

EMS SYSTEM DESIGN: If you've seen one EMS System, you've seen one EMS System...

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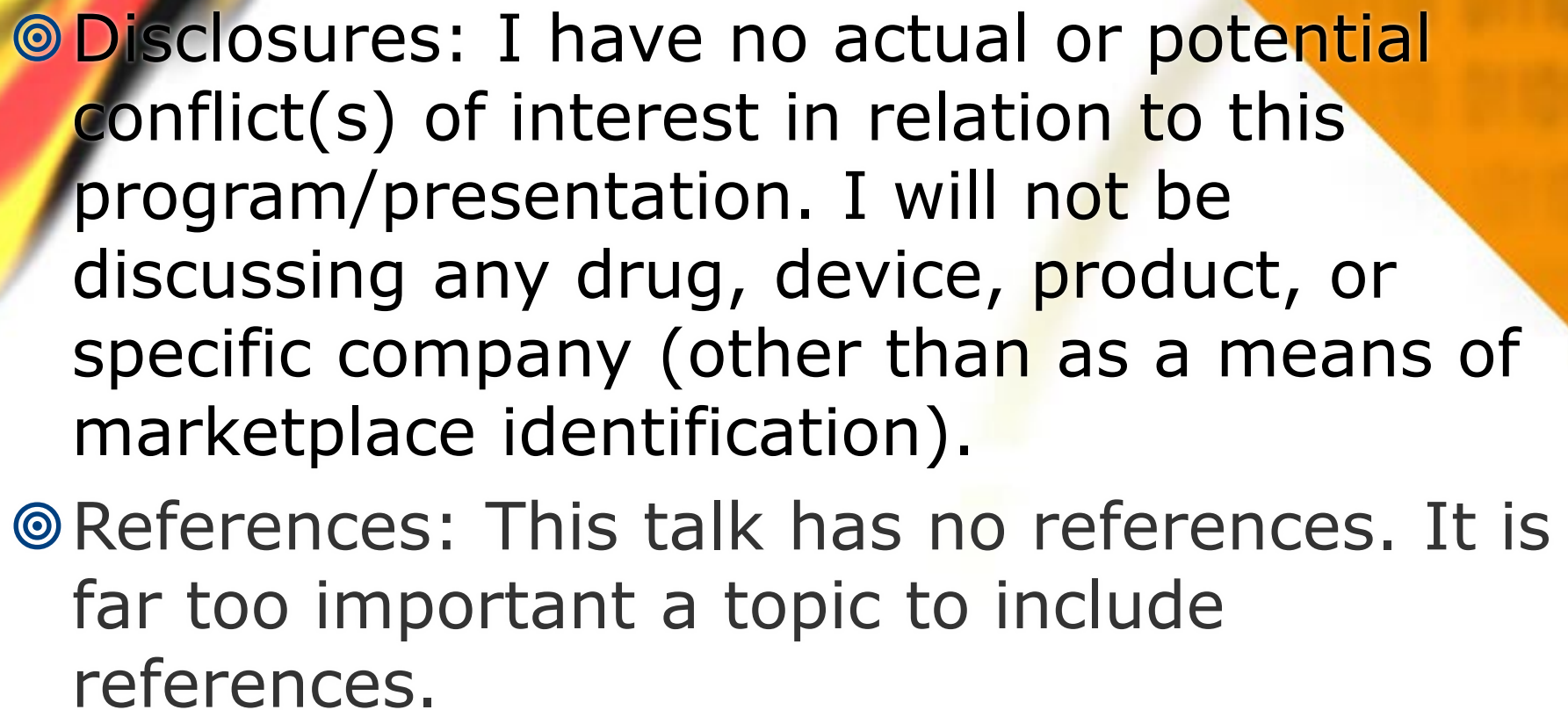
Facing COVID-19
Stronger Together

#vitalitystrong



vitality



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- © Disclosures: I have no actual or potential conflict(s) of interest in relation to this program/presentation. I will not be discussing any drug, device, product, or specific company (other than as a means of marketplace identification).
 - © References: This talk has no references. It is far too important a topic to include references.

Great Quote!

