Emergency Medical Services/Trauma Committee Meeting

Wednesday, March 7, 2018

California Hospital Association - Boardroom

1215 K Street, Ste 800

Sacramento, CA, 95814

Conference Call Option:

(800) 882-3610 Access Code: 1953936#

Meeting Book - Emergency Medical Services/Trauma Committee Meeting

AGENDA

3. Sponsor List Page 242

4. 2018 ED Forum Sponsor Information and Form Page 243

5. Save the Date Page 247

E. Emergency Care Systems Initiative

1. Activity to Date Page 248
   Bartleson

2. San Diego Update
   Yates

3. San Francisco Update
   Serrano-Sewell

4. Next Steps
   Bartleson

12:00 IV. LUNCH

12:30 V. OLD BUSINESS CONT'D

A. Leading the Way
   Bartleson/Lowe

1. Update Page 280

2. Next Steps

B. APOT Update
   Porter/Barton

1. San Bernardino Grand Jury Report Update Page 291
   Porter

2. Statewide Data Collection Update
   Barton

1:00 VI. NEW BUSINESS

A. Reducing Ambulance Diversions Page 292
   Schneider

B. AB 1759/SB 944
   Bartleson

1. AB 1795 Page 300

2. SB 944 Page 307

1:30 VII. LEGISLATION

1:40

VIII. REPORTS

IX. INFORMATION ONLY

2:00

X. ADJOURNMENT

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, VP Nursing & Clinical Services

SUBJECT: CHA New CEO, Carmela Coyle and New Committee Member Claude Stang, RN, BSN, MA

SUMMARY

Carmela Coyle began her tenure as President & CEO of the California Hospital Association in October, 2017. She formerly led the Maryland Hospital Association for nine years. Prior to 2008, she spent 11 years as senior vice president of policy where she served as national media spokesperson and led AHA's policy development and strategy planning activities.

Claude Stang, RN, BSN, MA, is presently the Associate Director of Emergency Services at Cedars Sinai Medical Center, and is a new member of the CHA EMS/Trauma Committee.

ACTION REQUESTED

- Information Only

Attachments: Carmela Coyle Bio
Claude Stang Resume

BJB:br

Carmela Coyle

President & CEO
California Hospital Association

Carmela Coyle began her tenure as President & CEO of the California Hospital Association, the statewide leader representing the interests of more than 400 hospitals and health systems in California, in October 2017.

Previously, Coyle led the Maryland Hospital Association for nine years, where she played a leading role in reframing the hospital payment system in Maryland and moving to a value-based methodology. Maryland is now considered a national leader in health care policy and innovation.

Prior to 2008, Coyle spent 20 years in senior policy positions with the American Hospital Association (AHA), including 11 years as the senior vice president of policy, where she served as a national media spokesperson and led AHA's policy development and strategy planning activities. Earlier in her career, she worked for the Congressional Budget Office in Washington, D.C., advising members of Congress and their staff on the economic and budgetary implications of legislative policy.

Coyle currently is a member of AHA's Board of Trustees.

CALIFORNIA HOSPITAL ASSOCIATION

1215 K Street, Ste. 800
Sacramento, CA 95814
916.443.7401

Claude J. Stang RN BSN MA

1870 Paseo Pelota, Palm Springs, California 92262 - 760-449-8023 (H) - claudestang@hotmail.com

Executive Profile

Health care leader with over 23 years diverse clinical, education and administrative experience in the acute care setting. Solid leadership, communication, conflict resolution and team building skills. Proven strategic planner, systems thinker and organizational change leader.

Skill Highlights

- Emergency Department Care and Operations
- Trauma Services
- Pediatrics
- Organizational Change
- Patient Flow and Bed Management
- Health Information Systems
- Quality Improvement
- Patient Satisfaction
- Nursing Education
- Hospital Accreditation
- Pay for Performance

Professional Experience

Desert Regional Medical Center — September 2015 to Current
Director - Emergency and Trauma Services
Palm Springs, California

- 40 bed ED, level 2 trauma center. Lead team of 7 managers, 1 educator, 1 pre-hospital liaison nurse. Oversee fiscal, operational, human resource management, professional practice, quality and safety, regulatory and compliance areas impacting ED and Trauma Services.

Vancouver Coastal Health, Coastal Community of Care — April 2015 to August 2015
Director - Clinical Optimization and Patient Flow
North Vancouver, British Columbia

- 250 bed full service community hospital within the Vancouver Coastal Health region, level 2 trauma center and large rural/remote hospital network in coastal British Columbia. Led restructuring of patient flow team and redesign of patient flow processes. Led hospital bedmap redesign and introduction of care model changes. Advised director colleagues on clinical optimization opportunities. Supported linkage of rural/remote network with urban hospital teams and processes. Oversaw strategy deployment activities in collaboration with senior team. Short term position to support Chief Operating Officer with organizational change.

Vancouver Coastal Health, Richmond General Hospital — January 2013 to April 2015
Director - Emergency, Critical Care, Medicine Services, and Patient Flow
Richmond, British Columbia

- 200 bed full service community hospital within the Vancouver Coastal Health region. Led team of 5 Managers and over 400 nursing staff. Responsible for 30 bed ED, 12 bed ICU, 3 medicine units and hospital bed management/patient flow. Accountable for budget over $35 million. Human resource management. Introduced many departmental and large scale organizational change initiatives. Redesigned bedmap and care model on medicine units, introduced new High Acuity Unit and new Pediatric Emergency Unit. Lean process improvement. Program and system performance evaluation and monitoring. Clinical quality improvement, using strategies such as Releasing Time to Care. Professional practice standards and regulation. Disaster Preparedness. This role in Canada is similar to a CNO/ACNO role in the US health system.

May 2011 to December 2012
Manager - Emergency Department

- Recruited to manage opening of newly designed 30 bed full service community ED within the Vancouver Coastal Health region. Led team of over 100 emergency nursing and support staff. Fiscal management. Human resource management. Change leadership. Process improvement. Program and system performance evaluation. Accreditation. Patient

Satisfaction.

Vancouver Coastal Health, Vancouver General Hospital April 2009 to April 2011
Operations Director - Patient Flow
Vancouver, British Columbia

- 600 bed tertiary academic hospital, level 1 trauma center. Promoted from ED Manager to lead major organizational change. Led team of 3 Managers, 5 hospital nursing supervisors and over 50 nursing and support staff. Led re-implementation and education of bed management technology to support patient flow. Through centralization of various hospital departments and restructuring, introduced new patient flow and bed management department. Led major hospital bedmap redesign. Introduced first ever hospital supervisor role. Key lead in pay for performance initiatives. Key lead in disaster preparedness for H1N1, SARS and 2010 Olympics.

Vancouver Coastal Health, Vancouver General Hospital June 2005 to March 2009
Patient Services Manager - Emergency Department
Vancouver, British Columbia

- Promoted to Manager of 50 bed ED, level 1 academic trauma center, within the Vancouver Coastal Health region. Led team of over 200 emergency nursing and support staff. Led major renovation of ED. Introduced first ED Nurse Practitioner and introduced collaborative professional practice model. Fiscal management overseeing budget over $10 million. Human resource management. Change leadership. Process improvement. Program and system performance evaluation. Accreditation. Patient Satisfaction.

Vancouver Coastal Health, Vancouver General Hospital May 2003 to May 2005
Clinical Nurse Educator
Vancouver, British Columbia

- Education, training and professional development of emergency nursing staff.

British Columbia Institute of Technology July 2002 to April 2003
Clinical Faculty - Emergency Nursing Specialty
Burnaby, British Columbia
Clinical instructor for new Emergency nurses.

British Columbia Children's Hospital July 2001 to June 2002
RN - Emergency Department
Vancouver, British Columbia

Royal University Hospital July 1998 to June 2001
RN - Emergency Department
Saskatoon, Saskatchewan

University of Saskatchewan January 1998 to January 1999
Clinical Instructor - Pediatrics
Saskatoon, Saskatchewan

Royal University Hospital July 1995 to June 1998
RN - Pediatrics
Saskatoon, Saskatchewan

Travel Nursing July 1994 to June 1998
RN
Stanford University Hospital - Palo Alto, CA
Swedish Medical Center - Seattle, WA
Eisenhower Medical Center - Rancho Mirage, CA
University of Washington Medical Center - Seattle, WA
St. Joseph Hospital - Eureka, CA
Jefferson Regional Medical Center - Pine Bluff, AR
Methodist Hospital - Lubbock, TX

Education

Royal Roads University 2006
Master of Arts: **Healthcare Leadership**
Victoria, British Columbia, Canada
Thesis: Improving the Delivery of Health Information to Emergency Department Patients

University of Saskatchewan 1994
Bachelor of Science: **Nursing**
Saskatoon, Saskatchewan, Canada
Graduated with Distinction

Professional Affiliations

College of Registered Nurses of British Columbia
California Board of Nursing
Emergency Nurses Association
Peer Reviewer, Canadian Journal of Emergency Medicine
Medico-legal consulting

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

EMS/TRAUMA COMMITTEE

2018 MEMBER ROSTER

CO-CHAIRs

Carla Schneider, MSN, MICN, CEN
Emergency Department Director
Hoag Memorial Presbyterian Hospital
One Hoag Drive
P.O. Box 6100
Newport Beach, CA 92658-6100
(949) 764-5926
(949) 764-8599 *(cell)*
carla.schneider@hoaghospital.org

Pam Allen, RN, MSN, CEN
Director of Emergency Services
Redlands Community Hospital
350 Terracina Blvd.
Redlands, CA 92373
(909)355-6447
Paa2@redlandshospital.org

MEMBERS

Neal Cline, RN, JD, CFRN
Sr. Flight Nurse Enloe FlightCare Assistant Chief, Butte County EMS STEMI Manager, PreHospital Clinical Coordinator
Community Paramedic Manager Enloe Medical Center
1531 Esplanade Chico, CA 95926
(530) 332-7933
neal.cline@enloe.org

Rose Colangelo, RN, MSN
Manager of Emergency Services
Scripps Memorial Hospital La Jolla
9888 Genesee Avenue
La Jolla, CA 92037-1276
(858)824-6730
Colangelo.rose@scrippshealth.org

Connie Cunningham, RN
Executive Director
Pre-Hospital, Emergency & Trauma Services
Loma Linda University Medical Center and Children's Hospital
11234 Anderson, Room A122A
Loma Linda, CA 92354
(909) 558-7875
ccunningham@llu.edu

Fred Hawkins
Director of Emergency Services
Ridgecrest Regional Hospital
1081 North China Lake Blvd.
Ridgecrest, CA 93555-3130
(209)543-4312
flhawkins@outlook.com

Cheryl Heaney-Ordez, MSN, RN, NEA-BC
Director, Emergency Services
Dignity Health
St. Joseph's Medical Center
1800 N. California St.
Stockton, CA 95204-6019
(209)467-6469
Cheryl.heaney@dignityhealth.org

Marlena Montgomery, MBA, MSN, RN, CEN
Director of Emergency Services
Sharp Memorial Hospital
7901 Frost Street
San Diego, CA 92123-2701
(858) 939-3099
Marlena.montgomery@sharp.com

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Karen Murrell, MD
Assistant Physician in Chief
Department of Emergency Services
Kaiser Permanente South Sacramento
6600 Bruceville Road Sacramento,
CA 95823
(916) 688-6536
karen.l.murrell@kp.org

Rupinder Sandhu
ED Nurse Director
UC Davis Medical Center
2315 Stockton Blvd
Sacramento, CA 95817-2282
916-703-6829
rupsandhu@ucdavis.edu

Jacqueline Saucier PhD (c), MBA, MSN
Director, Inpatient and Emergency Services
Palomar Medical Center
15615 Pomerado Road
Poway, CA 92064
(858) 613-4328
Jacqueline.saucier@palomarhealth.org

Claude Stang, RN, BSN, MA, CEN
Associate Director Emergency Department
Cedars-Sinai Medical Center
8700 Beverly Blvd., SCCT 2S46
Los Angeles, CA 90048
(310) 423-8754
Claude.stang@cshs.org

Jason Zepeda
Program Manager, Performance Improvement
Hoag Memorial Presbyterian Hospital
One Hoag Drive
P.O. Box 6100
Newport Beach, CA 92658-6100
(949) 764-1944
Jason.Zepeda@Hoag.org

EX OFFICIO

Bruce Barton
(Ex Officio)
Director
Riverside County EMS Agency (REMSA)
Department of Emergency Management
4210 Riverwalk Parkway, Suite 300
Riverside, CA 92505
(951)358-5029
bbarton@rivco.org

Ross Fay, MBA
(*Ex Officio* – CALSTAR) Regional Director
CALSTAR (California Shock Trauma Air Rescue)
177 John Glenn Drive
Concord, CA 94520
(925) 798-7670
rfay@calstar.org

Eric Morikawa, CHIEF
(Ex Officio - CDPH)
Field Operations Branch, Region II California
Department of Public Health Licensing and
Certification Program
P.O. Box 997377, MS 3001
Sacramento, CA 95899-7377
(916) 440-7363
eric.morikawa@cdph.ca.gov

Chi Perlroth, MD, FACEP
(Ex Officio - Cal ACEP)
Emergency Room Physician
John Muir Medical Center
1601 Ygnacio Valley Road
Walnut Creek, CA 94598
(213) 810-4785
chiyonglee@hotmail.com

James Pierson
(Ex Officio)
Vice President of Operations
Medic Ambulance Service
506 Couch Street
Vallejo, CA 94590
(707) 644-1761
jpierson@medicambulance.net

Daniel R. Smiley
(*Ex Officio –EMS*)
Chief Deputy Director
State of California
Emergency Medical Services Authority
(EMSA)
10901 Gold Center Drive, 4th Fl.
Rancho Cordova, CA 95670
(916) 431-3672
Dan.smiley@emsa.ca.gov

Ron Smith, LVN/EMT1A
(*Ex Officio* **-** *CDPH***) Alternate for Eric Morikawa**
Disaster Response Coordinator, Terrorism Liaison Officer
Emergency Preparedness & Disaster Response Section
California Department of Public Health
Licensing & Certification Program
1615 Capitol Avenue
Sacramento, CA 95814
(916) 552-8642
ron.smith@cdph.ca.gov

Susan Smith, RN
(Ex Officio- CalENA)
Director-at-Large, California
Emergency Nurses Association
County of San Diego, Emergency Medical Services
EMS Coordinator
6255 Mission Gorge Rd.
San Diego, CA 92120
(619) 325-9438
Susan.smiths@gmail.com

Lawrence Stock, MD, FACEP
(Ex Officio - Cal ACEP)
Alternate for Vivian Reyes, MD
Vice Chair, Department of Emergency Medicine
Antelope Valley Hospital
1600 W Avenue J
Lancaster, CA 93534
(310) 849-0709 (cell)
drlarrystock@gmail.com

Heather Venezio, RN
(Ex Officio - TMAC Representative)
Trauma Program Director
North Bay Medical Center
1200 B. Gale Wilson Blvd.
Fairfield, CA 94533
(707) 646-4019
hvenezio@northbay.org

REGIONAL ASSOCIATION REPRESENTATIVES

Keven Porter, RN
Regional Vice President, Inland Area
Hospital Association of Southern California
515 S. Figueroa Street, Suite 1300
Los Angeles, CA 90071
(951) 222-2284
kporter@hasc.org

David Serrano-Sewell
Regional Vice President
235 Montgomery Street, Suite 910
San Francisco, CA 94104
(415) 616-9990
dserranosewell@hospitalcouncil.org

Judith Yates
Senior Vice President
Hospital Association of San Diego & Imperial County
5575 Ruffin Rd., Suite 225
San Diego, CA 92123
(858) 614-1557
jyates@hasdic.org

CHA STAFF

BJ Bartleson, MS,RN, NEA-BC
Vice President, Nursing & Clinical Services
California Hospital Association
1215 K Street, Suite 800
Sacramento, CA 95814
(916) 552-7537
bjbartleson@calhospital.org

Barb Roth
Administrative Assistant California Hospital Association
1215 K Street, Suite 800
Sacramento, CA 95814
(916) 552-7616
broth@calhospital.org

EMS/T Committee Hospital Representation

BY COUNTY and HOSPITAL TYPE

As of February 16, 2018

HOSPITAL/HEALTH SYSTEM TYPES	
Free-Standing Facility	2
Hospital System	7
Small/Rural Facility	1
University/Teaching Facility	3
TOTAL COMMITTEE REPRESENTATION	13

Denotes number of hospitals/health systems represented within that county.

CHA Member/ED Breakdown
February, 2018

HOSPITAL COMMITTEE MEMBER:

Carla Schneider	Hoag Memorial Presbyterian Hospital
Pam Allen	Redlands Community Hospital
Neal Cline	Enloe Medical Center
Rose Colangelo	Scripps Memorial Hospital La Jolla
Connie Cunningham	Loma Linda University Med Center
Fred Hawkins	Ridgecrest Regional Hospital
Cheryl Heaney-Ordez	St. Joseph's Medical Center
Marlena Montgomery	Sharp Memorial Hospital
Karen Murrell	Kaiser Permanente South Sacramento
Rupy Sandhu	UC Davis Medical Center
Jacqueline Saucier	Palomar Medical Center
Claude Stang	Cedars-Sinai Medical Center
Jason Zepeda	Hoag Memorial Presbyterian Hospital

ED TYPE BY MEMBER:

Carla Schneider	Hoag Memorial Presbyterian Hospital	Emergency Services
Pam Allen	Redlands Community Hospital	Emergency Services
Neal Cline	Enloe Medical Center	Flight Nurse/Pre-
Rose Colangelo	Scripps Memorial Hospital La Jolla	Emergency Services
Connie Cunningham	Loma Linda University Med Center	Emergency/Trauma
Fred Hawkins	Ridgecrest Regional Hospital	Emergency Services
Cheryl Heaney-Ordez	St. Joseph's Medical Center	Emergency Services
Marlena Montgomery	Sharp Memorial Hospital	Emergency Services
Karen Murrell	Kaiser Permanente South Sacramento	Emergency Services
Rupy Sandhu	UC Davis Medical Center	Emergency Services
Jacqueline Saucier	Palomar Medical Center	Emergency Services
Claude Stang	Cedars-Sinai Medical Center	Emergency Services
Jason Zepeda	Hoag Memorial Presbyterian Hospital	Trauma/General

EX-OFFICIO COMMITTEE MEMBER:

Heather Venezio	TMAC
Eric Morikawa	California Department of Public Health
Daniel Smiley	California EMS Authority
Ross Fay	CALSTAR
Jim Pierson	Medic Ambulance
Ron Smith	California Department of Public Health
Lawrence Stock	Antelope Valley Hospital
Susan Smith	CalENA
Chi Perlroth	CAL ACEP
Susan Smith	CalENA
Bruce Barton	Riverside County EMS Agency

CHA/REGIONAL STAFF

BJ Bartleson	California Hospital Association
Judith Yates	HASD&IC
David Serrano Sewell	Hospital Council
Keven Porter	HASC

STATE REPRESENTATION

Northern California	**4**
Southern California	**9**

GUIDELINES FOR THE
CALIFORNIA HOSPITAL ASSOCIATION'S
EMS/TRAUMA COMMITTEE
Updated
09/23/15

I. NAME

The name of this committee shall be the CHA EMS/Trauma Committee.

II. MISSION

The EMS/Trauma Committee represents CHA members that provide emergency medical and/or trauma services in the State of California, and serves in an advisory capacity to the CHA Board of Trustees regarding EMS/Trauma member needs, policies and legislation.

Recognizing the diverse organizations and providers that work in emergency systems across the state, the mission of the committee also includes representation from diverse multidisciplinary health care organizations and associations that include professional associations, regulatory agencies, emergency services organizations, prehospital providers and others, that promote quality emergency services in the state of California. This multidisciplinary group will act as a collaborative source of emergency services expertise, providing a venue for the coordination of emergency and trauma services to advocate for the highest standards of emergency trauma care services across the state.

The purposes of the Committee shall be:

1. to serve as a forum for all CHA members and associated groups interested in EMS/Trauma to receive and exchange information, adopt policies and positions, guide management, adopt strategies and serve as the primary public policy arm of CHA for emergency medical services and trauma issues;
2. to provide CHA member EMS/Trauma providers with a statewide structure dealing with the issues important to their interests;
3. to create a representative form of leadership which is based on participation of all its members;
4. to provide direct input to the CHA Board of Trustees; and
5. to provide a unified voice on behalf of CHA members, taking into account the multiple diverse organizations that interact with hospital emergency/trauma services

III. COMMITTEE

The committee shall consist of a maximum of 22 representatives from California hospital/health system organizations, and organizations with related interests.

A. MEMBERSHIP

1. Membership on the CHA EMS/Trauma Committee shall be based upon membership in

CHA, and reserved for those members.

2. The Committee shall consist of various representatives from large hospital systems, public institutions, private facilities, free-standing facilities, small and rural facilities, university/teaching facilities, specialty facilities and a representative from a professional group specializing in EMS/Trauma issues.
3. Membership by EMS related organizations will be considered Ex-officio members. Ex-officio members will be determined by committee input and CHA determination.
4. Appointment of members to the Committee will follow the CHA Guidelines for Committee Membership.

B. TERMS OF THE COMMITTEE MEMBERS

1. As members leave the Committee, vacancies shall be filled. It is understood that a member forfeits his/her seat if they no longer serve in the capacity, or represent a facility that is not a CHA member.
2. Committee members with specialized skills, knowledge, or professional associations may serve on the committee as ex-officio members. Ex-officio members are not subject to the above terms. These determinations shall be made by CHA.
3. Provider representatives who transition from one position to another are welcome to attend committee meetings during their transition; however, this should not exceed two consecutive meetings.
4. Provider representatives who misrepresent their organization's position are subject to review and dismissal from the committee.

C. COMMITTEE MEETINGS

1. Meetings of the Committee shall be held quarterly.
2. Provider representatives may send an appropriate substitute to the meetings when they are unable to attend. To maintain continuity for Committee meetings, this should be used sparingly, not to exceed two consecutive meetings.
3. Three consecutive unexcused absences by a Committee member may initiate a review by the Chair and CHA staff for determination of the Committee member's continued service on the Committee.
4. Special meetings may be scheduled by the Chair, majority vote or CHA staff.
5. Membership is based on one's ability to be physically present at quarterly meetings and conference call only as needed for emergency situations.

D. VOTING

1. Voting rights shall be limited to members of the Committee, and each member present shall have one vote. Voting by proxy is not acceptable.
2. All matters requiring a vote of the Committee must be passed by a majority of a quorum of the Committee members only at a duly called meeting or telephone conference call.

E. QUORUM

Except as set forth herein, a quorum shall consist of the majority of the Committee

membership in attendance.

F. MINUTES

Minutes of the Committee shall be recorded at each meeting, disseminated to the membership, and approved as disseminated or as corrected at the next meeting of the Committee.

IV. OFFICERS

The officers of the Committee shall be the committee chair, co-chair, and CHA staff. Except as provided herein, the chair and co-chair shall be elected by the Committee for a two-year term.

The chair officers vacate their Committee positions upon election, and their seats shall be filled through the nominating and election process. The past-chairs will be invited by the Committee to serve as ex-officio members.

Should a chair or co-chair vacate his/her position prior to the end of the term, a nominating committee will convene to select a replacement, and assume a two-year term of office.

V. COMMITTEES

For special and specific purposes, the chair or CHA staff may appoint a committee or ad hoc on task force. Membership may be expanded to non-members of the Committee.

VI. GENERAL PROVISIONS

The strategic plan defining the goals, objectives, and work plans shall be developed annually by the CHA staff and approved by the Committee. Quarterly updates and progress reports shall be completed by the Committee and CHA staff.

Staff leadership at the state level shall be provided by CHA with local staff leadership provided by HCNCC, HASD&IC, and HASC. The primary office and public policy development and advocacy staff of the Committee shall be located within the CHA office.

The Committee staff shall be an employee of CHA.

VII. AMENDMENTS

These Guidelines may be amended by a majority vote of the members of the Committee at any regular meeting of the Committee.

VIII. LEGAL LIMITATIONS

Any portion of these Guidelines which may be in conflict with any state or federal statutes or regulations shall be declared null and void as of the date of such determination.

Any portion of these Guidelines which are in conflict with the Bylaws and policies of CHA shall be

considered null and void as of the date of the determination. Information provided in meetings is not to be sold or misused.

IX. CONFIDENTIALITY FOR MEMBERS

Many items discussed are confidential in nature, and confidentiality must be maintained. All Committee communications are considered privileged and confidential, except as noted.

X. CONFLICT OF INTEREST

Any member of the Committee who shall address the Committee in other than a volunteer relationship excluding CHA staff and who shall engage with the Committee in a business activity of any nature, as a result of which such party shall profit pecuniarily either directly or indirectly, shall fully disclose any such financial benefit expected to CHA staff for approval prior to contracting with the Committee and shall further refrain, if a member of the Committee, from any vote in which such issue is involved.

CHA Emergency Services/Trauma Committee Goals and Objectives, 2017-2019

CHA EMS/T Committee Mission

The mission of the CHA EMS/Trauma Committee is to represent CHA members that provide emergency medical and or trauma services in the state of California, and serve in an advisory capacity to CHA Board of Trustees regarding EMS/Trauma member needs, policy and advocacy to promote an optimally health society.

Goals and Objectives 2017- 2019

1. Develop guidance, tools, information and strategies to support emergency department and trauma services of the future that enhance quality patient care.
   a. Connect local and regional best practices with toolkits or web connections.
   b. Explore new technologies and applications to streamline and improve emergency and trauma care practices.
   c. Continue to monitor APOT and work collaboratively with prehospital providers on performance improvement and reengineering efforts.

2. Successfully launch the Emergency Care Systems Initiative to resolve California's overburdened emergency care system with a roadmap for change.
   a. Use performance measures, technology and new modalities to assess ED crowding and strategize solutions across systems of care.
   b. Develop both provider and consumer education vehicles to improve ED crowding.
   c. Develop public policy and advocacy strategies to address ED crowding, particularly alternate destination policies for behavioral health patients.

3. Implement a successful annual ED Forum that assists members to become agents of change during health care reform.
   a. Use state and national experts that emphasize a collaborative, multi-stakeholder level of involvement.
   b. Focus on member evidence based practices that are affecting change.

4. Represent Trauma issues on the EMSA trauma regulatory review task force.
   a. Appoint CHA EMS/T member to head the trauma subcommittee workgroup and present issues at the EMSA trauma task force.
   b. Assist with funding and solutions to maximize trauma care and provisions across the state.
   c. Select CHA EMS/T member to represent EMSC issues and report to the committee

5. Understand HIE systems and how they will benefit transitions of care for patients between systems of care.
   a. Work closely with HIE networks to understand connections and linkages to improved care transitions.
   b. Work with EMSA on HIE prehospital pilot work.

6. Closely monitor federal and state health care reform changes and their effect on emergency services and systems of care.
   a. Continue to monitor changes in the financial landscape that have a direct effect on emergency department visits.
   b. Monitor statutory and regulatory changes affecting hospital emergency /trauma services.

California Hospitals
Provide Care and Employ Thousands.

Support the Hospitals that Support You.

Join CHPAC today!

What is CHPAC?

California Hospital Political Action Committee (CHPAC) is the political arm of the California Hospital Association. The purpose of CHPAC is to elect candidates who understand the vital role hospitals play in our state as a part of the health care system, and the positive impact hospitals have on the economy.

CHPAC receives contributions from individuals and corporate members and uses those funds to support officeholders and candidates for state and local offices.

The CHPAC Board of Directors governs the activities and funds of CHPAC. The board includes health care leaders from across the state as well as corporate partners.

Why give to CHPAC?

As it becomes increasingly difficult for companies to do business in California, it is imperative that we help to elect candidates who understand and support hospitals. It is vital for hospitals to provide quality care while also maintaining the financial stability necessary to employ a workforce of more than a half-million individuals. Additionally, California hospitals purchase vast amounts of goods and services, further fueling the economy by supporting both small and large businesses.

Individual Advocacy Levels

CHPAC Presidents' Club Platinum ($5,000)

The prestigious Presidents' Club Platinum level signifies the highest level of commitment at the individual level.

- Includes all Presidents' Club Diamond level benefits.
- A special executive dinner and reception

CHPAC Presidents' Club Diamond ($1,750)

- Free admission (with one guest) to all CHPAC events
- Invitations to legislative briefings and receptions featuring key lawmakers who are active in health care policy
- Recognition throughout the year at CHPAC events and in publications
- An elite-level CHPAC lapel pin

CHPAC Presidents' Club ($1,500)

- Free admission (with one guest) to all CHPAC events
- Invitations to legislative briefings and receptions featuring key lawmakers who are active in health care policy
- Recognition throughout the year at CHPAC events and in publications
- A specially-designed CHPAC lapel pin

CHPAC Leadership Board ($850)

- Invitations to legislative briefings and receptions featuring key lawmakers who are active in health care policy
- Recognition throughout the year at CHPAC events and in publications
- A specially-designed CHPAC lapel pin

CHPAC Golden State Club ($500)

- Recognition throughout the year at CHPAC events and in publications
- A specially-designed CHPAC lapel pin

Corporate Sponsorship Levels

Membership in the CHPAC Corporate Presidents' Club is for corporations that have a vested interest in the vitality of hospitals and are committed to working with CHPAC to help elect policy makers who understand the important role hospitals play in their communities. Vendors and businesses that supply goods and services to the state's hospitals and health systems may demonstrate their support and commitment to their clients by joining the CHPAC Corporate Presidents' Club.

Corporate Presidents' Club ($7,300)

- Free admission for three company representatives to CHPAC's Presidents' Club events. CHPAC holds a dozen events throughout the year, which are held at great venues, and provide excellent opportunities for our member companies to network with area hospital executives. Your company will receive recognition on the invitation and throughout the event.
- Recognition in publications throughout the year that reach an audience of over 400 heath care administrators and CEOs
- Members can request a personal meeting with hospital executives by submitting a form.
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CALIFORNIA HOSPITAL ASSOCIATION
Political Action Committee

2018 State Contribution Form

Yes, I wish to support the state activities and causes of the California Hospital Association Political Action Committee (CHPAC) by making a contribution of:

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CHA EMS/TRAUMA COMMITTEE
MEETING MINUTES
August 30, 2017 / 10:00 a.m. – 2:00 p.m.

1215 K Street, Suite 800
Sacramento, CA

Members Present: Pamela Allen, Marlena Montgomery, Rose Colangelo, Cheryl Heaney-Ordez, Jim Pierson, Ross Fay, Laurie McCully, Ron Smith, Fred Hawkins, Heather Venezio, Karen Murrell,

Members Attending by Call: Carla Schneider, Rupy Sandhu, Connie Cunningham, David Serrano Sewell, Jason Zepeda,

Guests: Marguerite Paradis, Karl Sporer, Susan Bower, Steve Barrow, Bryn Mumma

CHA Staff: BJ Bartleson, Barb Roth, Sheree Lowe, Pat Blaisdell

RVP Staff: Judith Yates, Keven Porter

I. CALL TO ORDER/INTRODUCTIONS

Ms. Allen called the meeting to order at 10:00 a.m. Introductions and member updates were made.

Goals and Objectives: Ms. Bartleson updated the goals and objectives based upon suggestions from previous meeting. Additions include ECSI, HIE, trauma regulatory changes and ED Forum.

II. REVIEW OF PREVIOUS MEETING MINUTES

The minutes of the June 7, 2017, EMS/Trauma Committee meeting were reviewed.

IT WAS MOVED, SECONDED AND CARRIED:

- *Approved as submitted with no corrections.*

III. OLD BUSINESS

A. Emergency Care Systems Initiative (ECSI)

1. CHA is working with a potential funder to assist with consortium convening and data collection. The new brochure is available in hard copy and electronically. Committee members asked for the present list of stakeholders.

2. Stakeholder Campaign for Action
CHA has been collecting letters of support for the Emergency Care Systems Initiative from the identified stakeholders.

3. San Francisco Update (Serrano-Sewell)
The San Francisco stakeholders are working on local initiatives that will be discussed at the next meeting.
Last year, the San Francisco section CEOs retained the Price Waterhouse Cooper firm to research and provide a report on ED crowding issues. The report recommended the creation of a behavioral health/ED task force to look at local solutions for improved behavioral health care. The task force has ED physicians, community leaders, and hospital administrator representatives. Dr. Maria Raven from UCSF and Dr. Hemal Kanzaria (ZSFG) are studying frequent ED visitors to understand how patients can access care in the community before ED services are needed.

San Diego Update - Yates
The San Diego Emergency Oversight Coalition (EMOC) is studying care coordination activity and language standardization. San Diego Health E -Connect, the region's health information exchange, is working to develop linkages between hospital EDs to track frequent ED users.

- *ACTION: Send list of support letters received to committee members*

4. Conservator and placement of patients in the ED:
Ms. Lowe – often affects in-patient psych wards, this is the first time hearing this in the ED.

- *ACTION: Ms. Lowe, Ms. Bartleson and Ms. Blaisdell (Case Management Committee) to meet to discuss.*
- *ACTION: Details of problems encountered from committee member Ms. McCully*

B. ED Forum
Information provided regarding the Behavioral Health and ED Forum

- *ACTION: Send "save the date" electronic information to committee members*

.

C. Leading the Way (Lowe)
Background of behavioral health in California. Mr. Duane Dauner, CHA CEO, met with the National Alliance for Mental Illness (NAMI) to bring diverse organizations together to talk about improving the mental health delivery system. The Leading the Way coalition hired Darryl Steinberg as the coalition consultant. The coalition divided into four subcommittees, finance, delivery systems, workforce and Advocacy to assess and develop an agreed upon statewide model for behavioral health care. Thus far, they have held four general coalition meetings and several committee meetings. There are numerous links to the Emergency Care Systems Initiative.

