

# **QMS...The Missing Piece**

## **LMGT-2007**



**EMS Operations Manager Brian Hricik, NREMT-P**  
**EMS Supervisor Ray Whatley, MBA, NREMT-P**

**“How to correct the behavior and performance of an individual when the QA process reveals deficits in areas. Most QA proposals simply advise that, when errors are detected, the employer...‘should take appropriate corrective action.’”**

Page, J. (2004). Discipline with due process. In J. Fitch (Ed.) Prehospital Care Management. (p. 73).

# Alexandria Fire Department

- 9 Stations
- 8 Engines
- 5 24hr Medics
- 1 PTMU
- 3 Trucks
- 2 BCs
- 2 EMS Sups
- 1 SHSO
- 1 BCA



# EMS Specialty Teams

- Bike Medic
- Tactical Medic
- Haz-Mat Technicians
- Peer Fitness Trainer



# Objectives

- OEMS QM Rules and Regulations
- Identify the process
- Identify stumbling blocks
- What do we do with the information?
- What do we do now?

# Why are we doing this?

## Article 2

### Purpose and Applicability

#### 12VAC5-31-20. Responsibility for regulations; application of regulations.

##### A. These regulations shall be administered by the following:

1. State Board of Health. The Board of Health has the responsibility to promulgate, amend, and repeal, as appropriate, regulations for the provision of emergency medical services per Article 2.1 (§ [32.1-111.1](#) et seq.) of Chapter 4 of Title 32.1 of the Code of Virginia.
2. State Health Commissioner. The commissioner, as executive officer of the board, will administer these regulations per § [32.1-16](#) of the Code of Virginia.
3. The Virginia Office of EMS. The director, assistant director and specified staff positions will have designee privileges for the purpose of enforcing these regulations.
4. Emergency Medical Services Advisory Board. The EMS Advisory Board has the responsibility to review and advise the board regarding EMS policies and programs.

**Virginia Rules and Regulations**  
**Effective October, 10, 2012**

##### B. These regulations have general application throughout Virginia to include:

1. No person may establish, operate, maintain, advertise or represent themselves, any service or any organization as an EMS agency or as EMS personnel without a valid license or certification, or in violation of the terms of a valid license or certification issued by the Office of EMS.
2. A person providing EMS to a patient received within Virginia whether treated and released or transported to a location within Virginia must comply with these regulations unless exempted in these regulations.

#### Statutory Authority

§§ [32.1-12](#) and [32.1-111.4](#) of the Code of Virginia.

#### Historical Notes

Derived from Virginia Register Volume 19, Issue 3, eff. January 15, 2003; amended, Virginia Register Volume 29, Issue 1, eff. October 10, 2012.

12VAC5-31-600

# Quality Management Reporting

**“An EMS agency shall have an ongoing Quality Management (QM) Program** designed to objectively, systematically and continuously monitor, assess and improve the quality and appropriateness of patient care provided by the agency. The QM Program shall be integrated and include activities related to patient care, communications, and all aspects of transport operations and equipment maintenance pertinent to the agency’s mission. The agency shall maintain a QM report that documents quarterly PPCR reviews, supervised by the operational medical director.”

# 12 VAC 5-31-10

## Definitions

“Quality management program” or “QM” means the **continuous study of and improvement of an EMS agency or system** including the collection of data, the identification of deficiencies through continuous evaluation, the education of personnel and the establishment of goals, policies and programs that improve patient outcomes in EMS systems.”

# 12VAC5-31-1890

## Responsibilities of Operational Medical Directors

“B. Responsibilities of the operational medical director regarding medical direction functions include but are not limited to:

6. Reviewing and auditing agency activities to ensure an **effective quality management program for continuous system and patient care improvement**, and functioning as a resource in the development and implementation of a comprehensive mechanism for the management of records of agency activities including prehospital patient care and dispatch records, patient complaints, allegations of substandard care and deviations from patient care protocols or other established standards.”

# Building your process

- Identify who needs to be present
- Identify who reviews what and why
- Confidentiality/HIPAA
- Gathering data
- Getting the information out

**NONDISCLOSURE AGREEMENT**

To: \_\_\_\_\_ (ID No: \_\_\_\_\_)

You are requesting new or continued membership in the Quality Management System Committee ("QMS Committee") of the Alexandria Fire Department (the "Fire Department"). Virginia state law provides that the proceedings and records of the QMS Committee (the "QMS Information") constitute non-public, privileged information and are protected from disclosure to third parties in the absence of a valid court order. Accordingly, as a condition to furnishing such QMS Information to you, the Fire Department is requiring that you agree, as set forth below, to treat confidentially any non-public, privileged QMS Information (the "Privileged Information") that is furnished to you by, or made available to you by virtue of your membership in, the QMS Committee, or by any person acting on its behalf, in whatever form (oral or written, including electronic mail or other media, and regardless of whether or not any such materials are marked privileged or confidential), and whether furnished on or after the date of this agreement.

You agree that you will use the Privileged Information solely for the purpose of conducting the legitimate quality management activities of the QMS Committee and will not use or disclose to a third party any of the Privileged Information in any way for any other purpose unless authorized to disclose such information by the Fire Department's Operational Medical Director or EMS Operations Manager, or pursuant to a valid court order.

At any time, the Fire Department may terminate your access to the Privileged Information, or you or the Fire Department may elect to discontinue your membership in the QMS Committee. Upon the occurrence of any such event, or upon the Fire Department's written request, you will promptly deliver to the Fire Department's QMS Chairperson (or his/her designee), or destroy, all Privileged Information in your possession, custody or control, and all copies thereof, except to the extent you are advised that destruction of such Privileged Information is prohibited by law. Notwithstanding your return or destruction of such Privileged Information, you will continue to be bound by your obligations hereunder with respect to all such Privileged Information.

Your signature below will constitute your agreement with respect to the subject matter hereof.