◎ ***There is never
a traffic jam on
the extra mile.***

◎ **Captain Larry
Robeson,
Toledo
(Oregon) Fire
Department**



EMS System Design

⊙ Fire Based EMS

⊙ Transport

- ⊙ Single role
- ⊙ Dual-role
(firefighter/
EMTs)

⊙ Non-transport

- ⊙ Single role
- ⊙ Dual-role
(firefighter/
EMTs)
- ⊙ Medical
First
Responders
(First aid
and AEDs)

⊙ Non-Fire Based EMS

- ⊙ Third service
- ⊙ Law
enforcement
-based
- ⊙ Private (non-
profit or for
profit)
- ⊙ Hospital
based
- ⊙ Other

© Fire-based

© Transport

© Single role



Fire-Based EMS

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(firefighter
/EMTs)



Fire-Based EMS

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(Firefighter/
EMTs)

- ◎ Medical First
Responders
(First aid
and AEDs)

- * What
level of
care is
delivered?

- * Who
oversees
the care?



Fire-Based EMS

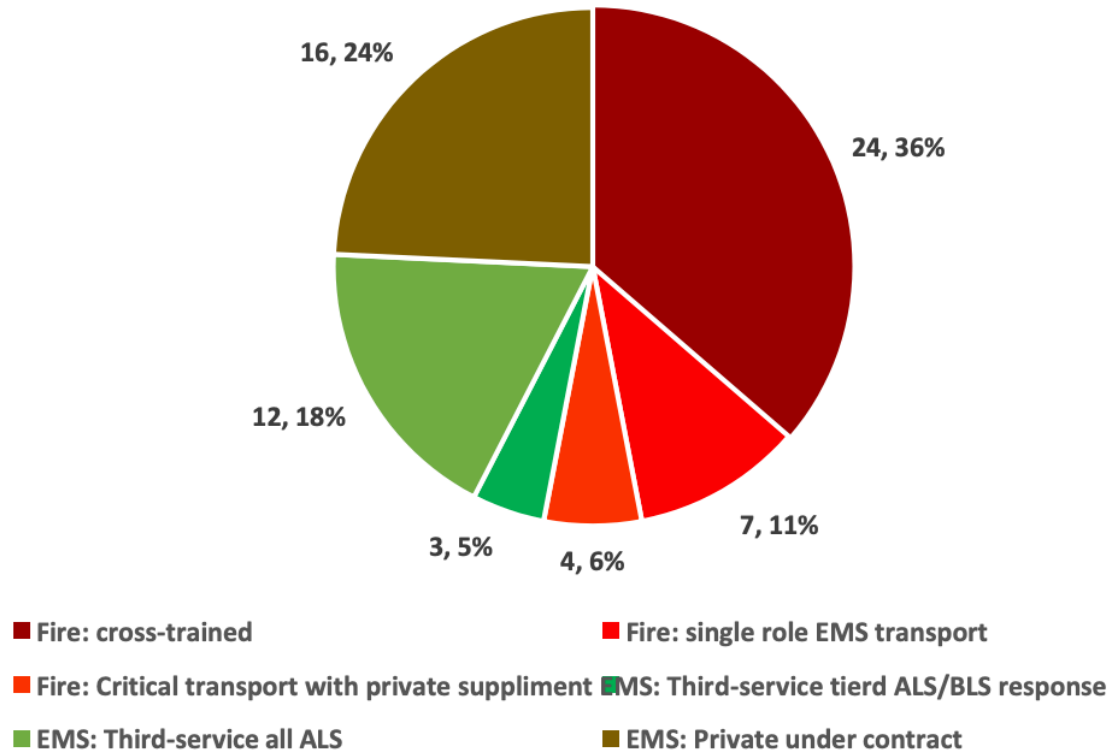
- ◎ Most common EMS system design in the US
- ◎ 10 Largest cities in U.S. use some form of Fire Based EMS (most are moving toward dual role)
- ◎ Many fire departments are incorporating EMS into their operations
- ◎ Single role Fire-Based EMS fading fast



Fire-Based EMS

Fire-Based EMS

EMS Systems in the top 66 US Cities.



Why Have Fire-based EMS?

History... it's the way EMS started

State / Municipal statute

Single agency concept / Single point of incident control

Cost savings (less duplication)

Politics / Revenue generation

What About Prevention?