- *ACTION: Information only.*

D. Community Paramedicine/Alternate Destination Update
1. Potential New CP Pilots (Smiley)

EMSA is bringing additional pilots into the OSHPD project. The alternate destination to urgent care sites will discontinue due to lack of data. There is successful data from the alternate destination sites for BH and sobering centers. The study revealed there is lack of standardization across urgent care center services and there is a need to create standardized criteria for urgent care hours, capability, lab testing ability, etc. Creating an inventory of urgent care centers and what services they perform would be helpful.
Mr. Pierson advised that Reno has a CP system in place that is doing well and includes the alternate destination model.

2. AB 820 and AB 1650
AB 820 (Gipson) – LA County CHA co-sponsored bill. Went to a 2-year bill. This is a bill for the community paramedicine alternate destination model.
AB 1650(Maienschein) – also moved to a 2-year bill. Includes all models of community paramedicine except alternate destination.

➢ *ACTION: Information Only.*

E. Ambulance Patient Offload Times (APOT) Update

1. San Bernardino Grand Jury Report - Porter
Numerous complaints were received from the high desert area regarding long ambulance patient offload delay times. The grand jury convened, listened to complaints and did due diligence. Six recommendations were made by the grand jury and the top ones are:
1. Build a new county hospital in the high desert
2. Single frequency for communication
3. Centralized base station model and alternate destinations

No hospitals were interviewed for the report and the Hospital Association of Southern California (HASC) made recommendation back to the Grand Jury. HASC recommended the following:
1. Look at adding additional Federally Qualified Health Clinics (FQHC's)
2. Find a way to recruit and retain primary care physicians

➢ *ACTION: information only*

F. EDIE Update (discussion postponed to next meeting)
1. CMT Presentations

2. EDIE Outcomes

3. Statewide Hospital, EDIE and Payer Relationships

G. C Diff in Prehospital Environment (discussion postponed to next meeting)

H. Trauma (discussion postponed to next meeting)
1. Maddy Funds Allocations

2. Update on Trauma Regulations Rewrite

I. Legislation

IV. NEW BUSINESS

A. Whole Person Care Pilot Program
Susan Bower from the San Diego Integrated Health and Human Services Agency presented the San Diego Whole Person Care (WPC) Pilot Program. The program integrates providers of multiple services and systems to frequent ED utilizers. It is named, "Whole Person Wellness, Better Health, Living Safely and Thriving" in San Diego and the goal is to provide comprehensive system navigation for those with needs that touch on various agency services. Target population are those who are high cost Medi-Cal beneficiaries and those that are homeless or at risk of becoming homeless. Also, those beneficiaries who suffer from mental illness or substance abuse disorders. Once the person is engaged in the program, they get a consent form to allow all agencies to work together and share information. The goal is to link the beneficiaries to whatever they need to help them become stable. They use social workers and peer support specialists. Care navigation teams will track the beneficiaries with a Whole Person Care Wellness Module. They are exploring how to connect this information with the E.Ds. ED information exchange could be a possible solution.

- *ACTION: Information Only*

B. Cardiac Arrest Study (Mumma)
Ms. Mumma is studying how hospitals are caring for post cardiac arrest patients. She is currently seeking physicians and nurses to participate in the study. Trying to get an idea of what is working and what is not working. She has received interested response from academic sites. The National Institute of Health funds the study.

- *ACTION: Ms. Mumma to provide committee with a list of interested hospitals*

C. Inpatient Discharge Delay (Blaisdell)
There are infrastructure issues at every step of the continuum of care. The CHA Case Management Committee was asked to identify their biggest problem. One of top identified problems are Medi-cal patients with no available discharge placement destination. This problem is getting worse. The committee did a mini-survey to understand the scope of the problem and Ms. Blaisdell provided the results to the committee. CHA has convened an internal group to come up with ways to help. The inpatient discharge delay leads to longer ED boarding times.

- *ACTION: Continue this discussion in the EMS/T Committee and in the next Case Management Committee meeting.*

D. NQF Draft and Other ED Outcome Measures (discussion postponed to next meeting)

E. Unintentional Injury Prevention Strategic Plan Project (Barrow)

Mr. Steve Barrow discussed that about 1,000 deaths due to unintentional injuries occur in California every year. Childhood unintentional injuries contribute to ED crowding. Goal is to keep this issue at the forefront. Seeking to collaborate with other associations and stakeholders. Mr. Barrow will send a summary of their strategic plan and webinar series to CHA. Ms. Venezio will send information regarding this project to the California Trauma Managers Association.

- *ACTION: Mr. Barrow to send a summary of their strategic plan and webinar series to CHA for distribution to the committee.*

V. ROUNDTABLE

Mr. Ross Fay provided information for the ED Forum and shared that the air ambulance providers are supporting AB 1410(Ridley-Thomas), the Emergency Air Medical Transportation Act, which helps to fund reimbursement.

Mr. Dan Smiley (EMSA)

- Discussed the updated information on HIE activity.
- Stated Stroke and STEMI Regulations can be used as guidelines
- Seventeen core measures will be released soon
- They have two California teams in Texas helping with the hurricane disaster relief.
- The will put forth a bill next year to get funding from DDS to EMSA to provide childcare training.

VI. NEXT MEETING

December 13, 2017

- *ACTION: Informational Only.*

VII. ADJOURNMENT

Having no further business, the meeting adjourned at 2:00 p.m.

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: Pat Blaisdell, VP Post Acute Care Services

SUBJECT: Inpatient Discharge Delays

SUMMARY

Hospitals continue to struggle with discharge patient delays to long term care, and inability to repatriate patients back to their original Long term care spot. Attachments discuss: Discharge Notice Guidance, AFL 17-27, Regulation 72520 Bedholds, and Readmission To a Nursing Home after a Hospital Stay. Update from Post Acute Care and Case Management Committee will be provided.

ACTION REQUESTED

- Discussion on how to assess and innovate to improve discharge delays that lead to ED boarding and overcrowding.

DISCUSSION QUESTION

1. Is this situation increasing?
2. Are there innovative ideas hospitals have arranged with their LTC partners to address these issues?

Attachments: Discharge Notice Guidance
AFL 17-27
Bedholds
Readmission to a Nursing Home after a Hospital Stay

BJB:br

1215 K Street, Suite 800, Sacramento, CA 95814 • *Telephone:* 916.443.7401 • *Facsimile:* 916.552.7596 • www.calhospital.org

SENDING REQUIRED TRANSFER/DISCHARGE NOTICES TO YOUR LOCAL LONG-TERM CARE OMBUDSMAN PROGRAM

Current federal regulations (42 CFR 483.15(c)(3)(i)) and State law (Health and Safety Code section 1439.6, effective January 1, 2018) require skilled nursing facilities to send copies of **all** facility-initiated transfer/discharge notices to the local Long-Term Care Ombudsman Program. For your convenience, the Office of the State Long-Term Care Ombudsman has developed the following guidelines.

Are facilities required to send copies of all discharge/transfer notices to the local Long-Term Care Ombudsman Program (LTCOP)?

- Facilities are **required** to send copies of all notices related to *facility-initiated* transfers and discharges.
- Facilities are **not required** to send copies of notices for resident-initiated transfers or discharges.

How is a resident-initiated transfer or discharge defined?

- A resident-initiated transfer or discharge means the resident or, if appropriate, the resident representative, has provided verbal or written notice of intent to leave the facility. The medical record must contain documentation or evidence of the resident's or resident representative's verbal or written notice of intent to leave the facility.
- A resident's expression of a desire to return home or to the community – or the elopement of a resident who is cognitively impaired – should not be taken as notice of intent to leave the facility.

When should a notice be sent to the local LTCOP?

- Facilities must give residents and their representatives a notice of discharge or transfer at least 30 days in advance unless one of the exceptions outlined in 42 CFR 483.15(c)(4)(ii) applies.
- The facility must send copies of these notices to the LTCOP at the same time.

Should notices be sent to the LTCOP for emergency transfers?

- When a resident is **temporarily transferred** on an emergency basis to an acute care facility, notice of the transfer may be provided to the resident and resident representative as soon as practicable (42 CFR 483.15(c)(4)(ii)(D)). Copies of these notices can also be sent to the LTCOP when practicable, such as in a monthly list.
- If the facility decides to **discharge** a resident for one of the allowed reasons while the resident is still hospitalized, the facility must send a 30-day notice of discharge to the resident and resident representative. In this case, the facility must also send a copy of the notice to the LTCOP **at the same time** it provides notice to the resident or the resident's representative.

What should be included on each notice?

- The notice should include the resident's name **and** the facility's name, address, and contact information, as well as all information required under 42 CFR 483.15(c)(5).

How to Send Notices to Your Local Ombudsman Program

Enter text here

KAREN L. SMITH, MD, MPH
Director and State Public Health Officer

State of California—Health and Human Services Agency

California Department of Public Health

EDMUND G. BROWN JR.
Governor

AFL 17-27

December 26, 2017

TO: Long-Term Care Facilities

SUBJECT: Assembly Bill (AB) 940: Notification to the long-term care ombudsman of facility initiated resident transfers and discharges

AUTHORITY: Health and Safety Code (HSC) section 1439.6

All Facilities Letter (AFL) Summary

This AFL notifies long-term care (LTC) facilities of the chaptering of AB 940 that requires LTC facilities to notify the LTC Ombudsman of facility-initiated transfers or discharges.

Effective January 1, 2018, AB 940 requires a LTC facility to notify the local LTC Ombudsman at the same time notice is provided to the resident or the resident's representatives when a facility-initiated transfer or discharge occurs. The facility must send notice to the local LTC Ombudsman for any transfer or discharge that is initiated by the facility, whether or not the resident agrees with the facility's decision. The facility does not need to notify the LTC Ombudsman of transfers initiated by the resident.

The facility is required to provide a copy of the notice to the LTC Ombudsman as soon as practicable if a resident is subject to a facility-initiated transfer to a general acute care hospital on an emergency basis. Failure to timely send a copy of the notice to the local LTC Ombudsman will constitute a class B violation, which may result in a monetary penalty between $100-$2,000.

If you have any questions, please contact your respective Licensing and Certification district office (DO). DO contact information is located at:

District Office Contact

The California Department Public Health's failure to expressly notify facilities of statutory or regulatory requirements does not relieve facilities of their responsibility for following all laws and regulations. Facilities should refer to the full text of all applicable sections of the HSC and the California Code of Regulations to ensure compliance.

Sincerely,

Original signed by Jean Iacino

Jean Iacino
Deputy Director

Center for Health Care Quality, MS 0512 . P.O. Box 997377 . Sacramento, CA 95899-7377
(916) 324-6630 . (916) 324-4820 FAX
Department Website (cdph.ca.gov)

Page Last Updated : December 26, 2017

72520. Bed Hold.

22 CA ADC § 72520BARCLAYS OFFICIAL CALIFORNIA CODE OF REGULATIONS

Barclays Official California Code of Regulations
Title 22. Social Security
Division 5. Licensing and Certification of Health Facilities, Home Health Agencies, Clinics, and Referral Agencies
Chapter 3. Skilled Nursing Facilities
Article 5. Administration (Refs & Annos)

22 CCR § 72520

§ 72520. Bed Hold.

(a) If a patient of a skilled nursing facility is transferred to a general acute care hospital as defined in Section 1250(a) of the Health and Safety Code, the skilled nursing facility shall afford the patient a bed hold of seven (7) days, which may be exercised by the patient or the patient's representative.

(1) Upon transfer to a general acute care hospital, the patient or the patient's representative shall notify the skilled nursing facility within twenty-four (24) hours after being informed of the right to have the bed held, if the patient desires the bed hold.

(2) Except as provided in Section 51535.1, Title 22, California Administrative Code, any patient who exercises the bedhold option shall be liable to pay reasonable charges, not to exceed the patient's daily rate for care in the facility, for bed hold days.

(3) If the patient's attending physician notifies the skilled nursing facility in writing that the patient's stay in the general acute care hospital is expected to exceed seven (7) days, the skilled nursing facility shall not be required to maintain the bed hold.

(b) Upon admission of the patient to the skilled nursing facility and upon transfer of the patient of a skilled nursing facility to a general acute care hospital, the skilled nursing facility shall inform the patient, or the patient's representative, in writing of the right to exercise this bed hold provision. No later than June 1, 1985, every skilled nursing facility shall inform each current patient or patient's representative in writing of the right to exercise the bed hold provision. Each notice shall include information that a non-Medi-Cal eligible patient will be liable for the cost of the bed hold days, and that insurance may or may not cover such costs.

(c) A licensee who fails to meet these requirements shall offer to the patient the next available bed appropriate for the patient's needs. This requirement shall be in addition to any other remedies provided by law.

The provisions of this section do not apply to patients covered only by Medicare, Title XVIII benefits pursuant to Code of Federal Regulations, Title 42, Subsection 489.22(d)(1).
Note: Authority cited: Sections 208(a), 1275 and 1276, Health and Safety Code.
Reference: Sections 1275 and 1276, Health and Safety Code; and 42 CFR 489.22 (d)(1).

Readmission to a Nursing Home After a Hospital Stay
When a resident is transferred to a hospital, the nursing home must allow the resident or family member to hold the resident's bed for up to seven days (bed hold). As required by Title 22, the SNF must provide a written bed-hold notice when they are transferred to the hospital. If the resident's hospital stay exceeds seven days, Title 22 requires that the SNF readmit the resident to the first available bed "appropriate to their needs." A refusal to readmit following a hospital stay I considered an involuntary transfer. The resident has the right to appeal an involuntary transfer.

Involuntary Transfer
SNF are able to discharge residents only under certain circumstances or based on certain specified reasons:

- It is necessary for the resident's welfare and the resident's needs cannot be met in the facility
- The resident's health has improved sufficiently so the resident no longer needs the services provided by the facility;
- The safety of individuals in the facility is endangered due to the clinical or behavioral status of the resident;
- The health of individuals in the facility would otherwise be endangered;
- The resident has failed, after reasonable and appropriate notice, to pay;
- The facility ceases to operate.

In the case of an involuntary discharge, the SNF is required to document the basis for the transfer in the resident's record.

Effective November 28, 2017, federal CMS requirements for participation for SNFs also require that in instances where the involuntary discharge is due to the inability of the facility to meet the resident's needs, the SNF must document the specific needs that cannot be met, its attempts to meet the needs, and the services available at the receiving facility to meet the resident's needs. When an involuntary discharge is based on the facility's claim that it cannot meet the resident's needs or the resident no longer needs its services, the decision must be documented by the resident's physician.

Effective January 1, 2018, facilities must also provide notification of involuntary discharges to the Long Term Care Ombudsman.

Appeals
The resident has the right to appeal the involuntary transfer. An appeal may be requested by calling the Transfer/Discharge and Refusal to Readmit Unit of the Department of Health Care Services at (916) 445-9775 or (916) 322-5603 and ask for a readmission appeal. If the hearing decision is favorable to a resident who was denied readmission, the Department of Health Care Services must promptly provide for the resident's readmission to the nursing home.

Appealing a Transfer or DischargeA resident has the right to appeal the nursing home's attempted transfer or discharge, and have a hearing and decision issued by the California Department of Health Care Services. To request an appeal, call the Transfer/Discharge and Refusal to Readmit Unit of the Department of Health Care Services at (916) 445-9775 or (916) 322-5603.

A hearing officer who works for the Department of Health Care Services will conduct the hearing and issue a written decision. If the resident is hospitalized and appealing a denial of readmission, at the hospital.

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: Gabe Waters, Vice President Network Development, Collective Medical Technologies
Dr. Maria Raven, MD, MPH, Associate Professor, UCSF School of Medicine

SUBJECT: EDIE

SUMMARY

EDIE is now in over 100 hospitals across the state. Dr. Raven and her colleague Dr. Hemal Kanzaria, have been reviewing EDIE patients to understand the frequency of high utilizers of emergency care. Gabe will give us an update on the status of EDIE and plans moving forward, and Maria will speak to her work and next steps.

ACTION REQUESTED

- Discussion on how EDIE will facilitate the work of ECSI.

DISCUSSION QUESTION

1. Who on the committee is actively using EDIE?
2. Is it possible to put a subcommittee together to explore outcome information that can be used to explain ED overcrowding issues, particularly with ECSI implementation?
3. Are there other care coordination activities besides Whole Person Care occurring and how can this be integrated with our work?

BJB:br

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, RN, MS, NEA-BC, VP Nursing & Clinical Services

SUBJECT: Community Paramedicine Update

SUMMARY

In November 2014, the California Office of Statewide Health Planning and Development (OSHPD) approved an application from the California Emergency Medical Services Authority to establish a Health Workforce Pilot Project that has encompassed 23 projects testing seven different community paramedicine concepts. Ten projects are currently enrolling patients and nine new projects were approved to begin enrolling patients in 2018. Four projects have closed and two of the nine new projects have decided to drop out.

1. Butte County EMS: post-discharge
2. Ventura EMS Agency: hospice
3. Ventura EMS Agency: tuberculosis
4. Alameda City Fire Department: frequent EMS user
5. Alameda City Fire Department: post discharge
6. San Bernardino and Rialto Fire Departments: post-discharge
7. City of San Diego Fire Department: frequent EMS user
8. Mountain Valley – Stanislaus EMS Agency: alternative destination – mental health
9. Medic Ambulance Solano: post-discharge
10. City and County of San Francisco: alternative destination – sobering center

New approved OSHPD projects

1. Santa Clara EMS Agency: alternative destination – mental health
2. Santa Clara EMS Agency: alternative destination – sobering center
3. Dignity (Redding): post – discharge
4. Cal Tahoe EMS Agency: post – discharge
5. Marin County EMS Agency: frequent 911 user
6. City and County of San Francisco: frequent EMS users
7. Central California EMS Agency (Fresno): alternate destination – mental health

Attached is the latest update of the California Community Paramedicine Pilot Program. The evaluations to date have shown to improve coordination among providers of medical, behavioral health and social services; reduced preventable ambulance transports, emergency department visits and hospital readmissions, and have not resulted in any adverse outcomes for patients

ACTION REQUESTED

- Discussion on community paramedicine and next steps.

DISCUSSION QUESTIONS

1. Do you have a Community Paramedicine program in your area and are you engaged in the work?
2. How do we work with the opposition, who is mainly concerned with patient safety and hospitals keeping sick patients out of the ED?

Attachment: Update Evaluation of California's Community Paramedicine Pilot Program

BJB:br

Update of Evaluation of California's Community Paramedicine Pilot Program

by Janet M. Coffman, PhD, MPP, Cynthia Wides, MA, and Matthew Niedzwiecki, PhD, Healthforce Center and Philip R. Lee Institute for Health Policy Studies at UCSF

February 7, 2018

Abstract / Overview

Community paramedicine, also known as mobile integrated health (MIH-CP) is an innovative model of care that seeks to improve the effectiveness and efficiency of health care delivery by using specially trained paramedics in partnership with other health care providers to address the needs of local health care systems. In November 2014, the California Office of Statewide Health Planning and Development (OSHPD) approved an application from the California Emergency Medical Services Authority to establish a Health Workforce Pilot Project that has encompassed 23 projects testing seven different community paramedicine concepts. Ten projects are currently enrolling patients and nine new projects were approved to begin enrolling patients in 2018. Four projects have closed.

The Philip R. Lee Institute for Health Policy Studies and Healthforce Center (formerly the Center for the Health Professions) at the University of California, San Francisco, are conducting an independent evaluation of these projects. This report presents findings through September 30, 2017 for the projects currently enrolling patients and the projects that have closed. The evaluators conclude that Californians benefit from these innovative models of health care that leverage an existing workforce that operates at all times under medical control — either directly or by protocols developed by physicians experienced in emergency care. The projects have improved coordination among providers of medical, behavioral health, and social services; reduced preventable ambulance transports, emergency department visits, and hospital readmissions; and have not resulted in any adverse outcomes for patients. This report presents a summary of major findings from the evaluation for policymakers. All data submitted by project sites are reported to OSHPD on a quarterly basis.

Acknowledgements

The authors thank the pilot sites, project participants, the California Emergency Medical Services Authority, and the California Office of Statewide Health Planning and Development for their assistance in carrying out this evaluation. They also thank the California Health Care Foundation for funding the evaluation.

Contents

The mission of the Healthforce Center is to equip health care organizations with the workforce knowledge and leadership skills to effect positive change.

Healthforce Center at UCSF 3333 California Street, Suite 410 San Francisco, CA 94118

Executive Summary

Community paramedicine, also known as mobile integrated health (MIH-CP) is an innovative model of care that seeks to improve the effectiveness and efficiency of health care delivery by using specially trained paramedics in partnership with other health care providers to address the needs of local health care systems. On November 14, 2014, the California Office of Statewide Health Planning and Development (OSHPD) approved an application from the California Emergency Medical Services Authority to establish a Health Workforce Pilot Project (HWPP) to test multiple community paramedicine concepts. OSHPD has since renewed the HWPP for one-year periods in 2015, 2016, and 2017. The community paramedicine HWPP has encompassed 23 projects testing seven different community paramedicine concepts. Ten projects are currently enrolling patients and nine new projects were approved to begin enrolling patients in spring 2018. Four projects have closed.

The HWPP regulations require organizations that sponsor pilot projects to retain an independent evaluator to assess trainee performance, patient acceptance, and cost effectiveness. The Philip R. Lee Institute for Health Policy Studies and Healthforce Center (formerly the Center for the Health Professions) at the University of California, San Francisco, are conducting the evaluation funded by the California Health Care Foundation.

This report presents a summary of major findings from the evaluation for policymakers. All data submitted by project sites are reported to OSHPD on a quarterly basis. The report presents findings through September 30, 2017, for each of the ten community paramedicine projects that are currently enrolling patients and the four projects that have closed.

The seven community paramedicine concepts sites are testing are described below:

1. **Post-Discharge, Short-term Follow-Up:** Provide short-term, home-based follow-up care to people recently discharged from a hospital due to a chronic condition (e.g., heart failure) to reduce their risk of readmission and improve their ability to manage their condition.

2. **Frequent EMS Users:** Provide case management services to people who are frequent 911 callers and frequent visitors to emergency departments (EDs) to identify needs that could be met more effectively outside of an ED and assist patients in accessing primary care and obtaining services to address non-medical needs, such as food, housing, and substance use disorder treatment.

3. **Directly Observed Therapy for Tuberculosis:** In collaboration with a public health agency, provide directly observed therapy (DOT) to people with tuberculosis (i.e., dispense medications and observe patients taking them) to assure effective treatment of tuberculosis and prevent its spread.

4. **Hospice:** In response to 911 calls made by or on behalf of hospice patients, collaborate with hospice agency nurses, patients, and family members to treat patients in their homes according to their wishes instead of transporting them to an ED.

5. **Alternate Destination – Mental Health:** In response to 911 calls, offer people who have mental health needs, but no acute medical needs, transport directly to a mental health crisis center instead of to an ED with subsequent transfer to a mental health facility.

6. **Alternate Destination – Urgent Care:** In response to 911 calls, offer people with low-acuity medical conditions transport to an urgent care center for evaluation by a physician, instead of to an ED.

7. **Alternate Destination – Sobering Center:** In response to 911 calls, offer people who are acutely intoxicated but do not have an acute medical or mental health needs transport directly to a Sobering Center for monitoring instead of to an ED.

Key findings are as follows.

General Project Status

- Thirteen pilot projects were launched from June through October of 2015.
- A new project, San Francisco's alternate destination – sobering center project, began enrolling patients in February 2017.
- The pilot projects enrolled 2,515 persons through September 30, 2017.
- Four projects, the UCLA Center for Pre-Hospital Care's post-discharge project and all three alternate destination – urgent care project, have closed. The post-discharge project closed due to lack of resources and the alternate destination – urgent care projects closed due to low enrollment.
- In December 2017, OSHPD approved nine additional projects in seven areas of the state that will test four of CP concepts that other sites are already testing. These sites are expected to begin enrolling patients during 2018.

Post-Discharge

- From June 2015 through September 2017, the five post-discharge projects have enrolled 1,401 patients. Butte's project has the largest enrollment (799 patients) and Alameda had the smallest (106 patients).
- Four post-discharge projects (Alameda, San Berardino-Rialto, Solano, and UCLA) have provided at least one home visit to every patient since they were launched in 2015. During the time period covered by this evaluation, Butte's project provided a telephone call to every patient and provided a home visit to only a subset of patients. Effective November 2017, Butte changed its protocol to provide at least one home visit to every patient.
- The post-discharge projects are improving patient safety by performing home visits within a few days of a patient's hospital discharge to ensure that patients understand their discharge instructions, are taking medications as prescribed, have sufficient refills to manage their conditions, have scheduled follow-up visits with their physicians, and are adhering to any dietary restrictions pertinent to management of their condition.
- All five post-discharge projects have reduced the all-cause 30-day readmission rate for persons with one or more of the chronic conditions they target below the partner hospital's historical readmission rate. Butte's heart failure patients were the only group whose all-cause 30-day readmission rate was higher than the historical rate. In response to these findings, Butte changed its protocol in November 2017 to provide at least one home visit to every patient.
- The five post-discharge projects avoided potential costs of approximately $1.4 million, the majority of which (59%) would accrue to Medicare. Participating hospitals also reduced their risk of incurring Medicare penalties for excessive readmissions.

Frequent EMS User

- The two frequent emergency medical services (EMS) user projects have enrolled 103 persons from July 2015 through September 2017.
- Since December 2016, San Diego's frequent EMS user project has not been able to enroll new clients because the community paramedics working on the project were reassigned to traditional 911 response crews.
- The frequent EMS user projects have achieved large reductions in the number of times enrolled patients called 911 and were transported to an ED.
- Frequent EMS user projects linked patients to organizations that provide primary care, mental health services, substance abuse treatment, food, housing assistance, transportation assistance and other services that can address their needs more effectively than the EMS system.
- The two frequent EMS user projects avoided potential costs of approximately $580,000 by reducing 911 calls, ambulance transports, and ED visits. San Diego's project also potentially reduced the amount of uncompensated care provided by ambulance services and hospitals because 43% of the patients enrolled in the project were uninsured.

Directly Observed Therapy for Tuberculosis

- The tuberculosis (TB) project enrolled 42 persons from June 2015 through September 2017.
- Most persons are enrolled for multiple months because treatment for TB typically spans six to nine months.
- Community paramedics dispensed appropriate doses of TB medications and their TB patients did not experience side effects any more frequently than typically associated with TB treatment.
- Twelve patients were admitted to a hospital in the period during which the project has been in operation, but only one patient was hospitalized for TB. This patient needed intravenous medication to treat TB meningitis, which was diagnosed prior to enrollment in the program.
- People with TB who received directly observed therapy from community paramedics were more likely to receive all doses of TB medication prescribed by the TB clinic physician than people who received directly observed therapy from the TB clinic's staff, probably because community paramedics were available 24 hours per day, 7 days per week.

Hospice

- The hospice project enrolled 270 persons between August 2015 and September 2017.
- The hospice project reduced the likelihood that patients who preferred treatment at home were transported to an ED, which could result in loss of hospice benefits. Patients were not denied transport to an ED where it was indicated and consistent with the patient's preference.
- Among hospice patients enrolled in the pilot project, the percentage of 911 calls that resulted in transport to an ED decreased from 80% to 30%.

- The hospice project avoided potential costs of $203,715 by reducing ambulance transports and ED visits.

Alternate Destination – Mental Health

- The alternate destination – mental health project enrolled 251 persons between September 2015 and September 2017.

- The pace of enrollment slowed in 2017 because several community paramedics left the agency or were promoted to other positions. The project has trained additional community paramedics and its leaders expect that the pace of enrollment will increase.

- Twenty-six percent of persons screened by the community paramedics were transported to the mental health crisis center. Additional patients could have been transported to the crisis center if the county had more inpatient psychiatric beds or if the crisis center accepted persons with private health insurance or Medicare. Some persons the community paramedics screened were not eligible for transport to the mental health crisis center because they had a medical need, were intoxicated, or were violent.

- In addition to responding to 911 calls regarding mental health emergencies, the community paramedics screen "walk-in" clients who come to the mental health crisis center on their own or who are brought by friends or family to determine whether they have any medical conditions that might necessitate transport to an ED instead of direct admission to the crisis center.

- Only 4% of patients enrolled in the project (n = 9) were transferred from the mental health crisis center to an ED within six hours of admission. None of the transfers involved a life-threatening condition and none of the patients transferred to an ED were admitted for inpatient medical care.

- The project also enhanced public safety because law enforcement officers called to the scene could transfer responsibility for the patient to paramedics and return to law enforcement duties instead of transporting the patient to an ED and waiting with the patient for evaluation.

- The project avoided potential costs of $266,200 by reducing the number of 911 calls that resulted in an ED visit and subsequent transport of a patient from an ED to an inpatient psychiatric facility.

Alternate Destination – Urgent Care

- The three alternate destination – urgent care projects enrolled 48 persons from September 2015 through September 2017.

- One of the alternate destination – urgent care projects closed in May 2017 and the other two projects closed in November 2017.

- Enrollment in the alternate destination – urgent care projects was substantially lower than anticipated because fewer 911 calls than expected met the strict inclusion criteria and many calls for eligible patients occurred at times of the day during which urgent care centers are closed. In addition, clinicians at urgent care centers were reluctant to treat some conditions, such as a dislocated shoulder, that could be treated safety and effectively in that setting.

- Most patients enrolled had a laceration or an isolated closed extremity injury.

- Since the alternate destination – urgent care projects began enrolling patients, two patients (4%) were transferred from an urgent care center to an ED within six hours of arrival at the urgent care center. Nine patients (19%) were transported to an urgent care center and then rerouted to an ED because clinicians at the urgent care center declined to treat the patient.

Alternate Destination – Sobering Center

- The alternate destination - sobering center project enrolled 400 persons from February 2017 through September 2017. Fifty patients (13%) were repeat visitors to the sobering center.

- 97.5% of patients enrolled in the alternate destination – sobering project were treated safely and effectively at the sobering center. Only nine patients (2.25%) were transferred to an ED within six hours of admission to the sobering center and only one (0.25%) was rerouted from the sobering center to an ED because registered nurses at the sobering center declined to accept the patient. None of these patients were admitted to a hospital for inpatient medical care.

- In addition, community paramedics participating in the project provide feedback to paramedics on 911 crews on how to screen acutely intoxicated persons to determine if they are candidates for transfer to the sobering center. They are also collaborating with homeless outreach workers to encourage people who use the sobering center frequently to seek treatment for chronic alcoholism, housing, and other services.

- During its first eight months of operation, the project avoided potential costs of $132,699 by replacing ED visits with visits to the sobering center. The majority of potential savings accrued to Medi-Cal because the majority of patients enrolled in the project are Medi-Cal beneficiaries.

Conclusion

The community paramedicine pilot projects have demonstrated that specially trained paramedics can provide services beyond their traditional and current statutory scope of practice in California. No adverse outcome is attributable to any of these pilot projects. The projects are enhancing patients' well-being by improving the coordination of medical, behavioral health, and social services, and reducing ambulance transports, ED visits, and hospital readmissions. The majority of potential savings associated with these pilot projects accrued to Medicare and hospitals serving Medicare patients because Medicare beneficiaries accounted for the largest share of persons enrolled in the pilot projects. Potential savings also accrued to the Medi-Cal program and providers that serve Medi-Cal beneficiaries.

These pilot projects integrate with existing health care resources and utilize the unique skills of paramedics and their availability 24 hours per day, 7 days per week. The pilot projects have not displaced any other health professionals. Instead, they have demonstrated that community paramedics can collaborate with physicians, nurses, behavioral health professionals, and social workers to fill gaps in the health and social services safety net. The community paramedics operate at all times under medical control, either directly or by protocols developed by physicians experienced in EMS and emergency care.

Research conducted to date indicates that community paramedicine programs are improving the effectiveness and efficiency of the health care system. Findings from this research also suggest that the benefits of community paramedicine programs grow as they mature, solidify partnerships, and find their optimal structure and niche within a community. The evaluation of HWPP #173 yields consistent findings for six of the seven community paramedicine concepts tested. All of the post-discharge, frequent 911 users, DOT for TB, hospice, and alternate

destination – mental health projects have been in operation for at least two years and have improved patients' well-being and, in most cases, have potentially increased health care value by yielding potential savings for payers and other parts of the health care system. Initial findings regarding the sixth concept, alternate destination – sobering center, suggest that this project is also benefitting patients and the health care system. The seventh concept, alternate destination – urgent care, shows potential but further research involving a larger volume of patients transported to urgent care centers with wider ranges of services and expanded hours is needed to draw definitive conclusions.

If community paramedicine is implemented on a broader scale, the current EMS system design is well suited to utilize the results of these pilot programs to optimize the design and implementation of proposed programs and to assure effectiveness and patient safety. The two-tiered system enables cities and counties to design and administer community paramedicine programs to meet local needs while both local and state oversight and regulation ensure patient safety.

