HENNEPIN COUNTY EMERGENCY MEDICAL SERVICES

I-35W BRIDGE

COLLAPSE

AUGUST 1, 2007

North Memorial

35W Bridge

Built 1967 Rated in recent years as: 'structurally deficient, but not in immediate need of replacement' **2000 ft span, 64 ft** high 141,000 cars / day Mississippi 390 ft wide, avg 7ft depth





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INITIAL RESPONSE
From initial 911 call:
20 minutes : EMS positioned in all critical areas of collapse zone

30 minutes: patient transport had begun from each end of bridge

Hennepin County EMS entities:

- HCMC ambulance
- North Ambulance
- Allina Ambulance
- Edina Fire Rescue
- Waconia-Ridgeview Ambulance





Hennepin County Medical Center

MINITAL RIG DEPLOYMENT

staging

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INCIDENT COMMAND

NW SECTOR

Became north staging area and base for extended operations
Good vehicle access, minimal number of patients







NE SECTOR

Very limited access, greatest number of significantly injured patients
Use of pick-up trucks to rapidly evacuate patients







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North Side

 Initial critical patients carried on backboards, passed down ladder
 Many bystanders and civilian medical

assistance

Pickups used to transport at least 7 victims from N downstream side, some went directly to hospital (U of M), some intercepted by EMS once reached city streets



Hennepin County

SOUTH DIVISION

SW Sector: only area with patients
SE Sector: supported fire activities







South Side

South side

Rapid civilian evacuation of span
Shifting debris, vehicle fires challenges
School bus evacuated, rapid search of area turned up no critical patients

Triage area / Staging set up with Red Cross assistance (in their parking lot)





Center Span

Most vehicles intact
Initial water rescues by police and civilians
1 CPR on span – terminated efforts on scene
Few serious injuries on center span
Multiple evacuated by fire boat to shore, transferred to waiting resources





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action to the

Structures and environment

Unknown hazardous materials and spills

Danger of secondary collapse: bridge moved and groaned during rescue

Safety lanes past downed power lines and potential collapse zones marked with yellow tape

COMMUNICATIONS **Staffing and division of labor Notifications / Mutual aid coordination** 800 MHz system / ETAC 1 Coordination of sector activities Issues: Radio channel overload **Cell phone traffic gridlock** Lack of information from scene to EOC, MRCC and receiving hospitals





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MRCC UNDER-UTILIZED

Crews forgot to notify MRCC
MRCC controlled only 20% of patients
Dispatch gave frequent reminders
Records updated after the event





RESPONSE SUMMARY

Collapse to last patient transported: Initial clearing of all sectors: 1 hr 35 mins Last EMS transport: 2 hrs 6 mins 50 patients transported by EMS 8-13 casualties via other vehicle Over 100 patients treated in 24 hours 13 deaths (4 at scene/2 hospital/7 recovery) No serious injuries to first responders or rescue personnel 29 ambulances used in first 4 hours Hennepin County Aedical Center North Memorial

EMS CHALLENGES

Understanding the scene

Maintaining command and sustaining essential communications with multiple staging sites Setting priorities: triage / transportation Managing mutual aid response Coordinating and tracking patient movement Overcoming hazards / ensuring rescuer safety Contending with volunteers / self assigned personnel





WHAT WORKED

Incident Response Plan **Responder / Interagency Cooperation** Radio System (all 800 mghz) **Overall coordination of event** EMS performed rapid patient triage, stabilization and transport **Resuscitation efforts were limited and** terminated in the field Adapting resources and protocols to the prevailing conditions

North Memorial



Hennepin County Medical Center

WHAT'S NEXT? Modify Response Plan to better anticipate really large incidents MCI Plan to follow daily operations

Improve communication and coordination with receiving facilities

Control of radio = control of event

Conditioning crews to use MRCC in MCI Emphasize regional planning, training and exercises. North Memorial Hennepin County

Medical Center

Mitigating Factors

Weather/ Season/ Time of day Traffic / lack of forward motion of vehicles **Use of automobile restraints** Cushion' of bridge collapsing under vehicles, shock absorbers, and seats Location of event (proximity to hospitals and resources)