<b>Alexandria Fire Department</b>	<b>Prospective QMS Committee Member</b>
Signature: _____	Signature: _____
Name: _____	Name: _____
Date: _____	Date: _____

Patient  
Outcomes

Provider  
Training

GIGO

# STUMBLING BLOCKS

Brown, Kirby (65 Years - Male) - Patient Care Report

Signatures		Attachments		Narrative			
Patient Information	Patient Hx	This Encounter	Treatments & Assessments	Treatment Checklist	Supplies	Billing	Active Checklist

Patient Number: 1 Incident Number: 1-2006-9208-0

Last Name: Brown Date of Birth: 07/14/1941 SSN: Unknown Patient Search

First Name: Kirby Age: 65 Years CO DL#: Ethnicity: White, non-Hispanic

Middle Name: Gender: Male

Patient Residence

Home Address: 3030 Summit Drive  
Address, Cont: Apartment 101  
City: Eastglen  
State: Colorado Zip: 80139  
County: Douglas  
Country: United States of America

Patient does not have a home address or the address is unknown  
 Use incident location for home address  
 Use international address for patient's home address  
 Patient is a resident of our jurisdiction

Phone No. (720) 555-6158 Home

Primary Physician

Last Name: Ackerman  
First Name: David  
Middle Name:  
Phone Number: (303) 555-9832 Other

Print Download EKG Save and Close Save Cancel

Are you getting the information back from the hospitals?



# HIPAA Federal Interpretation



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Secretary

Assistant Secretary for  
Preparedness & Respor  
Washington, D.C. 20201

AUG 13 2012

## Sharing Patient Health Outcome Information between Hospitals and EMS Agencies for Quality Improvement

This information sheet provides clarification as to the circumstances when a hospital and/or emergency department (ED) may share patient outcome information with the Emergency Medical Service (EMS) for quality improvement. The information provided is based on the requirements of the Federal Health Insurance Portability and Accountability Act (HIPAA)

If both the hospital and EMS provider are HIPAA covered entities, the hospital may share patient health outcome information with the EMS provider for certain health care operations activities of the EMS provider, such as quality improvement activities, as long as both entities have (or have had in the past) a relationship with the patient in question.

The hospital may share the information without the patient's authorization, but must make reasonable efforts to disclose only the minimum amount of individually identifiable health information needed for the activity.

<sup>1</sup>Covered entity: Includes a health care provider who transmits health information in electronic form in connection with a financial or administrative health care transaction for which the Department of Health and Human Services has developed HIPAA standards. If the EMS provider does not submit electronic claims to a health plan or government payer (such as Medicare or Medicaid), the provider is not a covered entity.

<sup>2</sup>Health care operations: Encompasses a number of activities to support health care treatment and payment functions, including quality assessment and improvement activities, (including outcomes evaluation and development of clinical guidelines), provided that the obtaining of generalizable knowledge is not the primary purpose of any studies resulting from such activities.

Source: HIPAA Privacy Rule at 45 CFR 164.501  
[http://edocket.access.gpo.gov/cfr\\_2007/octqtr/45cfr164.501.htm](http://edocket.access.gpo.gov/cfr_2007/octqtr/45cfr164.501.htm)

<sup>3</sup>Relationship: Includes a current or prior relationship between a patient and each covered entity. Example: EMS rendered treatment to and transported patient X to an ED for health incident Y. The EMS and ED therefore both have a relationship with patient X for health incident Y.

Source: HIPAA Privacy Rule at 45 CFR 164.506(c)(4).

Sincerely,

Nicole Lurie, MD, MSPH  
Assistant Secretary for Preparedness and Response

[Home](#)[Data](#)[Reports](#)[Find](#)[Learn](#)

## What is FOIA?



8.01 - 581.17 =

-573.16



[LIS > Code of Virginia > 8.01-581.17](#)

[leg1.state.va.us/cgi-bin/legp504.exe?000+cod+8.01-581.17](http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+8.01-581.17)

**8.01-581.17.** Privileged communications of certain committees and entities. A. For the purposes of this section: "Centralized credentialing service" means (i) ...