Introduction

Community paramedicine (CP), also known as mobile integrated health (MIH-CP) is an innovative model of care that seeks to improve the effectiveness and efficiency of health care delivery by using specially trained paramedics in partnership with other health care providers to address identified patient needs in local health care systems. Community paramedics receive additional training beyond that required for licensure and provide care outside of their traditional role, which in California is restricted to responding to 911 calls, treating patients at the scene of an emergency, transporting patients to EDs, and inter-facility transfers.[i] They are supervised by physicians and nurses who work for the emergency medical services (EMS) agencies that employ them and by staff of the health care and community service agencies with which their EMS agencies partner. According to a survey conducted by the National Association of Emergency Medical Technicians, by 2014 more than 100 EMS agencies 33 states and the District of Columbia had implemented one or more MIH-CP initiatives.[ii]

On December 19, 2013, the California Emergency Medical Services Authority (EMSA) submitted an application to the California Office of Statewide Health Planning and Development (OSHPD) for a Health Workforce Pilot Project (HWPP) to evaluate community paramedicine. In 1972, California established the HWPP program (HSC §§ 128125-128195), which was originally called the Health Manpower Pilot Projects program, to enable health care organizations to test and evaluate innovative models of care that utilize health professionals in new roles. A HWPP is necessary to establish community paramedicine initiatives in California because the sections of the Health and Safety Code that govern paramedic scope of practice (HSC §§ 1797.52, 1797.218) limit the settings where paramedics can provide services and the settings to which they can transport patients. OSHPD approved HWPP #173 on November 14, 2014, for one year and renewed approval for additional one-year periods in 2015, 2016, and 2017.

The HWPP regulations require organizations that sponsor pilot projects to retain an independent evaluator to assess trainee performance, patient acceptance, and cost effectiveness. A team of evaluators at the Philip R. Lee Institute for Health Policy Studies and Healthforce Center (formerly the Center for the Health Professions) at the University of California, San Francisco, serves as the independent evaluator for HWPP #173. The California Health Care Foundation funds the evaluation.

This report presents a summary of major findings from the evaluation for policymakers. All data submitted by the project sites are reported to OSHPD on a quarterly basis. This report addresses projects that are currently enrolling patients and projects that have closed. It covers the time period from the launch dates for each of the pilot projects through September 2017.

Overview of California Community Paramedicine Pilot Projects

The community paramedicine HWPP has encompassed 23 projects testing seven different community paramedicine concepts. Ten projects are currently enrolling patients and nine new projects were approved to begin enrolling patients in 2018. Four projects have closed. A map that displays the locations of project that are currently enrolling patients and new projects approved by OSHPD can be found in Appendix A. A table that lists the EMS agencies that are sponsoring new pilot projects that will begin enrolling patients in 2018 and the community paramedicine concepts they will test appears in Appendix B.

These projects are testing seven different concepts for the practice of community paramedicine.

The seven concepts are:

1. **Post-Discharge, Short-term Follow-Up:** Provide short-term, home-based follow-up care to people recently discharged from a hospital due to a chronic condition (e.g., heart failure) to reduce their risk of readmission and improve their ability to manage their condition. These services are provided by

paramedics who completed the full community paramedic training described below. Four projects provide at least one home visit to all patients; one initially provided a telephone call to all patients and a home visits to patients at high risk of readmission but began providing a home visit to every patient in November 2017.

2. **Frequent EMS Users:** Provide case management services to people who are frequent 911 callers and frequent visitors to EDs to identify needs that could be met more effectively outside of an ED and assist patients in accessing primary care and social services to address non-medical needs, such as food, housing, and substance use disorder treatment. Services are provided by paramedics who completed the full community paramedic training.

3. **Directly Observed Therapy for Tuberculosis:** In collaboration with a public health agency, provide directly observed therapy (DOT) to people with tuberculosis (i.e., dispense medications and observe patients taking them) to assure effective treatment of tuberculosis and prevent its spread. Services are provided by paramedic supervisors who completed the full community paramedic training.

4. **Hospice:** In response to 911 calls made by or on behalf of hospice patients, collaborate with hospice agency nurses, patients, and family members to treat patients in their homes according to their wishes, instead of transporting them to an ED. Services are provided by paramedic supervisors who completed the full community paramedic training.

5. **Alternate Destination – Mental Health:** In response to 911 calls, offer people who have mental health needs, but no emergent medical needs, transport directly to a mental health crisis center instead of to an ED with subsequent transfer to a mental health facility. Services are provided by paramedics who completed the full community paramedic training.

6. **Alternate Destination – Urgent Care:** In response to 911 calls, offer people with low-acuity medical conditions transport to an urgent care center for evaluation by a physician, instead of to an ED. Services were provided by paramedics on 911 response crews who were trained how to use a protocol to determine if patient would be eligible for transport to an urgent care center and how to follow procedures for enrolling patients who agree to be transported to an urgent care center. These paramedics were supervised by paramedics who completed the full community paramedic training.

7. **Alternate Destination – Sobering Center:** In response to 911 calls, offer people who are acutely intoxicated but do not have an acute medical or mental health need transport directly to a Sobering Center for monitoring instead of to an ED. Services were provided by paramedics who were trained how to use a protocol to determine if patient would be eligible for transport to an sobering center and how to follow procedures for enrolling patients who agree to be transported to a sobering center. These paramedics were mentored by paramedics who completed the full community paramedic training. The paramedics who completed the full training also performed quality assurance reviews of transports to the sobering center.

All sites obtained approval from an institutional review board (IRB) and enrolled patients following consent procedures stipulated by the IRB.

In December 2017, OSHPD approved nine additional projects in seven areas of the state that will test four of CP concepts within other local jurisdictions: post-discharge, frequent EMS users, alternate destination – mental health, alternate destination – sobering center. These sites expect to begin enrolling patients during 2018. A list of the new projects can be found in Appendix B.

Training of Community Paramedics

Paramedics were eligible to be trained to perform new roles as community paramedics if they had at least four years of experience, volunteered to participate in the pilot, and were sponsored by their local EMS authority. The State of California Community Paramedic Educational Taskforce developed a core curriculum that OSHPD reviewed and approved. The curriculum was adapted from the Paramedic Foundation's National Community Paramedic Curriculum to better align with the standards and requirements of practice in California. The curriculum included 48 hours of didactic, classroom-based instruction and 48 hours of clinical, hands-on training, for a total of 96 hours of instruction. Community paramedic trainees were additionally required to complete 56 hours of study outside the classroom, which included required readings and other assignments.

The site supervisors from Alternate Destination – Urgent Care projects and paramedics recruited to coordinate the Alternate Destination – Sobering project were required to complete the core curriculum. At these pilot sites all other paramedics in the system received training focused on (1) screening patients according to a protocol to determine if they would be eligible to enroll in the pilot, and (2) the procedures for enrolling patients who agree to be transported to an urgent care center or a sobering center. This approach was pursued because these concepts focus on clinical decision-making in the field regarding where to transport a patient. This is routine practice for paramedics, who must identify which patients to take to specialty care centers, such as stroke centers, that may not be the closest ED.

The first cohort of community paramedics, which consisted of 79 paramedics, were enrolled in the core curriculum and site-specific coursework during the first quarter of 2015. Two of the 79 paramedics were unable to complete the training for nonacademic reasons. All of the 77 paramedics who completed the core curriculum passed a written final examination, a simulated patient scenario examination, and an oral examination by the pilot site's medical director. Since then, three sites (Solano, Stanislaus, and Ventura) have trained 12 additional community paramedics to expand their programs or replace paramedics who have left their agencies or been promoted to other positions. San Francisco trained 10 community paramedics prior to the launch of its pilot project in February 2017. The seven jurisdictions in which OSHPD has approved new projects are expected to begin training community paramedics during the first quarter of 2018.

Patient Safety

Multiple procedures to ensure patient safety are incorporated into all levels of the pilot projects. Every project has a project manager, a medical director who is an emergency medicine physician, and a quality assurance officer who is most often a registered nurse with specialty in emergency medicine. Community paramedics have real-time access to physicians and registered nurses for consultation. Each project conducts a retrospective review of all patient encounters. In addition, each project has a local steering committee that approves protocols and reviews data on project outcomes. A statewide steering committee has oversight over all the projects and reviews quarterly reports from the sites. Sites are also required to report unusual occurrences to EMSA's project manager. The independent evaluator reviews data provided by sites for the evaluation and raises any concerns about patient safety that emerge from the data reported. Finally, OSHPD staff review the protocols and performance of the pilot sites and raise any patient safety issues they identify.

Funding

Funding for the pilot sites was provided primarily through in-kind services or funds from fire departments or approved operating budgets of private providers of EMS services. Two sites – Orange County's Alternate Destination – Urgent Care project and Solano's Post-discharge project received grants from health care systems that participated in their pilot projects.

Methods

Information presented in this report was obtained from multiple sources. Each of the pilot sites used a standardized, online data collection tool to report data to the independent evaluator on a quarterly basis. Metrics for which data were collected included numbers of people enrolled, characteristics of enrollees, and outcomes of community paramedic services, including patient safety outcomes. Sites also reported information about people who were eligible for their projects but not enrolled.

Estimates of potential savings for payers were derived from data that each site reported on the cost of ambulance transports, and from existing sources of data on the cost of ED visits and inpatient hospital admissions. Appendix C contains details about the methods the evaluator team used to estimate potential savings. It is important to note that the evaluation was not designed to be a cost effectiveness analysis that compares the costs and effects of community paramedics to other alternatives. With the exception of the directly observed therapy for tuberculosis concept, the services that community paramedics provide under the pilots differ from services furnished by other health care providers in their communities. Thus, the evaluation team concluded that an analysis of potential savings associated with the projects would be more informative.

The team collected data on the cost of operating the community paramedicine pilot projects. These data were reported in the initial public report and are not included in this update to the public report for two reasons. First, standardizing cost data across sites proved difficult due to differences in how projects were staffed (e.g., full-time community paramedics vs. paramedics who both provide community paramedicine services and respond to 911 calls), the generosity of employee benefits (e.g., pension vs. 401K plan), and allocation of costs for vehicles, and medical supplies. Second, the community paramedicine pilot projects are not authorized to bill for the services they provided. All costs for paramedic salaries, benefits, vehicles, and medical supplies are borne by the agencies that operate the pilot projects. Thus, at present payers do not bear any of the costs associated with these projects, although that could change in the future if private payers choose to pay for community paramedicine services or legislation is enacted that authorizes Medi-Cal or Medicare to pay for these services.

Evaluation team members conducted site visits at all project sites, where they interviewed EMS agency leaders, project managers, community paramedics, and representatives of hospitals and other partner agencies. The purpose of the site visits was to obtain a better understanding of how the projects operated and to hear the perspectives of multiple stakeholders. The site visits were augmented with conference calls with EMSA's project manager and the site-level project managers. The evaluation team also reviewed minutes of local steering committee meetings and reports that site-level project managers submitted to EMSA's project manager.

This evaluation focuses solely on the community paramedicine pilot projects and does not take into account other changes in health care delivery that may have affected the outcomes observed. This caveat is particularly important for the post-discharge projects. Since Medicare began imposing penalties on hospitals with "excessive" 30-day readmission rates in federal fiscal year 2013,[1] hospitals have deployed multiple strategies to reduce readmissions. These strategies include placing more patients on "observation" status instead of readmitting them to the hospital and utilizing registered nurses to provide telephone support to patients following hospital discharge. To the extent that hospitals participating in the post-discharge pilot projects utilize such strategies, it is

[1] Medicare penalizes hospitals that have 30-day readmission rates that exceed the national average adjusted for characteristics of patients who were readmitted and the entire population of patients that a hospital serves. Hospitals that exceed this benchmark receive a 3% penalty across all Medicare admissions regardless of whether they resulted in a readmission within 30 days. C. Boccuit and G. Casillas. Aiming at Fewer Hospital U-Turns: The Medicare Hospital Readmissions Reduction Program. Menlo Park, CA: Kaiser Family Foundation, 2017. http://files.kff.org/attachment/Issue-Brief-Fewer-Hospital-U-turns-The-Medicare-Hospital-Readmission-Reduction-Program.

possible that the findings of the evaluation are due to those strategies and not the post-discharge community paramedicine pilot projects.

Results

The results section begins with a summary of major findings that concern all seven community paramedicine concepts. The summary is followed by a discussion of major findings regarding key metrics relevant to individual community paramedicine concepts.

General Project Status

Highlights

- Collectively, the community paramedicine pilot projects enrolled 2,515 people from June 2015 through September 2017.
- The post-discharge projects enrolled the largest number of persons and the tuberculosis project had the smallest enrollment.
- Four projects have closed
  - UCLA's post-discharge project
  - Carlsbad's alternate destination – urgent care project
  - Orange County's alternate destination – urgent care project
  - UCLA's alternate destination – urgent care project
- One new project has opened
  - San Francisco's alternate destination – sobering center project
- The majority of patients enrolled in the projects were Medicare or Medi-Cal beneficiaries.

Table 1 lists the lead agencies for each pilot project operated under the auspices of HWPP #173, the concept tested, the date on which the project began enrolling patients, and the total number of patients enrolled from the time each project began through September 30, 2017. The longest running projects, Alameda's post-discharge project and Ventura's tuberculosis project, began enrolling patients in June 2015. The newest project, San Francisco's alternate destination – sobering center project, began enrolling patients in February 2017. Collectively, the projects enrolled 2,515 people from June 2015 through September 2017. The number of people enrolled per project ranged from a low of two for the City of Carlsbad's Alternate Destination – Urgent Care project to a high of 799 for Butte County's Post-discharge --project.

Four projects have closed. The UCLA Center for Pre-Hospital Care's Post-discharge project closed on August 31, 2016, because the Glendale Fire Department could no longer support the project financially. The UCLA Center for Pre-Hospital Care's Alternate Destination – Urgent Care project closed on May 31, 2017 and the Carlsbad and Orange County Alternate Destination – Urgent Care projects closed in November 2017. All of the Alternate Destination – Urgent Care projects closed due to low enrollment.

Table 1. Pilot Sites, Community Paramedicine Concepts, and Enrollment through Third Quarter, 2017

Community Paramedicine Concept	Lead Agency	Date Implemented	Total Patients Enrolled
Post-Discharge	Alameda City EMS	June 1, 2015	106
Post-Discharge	Butte County EMS	July 1, 2015	799
Post-Discharge	San Bernardino County and Rialto Fire Depts.	August 13, 2015	197
Post-Discharge	UCLA Center for Prehospital Care*	September 1, 2015	154
Post-Discharge	Medic Ambulance Solano	September 15, 2015	145
All Post-Discharge Projects			**1,401**
Frequent EMS User	Alameda City EMS	July 1, 2015	57
Frequent EMS User	City of San Diego	October 12, 2015	46
All Frequent EMS User Projects			**103**
Tuberculosis	**Ventura County EMS**	**June 1, 2015**	**42**
Hospice	**Ventura County EMS**	**August 1, 2015**	**270**
Alternate Destination – Mental Health	**Mountain Valley – Stanislaus EMS**	**September 25, 2015**	**251**
Alternate Destination – Urgent Care	UCLA Center for Prehospital Care**	September 8, 2015	12
Alternate Destination – Urgent Care	Orange County Fire Chiefs***	September 14, 2015	34
Alternate Destination – Urgent Care	Carlsbad Fire Dept***	October 9, 2015	2
All Alternate Destination – Urgent Care Projects			**48**
Alternate Destination – Sobering	**San Francisco Fire Dept.**	**February 1, 2017**	**400**
All Projects			**2,515**

* Ceased enrolling patients on August 31, 2017.
** Ceased enrolling patients on May 31, 2017.
*** Ceased enrolling patients on November 13, 2017.

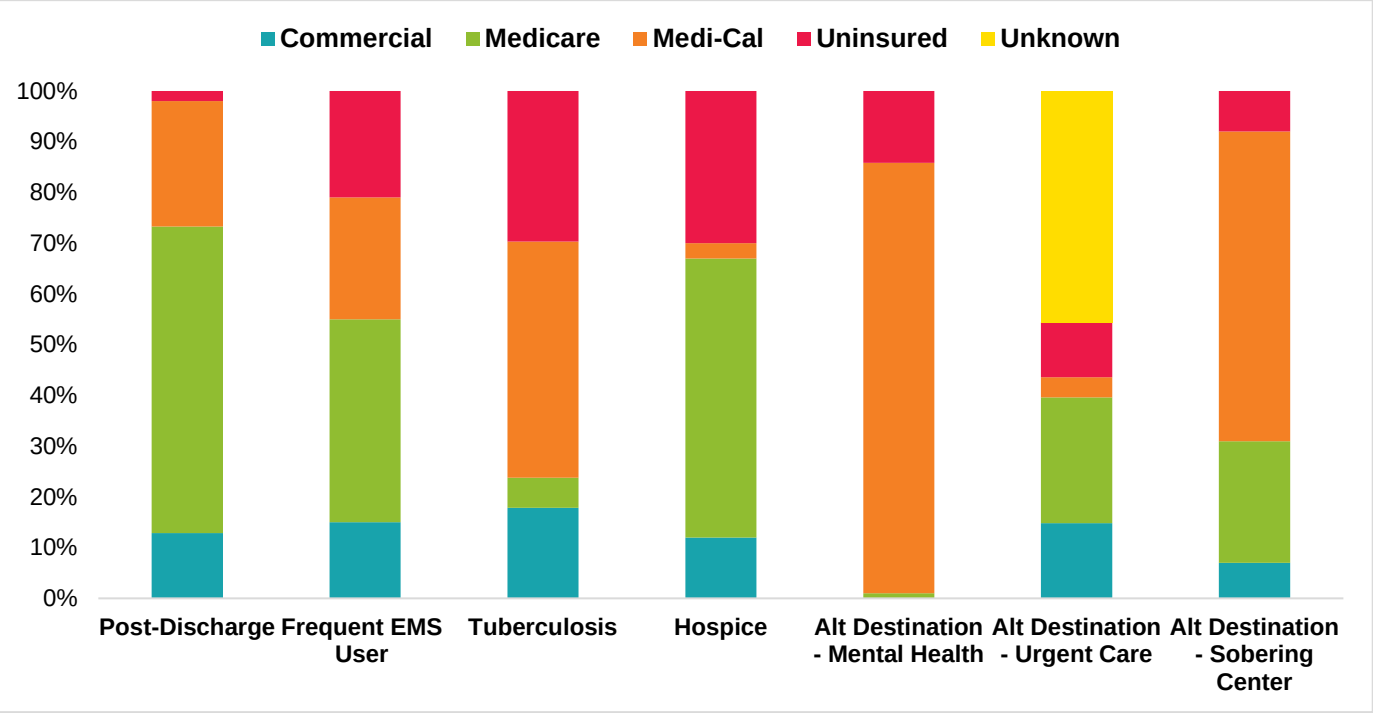
Consistent with findings from the original evaluation report, the distribution of patients by health insurance status varied substantially across the 14 projects, in large part due to differences in the characteristics of the patients served. Medicare beneficiaries accounted for the majority of patients enrolled by three of the five post-discharge projects (Alameda, Butte, UCLA – Glendale), one of the frequent EMS user projects (Alameda), and the hospice

project. For two of the post-discharge projects (San Bernardino and Solano), Medi-Cal beneficiaries constituted the largest share of enrollees and Medicare beneficiaries accounted for the second largest share. Medi-Cal beneficiaries and uninsured persons comprised the majority of patients enrolled in Ventura's tuberculosis project, San Diego's frequent EMS user project, Stanislaus' alternate destination – mental health project, and San Francisco's alternate destination – sobering center project. Many of the people who these projects serve have mental illness, substance use disorders, or other conditions that limit their access to employer-sponsored health insurance. Persons who are dually eligible for Medicare and Medi-Cal are classified as Medicare beneficiaries because Medicare is responsible for paying the majority of costs associated with their hospitalizations, ED visits, and office visits. Table 2 displays these findings in tabular form and Figure 1 displays them graphically.

Table 2. Health Insurance Status of Enrolled Patients (n =2,515)

Community Paramedicine Concept	Lead Agency	% Private/ Commercial Insurance	% Medicare	% Medi-Cal	% Uninsured or Pay Out of Pocket	% Unknown	Total Persons Enrolled
Post-Discharge	Alameda City EMS	15%	52%	24%	8%	0%	106
Post-Discharge	Butte County EMS	15%	67%	18%	0%	0%	799
Post-Discharge	San Bernardino County and Rialto Fire Depts.	9%	38%	46%	7%	0%	197
Post-Discharge	UCLA Center for Prehospital Care	7%	81%	11%	1%	0%	154
Post-Discharge	Medic Ambulance Solano	9%	44%	46%	2%	0%	145
Frequent EMS User	Alameda City EMS	16%	61%	20%	4%	0%	57
Frequent EMS User	City of San Diego	16%	14%	28%	43%	0%	46
Tuberculosis	Ventura County EMS	18%	6%	47%	30%	0%	42
Hospice	Ventura County EMS	12%	55%	3%	30%	0%	270
Alternate Destination – Mental Health	Mountain Valley – Stanislaus EMS	0%	1%	84%	14%	0%	251
Alternate Destination – Urgent Care	UCLA Center for Prehospital Care	0%	8%	0%	0%	92%	12
Alternate Destination – Urgent Care	Orange County Fire Chiefs	15%	32%	6%	15%	32%	34
Alternate Destination – Urgent Care	Carlsbad Fire Dept.	100%	0%	0%	0%	0%	2
Alternate Destination – Sobering	San Francisco Fire Dept.	7%	24%	61%	8%	0%	400

Figure 1. Enrollees by Insurance Status (n = 2,515)



Post-Discharge

Highlights

- The post-discharge projects enrolled 1,401 persons from June 2015 through September 2017.
- One of the post-discharge projects closed in August 2016 because the partner fire department was unwilling to continue funding the project.
- All of the post-discharge projects reduced the rate of 30-day admission for any cause for at least one of the diagnoses targeted.
- The four post-discharge projects that provided at least one home visit to all patients outperformed the project that relied primarily on telephone calls.
- Community paramedics identified 229 patients who needed instruction on how to use their medications correctly.
- The post-discharge projects potentially avoided $1.4 million in costs by reducing hospital readmissions; most potential savings would have accrued to Medicare and Medi-Cal.

Description

The goal of the five post-discharge projects is to reduce hospital readmissions for people discharged from a hospital for treatment of a chronic condition. A major impetus for the post-discharge projects is the Medicare Readmission Reduction Program, under which Medicare reduces payments to hospitals if they have rates of readmission that are deemed excessive. The projects aim to give patients the tools to manage their conditions more effectively so that they can avoid readmission. In collaboration with its partner hospital, each project identified one or more chronic conditions to address. Once a project enrolls a patient, a telephone call or home visit with a community paramedic is scheduled. During the call or visit, the community paramedic assesses the patient and reviews the patient's discharge instructions per the site's protocols. Some projects also provide home safety inspections during home visits.

The post-discharge projects worked with their partner hospitals to determine which conditions to target. UCLA – Glendale and San Bernardino-Rialto only enroll people with heart failure. Butte enrolls people with heart failure or myocardial infarction, and Solano enrolls people with heart failure or chronic obstructive pulmonary disease. Alameda enrolls people with heart failure, acute myocardial infarction, chronic obstructive pulmonary disease, diabetes, pneumonia, or sepsis.

The post-discharge projects provide short-term assistance during the immediate post-hospital period and do not replace home health care or any other services available to patients. The sites' protocols call for community paramedics to complete phone calls or visits within the first few days of hospital discharge. Some partner hospitals focus on enrolling uninsured persons and Medi-Cal beneficiaries who do not have insurance coverage for home health. In other cases, community paramedics serve a stop-gap role by providing calls or home visits while patients wait to obtain home health services. Interviewees at partner hospitals consistently indicated that home health agencies in their communities often cannot schedule a home visit until one week after a patient is discharged from the hospital. However, many readmissions occur during this time period. When community paramedics learn that a patient is receiving home health services, they coordinate with home health agency staff.

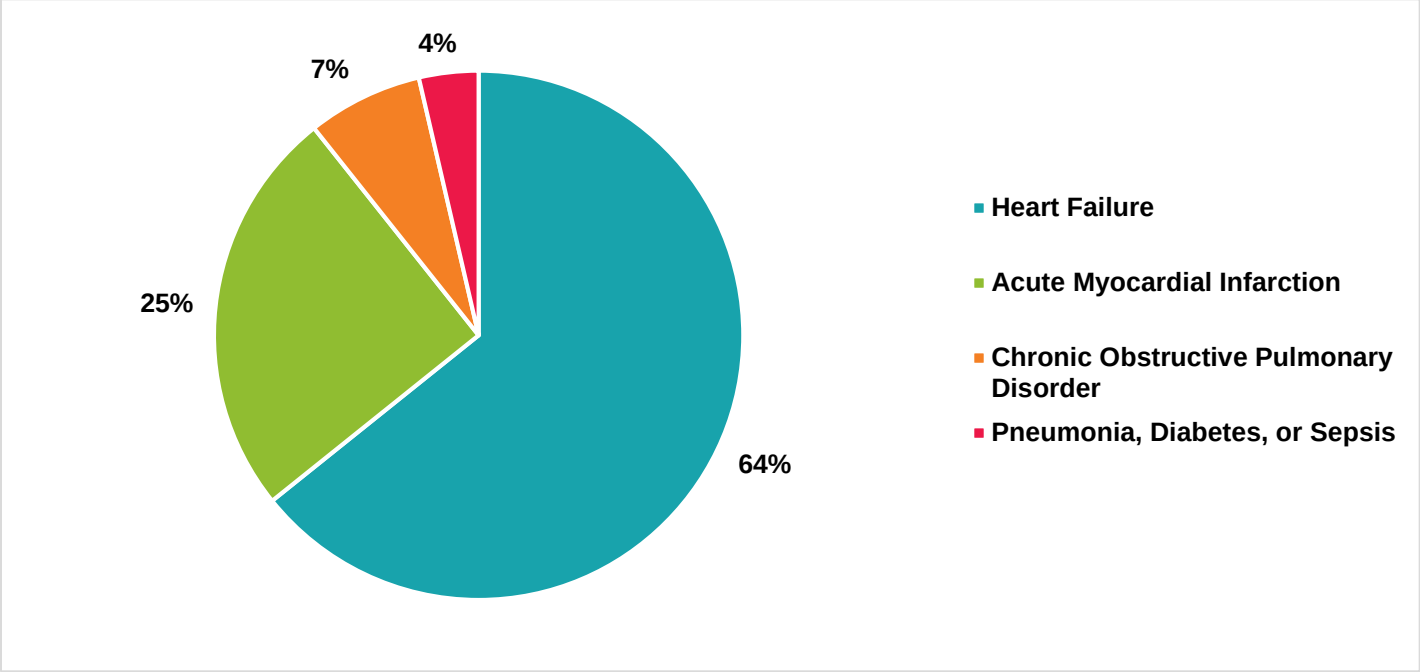
Two projects have full-time community paramedics (Alameda's project and the now closed UCLA-Glendale project) and three projects have part-time paramedics (Butte, San Bernardino-Rialto, and Solano). Since launching their projects, Alameda, San Bernardino-Rialto, and Solano (and formerly UCLA) have provided at least one home visit to all patients. Initially, Butte's protocol called for paramedics perform an initial assessment by telephone for all patients and use an algorithm to determine whether the patient needs additional assistance. If a Butte community paramedic determined that a patient would benefit from a home visit, the community paramedic

requested the patient's permission to do so. Butte's protocol changed effective November 2017. Its community paramedics now provide at least one home visit to all patients. This change was made in response to findings from the evaluation that Butte's project was less effective than the post-discharge projects that provided patients with at least one home visit.

Findings

The post-discharge projects enrolled 1,401 patients between June 2015 and September 2017. Butte had the largest enrollment (799 patients) and Alameda had the smallest (106 patients). Across the five projects, 64% of patients enrolled had heart failure, 25% had acute myocardial infarction, 7% had chronic obstructive pulmonary disorder, and 4% had pneumonia, diabetes, or sepsis. (Figure 2)

Figure 2. Post-Discharge Project Enrollees by Condition (n = 1,401)



Safety

The evaluation team found no evidence of any harm to patients enrolled in the post-discharge projects. On the contrary, there is substantial evidence that the projects reduced the risk of harm. The most compelling evidence of reduced harm concerns prescription medications. Community paramedics performed medication reconciliation for all patients, which involved examining all prescription drugs in a patient's possession and reconciling them with the instructions given to the patient when he or she was discharged from the hospital. The community paramedics identified 229 instances in which a patient needed additional instructions about how to take their medications as directed. Some patients had multiple prescriptions for the same medication and assumed they were supposed to

take all of them. Other patients were discharged from the hospital with only a 30-day supply of medication and did not understand that they needed to obtain refills to control their condition. If a patient had a personal physician, the community paramedic worked with the patient to contact the physician to obtain refills. If a patient did not have a physician, the community paramedic helped the patient find one.

Effectiveness

The post-discharge pilot projects achieved their primary goal of reducing inpatient readmissions within 30 days of discharge. Table 3 shows the historical 30-day readmission rates at the projects' partner hospitals and the 30-day readmission rates for patients enrolled in the post-discharge projects who had heart failure, myocardial infarction, congestive heart failure, or pneumonia. Patients with diabetes or sepsis are not included because historical data on readmission rates for persons with these diseases were not available. Figure 3 displays the data in a graphical format.

Table 3. Readmissions within 30 Days for Post-Discharge Project Enrollees versus Partner Hospitals' 30-Day Readmission Rates, 2012–2015 (Cumulative; n = 1,372)

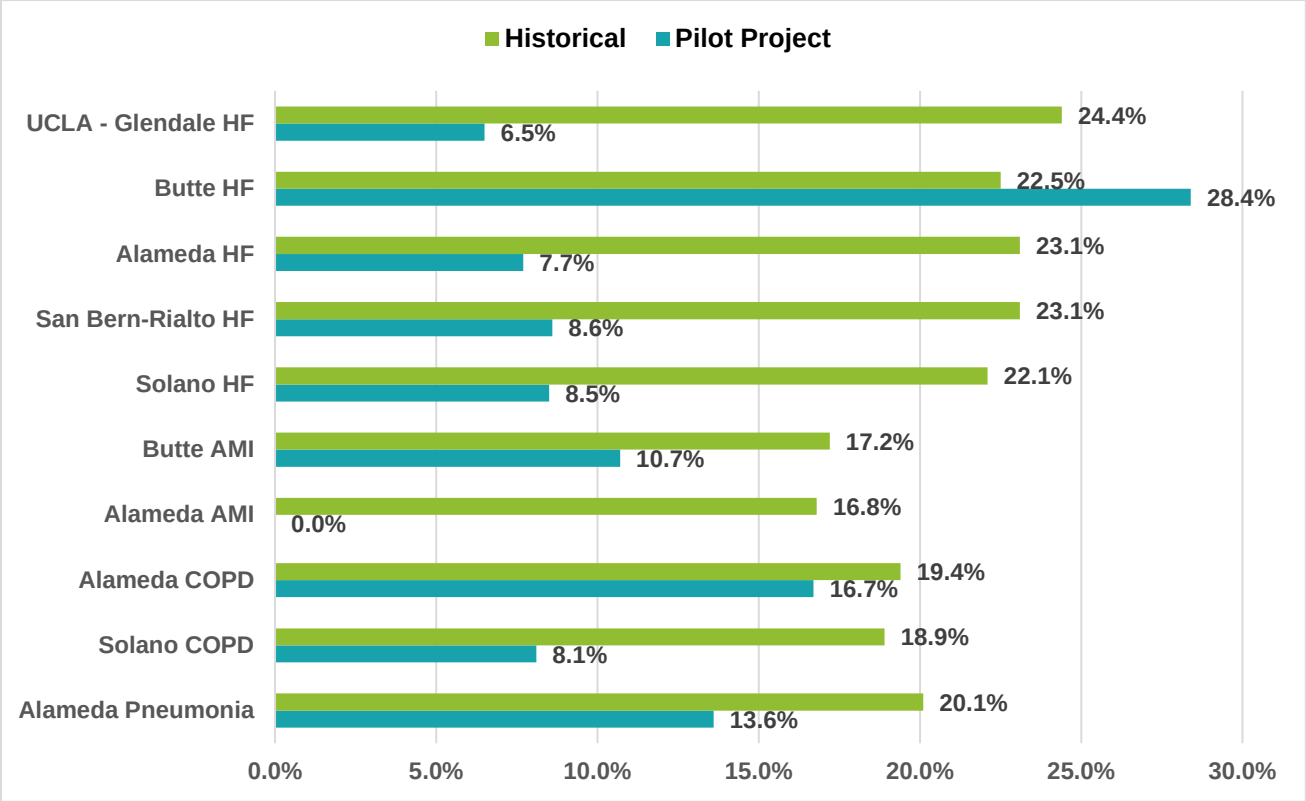
Diagnosis	Sponsoring Agency	Number of Patients Enrolled	Number Readmitted	Historical 30-day Readmission Rate*	% Enrollees Readmitted*
Heart Failure	UCLA	154	10	24.4%	6.5%**
	Butte	454	129	22.5%	28.4%***
	Alameda	26	2	23.1%	7.7%**
	San Bernardino and Rialto	197	17	23.1%	8.6%**
	Solano	71	6	22.1%	8.5%**
Acute Myocardial Infarction	Butte	345	37	17.2%	10.7%**
	Alameda	5	0	16.8%	0%**
Chronic Obstructive Pulmonary Disease	Alameda	24	4	19.4%	16.7%
	Solano	74	6	18.9%	8.1%**
Pneumonia	Alameda	22	3	20.1%	13.6%**

* Includes readmissions for any reason.
** 30-day readmission rate for enrolled patients was *lower* than the historical 30-day readmission rate.
*** 30-day readmission rate for enrolled patients was *higher* than the historical 30-day readmission rate.

Patients enrolled by all sites had lower rates of 30-day readmission than historical rates for their partner hospitals except Butte's heart failure patients and Alameda's chronic obstructive pulmonary disease patients. A notable difference from the original evaluation report is that the 30-day readmission rate for persons with chronic obstructive pulmonary disease who are enrolled in Alameda's post-discharge project is that there is no longer a statistically significant difference between the 30-day readmission rate for enrollees and the partner hospital's historical average. Butte's heart failure patients were the only group whose 30-day readmission rate has not been consistently at or below the partner hospital's historical rate.

