPFD -- \$770,000
- ◆ \$127,000 -- Average annual insurance loss

❖ Team Costs

- ◆ \$20,000 (mostly grant funded)
- ◆ Since teams inception: \$326,000 reduction in total insurance loss



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Fire Corps

- ❖ **Consists of 17 volunteers**
- ❖ **Pager alerted**
- ❖ **Respond on the initial alarm to all reported structure fires**
- ❖ **The team operates a decommissioned ambulance outfitted with rehab equipment and supplies.**
- ❖ **Training**
 - ◆ **Basic CERT**
 - ◆ **Specialized training on how to provide rehab conducted through IFSI.**
- ❖ **On-scene partnered with paramedics who conduct medical assessments while Fire Corps members provide hydration, cooling and nourishment.**



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Research / Fire Service Partnership

- ❖ **Fire Service Change needs to be driven by research.**
- ❖ **Research needs to be driven based on Fire Service concerns.**
- ❖ **It takes courage to change the status quo and find solutions to difficult problems with limited human and financial resources.**

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