

CGR



Prove It: The Art of Showing You are Doing a Good Job (or You're Not and Fixing It !)

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Introduction

Father of three active kids

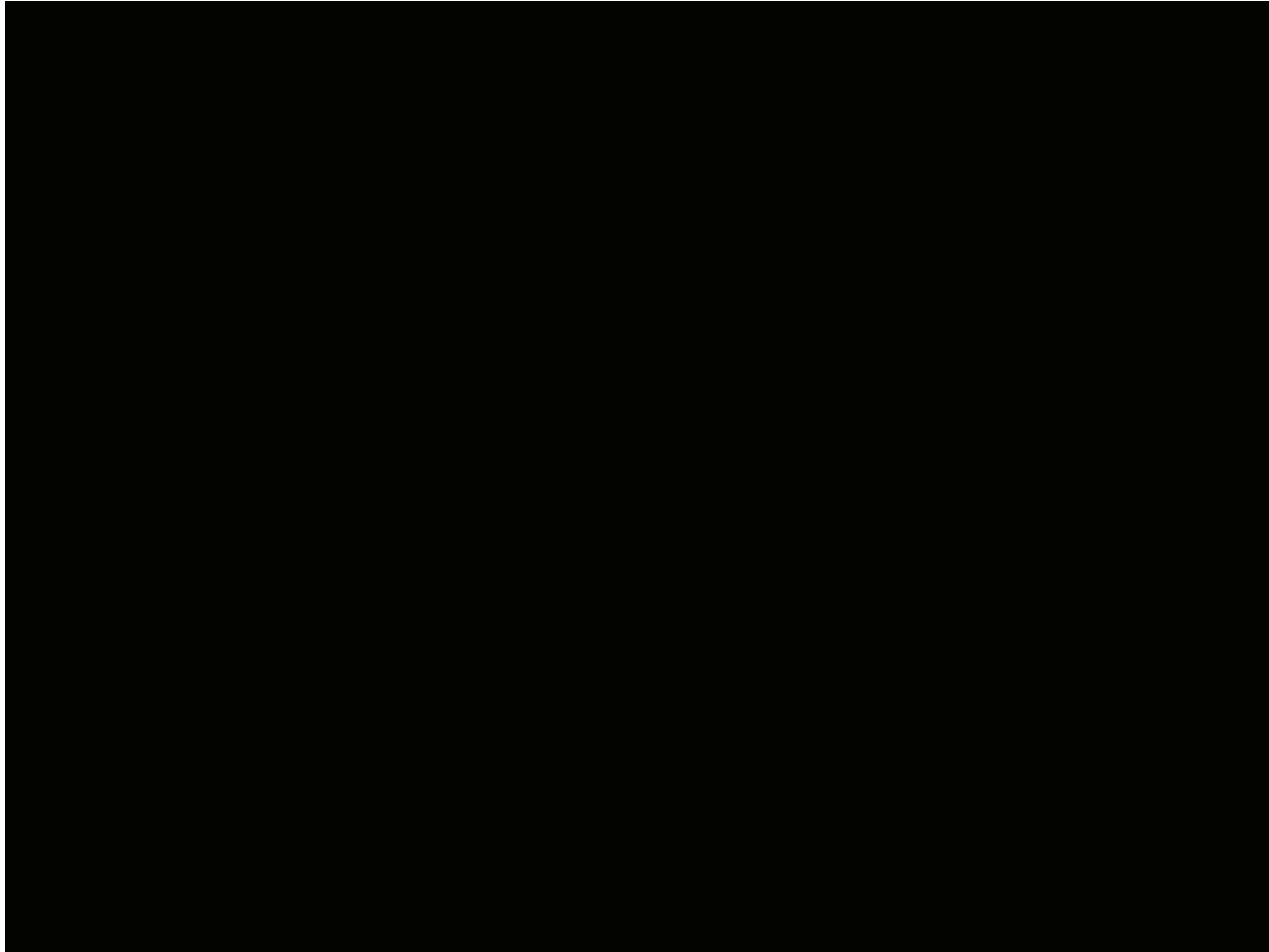
Paramedic since 1995

Southeast Quadrant Mobile
Critical Care Unit

16 years as manager in
EMS operations and
education

Senior Associate at Center
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After Lunch Laugh



Outline

- ▶ What Exists? Why Measure?
- ▶ Financial Picture
- ▶ Operational Measures
- ▶ Patient Care
- ▶ Celebrate Successes, Identify Challenges
- ▶ Sharing the News
- ▶ Moving Forward

Key Points

- ▶ Identify your key constituents and what is important to them
- ▶ Identify the key measures for the constituents
- ▶ Measure the activities of your organization
- ▶ Define your measures, be specific
- ▶ Create a “dashboard” to track your status

Who cares at about EMS?