This difference may be due to a difference between Butte's protocol and those of the other post-discharge projects. Under Butte's initial protocol, community paramedics contacted patients by telephone and conducted home visits only if an algorithm the community paramedics used during telephone conversations suggested that a home visit was warranted. Effective November 2017, Butte changed its protocol to require community paramedics to schedule at least one home visit with all enrolled patients to improve its ability to achieve reductions in readmissions for heart failure patients similar to those other post-discharge sites have achieved.

Figure 3. Readmissions within 30 Days for Post-Discharge Project Enrollees versus Partner Hospitals' 30-Day Readmission Rates, 2012–2015 (Cumulative; n = 1372 Patients)



Another important indicator of the effectiveness of post-discharge projects is referral of patients to providers of other services to improve the patients' well-being. Through September 30, 2017, community paramedics made at least 188 referrals to a wide range of service providers, using manuals of local resources that they prepared as part of their training. These services included primary care physicians, specialist physicians, pharmacists, mental health services, public health departments, home health providers, drug and alcohol treatment programs, senior home safety programs, food assistance agencies, housing assistance providers, transportation assistance providers, and domestic violence resources. At least one community paramedic helped a patient enroll in Covered California to obtain health insurance. If community paramedics perceived the need as urgent and were concerned that a patient might not follow through on their own, they assisted the patient in obtaining these services.

Potential Savings

All of the post-discharge projects have potentially avoided costs for insurers by reducing 30-day all cause readmissions among the patients they enrolled. Estimates of potential savings are based on differences between rates of readmission among enrolled patients and historical readmission rates obtained from Medicare Hospital Compare and on estimates of the cost of admissions for targeted diagnoses derived from OSHPD's public hospital inpatient discharge dataset. The evaluators estimate that the five post-discharge projects avoided potential costs of approximately $1.4 million through September 30, 2017. The amount of potential costs avoided ranged from a low of $110,718 for Alameda's project to a high of $417,687 for San Bernardino and Rialto's project. Differences in potential savings across sites reflect differences in the total number of 30-day readmissions avoided and the cost of readmissions. Butte's project realized potential savings despite having a 30-day readmission rate for heart failure that is higher than the partner hospital's historical rate, because it reduced 30-day readmissions for acute myocardial infarction, a diagnosis with a much higher average cost per admission than heart failure ($26,621 vs. $14,403). Potential savings generated by Alameda's project may have been greater than the estimate reported because savings associated with reductions in admissions for diabetes and sepsis could not be estimated, since Medicare Hospital Compare does not report data on historical rates of readmission for these conditions.

The majority of potential savings associated with the post-discharge projects would have accrued to Medicare because 61% of patients enrolled are Medicare beneficiaries. Potential savings would also have accrued to Medi-Cal because 25% of enrollees are Medi-Cal beneficiaries. Partner hospitals also may have benefitted if reductions in readmissions were sufficient to avert a Medicare penalty for excessive readmissions.

Table 4. Potential Savings for Post-discharge Projects

	UCLA - Glendale	Butte	Alameda*	San Bernardino and Rialto	Solano
Total Enrollment	154	799	106	197	145
Difference in Readmission Rates (percentage points)	-17.9	+0.6	-9.0	-14.5	-12.3
Number of Readmissions Avoided	Heart failure = 28	Heart failure = -27 AMI = 22	Heart failure = 4 AMI = 1 COPD = 1 Pneumonia = 2	Heart failure = 29	Heart failure = 10 COPD = 7
Average Cost of Readmission	Heart failure = $14,403	Heart failure = $14,403 AMI = $26,621	Heart failure = $14,403 AMI = $26,621 COPD = $11,562 Pneumonia = $14,923	Heart failure = $14,403	Heart failure = $14,403 COPD = $11,562
Total Potential Savings from Readmissions Avoided	**$403,284**	**$196,781**	**$110,718**	**$417,687**	**$224,964**
Potential Savings per Enrollee	**$2,619**	**$246**	**$1,045**	**$2,120**	**$1,551**

* Does not include Alameda patients with diabetes or sepsis because Medicare Hospital Compare does not report historical 30-day readmission rates for these conditions.

An important limitation of this analysis is that it does not taken into account repeat visits to an ED within 30 days of hospital discharge or use of observation status. If the community paramedicine projects were associated with an increase in repeat ED visits or use of observation status, potential net savings associated with the post-discharge projects would be lower. Effects on ED visits within 30 days were not discussed due to a lack of readily available data on repeat ED visits to partner hospitals by persons who were eligible for the program but not enrolled. Medicare Compare, the source of historical data on 30-day readmission rates at partner hospitals does not report rates of ED visits within 30 days of discharge. While 30-day ED revisit rates for participants could have compared the 30-day ED revisit rate reported in studies conducted in other hospitals, the evaluation team did not think that such comparisons would be appropriate because the hospitals included in such studies may have patient populations that differ from those of participating hospitals in ways that could affect our conclusions. We did not attempt to assess the number of patients placed on observation status because they can be difficult to track due to inconsistencies in availability of data on patients placed on observation status and the methods used to identify these them.[iii]

Conclusion

The post-discharge projects have demonstrated capability to reduce hospital readmissions within 30 days among persons with the chronic conditions they target. The projects also increased the likelihood that patients will take medications for these conditions as directed, by reconciling their prescriptions, reviewing the instructions for taking the medications, and assisting patients with medication refills, if needed. Moreover, community paramedics have referred patients to providers of other services that can improve their ability to manage their conditions and their overall well-being. The projects potentially avoided costs, primarily for the Medicare and Medi-Cal programs.

Frequent EMS User

Description

Highlights

- The two frequent EMS user projects enrolled 103 persons between July 2015 and September 2017.
- The San Diego project has not enrolled any new patients since December 2016 because its community paramedics were reassigned to traditional 911 response crews.
- The projects potentially avoided costs of $580,000 by reducing ambulance transports and ED visits. A substantial share of potential savings accrued to ambulance transport agencies and hospitals because a large percentage of patients were uninsured.

The two frequent EMS user projects enroll people who call 911 and/or who have ED visits frequently and whose use of emergency services is not routinely warranted by their medical condition. The goal of these projects is to reduce frequent EMS users' dependence on EMS agencies and EDs for care. Community paramedics assess patients' physical, psychological, and social needs and provide individualized case management to link them with nonemergency services. Patients remain enrolled in the projects until community paramedics believe that the patients no longer need the project's services. Criteria for determining that a patient no longer needs services emphasize reaching important individual milestones, such as obtaining housing or maintaining sobriety.

Findings

The two Frequent EMS User projects enrolled 103 patients from July 2015 through September 2017. The two projects enroll different populations of frequent EMS users. San Diego's project primarily enrolls persons with 20 or more ED visits per year. Alameda's project, which serves a city whose population is much smaller than San Diego's (79,227 vs. 1,391,676),[iv] is open to all persons referred by staff of the EMS agency or the partner hospital. San Diego's enrollees are younger than Alameda's enrollees and are more likely to be uninsured or enrolled in Medi-Cal.

Safety

The evaluation team found no evidence of any harm to patients enrolled in the frequent EMS user projects. On the contrary, there is substantial evidence that patients benefitted from the projects. The community paramedics visited patients multiple times to assess their physical, psychological, and social needs and assist them in obtaining nonemergency services to meet their needs, as discussed below in the section on effectiveness.

Effectiveness

The frequent EMS user projects achieved large reductions in the number of 911 calls and ED visits among enrolled patients. Reductions in 911 calls were highly correlated with reductions in ED visits because most 911 calls for these persons result in transport to an ED. Data on 911 calls were examined to estimate the projects' impact for persons enrolled in both frequent EMS user projects for which data were available for at least 12 months prior to enrollment and for at least 12 months following enrollment. Data on 911 calls and ED use during the month of enrollment were not analyzed to allow time for the intervention to affect patients' utilization.

Among persons enrolled in San Diego's frequent EMS user project for whom data are available for 12 months prior to enrollment and 12 months following enrollment (n =37) the total number of 911 calls decreased from 955 to 625, a decrease of 35%. The average number of 911 calls per person decreased from 26 per year to 17 per year and some enrollees had much larger decreases in 911 calls. Among persons enrolled in Alameda's frequent EMS user project for whom data are available for 12 months prior to enrollment and 12 months following enrollment (n = 33) the total number of 911 calls decreased from 131 to 110, a decrease of 16%. In Alameda, the average number of 911 calls per person decreased from four calls per year to three calls per year. The difference in impact between the two projects reflects differences between the persons enrolled. San Diego's clients had substantially more 911 calls prior to enrollment than Alameda's clients and, thus, there was greater room for improvement.

The frequent EMS user projects also succeeded in linking patients to services that address the needs that led them to make frequent ED visits. During their first visits with patients, community paramedics in Alameda and San Diego reported making 58 referrals to medical care providers, mental health providers, drug and alcohol treatment programs, food assistance programs, housing assistance programs, transportation assistance programs, domestic violence resources, and other social services. They may have made additional referrals during subsequent visits because some patients were not interested in referrals initially. In addition, community paramedics transported patients to these types of providers on 48 occasions to ensure that they obtained services. In some cases, community paramedics collaborated with staff of multiple service providers to go beyond routine care to meet patients' complex needs.[v]

Providing assistance with housing is an important component of frequent EMS user projects because many frequent EMS users are homeless. Among the 46 patients enrolled in San Diego's frequent EMS user project from November 2015 through September 2017, 33 patients (72%) were homeless. Community paramedics are uniquely positioned to assist homeless persons because they are often familiar with the patient already. They are also mobile and can be dispatched or consulted when one of their enrolled patients contacts 911, and they are familiar with the sites at which homeless persons congregate and can meet patients at any location.

San Diego's project has encountered challenges that have constrained its ability to meet patients' needs. In December 2016, the community paramedics working on San Diego's project were reassigned to traditional 911 response crews due to excessive 911 response times. The project manager and an emergency medicine fellow have operated the program to the best of their ability but they have not been able to manage clients as intensively as the community paramedics had. One consequence has been that since the community paramedics were reassigned, ED use has not decrease among enrollees who need more than referrals to providers of other services. Concerned about this situation, the project manager has shifted her time to focus exclusively on reducing ED usage among persons enrolled in the project who generate the largest numbers of 911 calls and ED visits.

Potential Savings

Among persons enrolled in San Diego's project through November 2015 through September 2017 for whom 12 months of data on 911 calls pre- and post-enrollment were available, the project reduced the number of 911 calls and ED visits by 330, avoiding potential costs of $551,760. (See Table 5.) A substantial percentage of potential savings from the reduction in ED visits would have accrued to ambulance transport providers and hospitals because 43% of San Diego's enrollees were uninsured. From July 2015 through September 2017, Alameda's frequent EMS user project avoided potential costs of $28,392. The majority of potential savings by Alameda's project would have accrued to Medicare because the majority of its patients are Medicare beneficiaries.

Table 5. Potential Savings Associated with Frequent EMS User Projects

Variable	Amount	
	Alameda	**San Diego**
Total Enrollment	57	46
Number of Enrollees with 12 Months of Data on 911 Calls Pre and Post Enrollment	33	37
Number of Transports and ED Visits Avoided	21	330
Average Cost of Ambulance Transport	$603	$923
Average Cost of ED Visit	$749	$749
Potential savings from Ambulance Transports Avoided (patients with 12 months pre-post data)	$12,663	$304,590
Potential savings from ED Visits Avoided (patients with 12 months pre-post data)	$15,729	$247,170
Total Potential Savings (patients with 12 months pre-post data)	**$28,392**	**$551,760**
Potential Savings per Patient Enrolled (patients with 12 months pre-post data)	**$860**	**$14,912**

Conclusion

The frequent 911 user projects have achieved substantial reductions in 911 calls, transports, and ED visits among the patients they have enrolled, often by linking patients with primary care, behavioral health, food, housing, and social services. These reductions in 911 calls, transports, and ED visits have potentially avoided costs for public health insurance programs (i.e., Medicare and Medi-Cal) and health care providers.

Directly Observed Therapy for Tuberculosis

Highlights

- The directly observed therapy for tuberculosis project has enrolled 42 persons between June 2015 and September 2017.
- The community paramedics dispensed all but 2 (0.06%) doses of TB medications prescribed by the TB clinic's physician.
- One patient was hospitalized twice for intravenous treatment of TB meningitis that was diagnosed prior to enrollment in the pilot project. Eleven other patients were hospitalized for reasons unrelated to their TB.

Description

Tuberculosis (TB) is a highly contagious disease treated with special antibiotic medications. A physician with expertise in TB treatment determines the number of medications and frequency of dosing. People with TB must take their medication as directed, because stopping treatment too soon or missing doses of medication could lead to development of a drug-resistant strain of TB, which poses a major public health risk to a community.[vi] To ensure that people with TB take their medication as directed, TB treatment clinics often provide directly observed therapy (DOT). Under DOT, a health care worker gives a patient medication, observes the patient taking the medication, and monitors the patient for side effects.

In Ventura County, public health officials asked the county's EMS provider to collaborate with the TB clinic to provide DOT, because the TB clinic does not have sufficient staff to provide DOT to all TB patients in the county. Ventura covers a large geographic area and it is not feasible for some patients to travel to the TB clinic for DOT. The TB clinic utilizes community health workers (CHWs) to administer DOT at remote locations, but the CHWs only work Mondays through Fridays and thus do not provide DOT on weekends. In addition, the CHWs are based in Oxnard, where the TB clinic is located, and have to drive as long as 60 minutes to reach some patients. In contrast, the community paramedics are available 24 hours per day seven days per week and are stationed throughout the county, so they usually can reach patients within 15 minutes.

Findings

Ventura's TB project enrolled 42 patients through September 30, 2017. Because the management of tuberculosis often spans six to nine months,[vi] the community paramedics usually carry a caseload of patients whom they treat for multiple months. Over the course of the pilot project, the community paramedics' caseload averaged seven patients per month.

TB clinic leaders indicated that there were conscious decisions to assign patients to either community paramedics or CHWs based on the likelihood that patients would comply with treatment. They often assigned patients to community paramedics who resist treatment or who were verbally abusive or sexually inappropriate because paramedics have more experience and training than the CHWs in managing persons with challenging behavior. They were also more likely to be assigned homeless persons and other patients who are difficult to locate.

Safety

The evaluation team found no evidence that the TB project harmed patients. Community paramedics dispensed appropriate doses of TB medications, and their TB patients did not experience any greater frequency of side effects or symptoms beyond those typically associated with taking TB medications.

Twelve patients enrolled in the pilot project have been hospitalized. One patient was hospitalized twice for TB meningitis, which had been diagnosed prior to enrollment in the program. The other eleven patients were hospitalized one time for a reason other than their TB diagnosis; one hospitalization was for a scheduled surgical procedure.

Effectiveness

People with TB who received DOT from community paramedics were more likely to receive all doses of TB medication prescribed by the TB clinic physician than people who received DOT from the TB clinic's CHWs. Since the project was launched in June 2015, the community paramedics were unable to dispense only two (0.06%) DOT treatments prescribed by the TB clinic physician (Table 6). In contrast, the CHWs were unable to dispense 722 (6.7%) prescribed DOT treatments. This difference is due primarily to the availability of community paramedics on nights and weekends. Availability on weekends ensures that patients have DOT seven days per week if needed, and availability in evenings improves compliance among patients who travel outside of Ventura County for work during business hours. Taking all recommended doses of TB medications as prescribed increases the likelihood that a patient will be cured and will not spread TB to others. It also decreases the risk that the patient could develop a drug-resistant strain of TB that would be much harder to treat and to control in the community.

Community paramedics also helped patients address health care needs other than TB. For example, some TB patients also have diabetes, which is associated with worse outcomes of TB treatment, especially if it is not well controlled. One TB patient treated by community paramedics had severely impaired vision and had difficulty filling syringes with the prescribed amount of insulin. The community paramedics found a local pharmacy that would prefill syringes for the patient to ensure that he would receive the correct dose.

Table 6. Instances of Non-Completion of Directly Observed Therapy among Patients Treated by Community Paramedics (Cumulative)

	Community Paramedic Patients	TB Clinic Patients
Number of Times Community Paramedic Could Not Complete Scheduled DOT	2 (0.06%)	722 (6.7%)
Reasons Why Patient Did Not Complete Treatment	One patient went out of town without making prior arrangements for the DOT. The other was not home at the scheduled time and did not respond to phone calls in a timely manner.	Most missed doses occur on holidays and weekends when the TB clinic is closed and CHWs are not available to treat patients outside the clinic.

Potential Savings

There was a small increase in adherence to the prescribed TB medication schedule when community paramedics administered DOT instead of CHWs, but we cannot estimate the effect of increased adherence in this range in the United States. If the project substantially increased adherence among hard-to-reach patients, the project may have increased the number of patients in Ventura treated successfully for TB and, thus, reduced medical and public health expenditures associated with public health investigation to identify, test, and treat close contacts of people who did not complete treatment. The project also reduced the need for CHWs to travel long distances to provide DOT, increasing their availability to complete other tasks.

Conclusion

Community paramedics can safely administer DOT for TB and monitor patients for side effects, under the direction of a physician who specializes in treatment of TB and in collaboration with public health nurses. Due to their unique schedule and mobility, they can achieve a very high rate of adherence to TB treatment, which reduces the risk that patients will develop a drug-resistant strain of TB and transmit it to other persons. They can also assist with patients' other social and medical needs that might create barriers to TB treatment.

Hospice

Highlights

- The hospice project enrolled 270 persons between August 2015 and September 2017.
- Community paramedics collaborate successfully with nurses on the staffs of partner hospices to provide care consistent with patients' wishes.
- The percentage of patients of partner hospices transported to an ED after a 911 call decreased from 80% prior to the pilot project to 30% during the pilot project.
- The project has potentially avoided costs of $203,715 by reducing ambulance transports and ED visits.

Description

The goal of hospice care is to provide medical, psychological, and spiritual support to persons dying from a terminal illness in a patient's home, a residential care facility, a nursing home, or an inpatient hospice facility. Hospice staff members tell hospice patients, their family members, and other caregivers to contact the hospice instead of 911 if they believe there is a medical need or if they become concerned about the patient's comfort. Despite this instruction, some hospice patients and their families call 911 instead of the hospice.

The standard response to a 911 call made on behalf of a hospice patient is to transport the patient to an ED, which may be upsetting and uncomfortable for hospice patients. In addition, clinicians in EDs may perform medical interventions that the hospice patient would prefer not to receive and may admit the hospice patient for inpatient care. Moreover, insurers may revoke hospice benefits if the patient receives treatment or hospitalization for their terminal illness that is incompatible with the hospice approach of comfort care.

Ventura County's hospice project seeks to prevent transports that are not consistent with hospice patients' wishes. This is especially important for hospice patients who reside in a residential care or skilled nursing facility. In those facilities, staff may call 911 without discussing the decision with the patient or family members.

If a 911 dispatcher or a first responder on scene determines that a person is under the care of a hospice agency participating in the pilot project, the dispatcher or first responder requests that a community paramedic come to the patient's home, which may be in a private residence, residential care, or skilled nursing facility. The community paramedics are supervisors who can respond to hospice calls while other paramedics respond to different 911 calls.

Once on scene, the community paramedic assesses the patient, talks with family members and caregivers, and contacts a registered nurse employed by the hospice agency. The hospice nurse directs the community paramedic regarding what care to provide. Depending on the circumstances, the hospice nurse may ask the community paramedic to wait with the patient and family members and/or caregivers until the nurse can arrive on scene. The hospice nurse may also ask the community paramedic to administer pain medications to the patient

that the hospice has provided in a "comfort care" pack. ***No hospice patient who requests transport to an ED is denied transportation.***

Findings

Ventura's hospice pilot project responded to 270 calls made on behalf of patients of participating hospice agencies. Hospice patients, family members, or staff of residential or skilled nursing facilities in which hospice patients resided initiated most 911 calls, but hospice nurses made some 911 calls during visits with patients. The reasons for 911 calls to which Ventura's community paramedics responded varied and included altered level of consciousness, cardiac arrest, constipation, fall, seizure, shortness of breath, syncope, and family concern about hospice care.

Safety

The evaluation found no evidence that the hospice project harmed patients. After an assessment to determine that the patient could remain at home under hospice care, the community paramedics' work consisted primarily of providing emotional support to hospice patients and their families and administering medications in patients' "comfort care" packs as directed by a hospice nurse until the hospice nurse could arrive and further evaluate the patient.

The hospice project reduced harm by honoring patients' wishes and reducing the likelihood that they would experience an undesired and uncomfortable trip to the ED and potentially lose hospice benefits. Community paramedics worked with patients, families, and hospice nurses to avoid ED transports, unless a patient requested transport or had a medical need that could not be met in the patient's home, such as a fracture. No patient was denied ED care where it was indicated and consistent with his or her wishes.

Effectiveness

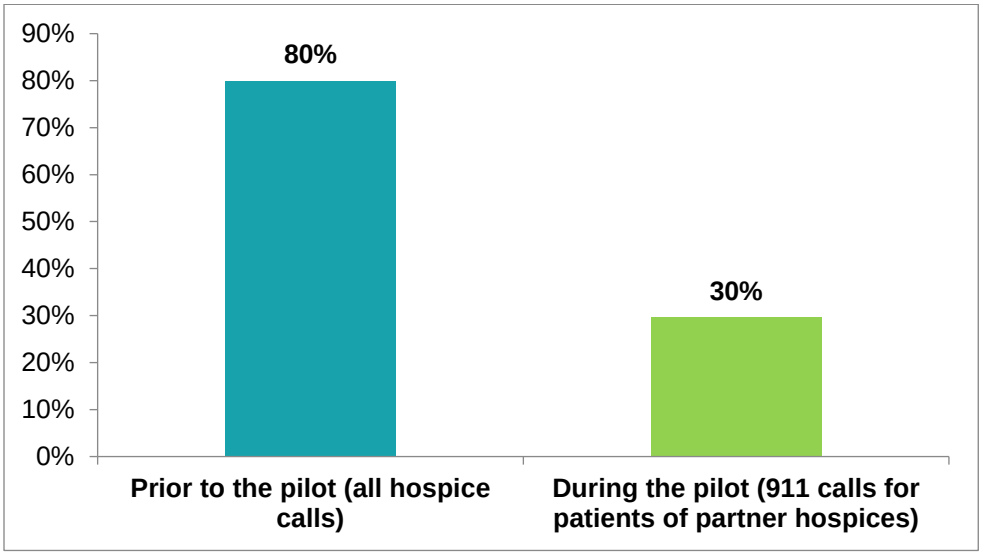
The project achieved its goal of honoring patients' wishes to remain in their homes by integrating EMS and hospice protocols. Figure 4 shows the impact of the pilot project on the percentage of 911 calls for hospice patients that resulted in transport of the patient to an ED. Prior to the launch of the pilot project, 80% of 911 calls for hospice patients resulted in the transport of a patient to an ED.[2] Among patients of partner hospices, the percentage of patients transported decreased to 30% after the pilot project was implemented. Although data on hospice revocation rates prior to the pilot project are not available, it is very likely that the large reduction in ED transports also led to a reduction in the percentage of patients of partner hospices whose benefits were revoked.

Community paramedics also alerted hospices and family members to patients' unmet needs for additional assistance. For example, the project's very first hospice call involved a patient who had fallen during the night while walking to the bathroom. With the patient's permission, the community paramedic who responded to the call

[2] The 80% rate of transport to an ED prior to the launch of the pilot project differs from the rate that AMR Ventura reported in its proposal to participate in the pilot project (42%). The 42% rate was based on a manual search of electronic records for 911 calls on which a specific box had been checked. The 80% estimate is derived from an electronic search of electronic records to identify all records in which the term "hospice transport" appeared. The evaluation uses the latter rate because it reflects the results of a more thorough search of AMR Ventura's records.

contacted a family member who arranged for the patient to have a caregiver at night as well as during the day to assist her with toileting and other needs.[vii]

Figure 4. Percentage of 911 Calls for Hospice Patients That Result in Transport to an ED (Cumulative)



Potential Savings

As indicated in Table 7, the hospice project avoided potential costs of $203,715 ($755 per patient enrolled). These estimates are based on reductions in ambulance transports to an ED and ED visits. Potential savings could be higher than these estimates because some hospice patients who were transported to an ED were admitted to a hospital for inpatient care. However, cost avoidance associated with inpatient admissions could not be estimated because the pilot project was unable to obtain data from hospitals in Ventura County on the number of enrolled hospice patients who were transported to their EDs who were subsequently admitted to their hospitals.

Table 7. Potential Savings Associated with the Hospice Community Paramedicine Project

Variable	Amount
Total Number of Patients Enrolled	270
Total Number of ED Visits Avoided (# if baseline rate persisted - # ED visits during pilot project)	135
Average Cost of ED Transport Avoided	$520
Average Cost of ED Visit Avoided	$989
Potential Savings from ED Transports Avoided	$70,200
Potential Savings from ED Visits Avoided	$133,515
Total Potential Savings	**$203,715**
Potential Savings per Patient Enrolled	**$755**

Conclusion

The hospice project demonstrates that community paramedics can partner with hospice nurses to safely reduce the number of hospice patients unnecessarily transported to an ED. Reducing ED transports increases the health care system's ability to honor the wishes of hospice patients, reduces the risk that they will lose their hospice benefits, and potentially reduces health care costs.

Alternate Destination – Mental Health

Highlights

- The alternate destination – mental health project enrolled 251 persons between September 2015 and September 2017.
- The project has enabled persons with mental health needs to obtain mental health services more quickly.
- In addition to 911 calls involving patients with mental health needs, the community paramedics have begun performing medical screening examinations for "walk-in" clients who come to the mental health crisis center for treatment.
- 96% of patients were treated safely and effectively at the mental health crisis center and no patients experienced adverse outcomes. Nine persons (4%) were transferred to an ED within six hours of transport to the mental health crisis center. Most transfers occurred during the first months of operation.
- The project has potentially avoided $266,200 in costs by reducing ED visits for medical clearance and subsequent ambulance transports to a mental health facility. Additional costs potentially could have been avoided if the county's inpatient mental health facility had more inpatient beds.

Description

Many EDs in California are overcrowded. Some of the people they serve can be treated safely and effectively in other settings, including some who arrive at EDs via ambulance. Alternate destination pilot projects focus on transporting such patients to settings in which they can obtain appropriate care more efficiently. In California, the need for alternatives is particularly critical for people with mental health needs. Since 1995, the number of beds in inpatient psychiatric facilities in California has decreased by nearly 30%.[viii] Patients with mental health needs routinely spend hours in an ED waiting for medical clearance. In some cases, they spend days in an ED waiting for a bed to become available in an inpatient psychiatric facility, without getting definitive mental health care.[ix] Nationwide, the mean length of ED visits is longer for psychiatric patients than medical patients (194 minutes vs. 138 minutes), and psychiatric patients are more likely to have stays in an ED lasting greater than 24 hours[ix]

The community paramedics participating in the Stanislaus County pilot project provide medical clearance for people with mental health needs and arrange for them to be transported directly to a county-operated mental health crisis center. Community paramedics are dispatched in response to 911 calls that a dispatcher believes involve a mental health problem, or when another paramedic or a law enforcement officer identifies a patient as having mental health needs. The community paramedics respond to these calls as needed in addition to responding to traditional 911 calls.

Once on scene, a community paramedic assesses the patient to determine whether he or she has any medical needs or is intoxicated due to alcohol or drug consumption. If the patient has no emergent medical needs, is not

intoxicated, and is not violent, the community paramedic contacts the mental health crisis center to determine whether the county inpatient psychiatric facility located next door to the crisis center has beds available. If the inpatient psychiatric facility has the capacity to accept the patient through the crisis center, the community paramedic gives the patient the option to be transported by ambulance to the mental health crisis center instead of an ED. The only exception are patients who the crisis center staff decline to admit because their behavior was disruptive during past visits to the crisis center; such patients are always transported to an ED.

After a patient arrives at the crisis center, mental health professionals on the crisis center staff evaluate the patient further to determine what mental health services he or she needs. Eligibility for the pilot project is limited to adults who are uninsured or enrolled in Medi-Cal because the county inpatient psychiatric facility does not accept patients with other types of health insurance. A private psychiatric facility is available to persons in Stanislaus County who have Medicare or commercial health insurance.

In recent months, the mental health crisis center staff have asked community paramedics to provide medical screening to "walk in" clients (i.e., persons not transported by ambulance). In the past, the crisis center had relatively few walk-in clients and these clients were sent to a nearby ED for medical clearance. When the volume of walk-in clients increased, the mental health crisis center staff requested that the community paramedics come to the crisis center to screen clients. This has enabled clients to obtain medical screening more quickly and begin mental health treatment more quickly if they do not have any acute medical needs.

Findings

Stanislaus's alternate destination – mental health project enrolled 251 persons from September 2015 through September 30, 2017. The pace of enrollment slowed in 2017 because several community paramedics left the agency or were promoted to other positions. Many patients enrolled in recent months were "walk in" clients who come to the mental health crisis center for care and need to be screened for medical needs before the crisis center can admit them. The project's leadership expect enrollment to increase in the near future because the project recently trained additional community paramedics.

Safety

The evaluation team found no evidence of patient harm caused by the alternate destination – mental health project. The community paramedics accurately screened patients to determine which of them could be safely transported directly to the mental health crisis center. Only nine of patients enrolled in the project (4%) were transferred to an ED within six hours of arrival at the crisis center. Seven of these nine patients were subsequently transferred to an inpatient psychiatric facility. The other two patients were discharged from an ED without transfer.

Table 8 lists the reasons why the nine patients were transferred to an ED. None of the transfers to an ED involved life-threatening conditions and none of the patients transferred were admitted for inpatient medical care. Eight of the nine transfers occurred during the first six months in which the project was in operation. The sharp decrease in transfers reflects the efforts of the project's medical director to develop protocols and screening methods that maximized the likelihood that the mental health crisis center would accept patients offered transport to the crisis center.

Table 8. Reasons for Transfer to an ED within Six Hours of Admission to Mental Health Crisis Center (9 of 251 Patients)

Reason for Transfer to an ED	Number of Patients
Agitation	2
Blood pressure above the mental health crisis center's threshold	2
Urinary incontinence	2
Patient had sleep apnea, and the county inpatient psychiatric facility did not have a continuous positive airway pressure (CPAP) machine	1
Change in patient condition	1
No capacity at psychiatric hospital	**1**
Total	**9**

The alternate destination – behavioral health project has also improved public safety. Law enforcement officers interviewed by the evaluation team stated that having community paramedics available enhanced their ability to respond effectively to persons with mental health needs because community paramedics are better prepared to address mental health needs and can arrange ambulance transports for mental health patients. This allows law enforcement officers to return to other law enforcement duties instead of transporting patients to an ED in their squad cars and waiting in the ED to transfer responsibility for the patient to a clinician.

Effectiveness

The pilot project substantially reduced the rate at which 911 calls involving patients with mental health needs resulted in a transport to an ED for medical screening. After the pilot project was implemented, 26% of mental health patients (n = 251) were transported to the mental health crisis center instead of an ED. An additional 26% (n = 252) met the eligibility criteria and could have been transported to the crisis center if additional beds were available in the county's inpatient psychiatric facility or if the crisis center accepted patients who have a form of health insurance other than Medi-Cal. The community paramedics also determined that 389 people (40% of people assessed) were not eligible for transport to the mental health crisis center because they had a medical need, had vital signs outside parameters for admission to the crisis center, were intoxicated, violent, agitated, or over age 65 years. Five percent (n = 47) met the medical criteria for admission to the mental health crisis center but were not admitted due to a history of disruptive behavior during previous admissions to the crisis center. Only two percent of eligible patients (n = 23) did not consent to be transported to the mental health crisis center.

The pilot project also reduced the time to treatment by a mental health professional, which improved patients' well-being. A mental health professional assessed people transported directly to the mental health crisis center within minutes of arrival. In contrast, people transported to an ED had a much longer wait for a medical screening evaluation and were then transported to an inpatient psychiatric facility to be assessed by a mental health professional.

Potential Savings

As indicated in Table 9, the alternate destination – mental health project potentially avoided an estimated $266,200 in costs ($1,061 per patient) because transporting a mental health patient to the crisis center avoids an ED visit and a secondary transport of a patient from an ED to an inpatient mental health facility. Most of these potential savings would have accrued to the Medi-Cal program because 86% of patients enrolled in the project were Medi-Cal beneficiaries.

Table 9. Potential Savings Associated with the Alternate Destination – Mental Health Project

Variable	Amount
Total Number of Patients Enrolled	251
Total Number of ED Visits Avoided	242
Average Cost of ED Transport Avoided	$554
Average Cost of ED Visit Avoided	$546
Potential Savings from ED Transports Avoided	$134,068
Potential Savings from ED Visits Avoided	$132,132
Total Potential Savings	**$266,200**
Potential Savings per Patient Enrolled	**$1,061**

Conclusion

The alternate destination – mental health project demonstrates that community paramedics can perform medical screening examinations for persons with mental health needs and determine which of them can be transported directly to a mental health crisis center. Transporting these persons directly to a crisis center enables them to obtain mental health services more quickly, which is likely to improve their well-being. The project also potentially avoids health care costs by reducing the numbers of persons transported to and assessed in an ED. Most of these potential savings would accrue to Medi-Cal because most persons participating in this project are Medi-Cal beneficiaries.

