Prehospital Care of Behavioral Emergencies

KARL SPORER, MD
ALAMEDA COUNTY EMS AGENCY

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Study objective: Patients with acute psychiatric emergencies who receive an involuntary hold often spend hours in the emergency department (ED) because of a deficit in inpatient psychiatric beds. One solution to address the lack of prompt psychiatric evaluation in the ED has been to establish regional stand-alone psychiatric emergency services. However, patients receiving involuntary holds still need to be screened and evaluated to ensure that their behavior is not caused by an underlying and life-threatening nonpsychiatric illness. Although traditional regional emergency medical services (EMS) systems depend on the medical ED for this function, a field-screening protocol can allow EMS to directly transport a substantial portion of patients to a stand-alone psychiatric emergency service. The purpose of this investigation is to describe overall EMS use for patients receiving involuntary holds, compare patients receiving involuntary holds with all EMS patients, and evaluate the safety of field medical clearance of an established field-screening protocol in Alameda County, CA.
EMS and Behavioral Emergencies

- Behavioral Emergencies make up 10% of our total EMS calls
- Most communities use a combination of law enforcement transport and EMS transport
- EMS Transport is mostly commonly to an ED
- Alameda County EMS Agency
  - All patients on a psychiatric hold are transported by EMS
  - 40% of EMS transported psychiatric patients are taken directly to a Psychiatric Emergency Service hospital
  - 60 (0.3%) of these patients needed medical care
31,813 (59%) sent to Medical ED

53,887 Involuntary Hold Encounters

22,028 did not return to an ED in 12 hours (98.2%)

22,074 (41%) sent directly to stand alone PES

60 sent by ambulance to an ED within 12 hours (0.3%)

54 developed new symptoms at PES

6 were protocol failures

<table>
<thead>
<tr>
<th>Time spent at PES</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 minutes</td>
<td>51 F, found to have glucose of 40 mg/dL on arrival to PES. Glucose was not obtained initially. Family had reported patient was acting &quot;like a schizophrenic&quot;</td>
</tr>
<tr>
<td>2 minutes</td>
<td>66 F, transported immediately after arrival to PES. Staff requested transport given violation of protocol due to age</td>
</tr>
<tr>
<td>7 minutes</td>
<td>53 F Initial blood glucose was 63 mg/dL and GCS was 13. On arrival to PES, glucose was 56 mg/dL, and she was transported to an ED.</td>
</tr>
<tr>
<td>131 minutes</td>
<td>55 M, transported from PES to an ED for disorientation. Patient documented as disoriented at initial paramedic assessment, pulse documented over 120, and reported to be alert and oriented only to person</td>
</tr>
<tr>
<td>325 minutes</td>
<td>32 F, staff discovered patient was in &quot;late stages of pregnancy,&quot; and requested medical evaluation. Instructions for this situation were not defined in the protocol for psychiatric emergencies.</td>
</tr>
<tr>
<td>330 minutes</td>
<td>53 F, for whom staff developed concerns about level of alertness hours after PES arrival. Initial paramedic report documented GCS 14 and noted depressed mental status</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed or Reported a New Symptom</td>
<td>13 (24%)</td>
</tr>
<tr>
<td>Effect of Administered Medication</td>
<td>10 (19%)</td>
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<tr>
<td>Seizure with history of seizure disorder</td>
<td>8 (15%)</td>
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<tr>
<td>Staff requested medical clearance, asymptomatic</td>
<td>7 (13%)</td>
</tr>
<tr>
<td>Staff requested medical clearance, mental status changes</td>
<td>6 (11%)</td>
</tr>
<tr>
<td>Patient had New Traumatic Injury</td>
<td>5 (9%)</td>
</tr>
<tr>
<td>Patient called EMS after discharge from PES</td>
<td>5 (9%)</td>
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</table>
EMS and Behavioral Emergencies

- Psychiatric Hold Patients (5150) can be safely sent directly to a Psychiatric Emergency Service Hospital
- 10% of EMS Calls are for an involuntary hold
- These were younger, more likely to be male, and less likely to be insured as compared to the general EMS population
- These same patients on an involuntary hold also had an average of two other EMS transports and accounted for a total of 24% of all EMS encounters
Olanzapine 10 mg Oral Disintegrating Tablets
Community Assessment and Transport Team (CATT)

- Mental Health First Responder
- Integrated with 911 Dispatch
- Mental Health Worker and EMT
- Alternate Destinations
- Fewer Involuntary Holds
- Integrated with Alameda County Care Connect
Law Enforcement Navigation of Behavioral Health Patients

David Miramontes MD FACEP FAEMS
CJ Winckler MD LP

Office of the Medical Director
Bring The stakeholders together !!!!