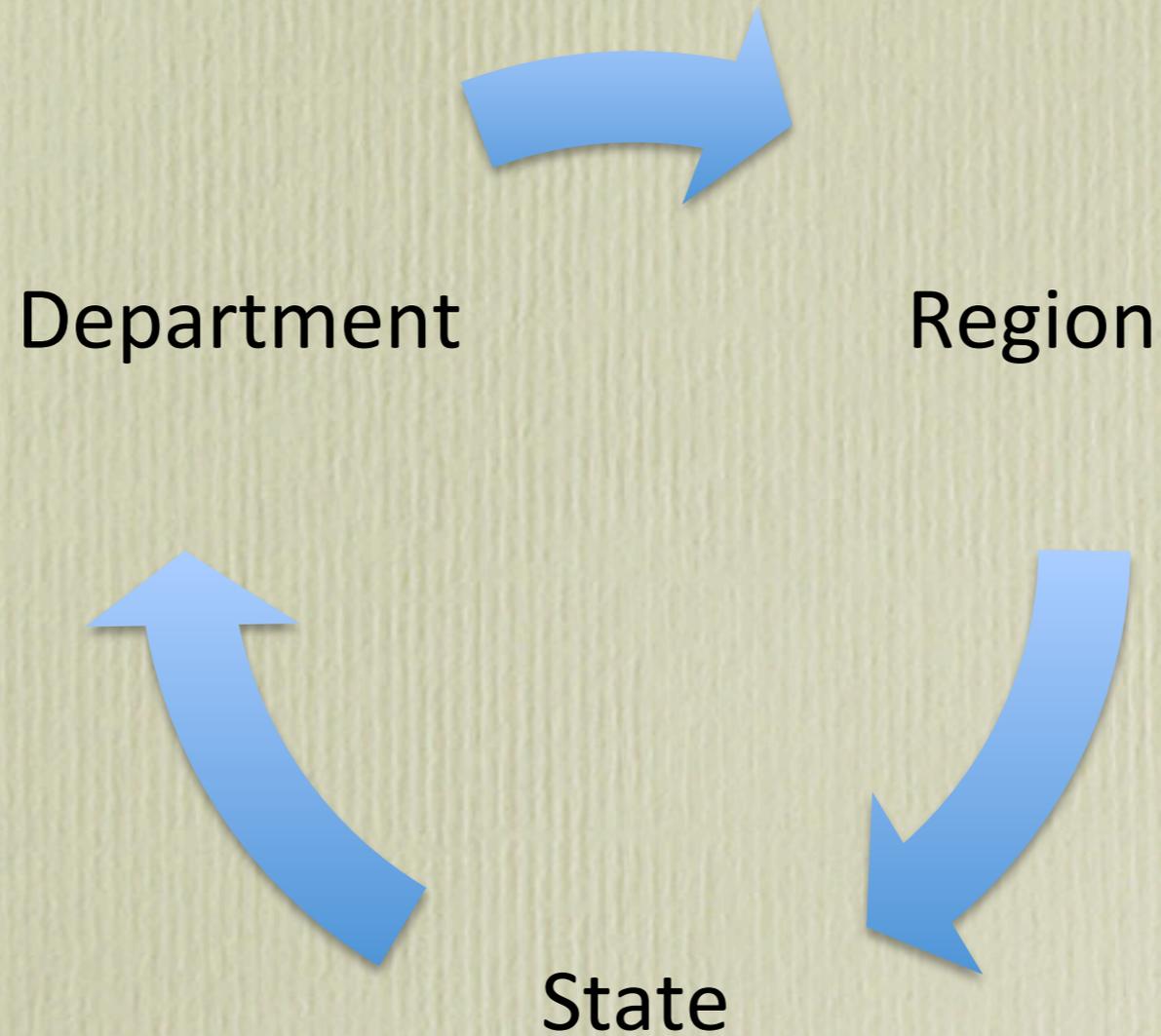
## § 8.01-581.17

### Privileged communications...

...quality assurance, quality of care, or peer review committee established pursuant to guidelines approved or adopted by...(e) the Office of Emergency Medical Services or any regional emergency medical services council...are **privileged communications which may not be disclosed or obtained by legal discovery** proceedings unless a circuit court, after a hearing and for good cause arising from extraordinary circumstances being shown, orders the disclosure of such proceedings, minutes, records, reports, or communications.

- Information known by a witness with knowledge of the facts or treating health care provider is not privileged or protected from discovery merely because it is provided to a committee, board, group, commission, or other entity specified in § [8.01-581.16](#), and may be discovered by deposition or otherwise in the course of discovery.
- A person involved in the work of the entities referenced in this subsection shall not be made a witness with knowledge of the facts by virtue of his involvement in the quality assurance, peer review, or credentialing process.

# Who's involved?



# Who's involved?

**DEPARTMENT**



Region

**you, us, they, me...**



State

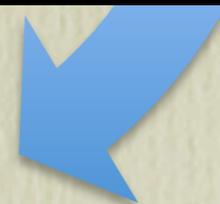
# Who's involved?

Department



**REGION**

**Regional Council  
Performance Improvement Committee  
OEMS Program Representative**



State

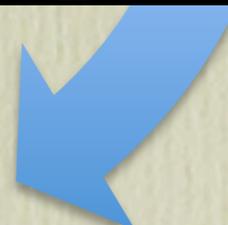
# Who's involved?



Department

Region

**VPHIB**  
**OEMS Program Rep**  
**Regulation & Compliance**

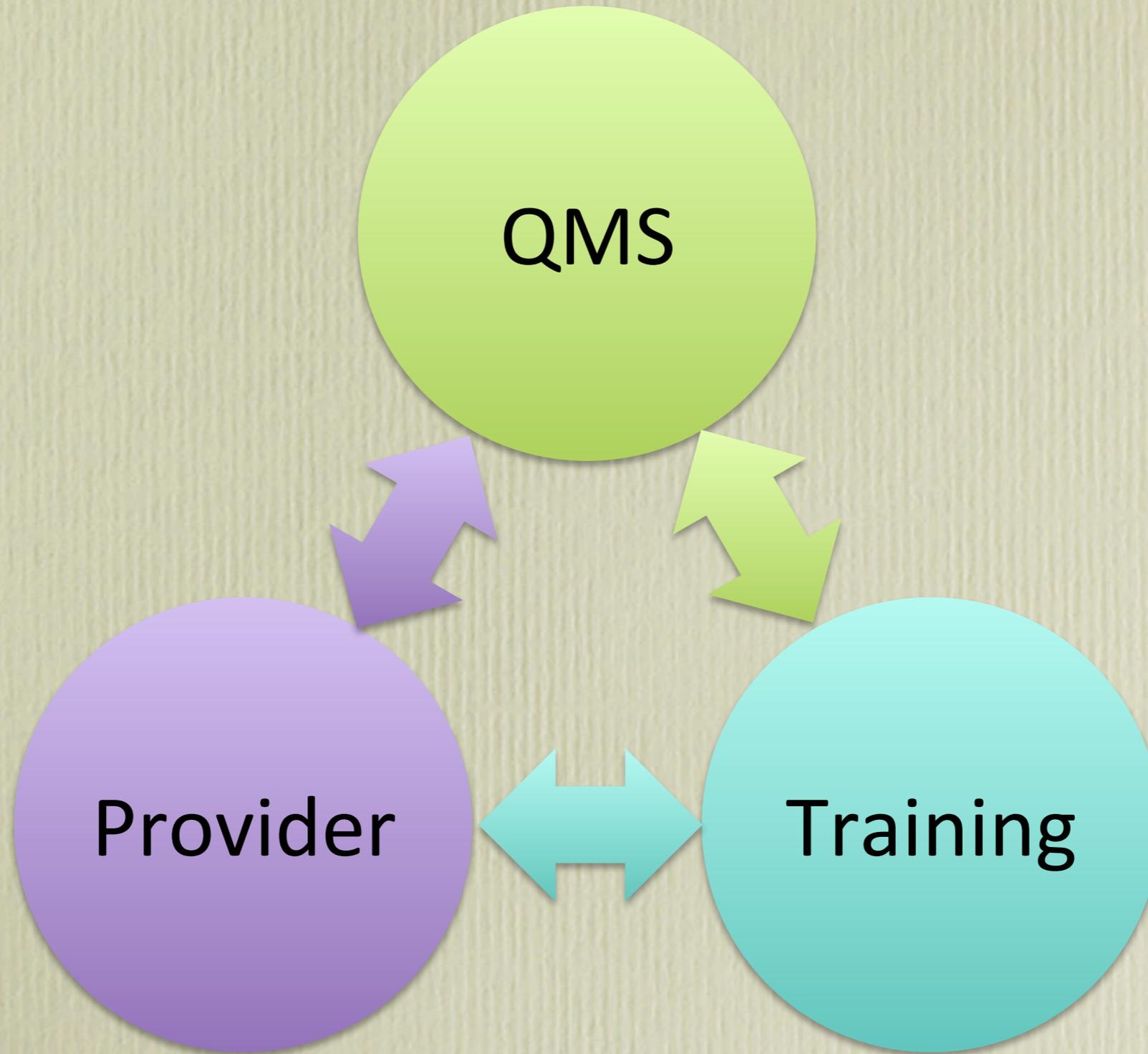


**STATE**

Bonus question

VPHIIB

Is this your system?