Alternate Destination – Urgent Care

Highlights

- The three alternate destination – urgent care projects enrolled 48 patients between September 2015 and September 2017.
- All three of the alternate destination – urgent care projects have closed due to low enrollment.
- Most patients enrolled had a laceration or an isolated closed extremity injury.
- Patients did not experience any adverse outcomes. Two patients (4%) were transferred to an ED within six hours of admission to an urgent care center; nine (19%) were rerouted to an ED because the urgent care center declined to treat the patient.
- The projects potentially avoided costs of $3,640 because insurers pay less urgent care centers less than EDs for treatment of eligible conditions.

Description

Three pilot projects offered patients who have minor injuries or minor medical conditions the option to be transported to an urgent care center instead of to an ED for evaluation by a physician. Urgent care centers are walk-in clinics that treat persons with illnesses or injuries that can be evaluated and treated safely without the full range of resources available in an ED. California does not license urgent care centers as a distinct category of health care provider; they operate under the licenses of hospitals or of the physicians who operate them.[xi] This means that there are no requirements regarding operating hours, equipment, or the types of medical services provided.

All three alternate destination – urgent care projects enrolled patients who had any of the following five conditions: isolated closed extremity injury, laceration with controlled bleeding, soft tissue injury, isolated fever or cough, and other minor injury. One site, Carlsbad, also enrolled patients who had generalized weakness. Patients were screened by paramedics on 911 response crews who were trained to use a protocol that was developed by emergency physicians to determine whether transporting a patient to an urgent care center was an appropriate option. The protocols excluded patients with medical conditions that were emergent, complex, or inappropriate for transport to an urgent care center.

If paramedics concluded that a patient could be treated safely at an urgent care center, the paramedics offered transport to an urgent care center approved by the jurisdiction's local emergency medical services agency (LEMSA). Urgent care centers approved by the LEMSAs were required to provide respiratory therapy treatments, x-rays, and point of care laboratory testing for blood and urine and to have an automated external defibrillator. ***Patients who declined to be transported to an urgent care center were transported to an ED.*** After transporting a patient to an urgent care center, paramedics were available to reroute the patient to an ED if a clinician at the urgent care center determined that the urgent care center could not treat the patient safely and appropriately. ***It is important to note that these projects did not involve evaluation and release of patients by paramedics. All patients were transported to a facility where they were evaluated by a physician.***

Findings

Forty-eight persons were enrolled in the three alternate destination – urgent care projects through September 2017. Orange County's project had the largest enrollment (34 patients) and Carlsbad's project had the smallest enrollment (2 patients). UCLA's alternate destination – urgent care project closed in May 2017 and Carlsbad and Orange County's projects closed in November 2017. All closures of alternate destination – urgent care projects were due to low enrollment.

There are multiple reasons why enrollment in the alternate destination – urgent care projects was substantially lower than anticipated. All three sites had fewer patients than expected who met all of the criteria for inclusion in the pilot project. In addition, many 911 calls occurred at times of the day during which urgent care centers were closed. In the case of Carlsbad's project, enrollment was limited to non-elderly adults who have insurance coverage through a single health plan.

Most of the patients for whom information on type of injury or illness was reported had a laceration or an isolated closed extremity injury, such as a dislocation, sprain, or fracture (Table 10).

Table 10. Number of Enrollees in Alternate Destination – Urgent Care Projects by Condition (Cumulative)

Lead Agency	Total Enrollees	Closed Extremity	Laceration	Soft Tissue	Fever or Cough	Other Minor Injury	Generalized Weakness
UCLA – Glendale and Santa Monica	12	5	0	0	0	7	0
Orange	34	17	15	0	1	1	0
Carlsbad	2	0	0	0	0	0	2
Total	**48**	**22**	**15**	**0**	**1**	**8**	**2**

Safety

The alternate destination – urgent care projects did not harm patients. Among the 48 patients enrolled in the alternate destination – urgent care projects, two patients (4%) were subsequently transferred to an ED within six hours of arrival at an urgent care center. (Figure 6) In addition, nine patients (19%) were transported to an urgent care center but then rerouted to an ED because clinicians at the urgent care center staff declined to treat the patient. None of these patients had life-threatening conditions and there were no adverse outcomes. The reasons for transport from an urgent care center to an ED are listed in the table below. Additional detail about the two secondary transfers can be found in the initial public report on the community paramedicine pilot projects.[xii]

Table 11. Reasons for Transfer or Rerouting to an ED within Six Hours of Admission to an Urgent Care Center (11 of 48 Patients)

Reason for Transfer to an ED	Number of Patients
Secondary Transfers	
Patient experienced shortness of breath and heart rate slowed after transport to an urgent care center for treatment of nausea without abdominal pain	1
Patient required surgery for injury	1
Rerouted Transfers (aka Continuous Transfers)	
Patient requested opioid pain medication	3
Diagnostic equipment broken or unavailable	2
Urgent care physician believed shoulder injury needed further evaluation	2
Urgent care center physician believed patient needed to be examined by an orthopedist	2
Total	**11**

Effectiveness

While paramedics participating in the pilot projects were able to triage patients according to protocol effectively, it was challenging for the paramedics and project leaders to determine which patients the urgent care centers would accept. Urgent care centers sometimes rejected patients who have conditions that can be safely treated outside an ED, such as a dislocated shoulder. Interviews with project managers and paramedics suggest that urgent care centers may be hesitant to accept patients transported by an ambulance since that is a new practice for them. In addition, the range of services offered by urgent care centers varies substantially. For example, some urgent care centers do not have the capacity to administer intravenous fluids, which limits their ability to treat persons with dehydration and other conditions that can be treated safely outside of an ED.

Potential Savings

Table 12 displays estimates of the potential savings associated with two of the three alternate destination –urgent care projects. Data for the third site are not included because it had only enrolled two patients as of September 30, 2017. These projects potentially avoided costs of $3,640. The estimates of potential savings are based on estimates of the difference between the amounts insurers pay for treatment of the same condition in an ED and an urgent care center. Costs for ambulance transports were not reduced because no transports were avoided.

Table 12. Potential Savings Associated with the Alternate Destination – Urgent Care Projects

	Variable	Amount
	UCLA – Glendale and Santa Monica	**Orange**
Total Enrollment	12	34
Total Patients Treated in an Urgent Care Center and Released	6	29
Estimated Difference Between the Cost of an ED Visit and an Urgent Care Visit	$104	$104
Total Potential Savings	**$624**	**$3,016**
Potential Savings per Patient Enrolled	**$52**	**$89**

Conclusion

More data are needed to draw firm conclusions about the alternate destination – urgent care model. Paramedics participating in the alternate destination – urgent care projects have demonstrated capacity to evaluate patients according to triage protocols to determine whether they are candidates for treatment at an urgent care center. No patients experienced adverse outcomes. However, only 48 patients were enrolled across the three sites over 25 months, in large part because many people with eligible conditions called 911 at times at which urgent care centers were not open. The only concept for which fewer people were enrolled – Directly Observed Therapy for Tuberculosis – is being tested at only one site and involves people who have a rare condition. In addition, two of the 48 patients enrolled were transferred to an ED following admission to an urgent care center and nine were rerouted to an ED because the urgent care center declined to accept the patient. These findings suggest that for alternate destination – urgent care projects to offer a viable alternative to EDs, screening protocols will need to be more closely aligned with the capabilities of urgent care centers and the illnesses and injuries they are willing to treat. The savings generated were modest due to the low enrollment and the design of the project, which only changed the location to which patients were transported and did not reduce the number of transports.

Alternate Destination – Sobering Center

Highlights

- The alternate destination – sobering center project enrolled 400 patients from February 2017 through September 2017.
- 97.5% of patients (n = 390) were treated safely and effectively at the sobering center. Only 2.5% (n = 10) were rerouted to an ED or transferred to an ED within six hours of admission.
- Persons treated in the sobering center have better access to social workers who can help them obtain detoxification, supportive housing, and other services.
- The projects potentially avoided costs of $132,699 because the cost of treating intoxicated persons in the sobering center is less than the cost of treating them in an ED.

Description

Acutely intoxicated persons are another population for whom alternatives to routine transport to an ED are needed. Nationwide an estimated 9.7% of ED visits are due to inebriation.[xiii] In busy EDs, clinicians have little time to assist intoxicated patients unless they also have an acute medical need. They may not provide counseling about their drinking or information about detoxification programs, case management, or other resources.

Cities around the US have established sobering centers to care for these patients.[xiv] Sobering centers are less expensive to operate than EDs and their staff are able to focus on the needs of intoxicated persons.[xv] In February 2017, the City and County of San Francisco began a pilot project under which paramedics transport eligible persons directly to its sobering center. The sobering center has cared for over 50,000 persons since it opened in 2003. It serves people who are acutely intoxicated but do not have other urgent health care needs. The sobering center is open 24 hours per day, 7 days per week and staffed by registered nurses who monitor patients throughout their stay. The registered nurses follow standardized procedures for a variety of medical and mental health conditions. There are also social workers on its staff who help patients obtain treatment for alcohol use disorders and mental health conditions, housing, Medi-Cal, Supplemental Social Security, and General Assistance. Most patients stay for 4 to 12 hours. Approximately 33% of patients are treated at the sobering center multiple times per year and approximately 90% of patients are homeless at the time that services are provided.[xvi]

San Francisco has trained all paramedics on 911 response crews to screen intoxicated patients to determine if they are eligible to enroll in the pilot project. Patients are deemed eligible for transport to the sobering center if they are have acute alcohol intoxication but do not have any medical or mental health needs. If a patient meets all eligibility criteria, the paramedics offer the patient a choice of transport to the sobering center or an ED. Patients who do not meet all eligibility criteria are transported directly to an ED, as are patients who express a preference for transport to an ED.

Ten experienced paramedics have completed the full community paramedic training. The community paramedics work with 911 response crews and the sobering center's staff to perform quality assurance reviews for patients transported to the sobering center. They provide training and are available to paramedics by telephone or in person for consultation if paramedics in the field are unsure whether a patient is eligible for transport to the sobering center. In addition, the community paramedics collaborate with San Francisco's Homeless Outreach Team (HOT) outreach workers to engage sobering center patients who are high utilizers of county health care services.

Findings

The alternate destination – sobering project enrolled 400 patients during its first eight months of operation (February 1, 2017 through September 30, 2017). Fifty of the 400 patients (13%) enrolled in the project have visited the sobering center more than once.

Safety

The community paramedics and the staff of the sobering center review the records of all patients transported to the sobering center by ambulance. Cases that involve a secondary transport of a patient to an ED are also reviewed by a committee that consists of the sobering center's deputy director, the sobering center nurse coordinator, the San Francisco Emergency Medical Services Agency's Medical Director, and the San Francisco Fire Department's Medical Director.

The most common risk to sobering center patients is an unforeseen need for medical detoxification, which is difficult to predict initially among people with chronic alcohol consumption. A patient may also have taken another drug that paramedics cannot detect when they examine the patient in the field. Clients are monitored via comprehensive nursing protocols that evaluate for effects of other drugs, including the impact to orientation and respiratory status resulting from sedating medications.

Among the 400 patients enrolled in the alternate destination – sobering project, nine patients (2.25%) were transferred to an ED within six hours of admission to the sobering center. These secondary transfers were due to agitation with chest pain, alcohol withdrawal, confusion, tachypnea (i.e., rapid shallow breathing), a fall, a suspected suicide attempt, and a client request for oxygen despite not having symptoms of respiratory distress. (Table 13) In eight cases, the transfer to the ED could not have been avoided because the need for transfer was not evident when the paramedics assessed the patient in the field. When the community paramedics reviewed records for the patient with tachypnea, they concluded that the patient's respiration rate in the field had been outside the range for admission to the sobering center and that the paramedics on the 911 crew that transported the patient to the sobering center had not relayed this information to the registered nurse on duty. The community paramedics coached the 911 response crew and their supervisor on how to use a patient's respiration rate in the field to determine if a patient is eligible for transport to the sobering center. One additional patient (0.25%) was rerouted from the sobering center to an ED due to hypothermia and bradycardia. His temperature was below the threshold for admission to the sobering center based on nursing protocols and he could not be rewarmed within 15 minutes. Among the ten patients transferred or rerouted to an ED, seven were treated in an ED and released. Two patients were medically cleared in the ED and transferred to a psychiatric ED. One left an ED's waiting room without being seen.

Table 13. Reasons for Transfer to an ED within Six Hours of Admission to Sobering Center (10 of 400 Patients)

Reason for Transfer to an ED	Number of Patients
Secondary Transfers	
Alcohol withdrawal	2
Confusion	2
Agitation with chest pain	1
Client requested oxygen despite lack of respiratory distress	1
Fall	1
Suspected suicide attempt	1
Tachypnea/Increasing temperature	1
Rerouted Transfers (aka Continuous Transfers)	
Hypothermic/bradycardia	1
Total	**10**

Effectiveness

The alternate destination – sobering center project has reduced the number of intoxicated persons transported to an ED. Interviews with project leaders indicate that one of the greatest benefits of treating these patients in the sobering center is that the sobering center social workers have greater ability to connect patients with medical detoxification, social work, case management services, and permanent housing. EDs have social workers but they are not able to focus exclusively on intoxicated patients. In addition, the sobering center is equipped to provide withdrawal management for patients if a bed is available in a medical detoxification center, which helps patients cope with withdrawal and increases their willingness to complete detoxification.

Another strength of the alternate destination – sobering center project is the use of paramedics in two complementary roles. Paramedics on 911 response crews can contact community paramedics for guidance if they are uncertain whether a patient meets the criteria for transport to the sobering center. Community paramedics review transports of patients to the sobering center and give 911 crews feedback on their use of the protocol for screening patients.

In addition, the community paramedics' partnership with the HOT outreach workers extends the project beyond transport to the sobering center to encompass outreach to high utilizers to encourage them to seek treatment for their alcohol use disorder. According to the project's leaders, this outreach is important because San Francisco has substantial services for homeless people with alcohol use disorders, but people often do not know how to access these services or will not seek help on their own. Pairing community paramedics with homeless outreach workers leverages the strengths of both groups of workers. Community paramedics contribute medical knowledge, ability to access medical records, and relationships with ambulance crews. Homeless outreach workers, many of whom are formerly homeless and or in recovery from substance us disorders, can form closer relationships with clients due to their lived experience.

Potential Savings

Table 14 displays estimates of potential savings associated with the alternate destination – sobering center project. For this project, savings were due to the difference in the cost of caring for intoxicated persons in the sobering center versus in an ED. For patients who were treated in the sobering center and released, savings were estimated by multiplying the number of patients by the difference between the cost of treating them in an ED or in the sobering center ($385). These savings were offset by the cost of a sobering center visit for the nine patients who were transferred to an ED and the cost of a second ambulance transport. During its first eight months of operation, the project generated $132,699 in potential savings ($332 per person) due to the reduction in ED visits. Actual savings realized by insurers may have differed because the data used to estimate costs are not used for billing purposes.[15] The majority of potential savings accrued to Medi-Cal because sobering center staff estimate that 61% of the patients enrolled in the project are Medi-Cal beneficiaries. Costs for ambulance transports were not reduced because no transports were avoided.

Table 14. Potential Savings Associated with the Alternate Destination – Sobering Center Project

Variable	Amount
Total Number of Patients Enrolled	400
Total Number of ED Visits Avoided	390
Average Cost of Ambulance Transport	$1,675
Average Cost of ED Visit	$649
Average Cost of Sobering Center Visit	$264
Potential Savings Associated with Sobering Center Visits	$150,150
Number of Secondary Transfers to ED	9
Potential Cost Associated with Sobering Center Visit for Secondary Transfers to an ED	$2,376
Potential Cost Associated with Secondary Transfers to an ED	$15,075
Total Potential Savings (Net of Cost)	**$132,699**
Potential Savings per Patient Enrolled	**$332**

Conclusion

Preliminary findings suggest that paramedics participating in the alternate destination – sobering center project can accurately screen intoxicated patients to identify those who can be treated safely and effectively in a sobering center. To date the project has resulted in the transport of 390 fewer persons to an ED. Only two patients (0.25%) were transported to the sobering center who did not meet the eligibility criteria (i.e., the patient rerouted from the sobering center to the ED and the patient accepted by the sobering center who had tachypnea). Only nine patients (2.25%) were transferred to an ED subsequent to admission to the sobering center and eight of the nine transfers were due to conditions that patients developed subsequent to arrival at the sobering center. There were no adverse outcomes from secondary transfers to an ED. The project potentially reduced costs because providing care to intoxicated persons in the sobering center is less expensive than caring for them in an ED. In addition, the community paramedics participating in the project provide valuable feedback to paramedics on 911 response crews and are collaborating effectively with homeless outreach workers to encourage persons with chronic alcoholism to seek treatment.

Summary and Conclusion

The community paramedicine pilot projects have demonstrated that specially trained paramedics can provide services beyond their traditional and current statutory scope of practice in California. No adverse outcome is attributable to any of these pilot projects. These projects are enhancing patients' well-being, improving the integration and efficiency of health services in the community, and reducing ambulance transports, ED visits, and hospital readmissions. The majority of potential savings associated with these pilots would accrue to Medicare and Medi-Cal and to hospitals serving Medicare and Medi-Cal patients.

Specifically, the sites testing the seven concepts have demonstrated the following.

Post-Discharge

- All five post-discharge projects decreased hospital readmissions within 30 days of discharge for at least one of the diagnoses targeted. Butte's heart failure patients were the only group of patients whose 30-day readmission rate exceeded the partner hospital's historical all-cause readmission rate. The difference may have been due to differences in protocols. During the time period covered by this report, Butte's project did not provide home visits to all patients, whereas all patients enrolled in the other four post-discharge projects received at least one home visit. In November 2017, Butte changed its protocol to provide every patient with at least one home visit.
- The projects improved patients' knowledge of their medications and their ability to take medications as prescribed by their physicians.
- The projects avoided potential costs for payers (primarily Medicare and Medi-Cal) and hospitals due to reductions in readmissions within 30 days of discharge. Participating hospitals also reduced their risk of incurring Medicare penalties for excessive readmissions.

Frequent EMS User

- These projects achieved substantial reductions in the number of 911 calls, ambulance transports, and ED visits among enrolled patients.
- Community paramedics assisted patients in obtaining housing and other nonemergency services that address the physical, psychological, and social needs that led to their frequent EMS use.
- Both projects avoided potential costs for payers by reducing 911 calls, ambulance transports, and ED visits. San Diego's project also potentially decreased the amount of uncompensated care furnished by ambulance providers and hospitals because 43% of the patients it enrolled were uninsured.

Directly Observed Therapy for Tuberculosis

- Community paramedics dispensed appropriate doses of TB medications and monitored side effects and symptoms that could necessitate a change in treatment regimen.
- Persons with TB who received directly observed therapy (DOT) from community paramedics were more likely to receive all doses of TB medication prescribed by the TB clinic physician than patients who received DOT from the TB clinic's community health workers. Receiving all doses prescribed by the TB clinic physician increased the likelihood that a patient would be treated successfully and would not spread TB to others or develop a drug-resistant strain of TB that would be much harder to treat and to control in the community.

Hospice

- Community paramedics assessed hospice patients, provided psychosocial support, and administered medications from the hospice patients' "comfort care" packs when necessary, in consultation with a hospice nurse.
- The hospice project enhanced ability to honor patients' wishes to receive hospice services at home by markedly reducing rates of ambulance transports to an ED and ED visits.
- The reduction in unnecessary transports and ED visits potentially avoided costs for Medicare and other insurers. Expenditures for inpatient care were also potentially reduced because some ED visits for hospice patients result in an inpatient admission.

Alternate Destination – Mental Health

- Twenty-six percent of persons screened by the community paramedics were transported to the mental health crisis center rather than an ED and more could have been transported to the crisis center if the county had more inpatient psychiatric beds or if the crisis center accepted people with private insurance or Medicare. (Some persons the community paramedics screened were not eligible for transport to the mental health crisis center because they had a medical need, were intoxicated, or were violent.)
- Ninety-six percent of patients who participated in the project (242 of 251 patients) were treated safely and effectively at the mental health crisis center without the delay of a preliminary emergency department visit for medical screening. Only 4% of patients (n = 9) required subsequent transfer to the ED, and none experienced adverse outcomes.
- The project also improved public safety because community paramedics could take responsibility for a person with mental health needs, which allowed law enforcement officers to return to law enforcement duties instead of transporting the person to an ED and waiting to transfer responsibility for the person to clinicians in the ED.
- The project avoided potential costs for payers, primarily Medi-Cal, by reducing ED visits and transfers of patients from EDs to psychiatric facilities. For uninsured persons, the amount of uncompensated care provided by ambulance providers and hospitals also decreased.

Alternate Destination – Urgent Care

- Conclusions cannot be drawn about the impact of the alternate destination – urgent care projects due to low enrollment.
- Among patients who were enrolled, paramedics were able to screen patients according to protocol and identify those for whom transport to an urgent care center was an appropriate option.
- No patients experienced an adverse outcome, although two patients (4%) were transferred to an ED following admission to an urgent care center, and nine patients (19%) were rerouted to an ED because the urgent care center declined to accept the patient.
- To operate safely and efficiently, these projects need to closely match field screening protocols with the capabilities of urgent care centers and the illnesses and injuries they are willing to treat.
- The projects potentially yielded modest savings for payers because they pay less for treatment provided in urgent care centers than in EDs for the same illnesses and injuries.

Alternate Destination – Sobering Center

- 97.5% percent of patients enrolled in the alternate destination – sobering project (390 of 400) were treated safely and effectively at the sobering center. Only nine patients (2.25%) were transferred to an ED within six hours of admission to the sobering center and only one (0.25%) was rerouted from the sobering center to an ED because the sobering center registered nurses declined to accept the patient. None of these patients were admitted to a hospital for inpatient medical care.

- In addition, community paramedics participating in the project provided feedback to paramedics on 911 crews on how to screen intoxicated persons to determine if they are candidates for transfer to the sobering center. They also partnered effectively with homeless outreach workers to encourage people who use the sobering center frequently to seek treatment for chronic alcoholism, housing, and other services.

- During its first five months of operation, the project avoided potential costs of $132,699 by substituting sobering center visits for ED visits. The majority of potential savings accrued to Medi-Cal because the majority of patients enrolled in the project are Medi-Cal beneficiaries.

Conclusion

The California community paramedicine pilot projects were designed to integrate with existing health care resources and utilize the unique skills of paramedics and their round-the-clock availability. Findings from the evaluation indicate that Californians benefit from these innovative models of health care that leverage an existing workforce that operates at all times under medical control — either directly or by protocols developed by physicians experienced in EMS and emergency care. No other health professionals were displaced. Instead, these pilot projects have demonstrated that community paramedics can partner with physicians, nurses, behavioral health professionals, and social workers to fill gaps in the health and social services safety net. No adverse patient outcome is attributable to any of these pilot projects.

At least 33 states are operating community paramedicine programs, and research conducted to date indicates that they are improving the efficiency and effectiveness of the health care system.[xvii, xviii, xix, xx] These findings suggest that the benefits of community paramedicine programs grow as they mature, solidify partnerships, and find their optimal structure and niche. The evaluation of HWPP #173 yields consistent findings for six of the seven community paramedicine concepts tested. All of the post-discharge, frequent 911 users, DOT for TB, hospice, alternate destination – mental health projects have been in operation for at least two years and have improved patients' well-being and, in most cases, have yielded savings for payers and other parts of the health care system. Initial findings regarding the sixth concept, alternate destination – sobering center, suggest that this project is also benefitting patients and the health care system. The seventh concept, alternate destination – urgent care, shows potential but projects that tested this concept did not enroll sufficient numbers of persons to draw conclusions about effectiveness. These projects were closed in 2017. Further research involving a larger volume of patients transported to urgent care centers with wider ranges of services and expanded hours would be needed to determine whether this concept is effective.

If community paramedicine is implemented on a broader scale, the current EMS system design is well suited to utilize the results of these pilot programs to optimize the design and implementation of proposed programs and to assure effectiveness and patient safety. The two-tiered system enables cities and counties to design and administer community paramedicine programs to meet local needs while both local and state oversight and regulation ensure patient safety.

Appendix A. Map of California Community Paramedicine Pilot Projects Currently Enrolling Patients and Projects Expected to Begin Enrolling Patients in 2018

Appendix B. New Community Paramedicine Pilot Projects that Will Begin Enrolling Patients in 2018

On November 27, 2017, OSHPD approved applications from seven jurisdictions across California to add nine new community paramedicine pilot projects to the HWPP. These projects will test four of the seven concepts that are currently being tested by other sites. The community paramedicine concepts that the new projects will test and the jurisdictions sponsoring the projects are listed in the table below.

Concept	Lead Agency
Post-discharge	Cal Tahoe Emergency Services
Post-discharge	Dignity Health - Redding
Frequent EMS User	City and County of San Francisco
Frequent EMS User	Marin County EMS Agency
Alternate Destination – Mental Health	Central California EMS Agency
Alternate Destination – Mental Health	Los Angeles City Fire Department
Alternate Destination – Mental Health	Santa Clara County EMS Agency
Alternate Destination – Sobering Center	Los Angeles City Fire Department
Alternate Destination – Sobering Center	Santa Clara County EMS Agency

Appendix C. Methods for Estimating Savings

This appendix describes the methods used to estimate savings associated with each of the seven community paramedicine concepts that are being tested as part of HWPP #173. Estimates of savings associated with the seven community paramedicine concepts reflect savings that accrue to parts of the health care system other than EMS transport providers, such as health insurers and hospitals. None of the projects realized savings for the EMS transport provider because they operate on fee-for-service basis and are reimbursed only for transport. These agencies had to provide in-kind contributions of supplies and labor to operate the pilot projects.

Different methods were used to estimate the savings associated with each concept due to the differences in the services provided and the types of outcomes each concept seeks to improve. For concepts that strive to reduce unnecessary ambulance transports, ED visits, and hospitalizations, the analysis focused on estimating the impact of these reductions on health insurers' expenditures because insurers typically pay for these services. Effects on hospitals' ability to manage "full risk" contracts with health insurers and avoid Medicare readmission penalties for excessive readmissions were addressed but could not be estimated quantitatively.

Post-Discharge

To generate estimates of savings, the differences between (1) the rates of readmission within 30 days of discharge among persons enrolled in the post-discharge projects, and (2) historical 30-day readmission rates for partner hospitals were calculated. Historical readmission rates were obtained from Medicare Hospital Compare.[xxi] a system for reporting and publicly releasing data on the quality of care provided by Medicare-certified hospitals. Medicare Compare collects data on readmissions for persons with four of the six conditions targeted by the post-discharge projects: heart failure, acute myocardial infarction, chronic obstructive pulmonary disease, and pneumonia. A dataset containing data on readmission rates of partner hospitals between July 2012 and June 2015 was downloaded from Data.Medicare.gov.[xxii] These data were used to assess the projects' impact on 30-day readmission rates because all partner hospitals used similar methods to report the data to Medicare and because there was minimal overlap between the time period for which Hospital Compare data were collected and the implementation of the post-discharge projects.

The difference in the rate of readmission was multiplied by the number of people enrolled in each pilot project to generate an estimate of the number of readmissions avoided for each of the targeted diagnoses. The number of readmissions avoided was multiplied by an estimate of the average cost of admissions for patients with diagnoses targeted by the projects. Estimates of the cost of admissions for targeted diagnoses were derived from OSHPD's public hospital inpatient discharge dataset. Costs per admission were calculated by multiplying the hospital's average charges for a diagnosis by the hospital's cost-to-charge ratio. This is a widely used method for estimating the cost of inpatient care. Using this method, costs per admission varied substantially across diagnoses targeted by the pilot projects, ranging from $11,562 for chronic obstructive pulmonary disease to $26,621 for acute myocardial infarction. For each project, the average cost per readmission was calculated as a weighted average of the costs of admissions of persons with targeted diagnoses with weights assigned based on the proportion of total readmissions that occurred among persons with each targeted diagnosis.

Frequent EMS User

Savings were estimated by multiplying the numbers of ambulance transports and ED visits avoided by (1) the average cost per transport to an ED, and (2) the mean Medicare reimbursement for ED visits. Based on interviews with manager of San Diego's frequent 911 user projects, we assumed that every 911 call prevented resulted in avoidance of an ambulance transport and an ED visit.

For San Diego's project, the number of ambulance transports and ED visits avoided was estimated by comparing the number of 911 calls made by enrolled patients during the 12 months prior to their enrollment to the number of

911 calls made during the 12 months following enrollment. Calls made during the month of enrollment were excluded in recognition that the month of enrollment is a time of transition for patients. Data on 911 calls pre- and post-enrollment were available for 35 of the 46 enrollees from November 2015 through June 2017. The reduction in 911 calls over the 12 months post-enrollment was divided by 12 to estimate the numbers of 911 calls, ambulance transports, and ED visits avoided per month.

Estimates of the cost of ambulance transports avoided were obtained from the sites. Data for ED cost estimates were obtained from the University of California Research Exchange (UC ReX) and reflect visits to EDs at University of California medical centers in 2015. Hospitals bill insurers for ED visits at one of five levels based on the amount of equipment and supplies needed to care for a patient. Level 1 is the lowest level and level 5 is the highest. For the frequent EMS user projects, we used the national average Medicare reimbursement rate for all five levels of ED visits because information was not available to enable us to determine the most common reasons why frequent EMS users visit EDs or the severity and complexity of their needs. Medicare reimbursement rates were used because Medicare is the payer whose reimbursement is widely considered to be closest to the cost of care. The analysis was not limited to ED visits for any particular diagnoses because diagnosis is not a criterion for enrolling in the Frequent EMS User projects. We could not use the cost-to-charge ratio method used to estimate the cost of inpatient readmissions avoided, because OSHPD does not collect complete data on charges for ED visits.

Tuberculosis

A quantitative analysis of savings associated with the project that provides directly observed therapy (DOT) for tuberculosis (TB) was not conducted due to challenges associated with estimating the impact of the project. As discussed in the main body of the report, the project found that community paramedics missed a smaller percentage of prescribed DOT treatments than community health workers (0.06% vs. 6.7%). However, we found no research that addressed the impact of a difference in adherence in a US population that compared groups of people with adherence rates of over 90%. In the absence of such research, we concluded that the most we could do would be to make directional statements about the potential impact of the increase in adherence on public health expenditures associated with investigation of close contacts of persons with TB and treating people infected by a noncompliant patient. We also make a directional statement about the impact of the use of community paramedics on the TB clinic's use of community health workers.

Hospice

Savings for the Hospice project were estimated by multiplying the number of transports and ED visits avoided by (1) the average cost per ambulance transport to an ED and (2) the average Medicare reimbursement for an ED visit for a high-acuity patient. The estimate of costs per transport reflects data reported by the pilot site for June 2015 through September of 2016. The estimates represented actual "cash collected" by the agency from insurers and other payers. The number of transports avoided equals the difference between the number of transports that would have occurred if the percentage of hospice 911 calls that resulted in a transport to an ED remained at the level observed prior to the pilot project (80%) and the number of transports that occurred among hospice patients enrolled in the pilot project.

As indicated above in the description of the estimates of savings for the Frequent EMS User projects, data for ED cost estimates were obtained from the University of California Research Exchange (UC ReX) and reflect visits to EDs at University of California medical centers in 2015. To estimate the cost of ED visits that do not result in a hospital admission, we applied national average Medicare reimbursement rates for all care provided to patients. For the hospice project, the median reimbursement for level 4 and 5 visits was used because terminally ill patients are likely to have acute needs. Mean reimbursement for level 4 and 5 visits across all diagnoses were used in lieu

of the costs related to specific diagnoses because information was not available to determine the diagnoses for which hospice patients were transported to an ED.

Alternate Destination – Mental Health

Savings for the Alternate Destination – Mental Health project were estimated by multiplying the numbers of ambulance transports and ED visits avoided by (1) the average cost per transport and (2) the average Medicare reimbursement for an ED visit for persons who only have behavioral health diagnoses. Because patients enrolled in the project are transported directly to the mental health crisis center, an ED visit is avoided every time a patient is enrolled as well as a secondary transport from an ED to a behavioral health facility.

The estimate of the average cost per ambulance transport was based on information provided by Stanislaus' EMS provider.

As indicated above in the description of the estimates of savings for the Frequent EMS User projects, data for estimates of the cost of ED visits were obtained from the University of California Research Exchange (UC ReX) and reflect visits to EDs at University of California medical centers in 2015. To estimate the cost of ED visits that do not result in a hospital admission, we applied national average Medicare reimbursement rates for all care provided to patients for which the only diagnoses reported are mental health diagnoses. These diagnoses were chosen because the alternate destination – mental health project serves persons who only have acute mental health needs.

Alternate Destination – Urgent Care

Savings for the Alternate Destination – Urgent Care project were calculated based on an estimate from the literature of the difference in the cost of treating minor illnesses and injuries in an ED versus an urgent care center. Estimates published in the literature suggest that insurers pay urgent care centers 45% of what they pay hospitals for ED visits for the same minor illnesses and injuries.[xxiii] The difference between reimbursement for ED visits and urgent care center visits was multiplied by the number of persons enrolled in the alternate destination – medical care projects to obtain an estimate of total savings.

No estimate of savings associated with reduction in ambulance transports is included because, unlike other community paramedicine concepts that reduce ED visits, the Alternate Destination – Urgent Care projects did not reduce ambulance transports. Transport costs do not change because all enrolled patients are transported to an urgent care center.

As indicated above in the description of the estimates of savings for the Frequent EMS User projects, data for estimates of ED costs were obtained from the University of California Research Exchange (UC ReX) and reflect visits to EDs at University of California medical centers in 2015. To estimate the cost of ED visits that do not result in a hospital admission, we applied national average Medicare reimbursement rates for level 1 and level 2 ED visits. These levels were used because these projects enrolled people with minor illnesses or injuries. This rate was multiplied to estimate the average cost of treating people with minor illnesses or injuries in an urgent care center.