- ◎ Fire prevention
 - ◎ One of the greatest achievements of the last 25 years
 - ◎ Fire Departments are literally putting themselves out of business

What About Prevention?



⊙ EMS Prevention

- ⊙ EMS itself is secondary prevention
- ⊙ Little to no primary prevention (as practiced in the fire service) or tertiary prevention (as practiced in medicine)

What About Prevention?



- ◎ EMS should be involved in primary prevention
 - ◎ Education
 - ◎ Injury and illness prevention strategies
 - ◎ Assisting with primary care initiatives

What About Prevention?



- ◎ The fire service provides an effective model for this...
 - ◎ Phoenix FD “psych van”
 - ◎ NFPA’s “Risk Watch” injury prevention
 - ◎ “Stop, drop and roll” *is* EMS primary prevention!

The problem with Fire based EMS

***"The fire service: 150
years of tradition,
unimpeded by
progress."***

© Michael Panzegrat,
Chicago Fire
Department

- © Many firefighters do not want to do EMS
- © Fire Suppression and Prevention will always be the primary mission of the fire service



Great Quote!

© ***On the whole, no one calls us when they have done something smart.***

© ***Lieutenant T. Van, City of Myrtle Beach Fire Department, South Carolina.***

Third Service EMS

- ◎ Third service (Police and Fire being the first two)
 - ◎ Usually municipal
 - ◎ Primary function is EMS but may also perform rescue



Third Service EMS

- ③ Third service models dominate in systems where EMS is mandated to be provided by a governmental division that stretches across several fire departments (e.g., county-based systems)





Third Service EMS

- ③ A variation on the 3rd service model is to combine EMS with another government provided service (i.e., law enforcement, beach patrol, public works).

One Hat



Many Hats





The problem with third service models

- ◎ Third service models are inherently inefficient from an administrative standpoint
 - ◎ Police and Fire Departments already have dispatch centers, personnel, administration, etc.



The problem with third service models

- ◎ Some EMS associated services will likely need to be provided a fire department or police department (i.e., HazMat, Heavy Rescue)

Great Quote!

© ***Being in charge is a lot like being pretty; if you have to tell people that you are, you're not.***

© ***Scott Corrigan, Gig Harbor Fire***

◎ Private services

- ◎ Often contracted to the responsible government agency
- ◎ Shares almost as much history as Fire Based EMS
 - ◎ Funeral Homes
 - ◎ Private Doctors (including “Father” Mayo)



Private EMS

◎ Private services

◎ Nationwide Services

◎ AMR

◎ Large Regional Providers

◎ Superior Ambulance

◎ Arcadian Ambulance

◎ Many “Mom and Pop” companies



Private EMS

Private EMS

🎯 Private services

- 🎯 In U.S., non-emergency ambulance transport is almost solely via private services



- ◎ Private services
 - ◎ Hospital Based Systems
 - ◎ Increased training levels
 - ◎ ED Staffing



Private EMS

◎ Hybrids

- ◎ Private Fire Departments
 - ◎ Industrial
 - ◎ Contract
- ◎ Private Public Safety Departments
- ◎ Multiple Model Companies



Private EMS

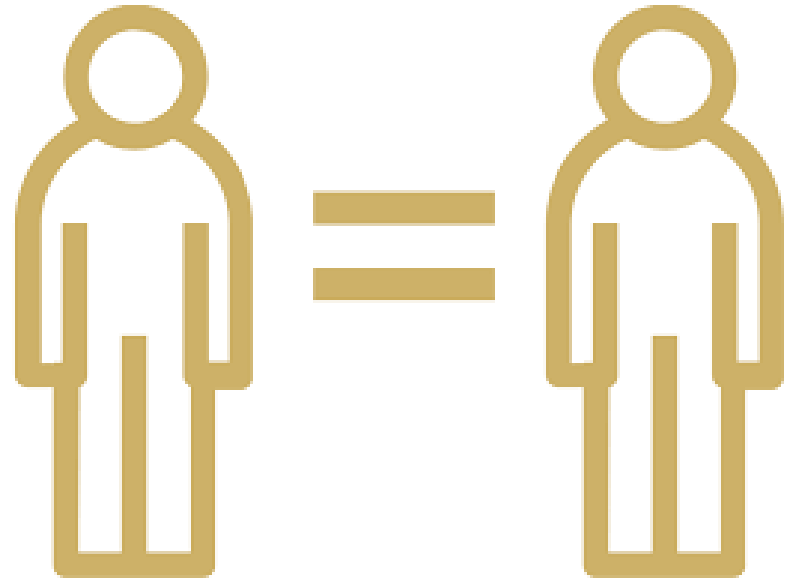


The problem with private EMS services

- ⊙ Public safety tends to be “inside-out”
 - ⊙ Background checks
 - ⊙ Scene security
 - ⊙ Authority to operate

