High-tech Hotspotting

Jim Dunford, MD, FACEP
EMS Medical Director, City of San Diego
Emeritus Professor of Emergency Medicine
UC San Diego
RESOURCE ACCESS PROGRAM (RAP)
Paramedicine Pilot Project
## Frequent Callers

<table>
<thead>
<tr>
<th>Return top:</th>
<th>Include Records on Watchlist</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient Search</th>
<th>Last Week</th>
<th>Last 2 Weeks</th>
<th>Last Month</th>
<th>Last 6 Months</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(8)</td>
<td>(9)</td>
<td>(11)</td>
<td>(56)</td>
<td>(77)</td>
</tr>
<tr>
<td>Address Search</td>
<td>(5)</td>
<td>(7)</td>
<td>(10)</td>
<td>(47)</td>
<td>(71)</td>
</tr>
<tr>
<td>Managed</td>
<td>(4)</td>
<td>(5)</td>
<td>(9)</td>
<td>(47)</td>
<td>(69)</td>
</tr>
<tr>
<td>Algorithms</td>
<td>(4)</td>
<td>(5)</td>
<td>(8)</td>
<td>(37)</td>
<td>(57)</td>
</tr>
<tr>
<td>Action Items</td>
<td>(3)</td>
<td>(4)</td>
<td>(8)</td>
<td>(36)</td>
<td>(53)</td>
</tr>
<tr>
<td>Alerts</td>
<td>(3)</td>
<td>(4)</td>
<td>(8)</td>
<td>(28)</td>
<td>(50)</td>
</tr>
<tr>
<td>My Incidents</td>
<td>(3)</td>
<td>(4)</td>
<td>(7)</td>
<td>(26)</td>
<td>(46)</td>
</tr>
<tr>
<td>My Profile</td>
<td>(2)</td>
<td>(4)</td>
<td>(6)</td>
<td>(25)</td>
<td>(41)</td>
</tr>
</tbody>
</table>
### Frequent Homeless Users

Return top: 10

<table>
<thead>
<tr>
<th>Last Week</th>
<th>Last 2 Weeks</th>
<th>Last Month</th>
<th>Last 6 Months</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8)</td>
<td>(9)</td>
<td>(11)</td>
<td>(47)</td>
<td>(71)</td>
</tr>
<tr>
<td>(5)</td>
<td>(7)</td>
<td>(10)</td>
<td>(47)</td>
<td>(69)</td>
</tr>
<tr>
<td>(4)</td>
<td>(5)</td>
<td>(9)</td>
<td>(37)</td>
<td>(57)</td>
</tr>
<tr>
<td>(3)</td>
<td>(5)</td>
<td>(8)</td>
<td>(36)</td>
<td>(53)</td>
</tr>
</tbody>
</table>

### Frequent Behavioral/Psychiatric Users

Return top: 10

<table>
<thead>
<tr>
<th>Last Week</th>
<th>Last 2 Weeks</th>
<th>Last Month</th>
<th>Last 6 Months</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8)</td>
<td>(8)</td>
<td>(11)</td>
<td>(50)</td>
<td>(71)</td>
</tr>
<tr>
<td>(5)</td>
<td>(7)</td>
<td>(10)</td>
<td>(47)</td>
<td>(71)</td>
</tr>
<tr>
<td>(4)</td>
<td>(5)</td>
<td>(9)</td>
<td>(47)</td>
<td>(69)</td>
</tr>
<tr>
<td>(4)</td>
<td>(5)</td>
<td>(8)</td>
<td>(37)</td>
<td>(57)</td>
</tr>
</tbody>
</table>

pid: AGEDSH
Financial tracking

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Count</th>
<th>Total</th>
<th>Average</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMBULANCE</td>
<td>70</td>
<td>58:25</td>
<td>00:50</td>
<td>$ 102,871.75</td>
</tr>
<tr>
<td>ENGINE</td>
<td>57</td>
<td>15:15</td>
<td>00:16</td>
<td>$ 4,925.75</td>
</tr>
<tr>
<td>TRUCK</td>
<td>4</td>
<td>00:52</td>
<td>00:13</td>
<td>$ 294.67</td>
</tr>
<tr>
<td>Totals</td>
<td>131</td>
<td>75:32</td>
<td>00:34</td>
<td>$ 108,092.17</td>
</tr>
</tbody>
</table>
Alerting