Alternate Destination – Sobering Center

Savings for the Alternate Destination – Sobering Center project were estimated by multiplying the numbers of ambulance transports and ED visits avoided per month by the cost of treating an intoxicated person with no co-morbidities in an ED. Costs for ambulance transports were included in the calculation only for patients who were secondarily transferred from the sobering center to an ED. The cost of initial transport to the sobering center was

not included because the San Francisco Fire Department would have incurred the cost of an ambulance transport regardless of whether a patient was transported to an ED or the sobering center.

The estimate of the average cost of treating an intoxicated person with no co-morbidities in an ED was based on an estimate generated by the San Francisco Department of Public Health.[xv] This estimate represents average total costs for a patient to be served at Zuckerberg San Francisco General Hospital, the county's public hospital, by dividing total operational and facility expenses by the number of patients served. These costs are not used for billing purposes and, thus, may not reflect what the hospital charges insurers for treating these patients.

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CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: Carla Schneider, MSN, MICN, CEN
Pam Allen, RN, MSN, CEN
Rose Colangelo, RN, MSN

SUBJECT: 2017 ED Forum

SUMMARY

Our third successful ED Forum was held in December 2017. We hosted over 200 people and had excellent presentations from many of our committee and hospital members. The overall program rating was 4.53 out of a 5 point scale. The program kicked off with Dr. Raven describing her work with emergency services information exchange research, Whole Person Care Statewide Initiative, ECSI pilot work, and two panel presentations with Cal ACEP and Dr. Lev. Pam Allen and Rose Colangelo also gave outstanding presentations. (See Power Points and Forum Evaluation). Ideas for next year include more panel sessions and innovation activity within ED's.

This year we hosted sponsors for the first time (see attachment) and we hope to increase their participation next year. We have information for each of you to distribute to your respective sponsors so we can broaden the sponsorship field.

The dates for next year's ED Forum is Wednesday, December 13, 2018. We purposely moved the Forum to a different week to avoid the EMS Commission meeting and encourage more of our pre-hospital provider stakeholders to attend. We will have officially kicked off ECSI and could potentially bring stakeholders together to move the initiative forward.

ACTION REQUESTED

- Please canvass your sponsors for participation next year. Information is provided.
- Discussion and suggestions on next year's Forum, including topics, methods and speakers.

Attachments: 2017 ED Forum Presentations
2017 ED Forum Evaluations
2017 ED Forum Sponsor information
2018 ED Forum Sponsor Form
2018 ED Forum Save the Date

BJB:br

1215 K Street, Suite 800, Sacramento, CA 95814 • *Telephone:* 916.443.7401 • *Facsimile:* 916.552.7596 • www.calhospital.org

Agents of change

Emergency Services Forum

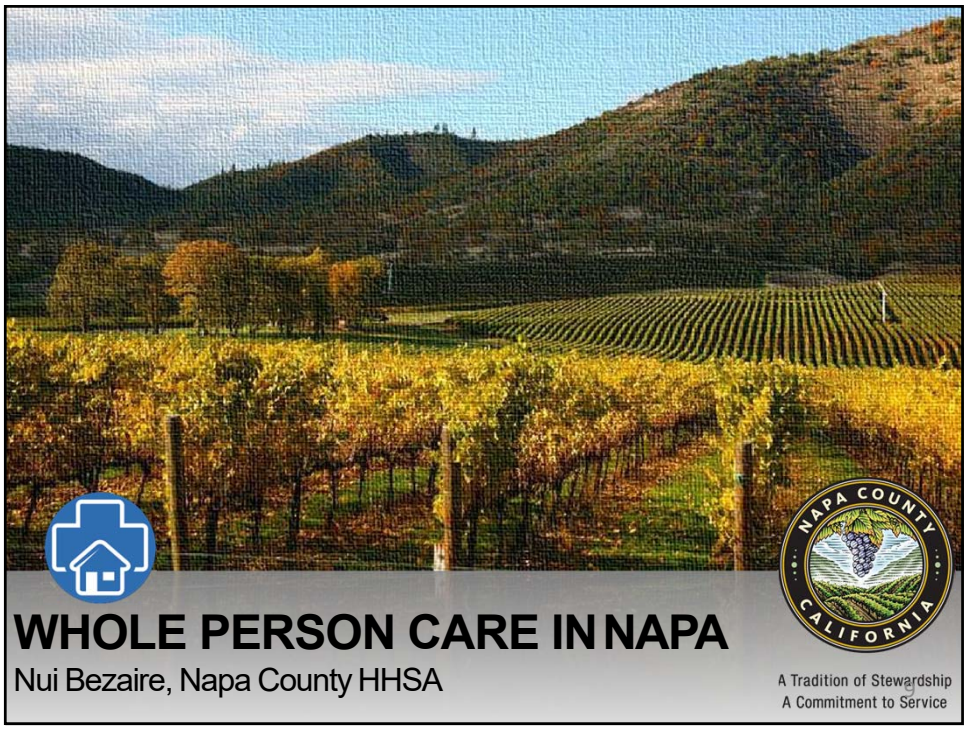
Whole Person Care

Nui Bezaire
Napa County Health and Human Services

Susan Bower
County of San Diego

Dana Durham
DHSC, Managed Care Quality and Monitoring Division

CALIFORNIA HOSPITAL ASSOCIATION



Napa WPC goals

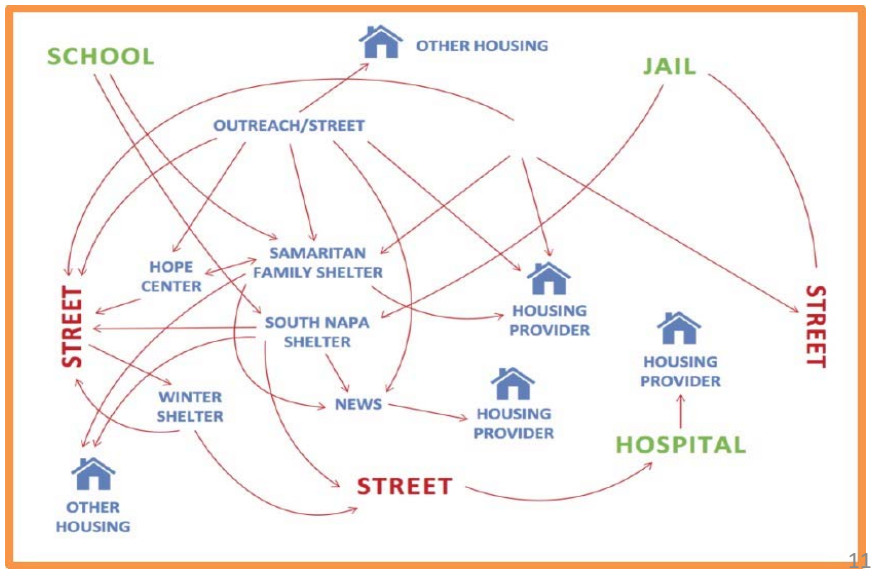
Napa County WPC aims to **improve the health and wellbeing** of beneficiaries through patient-centered coordinated care and streamlined pathways to housing.

The WPC program in Napa is both:

- ***Changing the service system*** to benefit all homeless people through enhanced comprehensive outreach services and coordination of housing resources; and
- ***Providing intensive care coordination*** to the most vulnerable homeless people, and those who use the most services.

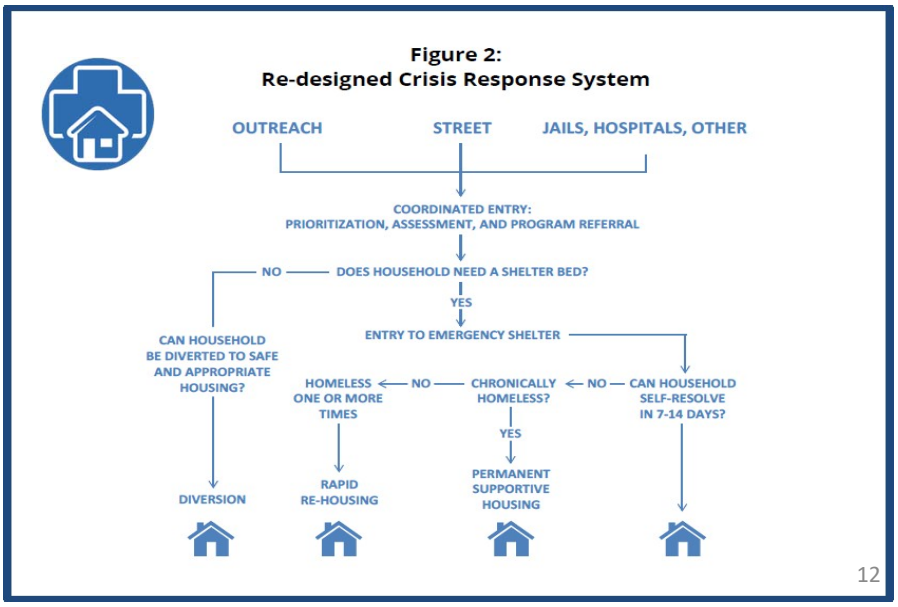
10

The Need for Change



11

Centralized, Coordinated, Collaborative



12

Napa's WPC Program

Award: ~$11.5M over 5 years

Lead Entity	**Napa County HHSA**
Launch Date	**July 1, 2017**
Target Population	**Homeless Medi-Cal beneficiaries who have high levels of vulnerability and/or frequent service use**

13

New/Enhanced Services

Outreach/Mobile Engagement – 70 clients (monthly caseload)

- Find new people and enroll them in the program to get them on the fast track to housing
- Try to prevent ED visits and hospitalizations with mobile care
- Discharge planning support

Coordinated Entry – 60 clients (monthly caseload)

- Centralized intake into housing for homeless population
- Prioritization based on vulnerability
- Connections to services and housing

Tenancy Care – 85 clients (monthly caseload)

- Keep people housed
- Address care needs and outcomes

SOAR – 15 clients (monthly caseload)

- Assistance with gaining SSI/SSDI benefits

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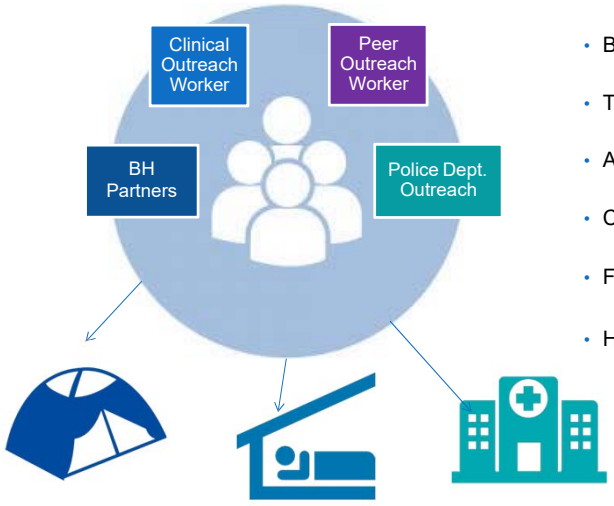
Homeless Outreach Services

Two Multi-Disciplinary Teams



- Go to camps, shelter, hospitals
- Build relationships
- Triage
- Assessments
- Case management
- Follow the person
- Housing plan from the start

15

Coordinated Entry to Housing

Prioritized List by Housing Need

Permanent Supportive Housing

1. **Bob S.** ***(High Utilizer)***
2. Jane D.
3. **Betty J.** ***(High Utilizer)***

Rapid Re-Housing

1. Nicole R.
2. **Arnold S.** ***(High Utilizer)***
3. Ronald M.

Diversion

1. Oscar G.
2. John S.
3. Wilma F.

CE Manager

Data synthesis

Prioritization List

Housing Inventory Management

HMIS

16

Housing Services, Stock & Matching

Housing Inventory, Matching & Services

Available Housing Units
Shelter + Care – 1 unit
City Section 8 – 1 unit
Downtown Apartments – 2 units
NV Silverado Estates – 1 unit
Abode Master Leasing – 5 units

Eligibility Criteria

Landlord Engagement

Navigation & Lease-Up

Housing Stabilization

Subsidy Administration

ABODE SERVICES
Because everyone should have a home.

Napa Flexible Housing Funding Pool

Rapid Re-Housing:
- ESG, CoC RRH
- private health grants

PSH:
- CoC grants

Landlord Mitigation
- bonuses, damages, continuity

Flexible Funds
- private grants
- gap funds, deposits

17

Tenancy Care Services

After

- **Keeping People Housed & Improving Outcomes**
  - Housing Case Management
  - Service & Care Plans
  - Care Coordination

ABODE SERVICES
Because everyone should have a home.

18

SOAR Services

- **Connects clients with SSI/SSDI benefits**
  - Application support and correspondence
  - Evidence collection
  - Assistance with appeals
- **Helps clients to overcome fragmented care and medical histories**
- **Limited, 7 month enrollment**

SOAR WORKS

St.JosephHealth
Queen of the Valley

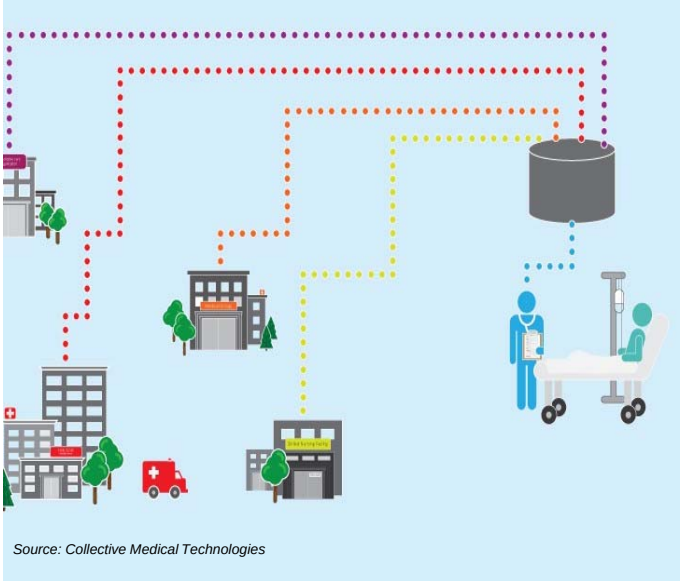
19

Coordinating Care

- **Care coordination collaborative**
- **Care coordination staff**
  - WPC admin team
  - Care Coordinator
  - Field Nurse Case Manager
- **Client care plans**
- **Technology solution**

20

Using Data Differently



Source: Collective Medical Technologies

Improving culture around data use

Blending data sets together

Care coordination technology with real-time data

Building data infrastrucutre

21

Evaluating Outcomes & Impact

- **Comprehensive evaluation plan**
- **Performance-based contracting**
- **Quarterly PDSA cycles**
- **Monthly data dashboards**
  - Universal & variant metrics
  - Client experience
  - Program enrollment
  - Homeless system outcomes

Government Performance Lab
Harvard Kennedy School

RDA

22

Thank You!

Nui Bezaire, Homeless Program Coordinator
Napa County Health & Human Services
nui.bezaire@countyofnapa.org

Housing is Healthcare

23

CALIFORNIA HOSPITAL ASSOCIATION

December 6, 2017

LIVE WELL SAN DIEGO

24

COUNTY OF SAN DIEGO VISION

LIVE WELL SAN DIEGO

Building Better Health

Living Safely

Thriving

25

PARTNERS

LIVE WELL SAN DIEGO

SAN DIEGO HOUSING COMMISSION (SDHC)
aetna
Community Health Group
Care 1st Health Plan
Health Net
Kaiser Permanente
Molina Healthcare
UnitedHealthcare
The Legal Aid Society
Family Health Centers of San Diego
211 San Diego
San Diego Health Connect — Better Information • Better Care
Alliance Healthcare Foundation — Advancing health and wellness for those in need.
Hospital Association of San Diego & Imperial Counties
Health Center Partners of Southern California
Regional Continuum of Care Council RCCC

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TARGET POPULATION

LIVE WELL SAN DIEGO

People who are **high utilizers** of health services AND are experiencing **homelessness, or are at-risk of homelessness AND** have one or more of the following:

- Serious Mental Illness
- Substance Use Disorder
- Chronic Physical Health Conditions

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WHOLE PERSON WELLNESS

LIVE WELL SAN DIEGO

Outreach and Engagement

Opening Doors

Housing and Services Support

Building Sufficiency

28

SITs – SERVICE INTEGRATION TEAMs

LIVE WELL SAN DIEGO

- 12 teams comprised of a Case Manager, and Peer Support Specialist, with support from a Licensed Clinician, Housing Navigator, and County RN
- Develop a Comprehensive Care plan for each WPW participant, and coordinate services across multiple systems, working collaboratively across all sectors in order to leverage services and avoid duplication of efforts.

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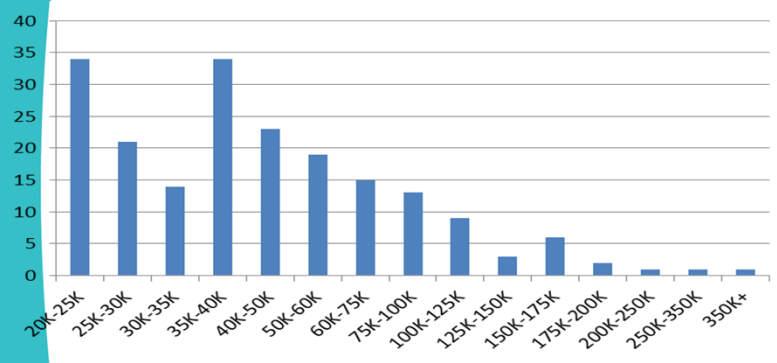
PLAN + HMIS POPULATION COST DISTRIBUTION (N=196)

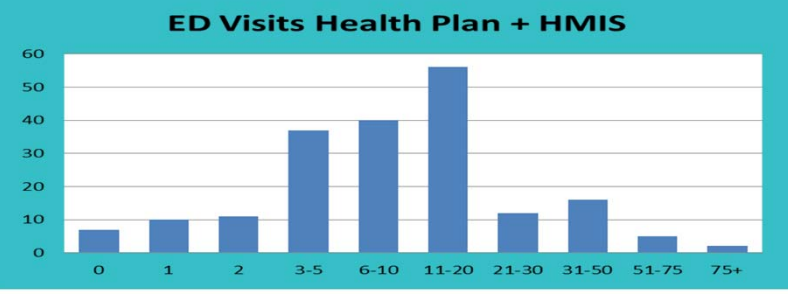


Similar distribution to the general high cost population but a second spike in the $35K-50K range

LIVE WELL SAN DIEGO

30

ED VISITS*



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CHALLENGES AND OPPORTUNITIES

Treatment and Housing Capacity

Contract Implementation

Learning from Challenges

32

QUESTIONS?

Susan Bower, Assistant Director

HHSA Integrative Services

Susan.Bower@sdcounty.ca.gov

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Whole Person Care (WPC)

Dana Durham, Branch Chief
Managed Care Quality and Monitoring Division
Department of Health Care Services

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Presentation Agenda

1. Program Overview
2. Enrollment Update and Early Successes
3. Learning Collaboratives
4. Whole Person Care Evaluation
5. Communication and Monitoring
6. Open Discussion/Questions

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WPC Program Overview

Program Description

- Whole Person Care (WPC) is implemented under the Section 1115 Medicaid Waiver entitled "Medi-Cal 2020"
- The program is a 5-year pilot to test county-based initiatives that target high-risk high-utilizing Medi-Cal beneficiaries

Program Objectives

- To improve care delivery, health, and lower costs through reductions in avoidable utilization such as inpatient and emergency department utilization

Pilot Strategies

- Pilots are to develop the needed administrative and delivery system infrastructure to support provision of high quality coordinated and appropriate care, and improve both process and patient outcomes

Target Population

- **Medi-Cal beneficiaries with repeated incidents of:**
  - Avoidable emergency use, hospital admissions, or nursing facility placement;
  - Two or more chronic conditions;
  - Diagnosed mental health and/or substance use disorders;
  - Those who are currently experiencing homelessness; and/or
  - Those who are at risk of homelessness following release from an institution.
- **May also include:**
  - Individuals not enrolled in Medi-Cal, but federal funding is not available for them
  - Dual-eligible beneficiaries, but must coordinate with the Coordinated Care Initiative where applicable

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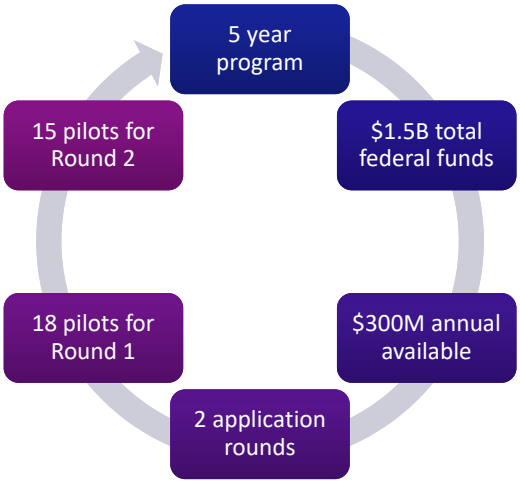
WPC Numbers at a Glance



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WPC Pilots

Round 1

- Began operation on January 1, 2017

Round 2

- Seven (7) additional pilots were approved
- Eight (8) 1st round pilots expanded their applications in the 2nd round

Common Themes

- Most pilots have chosen to target beneficiaries with multiple acute visits and those that are homeless or at risk of homelessness
- Less than half explicitly focus on beneficiaries with mental health and/or substance use disorders and recently institutionalized populations
- There is also a variation in care coordination strategies; however, most pilots have chosen to develop a navigation infrastructure, standardize assessment tools being used by participating entities, and expand or develop new data sharing systems.

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Enrollment

Round 1:

- **16** counties have already enrolled clients
- Approximately **26,000** clients enrolled into the program
- **Two (2)** counties are undergoing enrollment delays
  - Required to submit mitigation strategies with enrollment milestones
  - Anticipated to start enrollment by the end of the year
  - DHCS is developing a termination process and may take progressive action if milestones are not met

Round 2:

- Implementation and enrollment began on July 1, 2017
- Reported enrollment will be available in November

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Early Successes

Collaboration

- Some Lead Entities, such as **San Mateo**, are working with their county or local Medi-Cal plan colleagues to access data related to redeterminations and assist members in regaining Medi-Cal coverage.
- **Napa** is partnering with the police department's outreach homeless unit.
- **Solano** is cooperating with the larger cities to allocate a portion of their housing stock for WPC.
- **Santa Clara** is enhancing existing engagement with community partners, cities, and multi-governmental agencies through contracts.
- **Alameda** and **Orange County** find that incentive payments have been helpful to motivate partners and providers to help enroll members.
- LEs that serve the reentry population, specifically **Placer** and **Riversid**e, seeking are having success working and coordinating with probation departments to identify, engage, and serve enrollees.

Outreach and Engagement

- **Contra Costa**, **Kern**, and **San Bernardino** are experiencing success in branding the "services" offered by WPC rather than a program for high utilizers.

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Learning Collaborative

Learning Collaborative Goals

- Share best practice and learning across pilots
- For the State to provide information, assist with pilot implementation, discuss requirements, and report data about the pilots

Call Topics Included

- Learning Collaborative Meeting Series Kickoff (3/24/17)
- Universal and Variant Metrics Reporting (9/11/17)
- Budget Adjustment and Rollover (10/10/17)

In-Person Convening

- All WPC Pilots Convening (5/15/17)
- 2nd Round Lead Entities Convening (9/8/17)
- Implementation Highlights (10/24/17)

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WPC Evaluation

WPC Pilot Evaluation Goals

- If the pilots successfully implemented their planned strategies and improved care delivery,
- Whether these strategies resulted in better care and better health, and
- Whether better care and health resulted in lower costs through reductions in avoidable utilization.

Evaluation Design

- Based on the Medi-Cal 2020 Special Terms and Conditions (STC) requirements

RFP and Vendor Selection

- DHCS released a Request for Proposal (RFP) and selected the UCLA as the WPC independent evaluator
- The evaluator will develop the interim and final evaluation reports in accordance with the Evaluation Design
- Anticipated contract execution is on or before November 1, 2017

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Communication and Monitoring

Biweekly Technical Assistance

- Discussions include DHCS guidance, reporting templates, timelines, expectations, and other relevant topics

Contract Assignment/Monitoring

- Each Lead Entity is assigned to an analyst who serves as the single point of communication
- Analysts review and monitor reports and contacts the Lead Entity for clarification and additional information

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Resources

- **Webpage:** http://www.dhcs.ca.gov/services/Pages/WholePersonCarePilots.aspx
- **Email:** 1115WholePersonCare@dhcs.ca.gov

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Thank you

Dana Durham
dana.durham@dhcs.ca.gov

Susan Bower
Susan.Bower@sdcounty.ca.gov

Nui Bezaire
Nui.Bezaire@countyofnapa.org

CALIFORNIA HOSPITAL ASSOCIATION

Convening for Change: Addressing San Francisco's Emergency Department Challenge

Abbie Yant
VP Mission, Advocacy and Community Health Services
Saint Francis Memorial Hospital

David Serrano Sewell
Regional Vice President – San Francisco
Hospital Council of Northern and Central California

December 6, 2017
Riverside Convention Center
Riverside, CA

Hospital Council of Northern & Central California

What should San Francisco focus on in 2017?

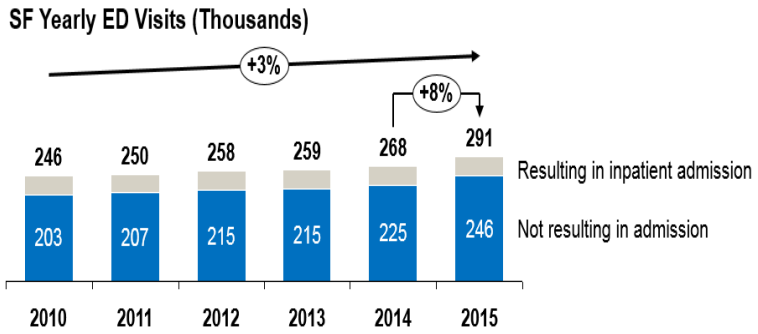
Do something about ED strain

We CAN do better for patients

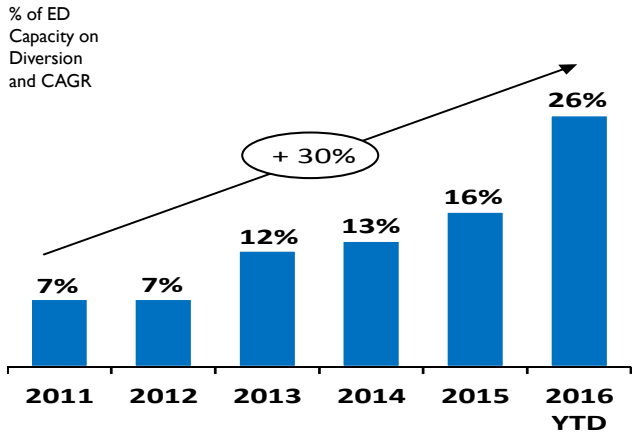
S.F. Emergency Physicians Association asked us

Can we talk about ED issues?

ED Visits Continue to Increase



The Diversion Rates are Raising



High ED Utilization Impacts Many

PATIENTS

PAYORS
(Employers, Taxpayers, Consumers)

HOSPITALS

OTHERS

Healthcare Leaders have made successful changes, like the Sobering Center

A 2002 report led to the Center's creation

Since July 2003, it has provided care for 14,000 individuals for a total of 48,000 encounters

Successful alternate destination with data validated outcomes

Remember, we are acting together and speaking with one voice…

Right?

The City's Hospital CEOs took action by commissioning a report

Protecting San Francisco Emergency Services:
Diagnosing and Addressing the Challenges of San Francisco's EDs

Drive a public policy agenda for change

EDs are a vital resource, particularly for the most vulnerable

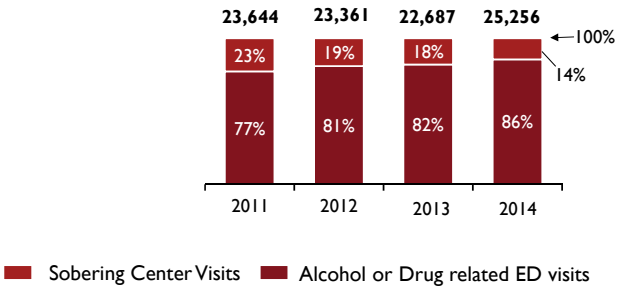
Patient "Personas"	Diego Insured by employer	Margaret Medi-Cal Enrollee	Jinn Li Medicare Enrollee	Harry Homeless, Addiction Issue	Sam Struggling with mental illness	Sofia Infant <1 year old
						
Reason for Visit	Injuries	Pre-existing, previously undiagnosed or unmanaged illness	Multiple chronic illnesses, likely to result in being admitted	Untreated conditions, multiple non-clinical needs	Behavioral disorders with frequent flare-ups	Early childhood infections and complications
Annual Visits	Every 7 years	Every other year	Every other year	Twice a year	N/A	Every other year
For Every 100 Visits	28 visits (~10 for injuries)	26 visits	21 visits	*Focus of recommendations*		2 visits
For Every 100 Hours	<28 hours	< 24 hours	< 27 hours	< 13 hours	< 19 hours	< 2 hours

Conducting over 50 interviews with Experts Validated the Systemic and Structural Issues

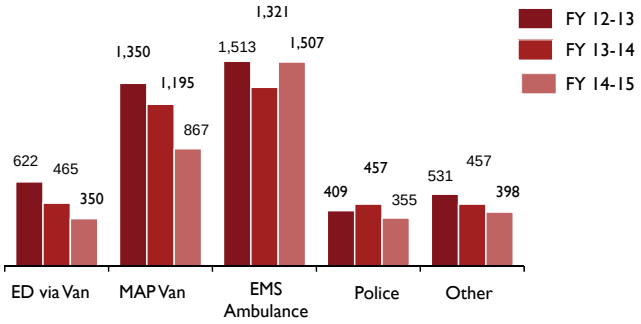
10% of ED visits may be preventable through more proactive primary, chronic and mental health, and addressing social determinants of health	**40%** of ED visits may be avoidable if an appropriate, convenient, affordable alternative is offered	Diversion (city average **26%**), awareness of options, and transport availability may prevent optimal ED selection	High occupancy in the ED may produce long wait times (**30** min average)	Lack of availability of inpatient (ZSFGH at **97%**) or post-acute capacity can increase time in the ED	Lack of follow-up can result in readmission
"Primary care is not very accessible, leaving patient health unmanaged until they need to use the ED"	*"Segments of population are just comfortable getting all care at an ED"*	*"It is common for multiple hospitals to be on diversion"*	*"Boarding is common in the ED due to delay in discharge to post-acute or in-patient bed unavailability"*	*"We do not have enough psych capacity in the city to move patients out of the ED"*	*"For many Medi-Cal patients, we do not have the information to contact their PCP post-discharge"*

Compounding the issue are social challenges outside of the direct control of hospitals, such as substance abuse

Alcohol-/Drug-Related Visits between ED and Sobering Center

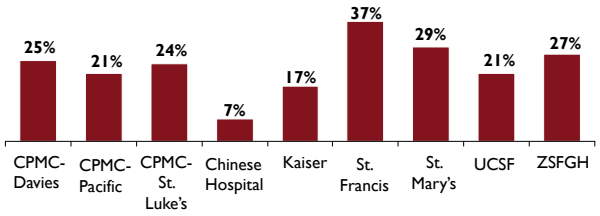


Sobering Center Arrivals



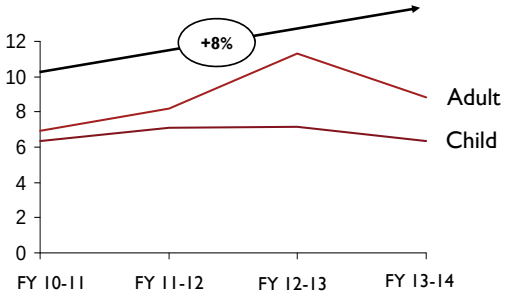
More patients are now being brought to ED by ambulances than before

Percentage of ED Patients Arriving by Ambulance in 2015



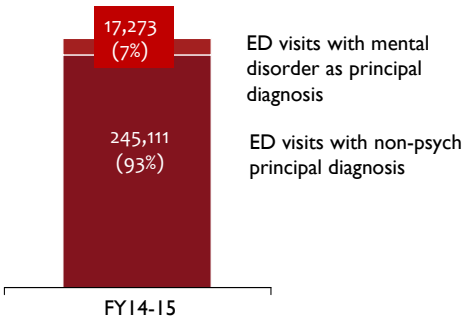
Of particular concern are so-called "5150" patients, who may be held for up to 72 hrs

"5150" detentions per 1,000 population

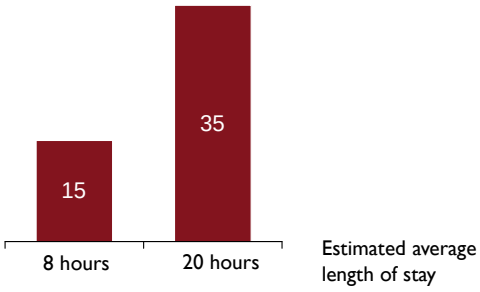


While appropriate specialized sites to handle urgent and emergent psychiatric needs exist, they are also over capacity

Psych Related ED visits



Estimated Range of Capacity Gap in Psych Emergency Beds



CEOs adopt key recommendations (December 2017)

SUPPORT and EXPAND lower-acuity settings serving substance abuse-related/psychiatric needs

ESTABLISH a **Behavioral Health ED Task Force** to evaluate how much and what type of additional lower-acuity capacity is needed

EMPOWER the LEMSA to triage/transport patients to alternate destinations

DIRECT the **Post-Acute Care Collaborative** to focus on programs that will speed the discharge/transition of patients

INFORM key stakeholders on the findings

The Report influenced policy that led to results

Public/Private partnership 56-bed unit at Saint Mary's Memorial Hospital to serve patients placed on various mental health conservatorships

More Respite Beds at Hummingbird Navigation Center

Optimizing Coordination of Care at LEMSA, now at DPH

Launch two workgroups for 2018

POST-ACUTE CARE COLLABORATIVE

Identified solutions to improve the availability and accessibility of post-acute care services for vulnerable populations and Medi-Cal beneficiaries

Two sub-groups - **Cognitively Impaired** and **Behaviorally Challenged**

Standardized Assessment Tool

Citywide Roving Placement Team

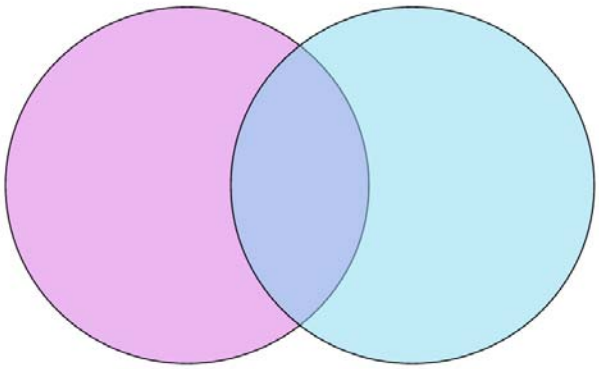
Increase Access to Supportive Living Alternatives

BEHAVIORAL HEALTH ED TASK FORCE

Representation from City, ED physicians, BH and public health leaders to identify the type, quantity, location and funding of additional capacity needed to relieve the strain on the EDs

- ✓ Expand the capacity of lower acuity (acute and subacute) psychiatric facilities to relieve ED strain
- ✓ Increase treatment and care options in the community to reduce ED utilization
- ✓ Invest in systems improvements

The two workgroups found similarities in recommending **System Level Changes** and **Individual Level Services**



Lessons Learned

Health Leaders are respected experts, but it is all about the Patients

Convening stakeholders will build relationships

Expert convening/facilitation matters

Informed data makes for effective advocacy to policy makers

Behavioral Health dominates, but so does discharge

Getting People Talking will Lead to Change

Agents of change

Emergency Services Forum

San Diego Pilot Program – Care Coordination Focus

Dimitrios Alexiou
Hospital Association of San Diego & Imperial Counties

Roneet Lev, MD
Scripps Mercy Emergency Department, San Diego

CALIFORNIA HOSPITAL ASSOCIATION

HOSPITAL ASSOCIATION of San Diego & Imperial Counties

San Diego Pilot Program – Care Coordination Focus

Dimitrios Alexiou, FACHE
President & CEO
Hospital Association of San Diego & Imperial Counties

December 6, 2017

@HASDIC www.hasdic.org

If you want to know your past, look into your present conditions. If you want to know your future, look into your present actions.

