From Chaos to Coordination: The EMS Patient Movement Strategy for the Asiana Plane Crash

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Kevin Rose is the emergency preparedness specialist for the San Mateo County EMS Agency, where he currently serves as the Interim Medical Health Operational Area Coordinator (MHOAC), Hospital Preparedness Program coordinator, Local Emergency Medical Services Agency coordinator and Disaster Healthcare Volunteers (DHV) administrator. He served as the MHOAC for the July 6, 2013 Asiana plane crash at SFO and as the Deputy MHOAC for the September 9, 2010 San Bruno explosion. Prior to working for the San Mateo County EMS Agency, Kevin worked as a legislative aide for the San Mateo County Board of Supervisors and as a field representative for Congresswoman Anna Eshoo. He has also worked in political consulting and public relations. Kevin has a Bachelor of Arts in Communication from the University of Puget Sound.
Overview

• San Mateo County (SMCO)/San Francisco International Airport (SFO)
• Asiana Airlines Flight 214 Plane Crash
  o EMS Field Operational Response
  o Hospital Operational Response
  o Patient Movement
• Passenger/Patient ID/Reunification
• Resources

Patient Movement

• Triage
• Treatment
• Tracking
• Transportation
• Identification
• Reunification
SAN MATEO COUNTY

Population: 718,451
(14th Most Populous in CA)

Size: 449 square miles
(3rd Smallest in CA)
San Francisco Peninsula
San Mateo Bridge (7 miles)
Foothills 2,500 ft. Elevation
San Andreas Fault
Hetch Hetchy Water
Bayside (90+% Pop.)
Coastside (~ 10% Pop.)

911 Pre-hospital EMS:
Fire First Response
AMR Ambulance

Hospital: Trauma
San Francisco General
Stanford/LPCH

Hospital: 24/7 ED
Seton Medical Center
Kaiser South San Francisco
Peninsula Medical Center
San Mateo Medical Center
Sequoia Hospital
Kaiser Redwood City
Seton Coastside (Standby ED)
San Francisco International Airport (SFO) Emergency Response Plan

• SFO Annual Air Crisis Exercise
• Alert 3
  o SMCO Code 2000 – Law
  o SMCO Alarm 303 – Fire
  o SMCO – Activation of MCI Plan

Asiana Airlines Flight 214 Destruction
Asiana Airlines Flight 214 Destruction (cont’d)

- Crash landing of Boeing 777
- Loss of tail and other parts of plane causing trail of airplane debris
- Debris field more than 8 football fields in length from the sea wall to the resting site
- Leaking jet fuel
- Aircraft lavatory waste
- Exposed luggage
- Imploded chutes on right side of plane
- 307 people dispersed from sea wall to crash site
  - 291 passengers
  - 16 flight crew
- Four crew and two passengers ejected during crash
- Explosion following set-up of tarmac casualty collection point
Asiana Airlines Flight 214
Field Response – Tarmac and Terminal

Patient Movement – Field Triage/Treatment
START/JumpSTART
Asiana Airlines Flight 214
Patient Movement – Field Tracking

• Field – Triage Tag Number, Triage Color, Hospital Destination,
  • Front
  • Back

Asiana Airlines Flight 214
Patient Movement – Field Tracking/Transport

• Medical Communications Coordinator
  – Incident Dispatch Team
    • EMSystem MCI Polling
    • Computer Aided Dispatch
Asiana Airlines Flight 214 Response
Patient Movement – Transport

• Unified Command
• San Francisco
  ◦ MCI Plan
• San Mateo County
  ◦ MCI Plan
  ◦ Trauma Plan
Asiana Airlines Flight 214
Field Response – Resources

• 52 transport ambulances (85% from SF Fire & AMR)
• 4 air ambulance (USCG & 3 Cal Star)
• 2 buses (SFO & SamTrans)
• Disaster Medical Supply Unit (DMSU)