The problem with private EMS services

- © EMS is seen as a “public utility” or a “right” - some municipalities do not want it out of government’s hands



Great Quote!

© ***A young boy walked up to an old salt of a firefighter. The young boy said to the firefighter, “When I grow up, I want to be a firefighter like you”. The old firefighter said, “Sorry Kid. You can't do both”.***

© ***John Clark,
apparatus
engineer, City of
Madison, WI Fire
Department***

EMS Delivery

- ◎ Heterogenous systems
 - ◎ Design
 - ◎ Sophistication
 - ◎ Function
 - ◎ Maturity
 - ◎ Other factors
- ◎ “If you’ve seen one EMS System, you’ve seen one EMS System...”



EMS Delivery

- ③ Driven by economic and political factors
 - ③ What funding is available?
 - ③ Which stakeholders are involved in healthcare delivery?
 - ③ Who supports the system?
 - ③ Infighting among public safety disciplines.
 - ③ Presence or absence of volunteers.

EMS Delivery

- ◎ Many systems and agencies are:
 - ◎ Dysfunctional
 - ◎ Resistant to change
 - ◎ Inefficient
 - ◎ Financially strapped
 - ◎ Desperate to fill vacancies

Where Does EMS Live?

- ◎ In
between
money
and
politics
 - ◎ Whenever
possible we
need to
change the
way we
approach
this divisive
topic



Operational Standards

- ◎ EMS: Sufficient in clinical standards but deficient in operational standards
 - ◎ No equivalent to NFPA / IFSTA / IAFF
 - ◎ No health and wellness initiatives
 - ◎ SSM
 - ◎ Relatively weak (or absent) political leadership
 - ◎ Local physicians often a barrier

Professional Standards

- ◎ Public safety organizations must have conduct standards
- ◎ Lacking in many smaller to mid-size EMS systems
- ◎ Fire service has taken the lead in this area in the last decade





Training

- ◎ Operations is only as good as the training which supports it
 - ◎ UHUs do not account for training - "A unit training isn't making money!"



Interoperability

- ⊙ Fire and EMS on different wavelengths
 - ⊙ Communications systems
 - ⊙ Knowledge of incident management
 - ⊙ Purchasing
 - ⊙ Ultimate control of a scene
 - ⊙ May be legislated

Medical Oversight

- ⦿ Typically lacking in fire service which is not integrated with EMS
 - ⦿ First responder actions
 - ⦿ Special Operations
 - ⦿ Rescue, HazMat, SWAT, etc.



Medical Oversight

⊙ Having EMS “housed” in another organization removes the physician from real oversight.

⊙ “The problem with being a medical director for a fire department is that you have lots of responsibility and no authority”

- Dan Hankins, MD



- ◎ It is a bad idea for physicians who aren't trained in EMS to attempt to take over or lead care in the prehospital setting



What About On-scene

Human Resources

- ◎ Many EMS providers leaving the field
 - ◎ “Burnout factor”
 - ◎ Run volumes
 - ◎ Lack of leadership
 - ◎ Lack of opportunities
 - ◎ Lack of prioritization of EMS
 - ◎ The best EMS providers are often just “moving through”



Commitment and Longevity

◎ The Fire Service

- ◎ Must be present in some form and is expensive to maintain
- ◎ Is politically active and powerful
- ◎ Generally committed to embracing EMS
- ◎ More progressive now than previously
- ◎ Fire service leaders assume positions of authority in government after they leave
- ◎ Enormously respected by the public



Career advancement in EMS?