- Chinese Proverb

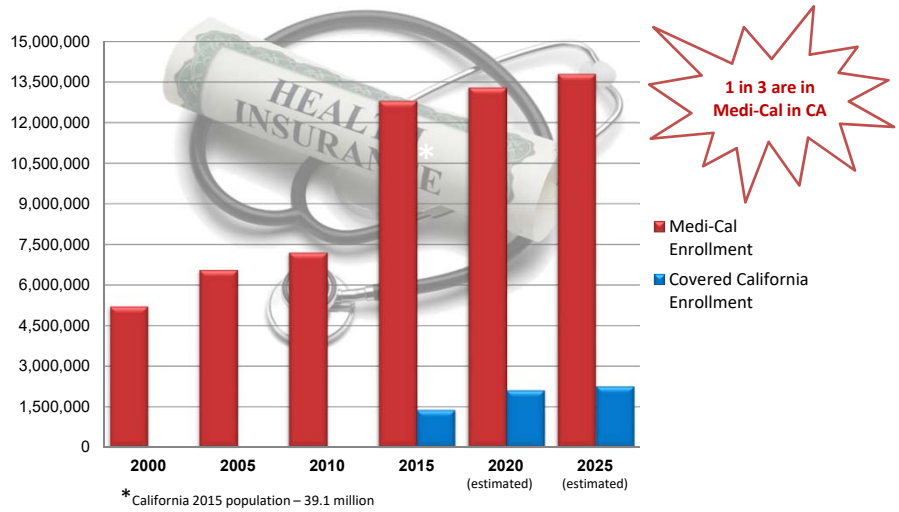
Local Issues

- Medi-Cal
- Emergency Services
  - Access and volumes
- Behavioral Health
  - Gaps in the Continuum
  - Reimbursement
- Workforce
- Community Benefit
  - Social Determinants of Health

2017 Priorities

= FINANCIAL CHALLENGES

Statewide Medi–Cal and Covered California Enrollment



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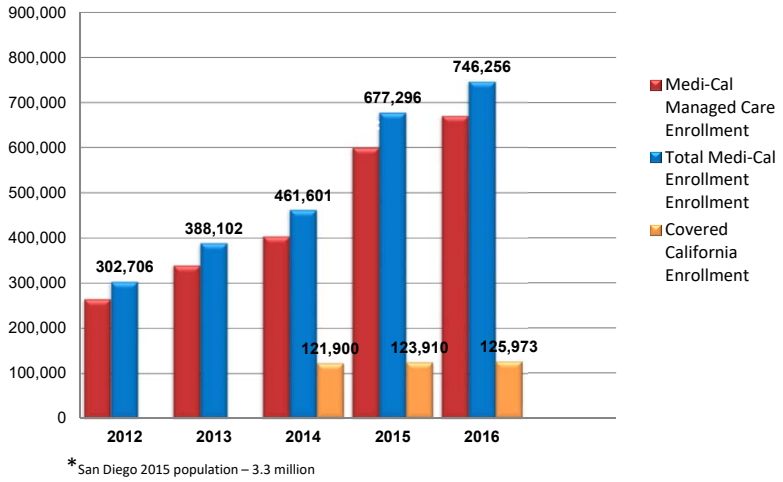
Medi–Cal and Covered California Enrollment in San Diego County



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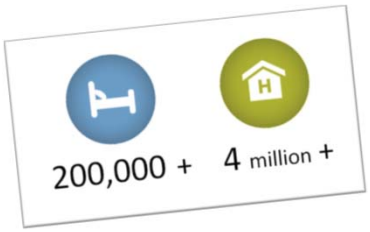
Medi-Cal Coverage Expands (ACA)

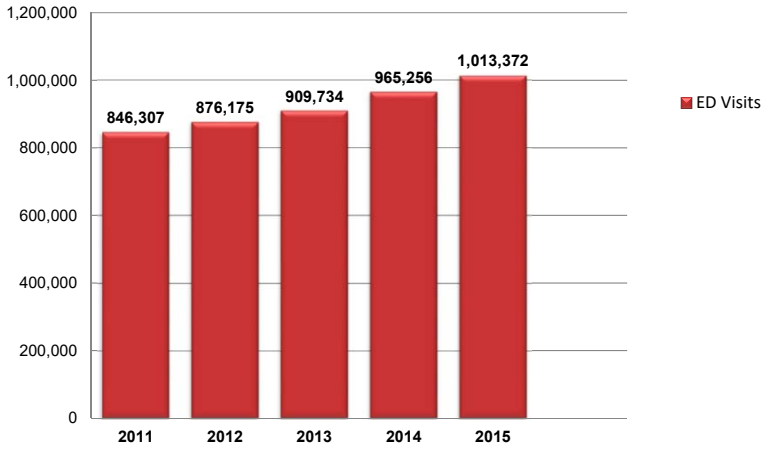
- Providing coverage to more than 13 million residents (half of all children) 1 in 3 residents
- Access barriers are amplified by low Medi-Cal payments
- Expanding coverage without expanding access

Demand For Health Services Surges



- Medi-Cal expansion is driving increased demand
- Medi-Cal ED visits increased by 1 million
- More than 200,000 additional Medi-Cal inpatients
- 4 million more Medi-Cal outpatient visits

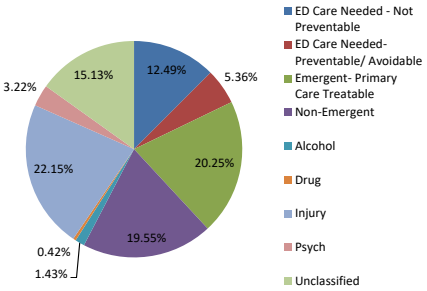
Emergency Department Volumes Continue to Grow



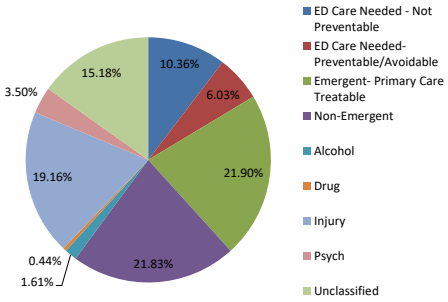
*San Diego 2015 population – 3.3 million

San Diego ED Discharges

San Diego All ED Discharges, 2014



San Diego Medi-Cal ED Discharges, 2014



- 39.8% of ED visits could have **potentially** been avoided/treated in primary care.
- Number of potentially avoidable/treated in primary care is almost 4% higher (42.73%) when looking solely at Medi-Cal ED discharges.

Emergency Room Crowding Collaborative Efforts


Non-emergencies clog local hospital ERs

Local health care leaders sounded the alarm Friday about emergency room crowding, asking the community to help preserve a precious resource for patients who need it most.

- Press conference held in March – 2016 with Public Health, EMS, Hospitals, First Responders, Health Plans and other community stakeholders.
  - Goal was to raise public awareness of the issue
  - Information card was created and shared (Left) as well as the press reported on the issue.
- Crowding taskforce continued to meet by phone weekly.

@HASDIC www.hasdic.org

San Diego Care Coordination

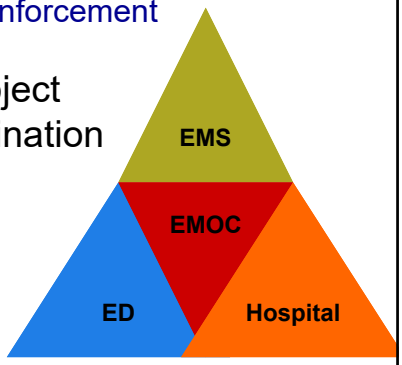
Roneet Lev, MD FACEP
Chair, San Diego Emergency Medicine Oversight Commission
President, Independent Emergency Physicians Consortium
Chief, Scripps Mercy Hospital San Diego Emergency Department

Emergency Medicine Oversight Commission

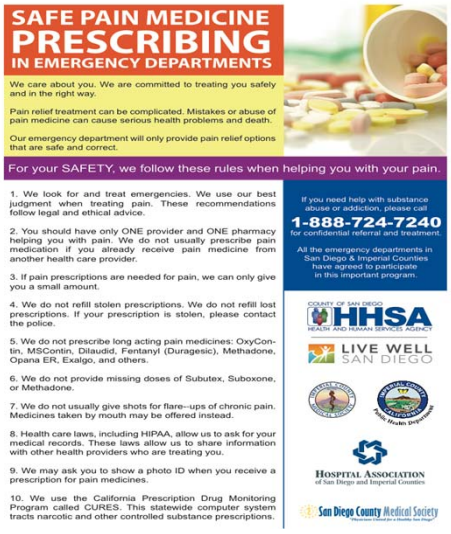
San Diego County Medical Society
"Physicians United for a Healthy San Diego"

Emergency Physicians, Nurses, Paramedics, Hospital Association, Law Enforcement

- Ambulance Bypass Project
- Follow Up Clinic Coordination
- 5150 Education
- Rape Exams
- Annual Survey
- Annual Conference



Safe Prescribing Guidelines



SAFE PAIN MEDICINE PRESCRIBING IN EMERGENCY DEPARTMENTS

We care about you. We are committed to treating you safely and in the right way.

Pain relief treatment can be complicated. Mistakes or abuse of pain medicine can cause serious health problems and death.

Our emergency department will only provide pain relief options that are safe and correct.

For your SAFETY, we follow these rules when helping you with your pain.

1. We look for and treat emergencies. We use our best judgment when treating pain. These recommendations follow legal and ethical advice.

2. You should have only ONE provider and ONE pharmacy helping you with pain. We do not usually prescribe pain medication if you already receive pain medicine from another health care provider.

3. If pain prescriptions are needed for pain, we can only give you a small amount.

4. We do not refill stolen prescriptions. We do not refill lost prescriptions. If your prescription is stolen, please contact the police.

5. We do not prescribe long acting pain medicines: OxyContin, MSContin, Dilaudid, Fentanyl (Duragesic), Methadone, Opana ER, Exalgo, and others.

6. We do not provide missing doses of Subutex, Suboxone, or Methadone.

7. We do not usually give shots for flare--ups of chronic pain. Medicines taken by mouth may be offered instead.

8. Health care laws, including HIPAA, allow us to ask for your medical records. These laws allow us to share information with other health providers who are treating you.

9. We may ask you to show a photo ID when you receive a prescription for pain medicines.

10. We use the California Prescription Drug Monitoring Program called CURES. This statewide computer system tracts narcotic and other controlled substance prescriptions.

If you need help with substance abuse or addiction, please call
1-888-724-7240
for confidential referral and treatment.

All the emergency departments in San Diego & Imperial Counties have agreed to participate in this important program.

COUNTY OF SAN DIEGO HHSA HEALTH AND HUMAN SERVICES AGENCY

LIVE WELL SAN DIEGO

HOSPITAL ASSOCIATION of San Diego and Imperial Counties

San Diego County Medical Society

The PDA Medical Task Force

- PDA TF Facilitator
- DEA
- Emergency Physicians
- Primary Care
- Pain Management
- Addiction
- Pharmacy
- Hospital Association
- Dental Association
- Psychiatric Association
- Pediatric Association
- Kaiser
- Scripps
- Sharp
- Community Clinic
- VA
- Military
- Palomar Health
- Indian Health
- Methadone Clinic

Medication Agreement

PATIENT MEDICATION AGREEMENT
for Painkillers, Anxiety Medication, Stimulants, and all Controlled Substances

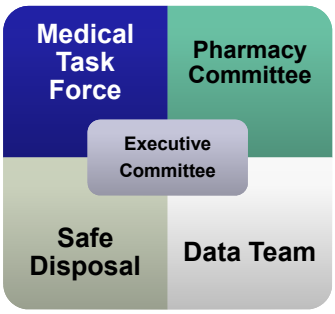
You are being prescribed a medicine that has many risks. The medicine also has special laws that the doctor and patient must follow.

It is important that you follow all these instructions, EXACTLY.

- **These medicines are dangerous. They can cause serious health problems, including death, even if taken as prescribed. They are also addicting.**
- **You should get your medicine from only ONE provider and ONE pharmacy. This helps prevent side effects and overdoses.**
- **Take the medication only as you are told. Do not take more medicine than you are prescribed. They need to last you until your next appointment.**
- **Your medicine is only for you. Do not share your medicine. Do not allow others to use your medicines. Do not sell or trade your medicines.**
- **Keep your medications secure. We recommend locking them. Lost or stolen medication means other are in danger.**
- **All emergency departments in San Diego and Imperial Counties have stated that they will not prescribe these medications if you lose them or feel you need more.**
- **The dangers of the medicine are greater with anything that makes you sleepy. Mixing your medicine with alcohol, street drugs, sleeping pills, or other drugs can make you sick or die.**
- **Do not drive a car or do dangerous activities if you are not fully alert when on these medicines.**
- **Your treatment will be monitored in different ways. You may be asked to do a drug test. You may be asked to show your pills. The state of California tracks your prescriptions.**
- **If your provider feels that your medicine is not helping, the medicine will be stopped. You will be treated with other methods.**

- Medication Agreement
- Treatment Guidelines
- CURES Registration

San Diego Prescription Drug Abuse Task Force



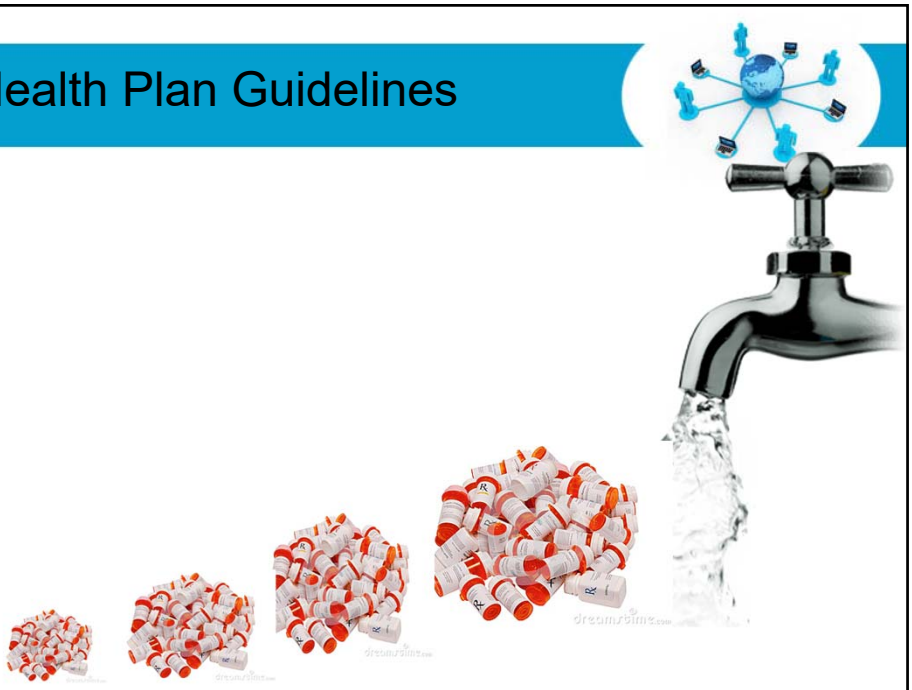
sandiegorxabusetaskforce.org
SanDiegoSafePrescribing.org

San Diego Death Diaries

One San Diego Vision for Safe Prescribing

- One Provider, One Pharmacist
- Use CURES
- Medication Agreement
- No Opioid + Benzodiazepines
- Honor ED Guidelines

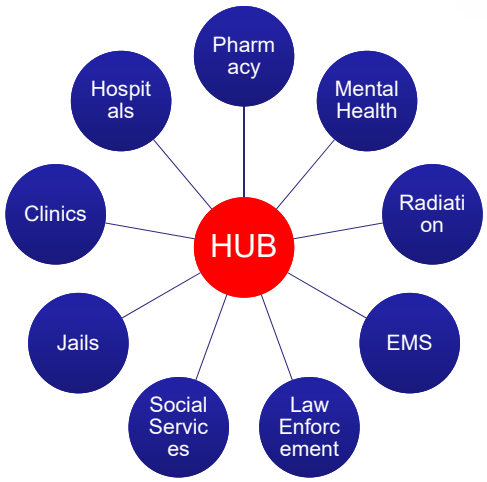
Health Plan Guidelines



Projects

- ED Guidelines
- Urgent Care Guidelines
- Medication Agreement
- Death Diary Education
- Methadone Clinics
- Behavioral Health Clinics
- Prisons
- Pharmacy Scripting on contacting provider
- Health Plan Guidelines
- Pain Educational Module
- Pediatric Education
- Naloxone for First Responders

Care Coordination



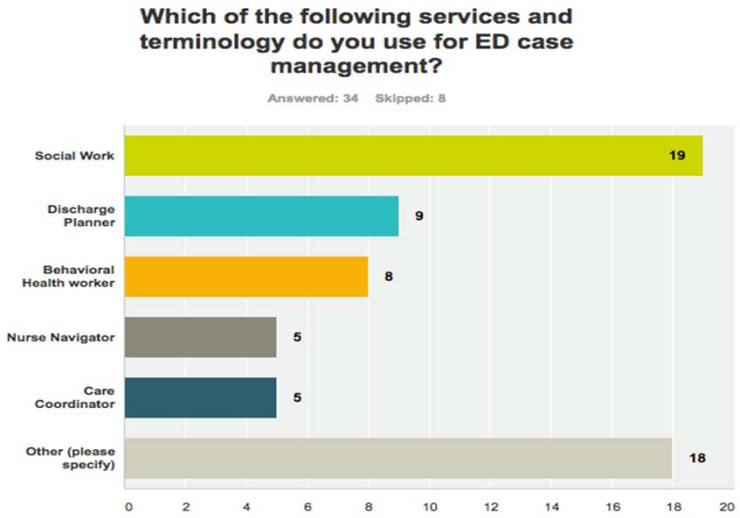
Group Partners

- ED physicians
- ED nurse managers
- ED case managers
- County EMS
- San Diego Fire Rescue
- Champions for Health – SDCMS Foundation
- San Diego Public Health
- PERT, Psychiatric Emergency Response Team
- Medi-Cal Health Plans (4 out of 5)
- HIE
- EDIE
- San Diegans for Healthcare coverage
- VA medical center
- Behavioral Health Leaders

Case Presentation March 2017

- C.W. is a 27 year old man with residence in Spring Valley. He had over 70 ED visits in 2016. He has behavioral health issues, but the last 10 ED visits were related to pain. CURES shows small quantity prescriptions, presumed from emergency departments. His father says he is a “pathological liar.”
- Health plan wants to develop a plan to help patient and decrease ED visits.

Survey Results
Terminology

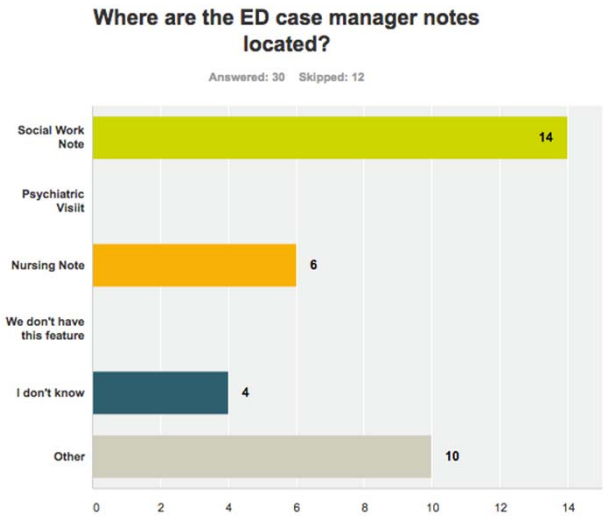


Survey Results
Information documented

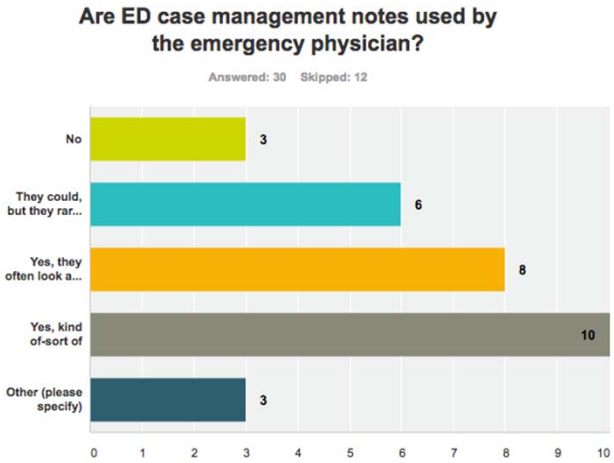
What information is documented by your ED case manager?

- Psychiatric coordination: Tele Psych, CMH, Psych Facilities
- Transfer communication
- Social services: housing, family support
- Medical Necessity/ Utilization Review/ Insurance Coverage
- Placement: SNF, Home Health, or other
- Discharge Needs/ Planning; Transportation, Scheduling appointments
- Social Issues
- CPS/ APS Reporting

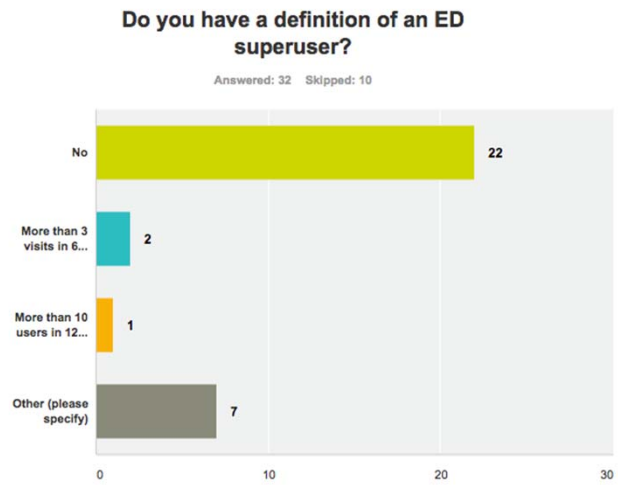
Survey Results
Notes location



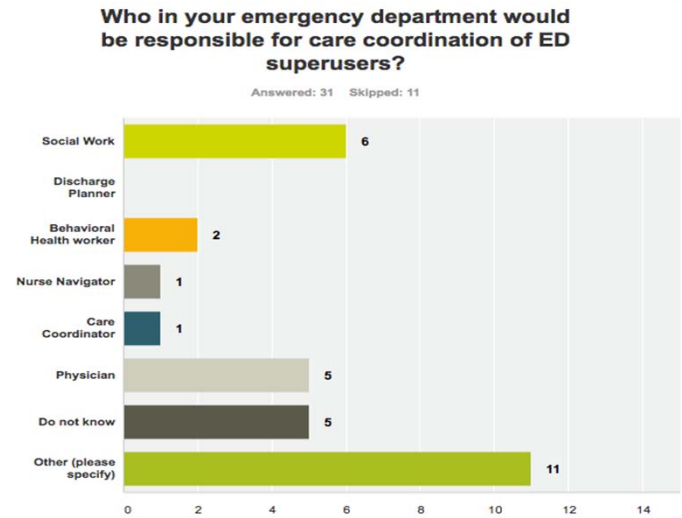
Survey Results
Are notes used by physicians?



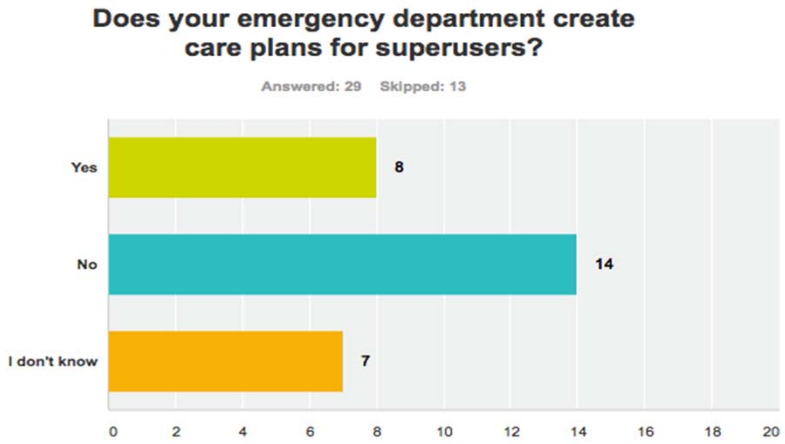
Survey Results
Super user definition



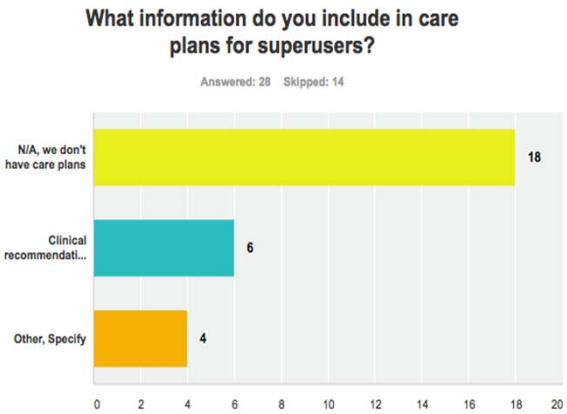
Survey Results
Who is responsible for care coordination?



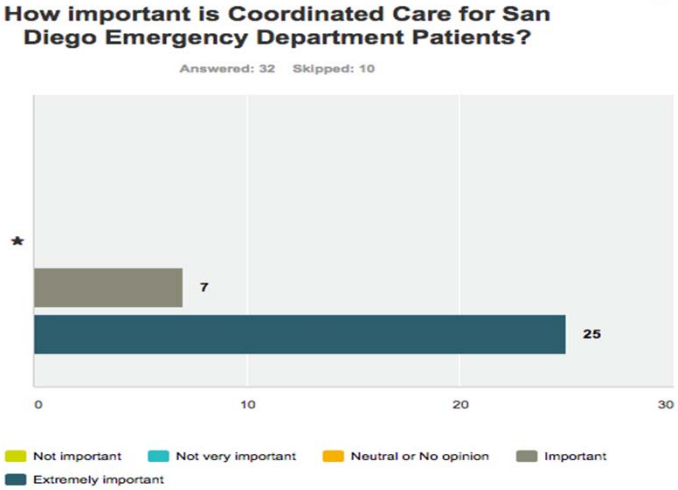
Survey Results
Do you have care plans?



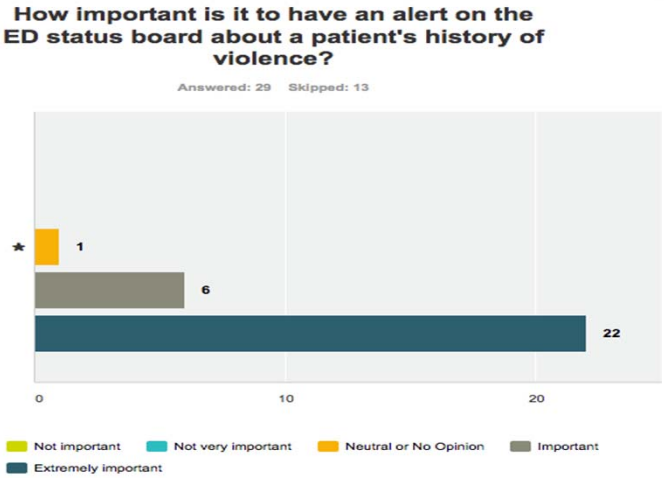
Survey Results
Information in care plans



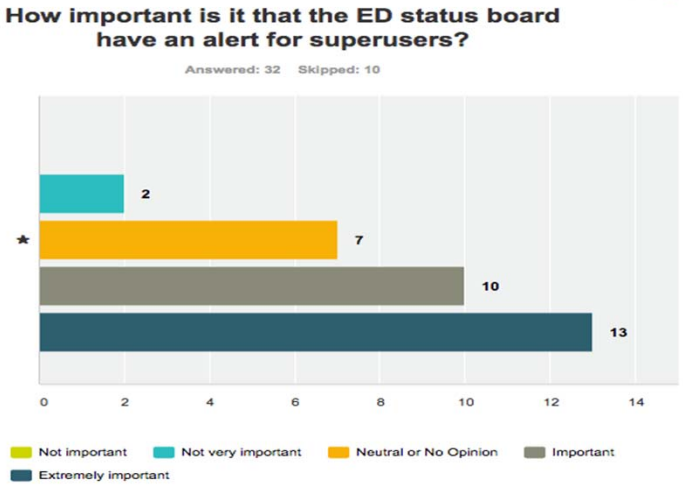
Survey Results
Importance of care coordination



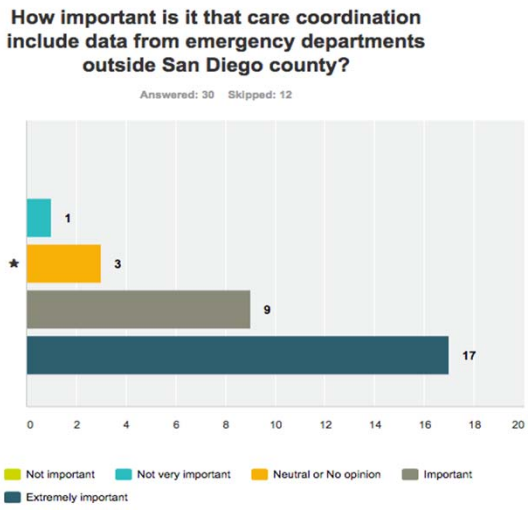
Survey Results
Importance of security

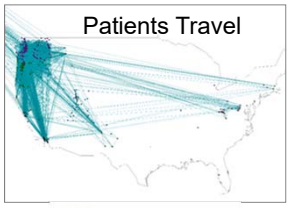


Survey Results
Alerting superusers



Survey Results
Importance of data outside San Diego

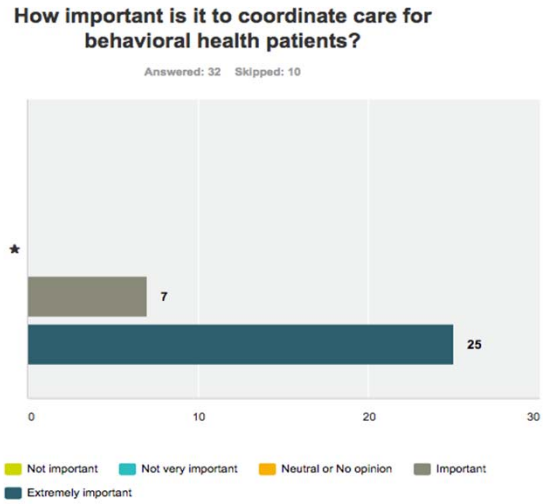




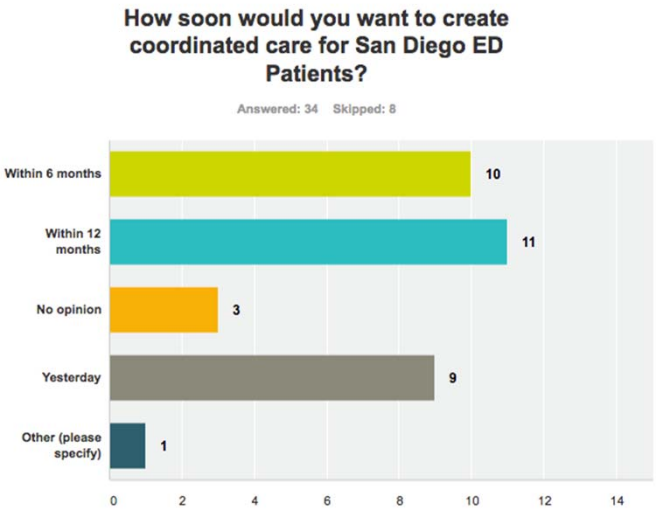
CollectiveMedical TECHNOLOGIES

- 2017
- 500 hospitals
- 13 states

Survey Results
Importance of behavioral health coordination



Survey Results
How soon would you want system?