# Best Practices

- Recognize the problem
- Understand the need to change
- Implement the change
- Standardize performance

# Who's keeping score?

- QMS Grading System
  - Self reporting
  - Committee consensus recommendation

## QMS Grading Criteria

D - Documentation issue

0 - No issue

1 - Protocol Deviation, without harm

2 - Protocol Deviation, with potential for harm

3 - Protocol Deviation, with documented harm

# High Risk Callback Program

- One person calls those identified as high risk refusal to see how they are doing
- All that have been contacted have been appreciative
  - Low cost with big rewards

# Patient Satisfaction Survey

## Fire Department Patient Survey Form

The City of Alexandria Fire Department is committed to providing a high quality emergency and non-emergency services. We would appreciate if you would take time to answer a few questions about your recent experience with our department. It is our goal to constantly monitor and seek opportunities to improve the service we deliver and your feedback is critical for us to meet our goal.

SURVEY CODE:

DATE OF SERVICE:  (mm/dd/yyyy)



	Completely Disagree	Disagree	Neither Agree nor Disagree	Agree	Completely Agree
1. The emergency personnel appeared professional in appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The emergency personnel arrived in a timely fashion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. The emergency personnel took away my pain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## ALEXANDRIA FIRE DEPARTMENT

Patient Survey Card Medic207



SURVEY CODE

*ABC123*



We are committed to providing excellent patient care.  
Please take our Patient Satisfaction Survey at  
[www.alexandriava.gov/PatientSurvey](http://www.alexandriava.gov/PatientSurvey)

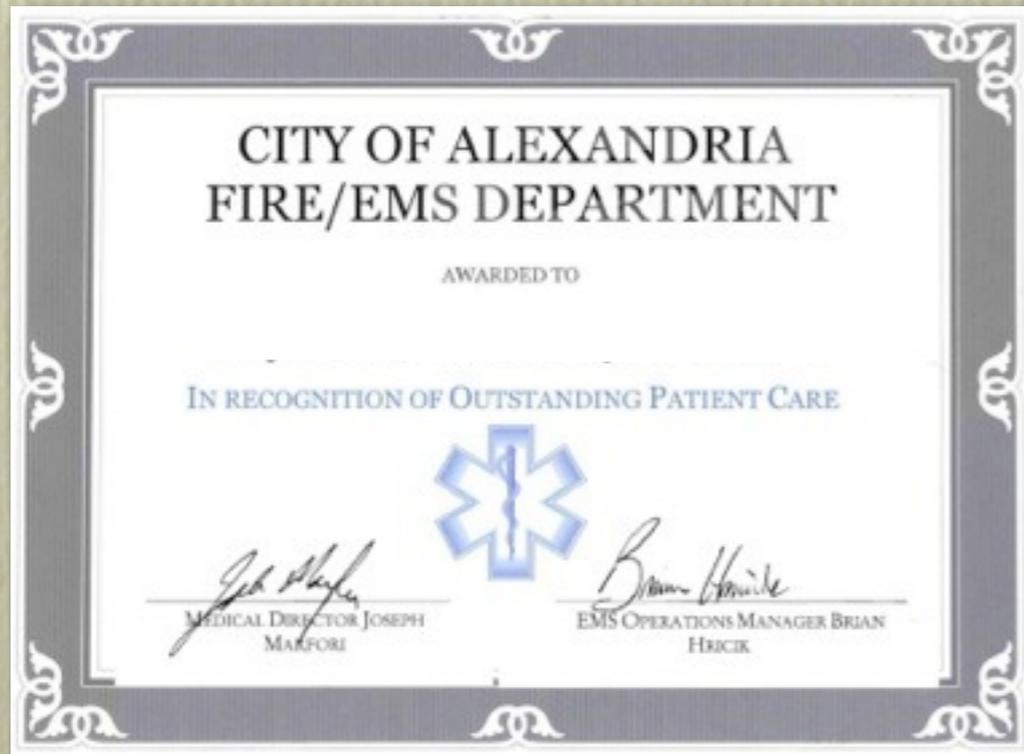
To obtain a copy of your patient care report,  
please contact the Alexandria Fire Department  
at 703.746.5253

The Alexandria Fire Department is dedicated to our  
community, our profession and each other

[www.alexandriava.gov/patientsurvey](http://www.alexandriava.gov/patientsurvey)