- WE DEVELOPED A SYSTEM
- Letter of Agreement
- MEDCOM navigation process
- LEO’s know sick...call EMS only when needed.
- Fire Only or EMS eval- Call the medical Director before release
- LEO’s Call MEDCOM to coordinate and Load balance Psych Hospital transports
<table>
<thead>
<tr>
<th>Psych Facilities</th>
<th>Behavioral Female</th>
<th>Behavioral Male</th>
<th>Behavioral Female</th>
<th>Behavioral Male</th>
<th>Behavioral Adult</th>
<th>Behavioral Geriatric Age &gt;=55</th>
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<th>Last Update</th>
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<td>State &amp; Fed Psych Facilities</td>
<td>Behavioral-Adult (State/Fed)</td>
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<td>Comment</td>
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</tbody>
</table>
CALL EMS and FIRE (manpower) for EMERGENT response if:
- Excited delirium, severe agitation or violent behavior
- Mental status changes or confusion (change from baseline)
- Recent trauma, ingestion or overdose

Call EMS only Evaluation for URGENT response if:
- Officer impression indicates patient needs medical assessment
- Patient complains of medical illness
- Patient requests a medical evaluation

If patient has no acute medical issues and is medically stable, contact MEDCOM for Navigation to the appropriate psychiatric facility by Law Enforcement:
- Provide Patient Name and DOB
- Provide location
- Is patient pregnant? Gestation greater than 20 weeks?
- Call MEDCOM (24/7) for navigation to the appropriate psychiatric facility

MEDCOM (24/7): (210) 233-5933

Rev 9_21_17
Medical Director Driven
Fire/EMS Medical Stability Evaluation

Patients **MAY NOT** be released for MEDCOM Law Enforcement navigation to a Free Standing Psychiatric Hospital if they have:

1. Lacerations, significant abrasions, wounds or Trauma (need ER eval and Tx)
2. Any history of any ingestion/OD (they must be medically cleared in an ER)
3. Significant intoxications, agitation, delirium, or aggressive behavior such that they cannot walk or participate in a psychiatric interview.
4. Any peg tubes, implanted ports, lines or Medical problems that are not under control (such as asthma/copd exacerbation, Glucose >400, Hypertension > 200 systolic)
PI – What Really Matters

• The four deadly sins
  1. Alcohol Intoxication
  2. Ingestion/Overdose
  3. Trauma/wounds
  4. Lines/tubes/chronic med problems and wheelchairs

• Where to draw the line?
LAW ENFORCEMENT NAVIGATION:

JAN 2018 – OCT 2018

TOTAL 13,652 CASES

IN THE FIELD (70%) n=9559

NOT IN THE FIELD (30%) n=4093

Emerg Det: In Hospital, 4,093, 30%

Emerg Det: LE Self Navigated, 418, 3%

Emerg Det: LE to Gen Hospital, 1199, 9%

Emerg Det: LE to Magistrate/Jail, 124, 1%

Emerg Det: LE to Gen Hospital, 7541, 55%

CANCELED by LE, 21, 0%

MH Warrant: Nav to Psych, 104, 1%

MH Warrant: LE Self Navigated, 4, 0%
Emergency Detentions: In Hospital

Emerg Det: Navigated to BH Facility

Emerg Det: Not Transported to BH Facility

Aug-18  Sep-18  Oct-18

Aug-18  Sep-18  Oct-18
LAW ENFORCEMENT TRANSPORTED TO PSYCH, MEDCOM NAVIGATED BY DEMOGRAPHICS

OCTOBER 2018

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
<th>Subtotal</th>
</tr>
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<tr>
<td>&lt;12</td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>12-17</td>
<td>41</td>
<td>47</td>
<td>88</td>
</tr>
<tr>
<td>18-54</td>
<td>391</td>
<td>214</td>
<td>605</td>
</tr>
<tr>
<td>55-64</td>
<td>33</td>
<td>29</td>
<td>62</td>
</tr>
<tr>
<td>65+</td>
<td>14</td>
<td>15</td>
<td>29</td>
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<tr>
<td>OB&lt;20WKS</td>
<td>0</td>
<td>4</td>
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<tr>
<td>OB&gt;20WKS</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

- Male, 42%, Female, 58%
- Male, 47%, Female, 53%

18-54, 605, 76%
12-17, 88, 11%
<12, <12, 1%
65+, 29, 4%
55-64, 62, 8%
NIX PES MEDCOM TRANSFERS by Requests