- ▶ Press
- ▶ Public
- ▶ Peers
- ▶ Politicians
- ▶ Physicians
- ▶ Payers
- ▶ Patients
- ▶ Providers



Financial Picture

▶ Sources of Revenue

- ▶ Property Taxes
- ▶ Donations
- ▶ Endowment
- ▶ Service contracts
- ▶ Grants
- ▶ Charges for service
 - ▶ What is your Average Patient Charge?
 - ▶ What is your initial collection rate?
 - ▶ How about your final collection rate?
 - ▶ What is your payer mix?



Direct Expenses for EMS Care

- ▶ The people in the rig or on duty
 - ▶ What is the value of a volunteer?
- ▶ Don't forget benefits and incentives
- ▶ Vehicle operation costs
- ▶ Medical supplies
- ▶ ALS Cost for ALS intercept



Indirect Costs for an EMS Agency

- ▶ Administrative Staff
 - ▶ Can you quantify volunteer time?
- ▶ Building costs (mortgage, rent, utilities)
- ▶ Insurance
- ▶ Legal and Audit costs
- ▶ Telephone and IT
 - ▶ IT contracts related to ePCR may fall into direct
- ▶ Training and Conferences
- ▶ Uniforms
- ▶ Recruitment and Retention
- ▶ Reserve Funds

What matters?

- ▶ Work with an accountant who knows your business
- ▶ Understand your financial statements from the billing folks and the accountant
- ▶ Have some key points ready
 - ▶ Average Patient Charge
 - ▶ Direct cost per call
 - ▶ Total cost per call
 - ▶ Annual revenue and expenses
 - ▶ What do you do with the excess revenue?
 - ▶ What is the value of the volunteer?
 - ▶ What is the cost of comparable service?



Gratuitous Trauma Scene



Operational Measures

- ▶ Community Demographics
 - ▶ Population, Households, Age, Income Level
 - ▶ Concentrations of population
- ▶ Requests for service
 - ▶ Distribution – Temporal and Geographic
 - ▶ Frequency
 - ▶ Type of Calls
- ▶ Call coverage
 - ▶ Primary units, Back Up Units, Mutual Aid, Automatic Aid
- ▶ Response times
- ▶ Unit Hours (scheduled and ad hoc)
- ▶ Number of medics, drivers, dispatchers



Community Demographics

- ▶ Sources
 - ▶ Town or Village Clerk
 - ▶ County GIS Service
 - ▶ Census.gov
 - ▶ Wikipedia
 - ▶ Chamber of Commerce
- ▶ Variability
- ▶ Why?
 - ▶ Cost per capita
 - ▶ Calls per capita
 - ▶ Variation w/ Population



What is a request for service?

- ▶ Any time your agency is asked to respond to an emergency?
- ▶ What about stand by events?
- ▶ If you send a flycar, is it a separate request?
- ▶ What data do you gather about your requests for service?
 - ▶ Times
 - ▶ Location
 - ▶ Nature
 - ▶ Units responding
 - ▶ Crew



How do you define Response Times?

- ▶ Are all responses created equal?
- ▶ Do you measure from the patient perspective?
- ▶ What are the intervals?
 - ▶ Dispatch processing
 - ▶ Chute Time
 - ▶ Crew mustering
 - ▶ Crew preparation
 - ▶ Driving Time
 - ▶ Patient Access Time
- ▶ Do you count mutual aid calls?
- ▶ What about “exceptions”?



What is the response time “standard”?