# Positive Recognition

## Call of the Quarter Award Program



Emergency Medical Services Council  
*City of Alexandria, Virginia*

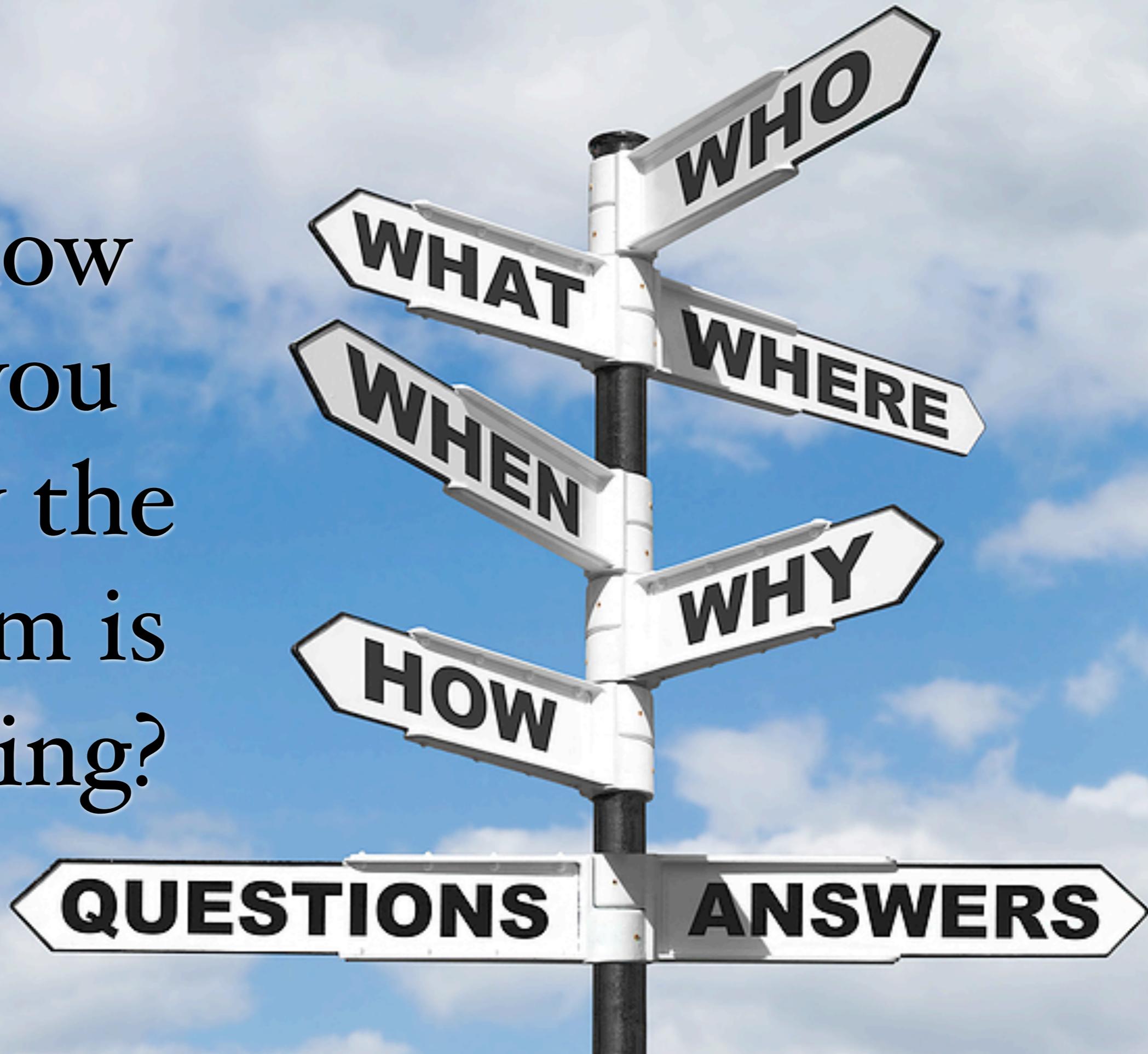
Office of the Chair: Pamela Copley, PO Box 320608, Alexandria, Virginia 22320  
Tel: (703) 909-4168 Fax: (703) 684-7476 E-mail: [PvonGruber@aol.com](mailto:PvonGruber@aol.com)

*For immediate release: March 27, 2008*

### Six Alexandria Medics and Firefighters Receive EMS Council Awards

Six Alexandria medics and firefighters were awarded the Alexandria Emergency Medical Services Council's "Call of the Quarter" honors on March 24, 2008, in a ceremony at Inova Alexandria Hospital. The six men used exceptional skill, teamwork, and judgment under great pressure to save the life of a 67-year-old man injured in a one-car accident late in 2007.

So how  
do you  
know the  
system is  
working?



# Information Overload

**Layers of data**

**Piles of data**

**Tiny granules**



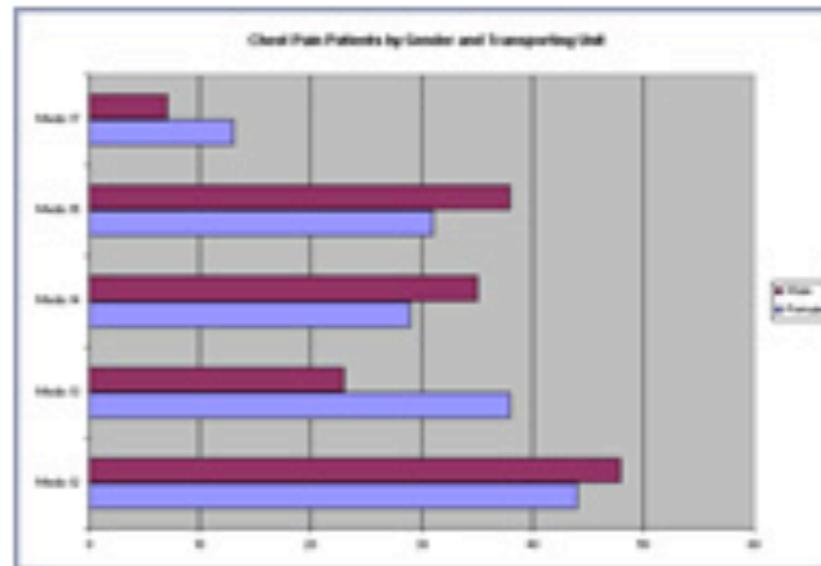
## Data Analysis

The FireManager includes extremely powerful query and analysis tools that make it easy to put your data to work for you.

**Query by Forms:** Our Query by Forms technology allows you to ask the tough questions and quickly get the answers you need. Simply enter your search criteria on a data entry form and push a button to find out...

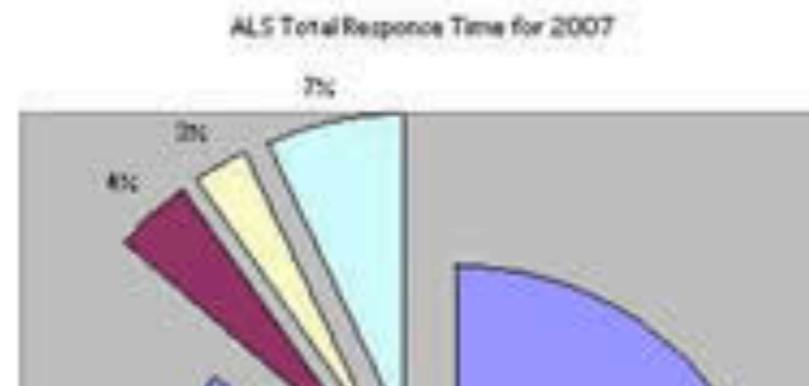
- ▶ How many chest pain patients did not receive a 12-lead EKG?
- ▶ Have we administered morphine to any patients with systolic blood pressures less than 90?
- ▶ What was our dollar loss for fires involving vehicles last month?