Asiana Airlines Flight 214
Field and Agency Response

Response Times
• 1128 Plane crash
• 1129 First 911 call
• 1130 First AMR ambulance on-scene
• 1140 EMSystem MCI polling of hospitals (1205; 1300)
• 1142 EMS on call notified (1152 MHOAC)
• 1200 EMS on Call/MHOAC contact w/field, hospitals, region (1244)
• 1305 Tarmac operations cleared – transition to terminal operations
• 1400EMS Command Center activated
• 1432 Initial SitRep to region and state (1615, 1944)
• 1446 EMSystem regional announcements (1454, 1501, 1701)
• 1640 Transport of last patient from SFO terminal
Asiana Airlines Flight 214
EMS/MHOAC-Hospital Situation Reporting

- EMSSystem Regional Announcements

**Update: SFO Plane Crash**
Inreach 07/06/13 14:46 07/07/13

Update on Patients:
- 56 transported
- 57 at site being triaged for transport
- 200 patients at terminal brought by bus being reassessed
- 34 clients

Begin tracking patients. EMS will follow.
For more info. Michael Leach 650 452 7000, Kevin Rose 650 452 7000.

**Update: No More Patient Transports**
Inreach 07/06/13 17:30

- Event ended quietly. Update on Patients: All patients have been transported.
- For PR Reunification assistance contact the American Red Cross number 2467 line @ 866-733-3333.
- United is helping Asiana Airlines with Patient Lodging/Paperwork.
- Asiana Air General Information for the Public on the Crash: 800 388 6866.
Asiana Airlines Flight 214 Response
Field Situation Reporting

• Establish Field Point of Contact
• Scene size-up
  o Total number of victims w/rough triage breakdown (reds, yellows, greens)
  o Approximate number of victims transported and to which hospitals
  o Approximate number of victims on-scene
  o Hospital polling issues – none
  o Additional/misc. information
• Resources needed – none

Asiana Airlines Flight 214 Response
EMS/MHOAC Situation Reporting

• Overall situation size-up
  o From field
  o From hospitals
  o From media
• Informal situation reporting
  o Phone/email/trunked radio
  o EMSSystem regional announcements
• Formal situation reporting
  o EOM SitRep
Asiana Airlines Flight 214
Patient Movement – Hospitals

Asiana Airlines Flight 214
Patient Movement – Hospitals (cont.)
<table>
<thead>
<tr>
<th>Asiana Airlines Flight 214 Patients/Receiving Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 3 Trauma Hospitals (110)</td>
</tr>
<tr>
<td>o Stanford Hospital (55)</td>
</tr>
<tr>
<td>o San Francisco General (53)</td>
</tr>
<tr>
<td>o Eden Medical Center (2)</td>
</tr>
<tr>
<td>• 3 San Mateo County Hospitals (29)</td>
</tr>
<tr>
<td>o Peninsula (14)</td>
</tr>
<tr>
<td>o Kaiser Redwood City (10)</td>
</tr>
<tr>
<td>o Sequoia Hospital (5)</td>
</tr>
<tr>
<td>• 5 additional SF hospitals (39)</td>
</tr>
<tr>
<td>o UCSF (14)</td>
</tr>
<tr>
<td>o California Pacific Medical Center (9)</td>
</tr>
<tr>
<td>o St. Francis (7)</td>
</tr>
<tr>
<td>o Kaiser SF (5)</td>
</tr>
<tr>
<td>o St. Mary’s (4)</td>
</tr>
<tr>
<td>• 181 patients transported to 11 hospitals w/in 5 hours in 3 – 4 waves</td>
</tr>
</tbody>
</table>
Asiana Airlines Flight 214
Standby San Mateo County Hospitals

- Kaiser South San Francisco
- San Mateo Medical Center
- Seton Medical Center
- Additional SF hospitals

Asiana Airlines Flight 214
Hospital-EMS/MHOAC Situation Reporting

- Receiving facilities – HCC Activation
  - How many patients received and condition/status
  - Staffing/supplies
  - Information from arriving crews and other sources
  - Patient discharge
- Standby facilities – HCC activation
  - Staffing/supplies
  - Information from other sources
Asiana Airlines Flight 214
Patient Movement - Identification

• Hospitals overwhelmed by agencies:
  o ARC — client
  o Asiana Airlines/UAL – passenger/customer
  o Consulates (China, South Korea) — national
  o CBP — foreign nationals/U.S. resident
  o DHS — passenger/victim
  o EMS — victim/patient
  o FBI — passenger/victim
  o NTSB — passenger/victim
• And MEDIA!!!