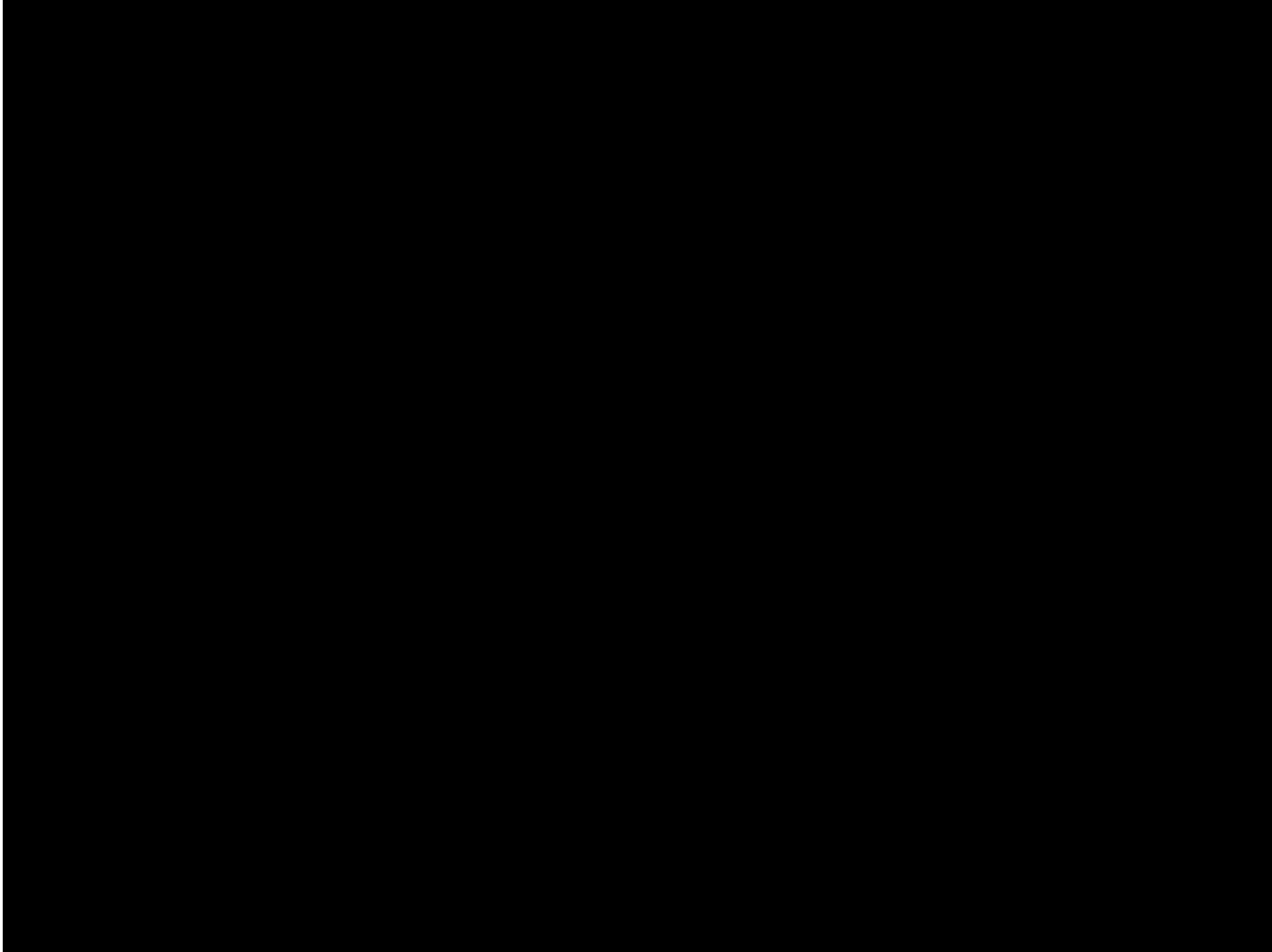
- ▶ There is no standard, period .
- ▶ Hypoxia needs to be treated within 4 to 6 minutes
- ▶ The NFPA has published standards, but not used universally and may be impossible to meet
- ▶ No state law, policy or regulation
- ▶ Refer to the list of p’s earlier



Average vs. Fractile Time

- ▶ In an average, half of the calls are better, half the calls are worse
- ▶ Fractile is more precise measurement
- ▶ Set a goal for your agency:
 - ▶ 90 percent of life threatening dispatches will be responded to in 540 seconds or less (9 minutes)
 - ▶ 90 percent of non-life threatening dispatches will be responded to in 1080 seconds or less (18 minutes)
- ▶ Track your progress

Funny Cop Scene



Operational Measures

- ▶ Drop Times
 - ▶ Time to leave a patient at the hospital
- ▶ Length of Calls
 - ▶ Dispatch to In Service time
- ▶ Unit Hours
 - ▶ Number of hours a staffed ambulance is ready to respond, or did respond
- ▶ Unit Hour Utilization
 - ▶ Staffed hours per week, day or month
 - ▶ Number of requests for same period
 - ▶ Divide requests by Unit hours to get a ratio