**Data Export:** Once you retrieve your data using Query by Forms, you can easily export selected fields to Microsoft Excel for further processing. Create lists, pivot tables, charts and graphs to answer the tough questions and give your presentation sizzle.



**Time Log Scoring:** All departments should have stated goals for response time to incidents. The FireManager makes it easy to define these goals and to measure your performance.

Once the goals have been established, every time stamp that comes over from your CAD system is analyzed and a letter grade is issued. An 'A' means that the goal was met. A 'B' means that the goal was missed slightly, and so on. At any point in time, you can simply query the data using Query by Forms, export it to a spreadsheet, and create a presentation-ready graph for tonight's council meeting or tomorrow's staff meeting.

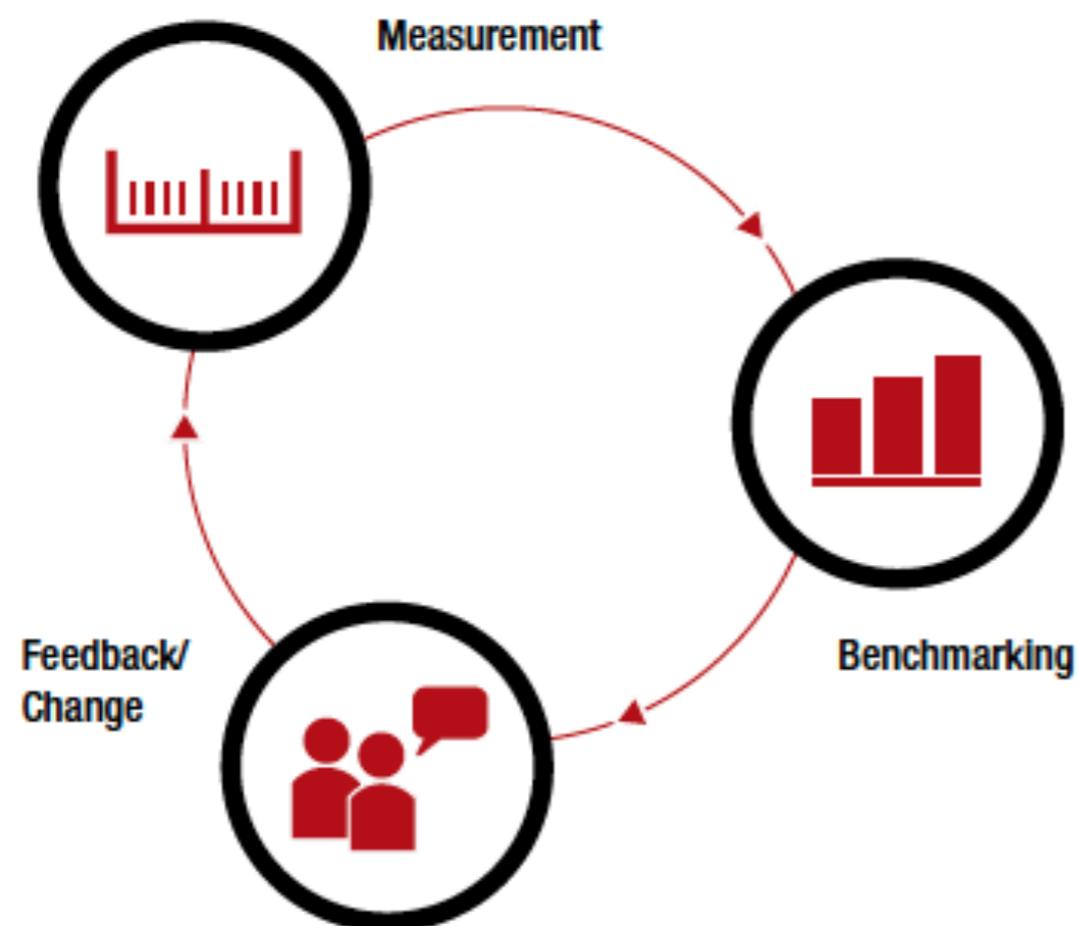


## Quality improvement elements of a resuscitation system

### **CODE-STAT™ 9.0** DATA REVIEW SOFTWARE

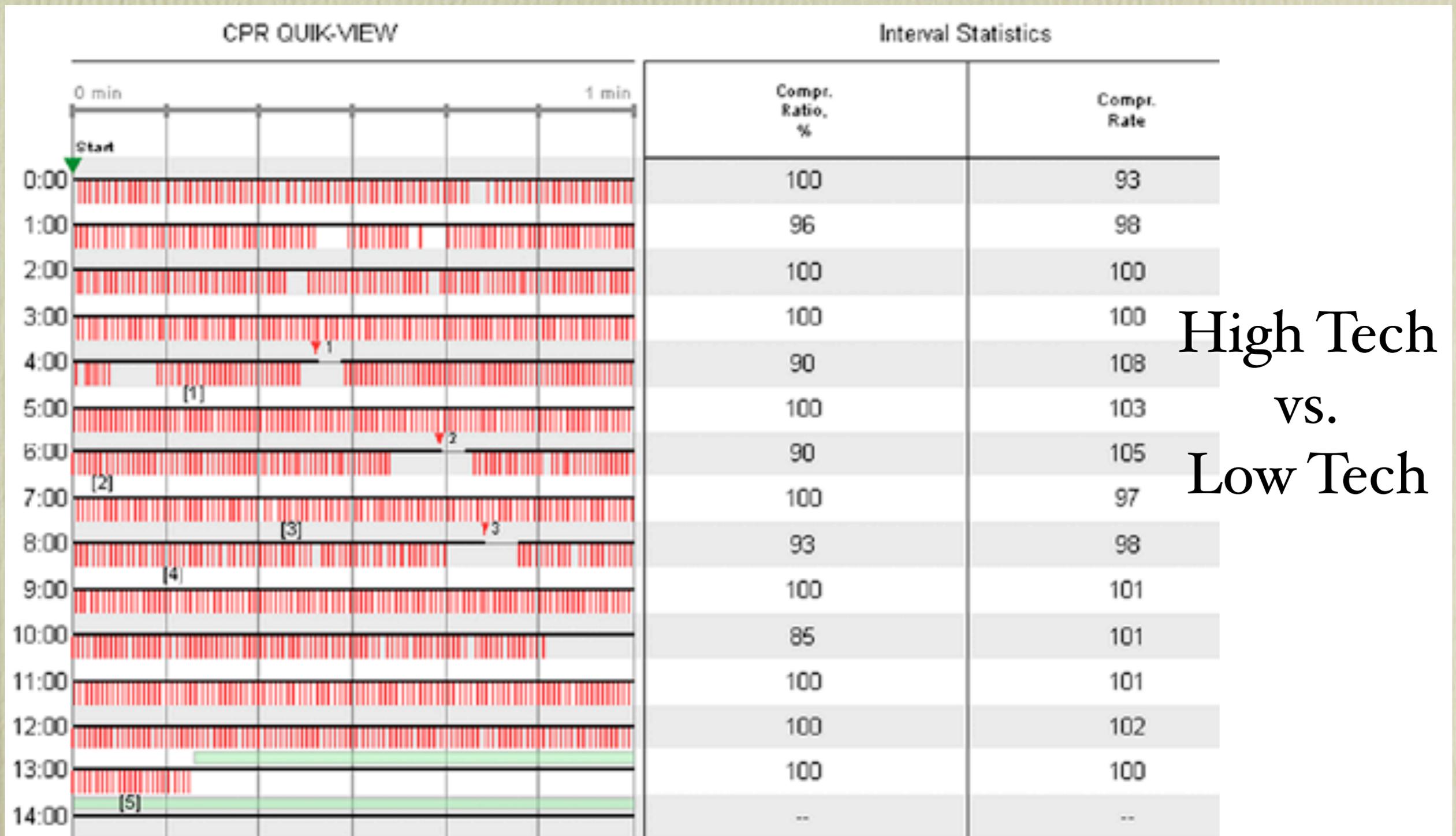
#### **Christenson study and CODE-STAT software**

A recent study released by Dr. John Christenson, et al. shows that chest compression fraction appears to be an important determinant of survival from cardiac arrest. CODE-STAT 9.0 makes it easier to measure and analyze chest compression performance by annotating relevant data onto the patient's continuous ECG report and automatically calculating CPR statistics such as compression rate and hands-on time.'



**Disclaimer: This is not a  
product endorsement**

# Data Trends



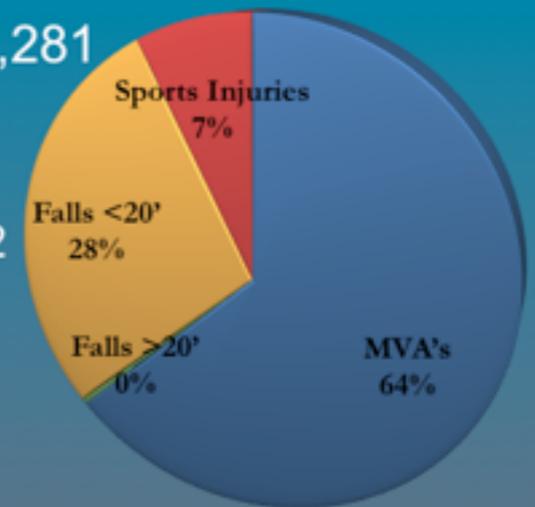
# Making Things Better...

- Regional Performance Improvement Committee
- Identifying local/regional trends
- Training & Education
- New Initiatives
- Community Outreach

January 1, 2010 to June 30, 2010

■ Total number of calls: 5,281

- MVA's: 327
- Falls 20 feet or less: 146
- Falls greater than 20 ft: 2
- Sports injury: 38



**Best Practices**

# **Improving Sudden Cardiac Arrest Outcomes**

**The Redmond Experience**



<http://www.physio-control.com/learning/clinical-topics/>

# Seattle Medic One



Officers Yost, Byrum, and Anderson,

December 29, 2009