- ⊙ Deficiency in leadership positions
- ⊙ Lack of opportunities for advancement
- ⊙ No clearly defined rank
 - ⊙ A Fire Chief on vacation is still a Chief



© There is
no
dedicated
federal
agency
that
guides
EMS
policy



Career advancement in EMS?

© ***“Practice does not make perfect, nor is it meant to. Practice simply increases your repertoire of ways to recover from your mistakes.”***

© ***President/Captain James L. Jester, Ocean City (Maryland) Volunteer Fire Company***

Great Quote!

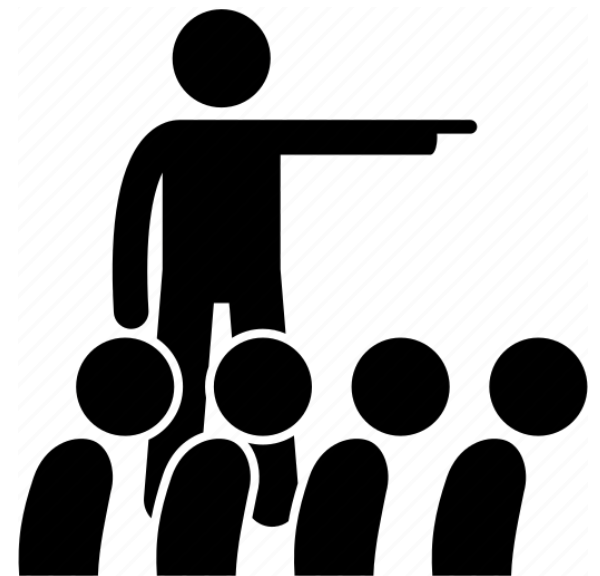


- © An article by Matt Zavadsky, MHA of TriState Ambulance in LaCrosse hits the nail on the head...

Who Decides?

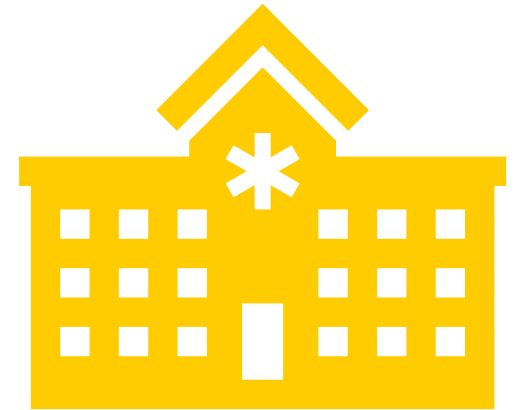
Who Decides?

- ③ The problems with EMS come down to governance - who is “in charge”?



Who Decides?

🎯 Who decides whether a system is local, regional, or a combination?



Who Decides?

- ③ Who decides if there is one provider for an entire medical trade area, or multiple providers engaging in retail competition?



Who Decides?

- ③ Who decides what the performance criteria will be and what the penalties for non-compliance are (or if there will be performance criteria at all)?



Who Decides?

- ③ Most U.S. EMS systems were not planned but evolved
 - ③ Guided by short-term, issue-driven political decisions
 - ③ sentinel events
 - ③ 'lobbying' by one stakeholder group



Who Decides?

- ◎ Framework by State Government
 - ◎ Highly variable
- ◎ Little federal guidance
 - ◎ Interoperability issues
 - ◎ DOT publishes curriculum
 - ◎ National Incident Management System (NIMS) defines but limited use



Great Quote!

© ***“If someone makes a mistake on the fireground, ask the standard question: ‘Who taught them that?’”***

© ***Trent Engler, San Jose Fire Department***

A Systems Approach to EMS

Emergency healthcare as
a regional delivery model

- EMTALA

EMS must be pushed to
this model

- High start-up and infrastructure costs
- Best utilized over wide area
- Fewer paramedics are better

***A Systems
Approach
to EMS***

For EMS to be successful in the next century, it must be re-established and operated as a health care system.

***A Systems
Approach
to EMS***

EMS **must** become an integrated part of the practice of Emergency Medicine.

Great Quote!

© ***The garbage collector doesn't get excited when they turn the corner and see trash, because they're expecting it. Likewise, you should be expecting fire on every run.***

© ***(The Late)
Lieutenant Andy
Fredericks***

***Any
Questions?***