Clinical Measurements

- ▶ Develop in consideration with REMAC and Medical Director
- ▶ Consider both agency and call based measurements
- ▶ Agency Measurements
 - ▶ Epi-Pen
 - ▶ Glucometer
 - ▶ Albuterol
 - ▶ Tourniquets
 - ▶ Lifting Procedures
 - ▶ Safety Operations
 - ▶ Narcan
 - ▶ CPAP



Call Based Measurements, Part I

- ▶ Trauma Calls
 - ▶ Time on Scene
 - ▶ Proper triage to trauma center
 - ▶ Proper use of spinal immobilization
- ▶ Cardiac Arrest Calls
 - ▶ Bystander CPR
 - ▶ Time of AED use
 - ▶ Evidence of focused CPR
 - ▶ Proper interventions
- ▶ Chest Pain Calls
 - ▶ Use of Aspirin
 - ▶ ALS called



Call Based Measurements, Part II

- ▶ Stroke Calls
 - ▶ Use of Assessment Tool
 - ▶ Was a glucometer used?
 - ▶ Transport to a Stroke Center
- ▶ Altered Mental Status
 - ▶ Was a glucometer used?
 - ▶ Appropriate assessments performed
- ▶ Suspected Narcotic Overdose
 - ▶ Appropriate use of naloxone



Clinical Measures, Part III

- ▶ Respiratory Distress
 - ▶ Use of oxygen and/or albuterol
 - ▶ Lung sound assessment
 - ▶ Pulse oximetry
 - ▶ Use of CPAP
- ▶ Pediatric Patients
 - ▶ Proper assessment/care of ALTE
- ▶ Syncopal Episodes
 - ▶ Proper assessment and treatment (ALS and 12 Lead)
- ▶ Refusal of Transport
 - ▶ Proper documentation of assessment
 - ▶ Proper refusal paper work completed



Create a Dashboard

Requests Received	492					
Requests Answered	467	95%	Transports	352	75%	
Time	2300-0459	0500-1059	1100-1659	1700-2259	Total	
Echo	6	12	18	12	48	10%
Delta	10	20	30	15	75	15%
Charlie	15	30	41	24	110	22%
Bravo	22	32	51	30	135	27%
Alpha	14	28	45	37	124	25%
Total	67	122	185	118	492	
	14%	25%	38%	24%		

Dashboard Design

Response Times										
	< 2 min	2 to 5 min	6 to 9 min	10 to 12 min	13 to 15 min	16 to 18 min	> 18 min	Mutual Aid	< 9 min %	<18 min %
	<120	120 to 300	301 to 540	541 to 780	781 to 900	901 to 1080	>1080			
E	5	12	18	8	2	0	0	3	78%	100%
D	7	15	27	15	5	3	0	3	68%	100%
C	6	8	32	40	9	7	3	5	44%	97%
B	10	13	25	33	42	7	3	2	36%	98%
A	4	12	8	28	32	24	4	12	21%	96%
Sum	32	60	110	124	90	41	10	25		
	7%	13%	24%	27%	19%	9%	2%			

Sharing the News

- ▶ Talk to your stakeholders
- ▶ Back to the list of P's
- ▶ Meetings
- ▶ Press Release
- ▶ Annual Report



Moving Forward

- ▶ Sustain the practice of data analysis
- ▶ Periodically review the dashboard contents
- ▶ Make a big deal of the successes
- ▶ Be realistic about the shortfalls



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Sources

▶ Using CPIs

- ▶ <http://www.jems.com/article/ems-insider/using-cpis-help-prevent-legal-troubles>

▶ California Metrics

- ▶ http://www.emsa.ca.gov/ems_core_quality_measures_project

▶ NAEMSP on Response Times

- ▶ <http://www.naemsp.org/Documents/Position%20Papers/POSITION%20Considerations%20in%20Establishing%20EMS%20Response%20Time%20Goals.pdf>

- ▶ Evidence-Based Performance Measures for Emergency Medical Services Systems: A Model for Expanded EMS Benchmarking
A Statement Developed by the 2007 Consortium U.S. Metropolitan Municipalities' EMS Medical Directors (Appendix)

<http://informahealthcare.com/doi/abs/10.1080/10903120801903793>

THANK YOU
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