As part of ongoing Quality Assurance, we are continuing with CPR defibrillator review that provides a measure of how much of the resuscitation was spent performing hands-on CPR – also termed the “CPR fraction”. This report is meant to supplement the training and review by the Redmond Fire Department as well as the individual case review by Steve Perry at the EMS Division. The goals of this reporting are constructive. We do not share individual agency information and mandate that this report be used strictly as a tool for improvement.

More and more evidence indicates that efforts to limit CPR interruptions can help improve the chance of survival. King County Fire Departments have continued to work toward this goal of near continuous CPR and as a consequence have seen important improvements in the portion of resuscitation during which CPR was performed. Ideally AED resuscitation enables a CPR fraction approaching 90% - a scenario where the only interruptions are essentially due to the pause for rhythm analysis and shock. You recall that County-wide the CPR fraction for 2008 was 65%, far better than other EMS systems and better than historical performance in King County, though with some room for improvement locally.

The current report provides the CPR fraction during the first 5 minutes of resuscitation for the Redmond Fire Department and all of King County agencies combined for the months of June through November, 2009, along with the AED download fraction for this 6 month period. The goal is 100% AED downloads so that we can provide the most accurate assessment of care.

1. On average, the Redmond Fire Department attained a CPR fraction 83% for the period of June 1 – November 30, 2009 and is a substantial improvement over the first portion of 2009 when the Redmond Fire Department attained a 66% fraction.
2. For all of King County from June through November 2009, the CPR fraction was 69% with the highest single agency CPR fraction being Redmond – congratulations.
3. The Redmond Fire Department submitted two-thirds of possible AED downloads – I will push for a greater proportion. I appreciate the effort aimed at data retrieval and encourage these ongoing efforts.

Across all agencies in King County, we hope to increase CPR performance so that we reach or exceed 75% CPR during resuscitation. The hope is that this will translate to even better survival.