Asiana Airlines Flight 214
Patient Movement – Identification (cont.)

• Requesting Agency Tracks:
  o Law Enforcement
  o Medical
  o Other
  o Media
• Requesting Agencies
  o ARC, Asiana/United, Consulates, CBP, DHS, EMS, FBI, NTSB
<table>
<thead>
<tr>
<th>Asiana Airlines Flight 214</th>
<th>Patient Movement – Identification (cont.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requesting agency tracks/agencies:</strong></td>
<td></td>
</tr>
<tr>
<td>o Law – CBP, DHS, FBI</td>
<td></td>
</tr>
<tr>
<td>o Medical – EMS, NTSB … American Red Cross</td>
<td></td>
</tr>
<tr>
<td>o Other – Asiana/UAL, Consulates</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asiana Airlines Flight 214</th>
<th>Patient Movement – Reunification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customs and Border Protection (CBP)</strong></td>
<td></td>
</tr>
<tr>
<td>o Processed entry into U.S.</td>
<td></td>
</tr>
<tr>
<td><strong>Air Carrier/American Red Cross/NTSB</strong></td>
<td></td>
</tr>
<tr>
<td>o Family Reunification</td>
<td></td>
</tr>
<tr>
<td><strong>Hospitals</strong></td>
<td></td>
</tr>
<tr>
<td>o Discharge</td>
<td></td>
</tr>
</tbody>
</table>
Asiana Airlines Flight 214
Patient Movement Re-cap

• Triage
• Treatment
• Tracking
• Transportation
• Identification
• Reunification

Asiana Airlines Flight 214
Moving Forward

• Identification
• Reunification
Aviation Disaster Family Assistance Act of 1996

- Victim Support Tasks
  - NTSB
  - Air Carrier
  - American Red Cross (Family Care and Mental Health)
  - DHHS/ASPR & DOD (Victim ID Services)
  - DOS (Assisting Families of Foreign Victims)
  - DHS/FEMA (Communications)
  - DOJ (Assisting Victims of Crime)

Aviation Disaster Family Assistance Act of 1996 (cont.)

- NTSB
  - Lead Investigation Agency
  - Family Assistance Center (FAC)

- Air Carrier
  - Passenger manifest
  - Family
  - Passengers
  - FAC
  - Liaison to hospital
Aviation Disaster Family Assistance Act of 1996 (cont’d)

• American Red Cross (ARC)
  o Family Care and Mental Health
  o Liaison to Hospital

• Passenger manifest
  o Air carrier SHALL share passenger manifest with NTSB upon request
  o Air carrier MAY share passenger manifest with ARC upon request
  o Air carrier CANNOT share passenger manifest with hospital

Asiana Airlines Flight 214
Patient Movement – Identification

• Customs and Border Protection (CBP)
  o Federal Inspection Station
  o Entry with/without Inspection
Asiana Airlines Flight 214  
Patient Movement – Identification (cont.)

- EMS – hospitals, number of victims per facility, triage colors

<table>
<thead>
<tr>
<th>Total</th>
<th>SUH</th>
<th>SFG</th>
<th>PEN</th>
<th>KRWC</th>
<th>SEQU</th>
<th>UCSF</th>
<th>CPMC</th>
<th>St. Francis</th>
<th>Kaiser SF</th>
<th>St. Mary's</th>
<th>EDEN</th>
</tr>
</thead>
</table>

Asiana Airlines Flight 214  
Patient Movement – Identification (cont.)

- Hospitals – medical record number, name, age, gender, chief complaint, etc.