EMS Hub ↔ StreetSense

client registry

From: onscene@infotechsm.com
To: Anne Jensen

onScene Social Alert
January 9, 2013 6:51 PM
onScene Social Alert
911 Dependency
Incident Number: FS99991
Acuity: Moderate
Age:
Sex: Female
Chief Complaint: Back Pain

View full ePCR Report
Effect of RAP: EMS, ED, in-patient days (1 hospital)

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services Prehosp Emerg Care 2012 Oct;16(4):541-547
Effect of RAP: Fire-EMS resources

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services Prehosp Emerg Care 2012 Oct;16(4):541-547
Effect of RAP - healthcare charges

Δ = -$221,394

PreRAP: $689,743
PostRAP: $468,394

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services Prehosp Emerg Care 2012 Oct;16(4):541-547
Project 25
Project 25

Ambulance Rides: 736, 279, 241
ER Visits: 1418, 487, 506
Hospital Admissions: 345, 153, 105
Hospital Days: 1568, 659, 568
Days in Jail: 890, 697, 280

- Homeless
- P25 Year 1
- P25 Year 2
Project 25: public cost savings

Public costs 2010 (Homeless)

- Ambulance Rides
- ER Visits
- Hospital Days
- Law Enforcement
- Other

$4,229,429

Δ = $2,654,590

Public costs (P25 Year 2)

$1,574,839
Future alerting

- RAP clients
- AED locations
- Ventilator patients
- LVAD patients
- Narcotic OD
- Hypoglycemia, seizures
- Hypertension
- Elderly falls
- 30-day readmission risk
Community Information Exchange: social data exchange

UC San Diego Health System

PATH
MAKING IT HOME

ST. VINCENT DE PAUL VILLAGE
A PARTNER OF FATHER JOE'S VILLAGES

SERVING SENIORS
Formerly Senior Community Centers

Meals-on-Wheels
Greater San Diego, Inc.

St. Paul’s Senior Homes & Services

ElderHelp

(Clinic - Prospect)
9-1-1 > 211 social support referrals

2-1-1’s Contact Center

Every day people dial 2-1-1 for assistance navigating the complex system of community, health and disaster services. Highly trained Client Service Representatives have helped more than 220,000 clients access services such as food assistance, healthcare information and housing and educational services.

Dial 2-1-1 for:
- Housing & Shelter Assistance
- Food Assistance
- Utility Assistance
- Military & Veteran Services
- Disaster Response
- Mental Health Resources
- Substance Abuse Services
- Healthcare Services
- Legal Services
- Parenting Services
- Children’s Services
- Physical Activity & Nutrition Resources
- Financial Assistance
- Senior Services
- Volunteer Services
- Education Assistance
- Employment Resources
ONC: +EMS Grant SAFR functionality: **SEARCH**

- Past history
- Allergies
- Medications
- **POLST (Physician’s Order for Life-sustaining Treatment)**
+EMS Grant functionality: ALERT
+EMS Grant functionality: **FILE**
+EMS Grant functionality: **RECONCILE**
Data-Driven System Helps Emergency Medical Services Identify Frequent Callers and Connect Them to Community Services, Reducing Transports and Costs

Snapshot

Summary
The City of San Diego’s emergency medical services system implemented a program to identify individuals who frequently call 911 and arrange for them to receive relevant medical, social service, and other interventions that can reduce their future reliance on emergency services. This initiative, known as the Resource Access Program, uses sophisticated health information technology that immediately recognizes and notifies a program coordinator whenever a frequent user of emergency services calls 911. The coordinator, an experienced paramedic, then alerts a network of community stakeholders (e.g., physicians, social workers, police officers, case managers, housing providers) and works with them to implement measures to address the caller’s immediate and underlying health and social needs. The program has significantly reduced emergency medical service transports for frequent 911 callers, leading to major cost savings.

Evidence Rating (above in href)

Contact the Innovator
James Dunford, MD, FACEP
Anne Marie Jensen, PM

Look for Similar Items by Subject

http://innovations.ahrq.gov/content.aspx?id=4073