I also want to acknowledge your Fire Department’s commendable efforts as part of the ROC studies that evaluated real-time CPR feedback, the ITD valve, and Analyze Early versus Analyze Late strategy of EMS CPR. These were landmark studies that will inform the updated international guidelines planned for publication late in 2010. The Redmond Fire Department along with the rest of the King County EMS agencies set the standard with regard to study protocol adherence and most importantly set the bar for what communities should expect with regard to survival following cardiac arrest. Please keep up the hard work.

66% CPR Fraction Time



## CPR Summary Report

CODE-STAT™ Database: code-statdb Report generation date: 05/15/2011

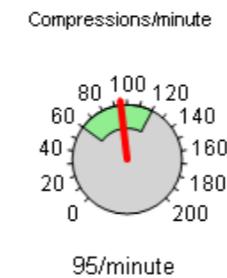
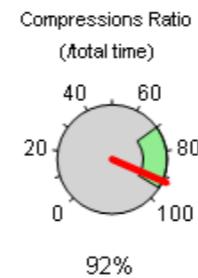
Number of Cases in Database: 290  
 Number of Cases Selected: 7  
 Statistical Parameters: 1000-0300-3000-05  
 Selection Criteria: Year-to-Date 04/15/2011 - 05/15/2011, Continuous Report(s)

CPR Summary Selection Criteria: All Cases

Incident ID	Case Start	Device	Compr. Ratio, %	Compr. /min	CPR Edited?
2011051116041400-MEDIC 23	05/11/2011	LP15	90%	95	Yes
2011051018555000-MEDIC 19	05/10/2011	LP15	94%	117	Yes
2011050622083500-MEDIC 19	05/06/2011	LP15	93%	8	Yes
2011050610563300-MEDIC 19	05/06/2011	LP15	92%	92	Yes
2011050507114500-MEDIC 35	05/05/2011	LP15	91%	108	Yes
2011050414165300-MEDIC 35	05/04/2011	LP15	89%	100	Yes
2011042414284600-MEDIC 35	04/24/2011	LP15	90%	95	Yes

### LP15 CPR Summary

Device	Compr. Ratio, %	Compr. /min
LP15	92%	95



92% CPR Fraction Time

# Their Solution

## Improving Cardiac Arrest Outcomes

### The Richmond Experience

- Data collection
- Rapid feedback
- Annotated progress reports
- Debriefing
- Monthly statistics
- Regular code team drills



### Best Practice

#### Improving Hands-on Compression Ratio

**The Situation**  
In May 2009, Radmond Medic One learned that their service had a recorded compression hands-on ratio of 60%—the lowest in the entire county. Although their service performs more CPR on cardiac arrest calls than the national average for EMS responders, Radmond Medic One knew they had to improve. They were acutely aware of research showing that increasing the time spent on chest compressions and minimizing interruptions can lead to increased resuscitation.<sup>1</sup> The Radmond team wanted to work on a performance improvement plan.

Six months later, their hands-on time was 80%—the highest in the county. The improvement lasted—their hands-on compression ratio measured 80% or better for all of 2010. This best practice story demonstrates how a team of dedicated EMS professionals recognized a performance weakness impacting their patient care and collaboratively built a program for improvement.

**The Recommendation**  
Recognizing the problem was the first step. To improve, Radmond Medic One needed to understand the cause, identify how to improve and implement the steps.

Their success came from a strong understanding of how all the components—people, process and tools—work together to deliver results.

"It was a real eye-opener for us" to learn that Radmond's compression fraction time was 60% compared to 70% for all of Seattle & King County Medic One, says Jim Duran, EMS chief for Radmond. "We recognized that to be successful, we had to become an educational and learning organization, to look at challenges with a different set of eyes." He tasked paramedic Dana Yost with improving the agency's CPR response.

Although much better than the 40-50% compression fraction for EMS agencies nationwide,<sup>2</sup> Radmond wanted to improve because "there is plenty of data showing that as you increase compression fraction time you increase resuscitation," says Yost.

"We now had the ability to look at our own data," said Yost, since Radmond had recently upgraded to LIFEPAK<sup>®</sup> 15 monitor/defibrillators, the LIFEPAK<sup>®</sup> System and CODE-STAT<sup>™</sup> Data Review Software with Advanced CPR Analytics from Physio-Control.

"You can't figure out what you can do better if you don't collect data. And you can't figure out what you can do better if you don't LOOK at the data. Our new philosophy is 'maesura, improve, maesura, im-

prove,'" Yost maintains. "And I'm not talking about administrators, I mean the people on the scene, the people who are going to change things out on the scene, the people working on cardiac arrests."

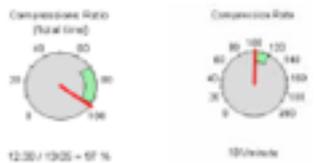
**The Approach**

- Focus on compression fraction
- Quality Improvement (QI) instead of Quality Assurance (QA)
- Peer review of cases by fellow paramedics
- Rapid feedback to paramedics
- Monthly review of statistics by all hands
- Mock code drills as a team

**The Implementation**  
**Data where it needs to go**  
At the end of each cardiac call, medics push a button on the LIFEPAK 15 monitor/defibrillator to transmit the code data via high speed modem through the LIFEPAK System to the CODE-STAT database at Radmond Medic One. The LIFEPAK System then sends an alert to the smart phones of paramedics designated as "annotators" to let them know a case is ready for review.

**Peer review by paramedics**  
The medic/annotator marks up the start and end of the cardiac arrest call, verifies the record is correct (such as looking for wave form artifact that is falsely recorded as compressions) and notes ROSC (Return to Spontaneous Circulation), if any. New annotators got up to speed after an hour of training and annotating three cases. Two annotators are designated for each shift. This aids in making sure at least one annotator is usually available.

"Any agency could do the exact same thing as us," using a handbook of step-by-step instructions on how to annotate the call and where to send the report, says Yost.



Thank you for what YOU do  
each and every day and  
**THANK YOU** to our **VETERANS**

Brian Hricik

[brian.hricik@alexandriava.gov](mailto:brian.hricik@alexandriava.gov)

Ray Whatley

[ray.whatley@alexandriava.gov](mailto:ray.whatley@alexandriava.gov)

