

The Future of Emergency Medical Services (EMS) Communications



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National Association of State EMS Officials

National Association of EMS Physicians

National Association of EMTs

National Association of EMS Educators

Vice-Chair

Public Safety Spectrum Trust



EMS Communications Now

- Narrowband Land Mobile Mission Critical Voice And Limited Telemetry
 - VHF/UHF/700 MHz/800 MHz
- Commercial Voice and Limited Telemetry Services
 - Telephone and Cell Services
- Broadband
 - 3G Commercial Wireless Data/Municipal WiFi & MESH Systems (Unlicensed 2.4 GHz)
 - Lack Mission Critical Reliability
 - Lack Public Safety Priority
 - Lack Patient Security
 - Lack Wide Area Coverage in Rural Areas

EMS Needs Improved Communications Technology

Joint Advisory Committee on
Communications Capabilities of
Emergency Medical and Public
Health Care Facilities



Report to Congress
February 4, 2008

The cover of the report features a blue-tinted background image of emergency responders at a scene. At the bottom, there are logos for the Department of Homeland Security, the Department of Justice, and the SAFECOM program. The title and program information are listed on the right side, and a row of small images is at the very bottom.

Public Safety Statement of Requirements
for Communications & Interoperability

The SAFECOM Program
Department of Homeland Security
Volume I, Version 1.2
October 2006

Qualitative

What We Lack

- Situational Awareness (SA)
 - Events
 - Resources
- Common Operating Picture (COP)
 - First Responders/Ambulance Responders
 - Rescue/Extrication Responders
 - Air-Medical Responders
 - Hospital/Specialty Center Staff
- Rural & Community Paramedicine Communications

What We Need for SA & COP

- More Than Voice Communications
- Network of Data Bases
 - Resource Status
 - Events Status
 - Adequate Bandwidth to Push/Pull/Park Data:
 - Voice
 - Other (Complex Biotelemetry, Video, Images)
- GIS-Based User Interfaces
 - PDA, MDU, Desktop
 - Real-Time Resource/Event Updating

EMSREMS

Ridgeway EMS 1

DOTREMS

UNITED AMB.

MERCY HOSP.

LIFE FLIGHT
++/Available

MVC

CITY FIRE/RESCUE

DIABETIC

CITY TRAUMA CTR.

JONES MEM. HOSP. CARDIAC
(DIVERT)

EMS 1 1800-0600
•K. McGinnis P11024
•G. Smith E86054
EMS 2 Out of Svc.

MVC

Unscheduled

VERNON FD
VOLUNTEER
AMBULANCE

Call: 1800-1800
•E18924/E93204

RIDGEWAY EMS

NEW SHARON FD
1ST RESPONDERS

RIDGEWAY FD
EXTRICATION/HAZ MAT

RIDGEWAY HOSP.

ER: Smith
No surgeon

LEREMS

FREMS

EMS 1
Inventory/
Status:

++ / ++



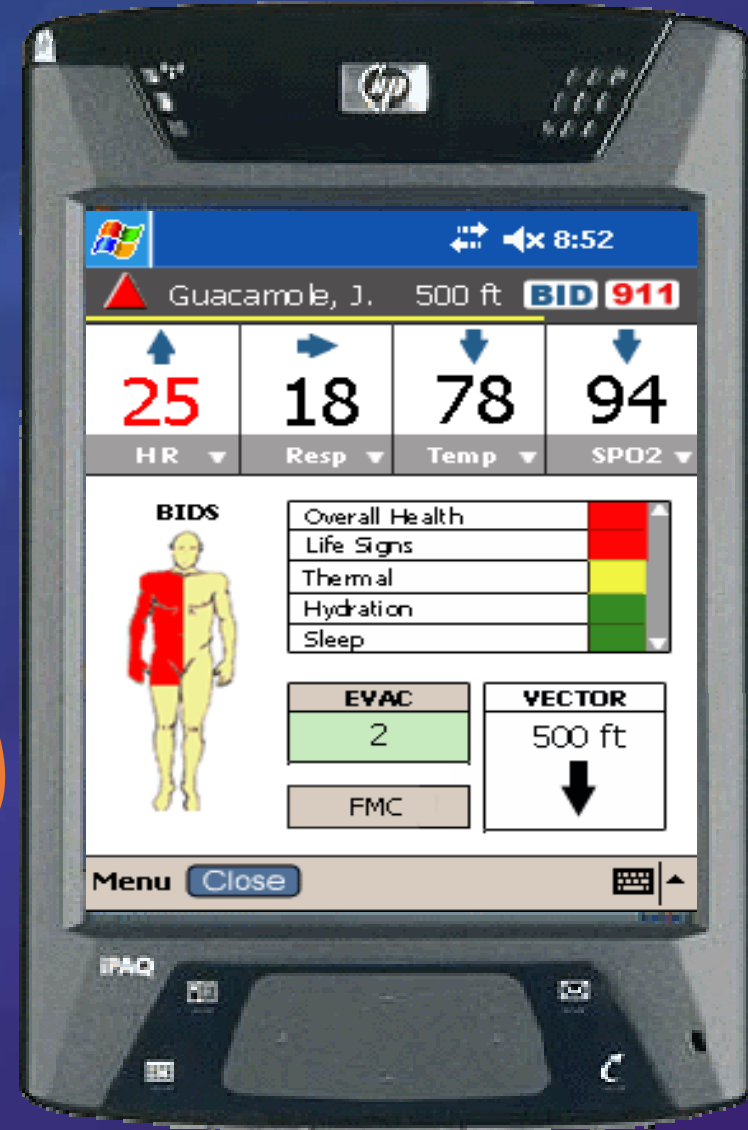
Electronic Health Record

Portable PSCD Type Platform

Speech Recognition Input



Wireless Patient Monitoring



Ridgeway Hospital

EMSREMS

UNITED AMB.

UNITED CCT

DOTREMS

MERCY
HOSP.

United Wheelchair

LIFE FLIGHT

MVC

To MVC

JONES MEM. HOSP.
(DIVERT)

CARDIAC

CITY TRAUMA CTR.

- SOAP Notes
- 3/4 Lead EKG
- 12 Lead EKG
- VS Monitor

MVA

MVC

Pt.1

Pt.2

VERNON FD
VOLUNTEER
AMBULANCE

RIDGEWAY EMS

RIDGEWAY HOSP.

Specialist Call List

Service Call List

Tib/Fib Fx x1/x1

AO x 4

140/90;88;18;CR+

2ary -; GCS-,TS-



EMS Communications - Future

- Narrowband Land Mobile Mission Critical Voice
 - VHF/UHF/700 MHz/800 MHz
- Commercial Voice Services
 - Telephone and Cell Services
- Broadband
 - Nationwide 4G Shared Public Safety/Commercial Wireless Data Network and Links to Fiber Networks
 - Mission Critical Redundancy & Reliability
 - Public Safety Priority
 - Patient Security
 - Wide Area Coverage in Rural Areas via Roaming, Satellite and Wireless/Fiber Links