October 2018

TOTAL 327 Requests

- Auto-Accepted, 113, 35%
- Non-Auto Accepted, 183, 56%
- Declined/Cancelled, 31, 9%

10% ER to PES Auto Accept Transfers Declined/Canceled

- Refer to Intake - Non Adult: 2
- Refer to Intake - Other: 5
- Refer to Intake - No Beds: 4
- Pt left AMA: 1
- Physician Declined: 7
- Not Medically Cleared: 2
- Cancelled by Referring Fac: 10

31 Declined
NIX PES MEDCOM TRANSFERS by System Utilization

Nix PES Transfers starting 9/18/18

- UHS, 128, 32%
- BHS, 118, 29%
- CSR, 52, 13%
- Nix, 84, 21%
- MHS, 19, 5%

YTD 401 Transfers

Nix PES Transfers by Month

- BHS
  - Sep-18: 41
  - Oct-18: 77
- CSR
  - Sep-18: 12
  - Oct-18: 40
- Nix
  - Sep-18: 24
  - Oct-18: 60
- MHS
  - Sep-18: 4
  - Oct-18: 15
- UHS
  - Sep-18: 27
  - Oct-18: 101

October 2018
Performance Improvement Process

- Performance Improvement Committee:
  - STCC (South Texas Crisis Collaborative) @STRAC
  - MedCom (STRAC patient Movement/Helios)
  - Psychiatric Facilities
  - Law Enforcement
  - Office Medical Director / SAFD

- Secondary Transfers are a Red Flag
Seeing is Believing:
Treatment through TelePsych

David French, MD, FACEP, FAEMS
Medical Director, Charleston County EMS
Financial disclosures

• Dr. French – none to report
Charleston County EMS

• Cover 1400 square miles
• Over 60,000 calls annually
• Over 5000 MH calls
• 80% transported to ED
Mobile Crisis

- 24/7/365 mobile assessment team
- Onsite evaluations
- 45 - 50 minutes to arrive
- Called 4 - 5 times per year
- Outpatient clinic
- Involuntary commitments
- Direct admissions
- Link to community care
TelePsych

- Connect EMS to Mobile Crisis via telehealth
  - Vidyo software on laptops, phones
  - Low bandwidth
  - Meeting room technology for assessments

- Assessment initiation:
  - 45 ➔ 5 minutes
TelePsych

- ALS Ambulance dispatched with QRV
- First ALS provider assesses patient
  - Adults only
  - No medical or trauma complaint
  - VS restrictions
- Cooperative patient offered assessment
TelePsych

Does the patient meet ANY of the following criteria?:
- Acute medical or trauma complaint
- Pediatric Patient (<12 years)
- Non-ambulatory (or requires assist)
- Suspicion of overdose

Evaluate vital signs:
- Pulse >120 or <50
- RR >24 or <8
- SBP >200 or <85, or DBP >120
- SpO2 <92% on Room Air
- BGL <60 or >300
- GCS <14

Refer to Appropriate Guideline and Transport

Teleconference with Mobile Crisis
TelePsych

• Ambulance returns to service
• QRV stays with PD and patient
• Mobile Crisis assesses patient
  • Vidyo software meeting rooms
  • Can run more than one consult
TelePsych

• Mobile Crisis determines disposition
  • Input from EMS and LE
  • Collateral information/history

• Four possible outcomes
  • Voluntary vs involuntary
  • EMS personnel Notary Publics for Part 1
  • Order of detention printed on-scene
  • LE transport
TelePsych

Reduction in EMS Transport

- Total calls
- Calls transported by EMS after assessment

Graph showing the percentage reduction in EMS transport from May 2017 to December 2018.
TelePsych

Pie chart showing the distribution of diversion types:
- Not diverted: 567 (48%)
- ED & Hosp: 488 (42%)
- ED: 111 (10%)
- Hospital: 5 (0%)
TelePsych

BEFORE MAY 1, 2017
• About 5 calls/year
• 80% EMS transports

THROUGH JANUARY 7, 2019
• 1200 calls
• 678 ED diversions
• 572 avoided hospitalization
• About 5% EMS transports
TelePsych

Estimated cost savings

$1.8 + million

Based on $2000 ED visit + $350 EMS transport
TelePsych

• Expanding MC teams around the state
• Incorporating telehealth w/ EMS
• Telehealth w/ LE?
• Imbedding a clinician in dispatch
• Recent Medicare Innovations opportunity?
Contact

DFrench@charlestoncounty.org