<table>
<thead>
<tr>
<th>#</th>
<th>MRN</th>
<th>LAST NAME</th>
<th>FIRST NAME</th>
<th>AGE</th>
<th>GENDER</th>
<th>CHIEF COMPLAINT</th>
<th>DISPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28335</td>
<td>Doe</td>
<td>Jane</td>
<td>24</td>
<td>Female</td>
<td>Plane crash; ribs</td>
<td>Facesheet</td>
</tr>
<tr>
<td>2</td>
<td>28445</td>
<td>Doe</td>
<td>John</td>
<td>18</td>
<td>Male</td>
<td>Plane crash; neck</td>
<td>Discharged</td>
</tr>
<tr>
<td>3</td>
<td>29655</td>
<td>Doe</td>
<td>John</td>
<td>24</td>
<td>Male</td>
<td>Plane crash; head</td>
<td>Face sheet</td>
</tr>
</tbody>
</table>
Asiana Airlines Flight 214
Patient Movement – Identification (cont.)

- Air Carrier – manifest team “scrubbing” passenger manifest for NTSB and CBP

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>M</th>
<th>Record Locator Number</th>
<th>Status</th>
<th>Payment</th>
<th>Seat Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doe</td>
<td>Jane</td>
<td>T</td>
<td>A034566</td>
<td>1K</td>
<td>Revenue</td>
<td>7A</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>D</td>
<td>A034585</td>
<td>Non-revenue</td>
<td>418</td>
<td></td>
</tr>
<tr>
<td>Doe</td>
<td>Jane</td>
<td>R</td>
<td>ΔΗΗΗΔΗΗΗ</td>
<td>Positive Senior</td>
<td>778</td>
<td></td>
</tr>
</tbody>
</table>

- Hospital team
- Family Assistance Center

Patient Information – Federal Law

- Title 45 Code of Federal Regulation Section 164.510 (a) and (b)
  - A covered entity may use or disclose protected health information (PHI) to a public or private entity authorized by law to assist in disaster relief efforts:
    - Name
    - Location in facility
    - Condition in general terms
    - Religious affiliation
• HOWEVER…
  o Unless the following steps interfere with the ability to respond to the emergency, the hospital must follow the following steps before disclosing information:
    • Obtain patient’s agreement
    • Provide patient with opportunity to object
    • Hospital may make decision on behalf of patient if patient is unable to (but must present patient with opportunity to object when patient is able to make a decision)

• CA Civil Code 56.10 (c)(14) and (15)
  o Hospital may disclose to state or federally recognized disaster relief organization for the purpose of responding to disaster welfare inquiries:
    • Name
    • City of residence
    • Age
    • Sex
    • General Condition
Patient Information – Federal Law

• Federal Register, Vol, 64, No. 212, pg. 59918 and 59956, November 3, 1999
  o National Transportation Safety Board (NTSB) is considered a Public Health Authority due to its case investigation of a transportation accident that looks to reduce mortality and injury by making recommendations for safety improvements

• CA Civil Code 56.10 (c)18
  o Disclosure to a public health entity for the purpose of preventing injury

Patient Information – Federal and California Law

• Therefore, hospitals CAN share with NTSB and ARC:
  o Name
  o City of residence
  o Age
  o Sex
  o Location in facility
  o General condition
  o Religious affiliation
  o (release date)
### Patient Movement – Identification and Reunification

- **Passenger Manifest Exchange**: Air Carrier to NTSB
- **Patient Information Exchange**: Hospital to ARC/NTSB/EMS (and CBP)
- Air carrier cannot share passenger manifest with hospital
- Hospital cannot share patient list with air carrier

### Patient Movement – Identification and Reunification (cont’d)

- Both air carrier and hospital CAN share passenger/patient manifest/list with NTSB/ARC
- **Identification**
  - Lead — Air Carrier, Hospital
  - Supporting — Red Cross, NTSB, EMS
- **Reunification**
  - Lead — Air Carrier, Hospital
  - Supporting — American Red Cross
Hospital Incident Command System (HICS)

- HICS 2014 – Under Operations Section
  - Patient Family Assistance Branch Director
    - Family Reunification Unit Leader
    - Social Services Unit Leader

Resources

- Resources
  - CHA/ARC MOU
  - ARC Disaster Health Services SOU
  - CHA Disclosures of Protected Health Information (PHI) in Disasters
THANK YOU

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