Group Discussion

- Do we want a unified approach for Emergency Department Case Management in San Diego?
- What are the priorities for unified case management?
  - Clinical Coordination for Superusers?
  - Clinical Coordination for Behavioral Health Superusers?
- What are Priority Features?

Next Steps

- Mission Statement
- Insure All Stakeholders Represented
- Technology Update Meeting
- Clinical Care Coordination Meeting

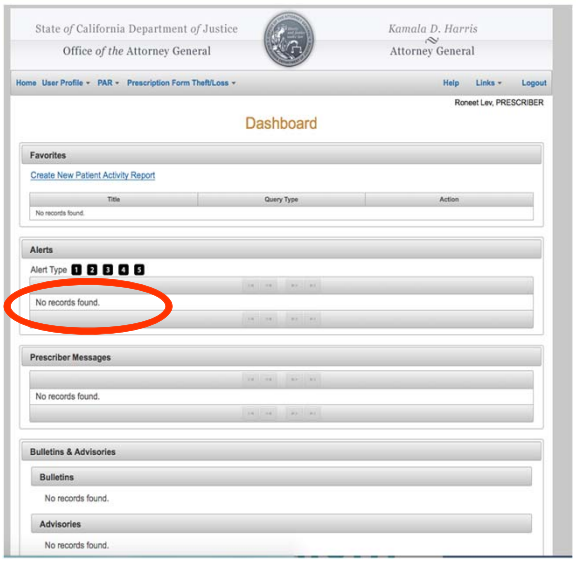
The WishList - May 2017

- Information PUSHED to ED Status Board
- **Security Events**
- **Medical Home**
  Clinics, Health Plan
  Special Program: PACE, SIPS, RAP, other
- **Medications Lists**
  Anticoagulation – list diagnosis and time frame
  Immunizations – Hepatitis A
- **Allergies**

Wish List - continued

- Medical History
- Behavioral History
  pertinent information from PERT/ RAP
  discharge and location of last psychiatric admission
  child abuse, elder abuse, trafficking, neglect
- Infections
  lice, MRSA, resistant organisms – antibiotic of choice
- Social History
  Emergency contact number
  Drug Use
- Radiation History
- Pain Management
  +/-contract, remind San Diego 5 points guideline
- Communication – free text

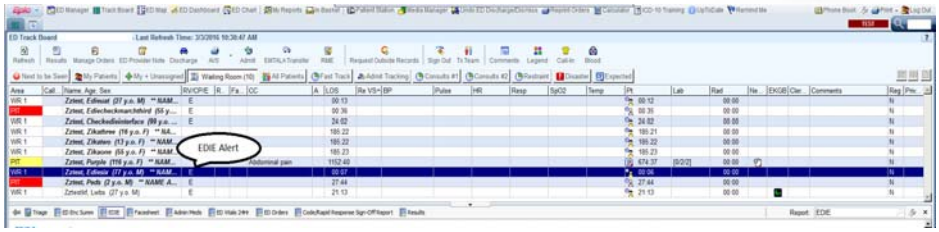
CURES Coordination



- **Available since 2008**
- **CURES 2.0 since 2015**
- **Dashboards**
- **Alerts**
- **Communication**

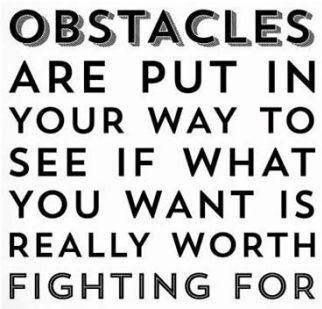
92

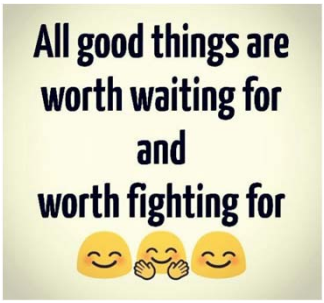
The IT Solution



CollectiveMedical TECHNOLOGIES™

SAN DIEGO HEALTH CONNECT
Better Information • Better Care™





Where are we headed?

@HASDIC www.hasdic.org

EDNA Service Offering

SAN DIEGO HEALTH CONNECT
Better Information • Better Care®

Emergency **D**epartments **N**otification & **A**lert System

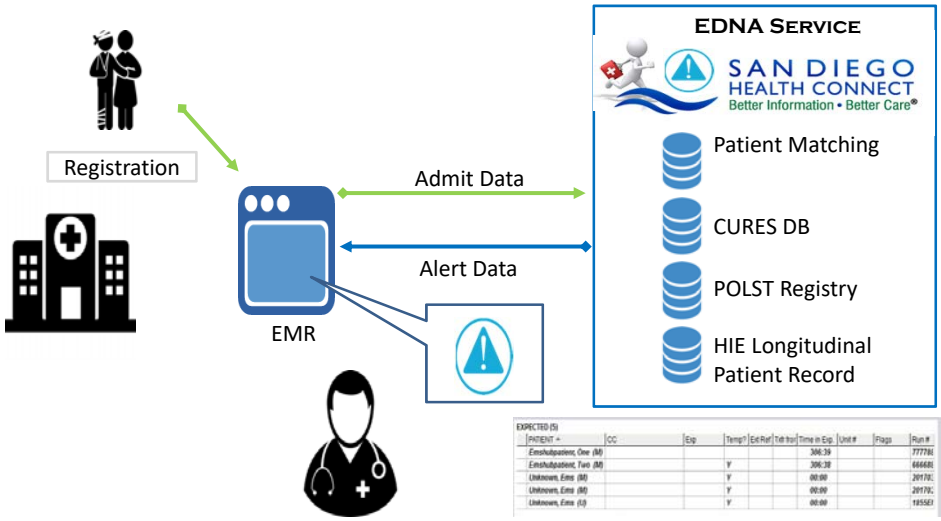
Key Features include:

1. Patient Matching from the HIE
2. Access to CURES DB (≤Oct 2018)
3. Access to the POLST registry
4. Access to patients community clinical data from the HIE

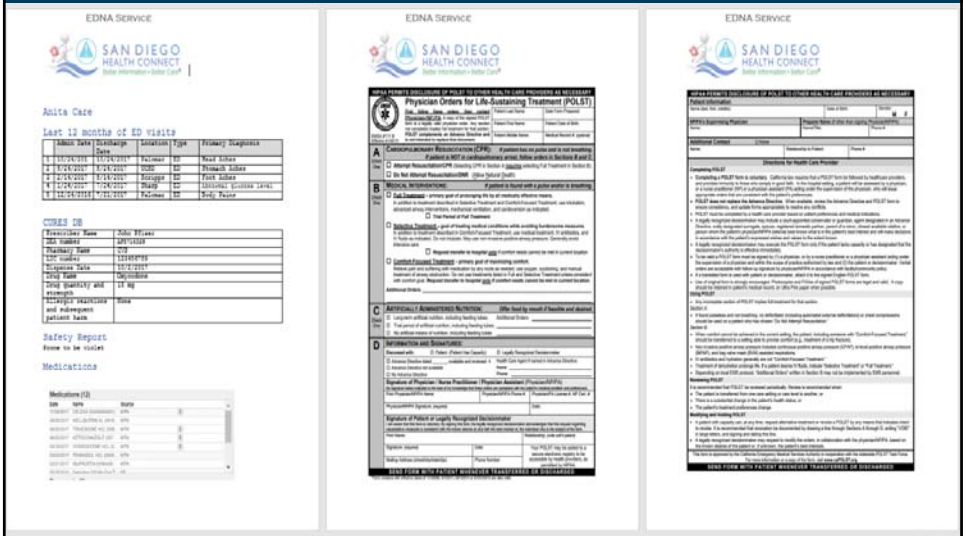
Use Cases

When a patient shows up at the ED of the hospital, the registration process triggers EDNA to gather key information into the track board about the patient, which enables the physician to make better and faster decisions that would potentially eliminate duplicate procedures and having to wait on documentation from other hospitals.

Process Flow



Sample Report



The Future is in Front of Us

www.hasdic.org

Questions?

Agents of change
Emergency Services Forum

Thank you

Dimitrios Alexiou
dalexiou@hasdic.org

Roneet Lev
roneetlev@gmail.com

CALIFORNIA HOSPITAL ASSOCIATION

Agents of change

Emergency Services Forum

Emergency Care as an Essential Element of an Integrated Heath Care Model

Aimee Moulin, MD
UC Davis Health

Larry Stock, MD, FACEP
Antelope Valley Hospital

CALIFORNIA HOSPITAL ASSOCIATION

Emergency Medicine in an Integrated Healthcare Model

Drs. Aimee Moulin and Larry Stock
Moderator: Dr. Roneet Lev

Emergency Medicine

- Past: Mission Impossible
- Present: Central to the Solution
- Future: Saving Lives while Saving the System

Mission Impossible

- **Mission Difficult: that would be easy!**
- Roles: Resuscitation/Critical Care, Complex diagnostic workups, Exacerbations of Chronic Disease, Standby and Disaster Function, Safety net care, After hours demand
- EMTALA: No one is ever turned away (Federal Safety Net)
- Spinning the plates: ultimate multi-taskers
- We speak everyone's language: Communicate, Manage Information, Make Decisions, Coordinate Care

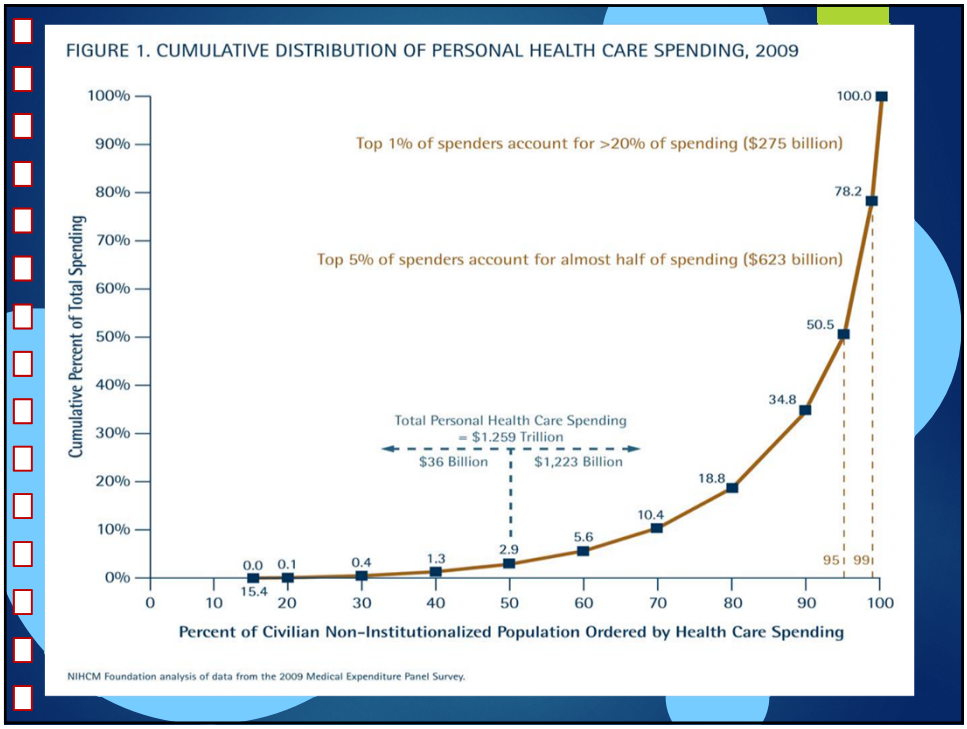
Health Policy Challenge

How to Simultaneously Achieve:

- Access to Care
- High Clinical and Service Quality of Care
- Reasonable Cost (High Value Care)

Triple Aim Challenge

- Improving the Health of Populations
- Improving Patient Outcomes (Clinical and Service Quality)
- Reducing the Per capita Cost of Health Care



EM: Future is Here

- There are no Inappropriate ER Visits
- EM is an essential element of a Integrated Health Care Model
- EM provides Value
- **Saving Lives and Saving the System: Generational Challenge**

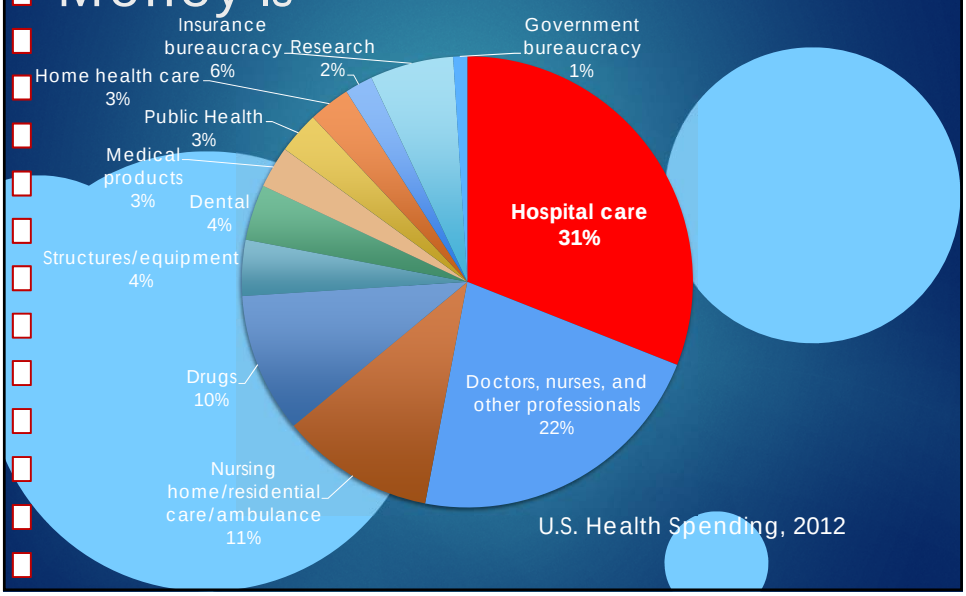
EM: Central to the Solution

- The interface of inpatient and outpatient care
- EDs support Primary Care: complex diagnostic workups, meeting after hours demand for care
- EDs play a constructive role in limiting preventable hospital admissions: **Actively Managing Down Hospital Bed Days**

EM: Central to the Solution

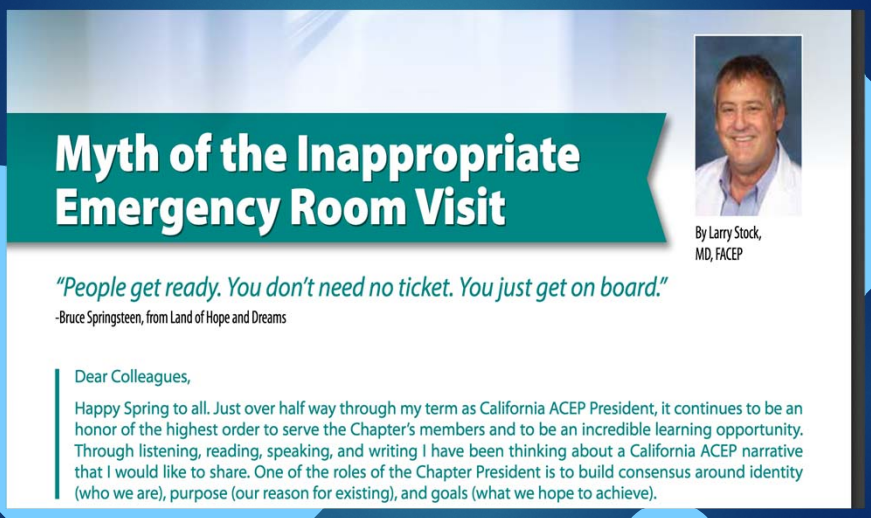
- Framework for Cost Reduction Targets
- Low impact: Diverting low acuity visits
- **High Impact: Improving efficiency, reducing admissions for intermediate or complex conditions**

Hospital Care: Where the Money Is



U.S. Health Spending, 2012

What guides us



Myth of the Inappropriate Emergency Room Visit

By Larry Stock, MD, FACEP

"People get ready. You don't need no ticket. You just get on board."

-Bruce Springsteen, from Land of Hope and Dreams

Dear Colleagues,

Happy Spring to all. Just over half way through my term as California ACEP President, it continues to be an honor of the highest order to serve the Chapter's members and to be an incredible learning opportunity. Through listening, reading, speaking, and writing I have been thinking about a California ACEP narrative that I would like to share. One of the roles of the Chapter President is to build consensus around identity (who we are), purpose (our reason for existing), and goals (what we hope to achieve).

TABLE 1. EMERGENCY DEPARTMENT VISITS AND UTILIZATION PER THOUSAND FOR CANADA, ENGLAND, UNITED STATES, AND CALIFORNIA - 2015

	POPULATION	MEDIAN AGE	ED VISITS	ED UTILIZATION PER 1000 PEOPLE
CANADA	35749600	40.5	15873016	444
ENGLAND	54000000	40	22659980	420
UNITED STATES	316500000	37.8	133600000	423
CALIFORNIA	39144818	35	14253090	364

Notes: Age, population estimates came from public data sets. For Canada, Statistics Canada. For England, the United Kingdom National Center for Statistics. For US and California, the US Census Bureau. The 2013 US population was used for this table because it was the most recent year that national data on ED visits was available from the American Hospital Association. ED utilization estimates for Canada were from the National Ambulatory Care Reporting System; for England, the House of Commons Library. California ED visits were from the Office of Statewide Health Planning and Development.

TABLE 2. CALIFORNIA EMERGENCY DEPARTMENT VISITS AND UTILIZATION PER THOUSAND BY INSURANCE - 2015

	2015 POPULATION	UTILIZATION PER 1000	ADMISSION RATES	ALL ED VISITS	ALL ED ADMISSION	ALL ED ENCOUNTERS
MEDICARE	5644384	534	29.81%	2116800	898864	3015664
MEDI-CAL	11000000	532	9.27%	5313454	543149	5856603
PRIVATE COVERAGE	18900000	201	9.49%	3432622	359812	3792434
UNINSURED	3800000	288	3.80%	1052663	41559	1094222
OTHER	N/A	N/A	8.52%	447627	41677	489304
UNKNOWN				4550	313	4863
				12367716	1885374	14253090

Notes: Data on insurance coverage of the population in California came from the Kaiser Family Foundation. All data on ED visits and admissions were from the Office of Statewide Health Planning and Development.

What guides us

Emergency Medicine is an Essential Component of an **Integrated Health Care Model**

Dear Colleagues,

Last month I began a journey to describe an internal narrative for California ACEP. My goal is to begin a discussion, find common ground, and have a coherent message for our membership as we encounter policy makers, the public, and others within health care. In an era of doing more with less, we all need clarity about our emergency medicine (EM) roles, where we fit within the health care system, and what value we bring to our patients.

What guides us

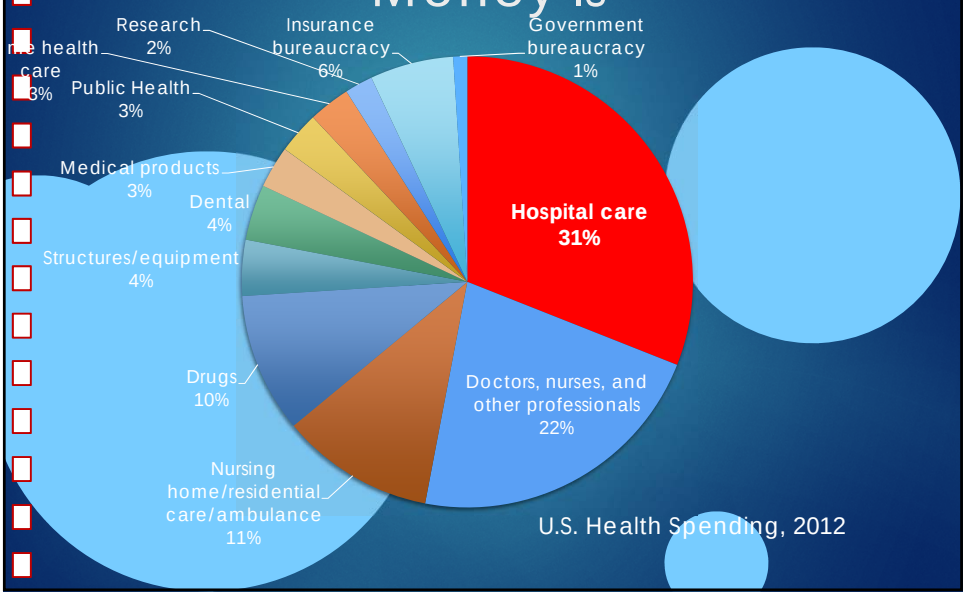
Dear Colleagues,

As the 45th Chapter President of California ACEP, I wanted to begin to tackle the issue of building internal consensus around fundamental issues regarding emergency medicine and our patients.

In May I began writing a three-part narrative in which I argued:

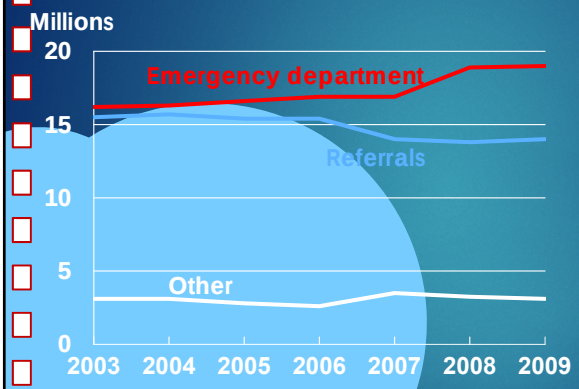
- **MAY, PART ONE:** There are no inappropriate emergency department visits
- **JUNE, PART TWO:** EM is an essential element of an integrated health care model
- **JULY, PART THREE:** EM provides value

Hospital Care: Where the Money Is



U.S. Health Spending, 2012

EDs Account for Nearly All of the Recent Growth in Hospital Admissions



Between 2003 and 2009:

- Inpatient admissions (elective and non-elective) grew by about 4% (~34.7 million to 36.1 million)
- The US population grew by slightly less than 6%
- ED admissions accounted for nearly all of the growth in hospital admissions

Data Source: National Hospital Discharge Survey
Note: Excludes live births. Weighted counts with imputed values

EM Future: Kaiser Permanente as a Model

- KP is an example of an Integrated Health Care System reaching goals of the Triple Aim and Health Policy Challenges
- Low ED Utilization
- Key Point: **The best way to reduce ED utilization is not to block access to ED care but to increase access to high quality and convenient primary and urgent care**

TABLE 3. EMERGENCY DEPARTMENT UTILIZATION AND HOSPITAL ADMISSION RATES FOR THE US, CALIFORNIA, AND KP CALIFORNIA MEMBERS, 2010 AND 2011

	POPULATION (9)	UTILIZATION RATES PER 1,000 PEOPLE	ADMISSION RATES
US population (2010) (17)			
Total	308,745,538	418	15.3%
<65	268,477,546	398	10.2%
>=65	40,267,984	548	40.3%
Non-KP California (2011) (18)			
Total	54,30,826,342	334	15.7%
<65	27,616,821	314	10.9%
>=65	3,509,490,000	456	41.7%
KP California (2011) 9			
Total	6,821,382	244	13.2%
<65	5,926,085	206	8.2%
>=65	895,297	496	27.1%

Health, Health care, Health economics

- Better health is the goal
- Health care is one element towards better health
- How can we achieve better health at a lower cost with enhanced experience and outcomes?

Elements of a pathway forward

System level

- Access
- Value: Quality/Cost
- Integrated health care models
- Evidence, research, education
- Care Coordination
- Information and EHR
- Public and Population Health

Patient level

- Participation
- Personal responsibility for health
- Prevention
- Planning: End of Life

Thank you

Larry Stock, MD, FACEP
Drlarrystock@gmail.com

Aimee Moulin, MD
AKMoulin@gmail.com

Agents of change

Emergency Services Forum

Improving Emergency Department Transitions of Care – Can It Help with ED Overcrowding?

Stephen V. Cantrill, MD, FACEP
Denver Health Medical Center

CALIFORNIA HOSPITAL ASSOCIATION

Improving Emergency Department Transitions of Care: Can It Help with ED Overcrowding?

Stephen V. Cantrill, MD, FACEP
Co-Chair, NQF Transitions of Care Panel

Who am I?

- 36 years in EM, 18 as Medical Director of Denver Health ED (Safety net, Level 1 Trauma, 3rd Service EMS)
- Past president of the DH medical Staff
- Past chair of ACEP Clinical Policies Committee
- Past chair of ACEP Quality and Patient Safety Committee
- 11 years experience in performance measure development
- Associate Professor, EM, University of Colorado SOM

Background for this Issue

- U.S. emergency departments (ED) treat 130 million patient visits annually.
- About 10% admitted, accounting for about 80% of all unscheduled hospital admissions.
- ED visits are critical inflection points in a patient's health trajectory.
- Emergency care is costly but often preferred by patients.
- Most transition efforts have focused on hospital discharges.
- 20% of Medicare hospital discharges are readmitted within 30 days, with half of the patients having not yet seen an outpatient doctor for follow-up.
- Conventional wisdom: Better transitions *into* and *out* of the ED could result in more efficient resource utilization and a more seamless patient care experience.

What are "ED transitions of care?"

"Movement of patients *between health care locations, providers, or different levels of care as their conditions and care needs change involving an emergency department as the receiving or sending location"*

Examples of ED Transitions of Care

INCOMING

Home
Another ED / Hospital
Specialist
Medical Home / PCP
Long Term Services & Support
Prehospital
Other episodic care
Within ED
Shelter
Jail
Other

EMERGENCY DEPARTMENT

OUTGOING

Home
Another ED / Hospital
Long Term Services & Support
Medical home / PCP
Specialist
With ED / Hospital
Shelter
Jail
Other

Recognition of TOC as a Problem:

- The Joint Commission has publicly recognized that an inability to effectively transfer information and accountability is a primary factor in sentinel events.
- World Health Organization has made it a high priority for its patient safety initiatives.
- The Centers for Medicare & Medicaid Services has established a Community-based Care Transitions Program.
- The Accreditation Council for Graduate Medical Education has established effective communication during these transitions as a requirement of residency training.

Potential benefits of improving these transitions

- Improved person-centered care
- Increased value of care
- Reduced costs of care
- Improved efficiency of care
  - Reduced number of ED visits
  - Reduced duration for an ED visit

Brief History of Work in this Area: Improving Transitions of Care: Emergency Department to Home National Transitions of Care Coalition – October 2009

1. Improve communications during transitions between providers, patients, and caregivers.
2. Implement electronic medical records that include standardized medication reconciliation elements.
3. Establish points of accountability for sending and receiving care, particularly for hospitalists and nursing home providers.
4. Increase the use of case management and professional care coordination.

Brief History of Work in this Area, continued

5. Expand the role of the pharmacist in transitions of care.
6. Implement payment systems that align incentives and include performance measures to encourage better transitions of care.
7. Develop performance measures to encourage better transitions of care

ACEP Transitions of Care Task Force Report September 2012 - 78 references

* **13 recommendations:**

1. Improve residency training and continuing professional development for emergency physicians on the importance of handoffs in effective transitions of care.
2. Enhance and promote training and education for all emergency department personnel regarding the importance of transitions of care and how to implement effective policies and procedures.
3. Assess provider performance, especially that of residents, with appropriate feedback, and provide training in communication skills as necessary.
4. Work with emergency department information system vendors to produce transition support tools.

Recommendations, continued

5. Identify strategies that make handoffs successful, and use them to establish goals for emergency departments.
6. Identify the components of a minimum data set for all transitions.
7. Work with the Society of Hospital Medicine to hardwire the handoffs between the emergency department and the hospitalists.
8. Evaluate tools currently used to guide emergency department handoffs, identifying the assessment tool or guidelines used.
9. Develop a web-based toolkit that includes resources, assessment and support tools, and best practices.

Recommendations, continued

10. Promote widespread adoption of immunization programs for all, and screening programs for drug and alcohol abuse and domestic violence.

11. Develop education resources on palliative care in the emergency department to enhance knowledge and increase the number of emergency department-based palliative care programs.

12. Seek funding for effective emergency department-based transition programs. Consider developing measures that quantify effective transitions.

13. Solicit research to determine the effectiveness of transitions of care programs on patient outcomes, especially related to emergency department revisits for the same condition and hospital readmissions.

Situations in which poor transitions of care can contribute to ED overcrowding

1. Potentially unnecessary revisits due to poor information conveyance.
   - 8.2% of pts discharged from the ED will return within 3 days
   - 32% will visit a different institution
2. Unnecessarily repeated diagnostic studies due to flawed information flow.

NQF ED Quality of Transitions Project

- Funded by HHS Emergency Care Coordination Center (ECCC)
- Expert Panel:
  - 24 members, multi-disciplinary– 7 Emergency physicians
  - 5 NQF Staff
  - Rapid time frame: less than 12 months from soup to nuts
- Environmental scan of the literature: 47 relevant articles reviewed
- Scan for existing measures and measure concepts
  - Identify measurement gaps in TOC and develop measure concepts for these gaps
- Categorized and ranked measures and measure concepts

"Measure" vs "Measure Concept"

- Measure: a fully developed metric that includes detailed specifications and may have undergone scientific testing.
- Measure Concept: an idea for a measure that includes a description of the measure, including planned target and population, but has not undergone full specification or testing.

NQF Final Report:

Emergency Department Transitions of Care:
A Quality Measurement Framework
AUGUST 30, 2017

Available at:
https://www.qualityforum.org/Publications/2017/08/Emergency_Department_Transitions_of_Care_-_A_Quality_Measurement_Framework_Final_Report.aspx

Report Recommendations

1. EDs need to build infrastructure and linkages to support ED transitions that are patient centered.
2. Enhancements to health information technology (HIT) are needed to support high quality ED transitions in care.
3. New payment models may facilitate quality improvement in ED transitions and should be investigated.
4. A research agenda for further work in TOC is needed.

Recommendation #1
Infrastructure & Linkages

- Investments in ED-based care managers, navigators, and social workers; referrals to community health workers and healthcare coaches.
- ED-based system for patients (e.g. phone access) where a provider is available to answer questions.
- Regular screening of patients who may be at high-risk for poor ED transitions in care, with a focus on unmet social service needs.
- Information on community resources, ensuring resources are available for patients.

Recommendation #2
Health Information Technology

- Health information exchanges should be viewed as a public good and supported by public funding or by payers
- Sharing of key information elements important to ED transitions between clinical and non-clinical providers; support feedback about specific patients to promote a learning system
- Integration of information from multiple sources (e.g., pharmacy data and prescription drug monitoring programs)

Recommendation #2 cont.
Health Information Technology

- Care team members to be contacted automatically when the patient arrives or departs the ED, e.g., ADT alert system.
- Shared decision making between providers and patients during transitions.
- Consider patient privacy concerns when sharing information between health care providers and community-based organizations.
- Systems to improve patient understanding, e.g., evolution of symptoms.

Recommendation #3
New Payment Models

- Global budgets to budgets to reward hospitals for coordinated care, e.g., investment in ED transitions.
- New reimbursement codes to support additional resources, e.g., observation units providing more intensive care coordination services.
- Primary care providers reimbursed for coordination efforts or follow-up not involving an in-person visit .
- Capitated payments to spur investments in improving ED transitions.

Recommendation #4
Research Agenda

- Taxonomies to support improved ED transitions:
  - Provider-to-provider communication
  - Provider-to-patient communication
- Research to understand which patients are at highest risk for poor transitions or poor outcomes.
  - Research to understand which interventions work best to improve transitions and outcomes

Recommendation #4 cont.
Research Agenda

- Identify and promulgate promising models for ED and community engagement including:
  - Community engagement with law enforcement, social services, housing, and other resources
  - Payer engagement
  - Linkages between community clinical providers and EDs

Measure / Measure Concept Compendium (Appendix C)

- 6 Existing Measures
- 25 Measure Concepts
- Measures/Measure Concepts Framework
  - Domains: 4
    - Provider Information Exchange: 2 subdomains
      - Key information elements and properties of transmission
      - Care coordination and feedback
    - Patient, Family, and Caregiver Information Exchange: 2 subdomains
      - Key information elements and properties of transmission
      - Effective communication and shared decision making

Measure / Measure Concept Compendium (Appendix C)

- Engagement of the Broader Community: 2 subdomains
  - Connection and alignment
  - Accessibility of services
- Achievement of Outcomes: 4 subdomains
  - Healthcare utilization & costs
  - Provider experience
  - Patient/family/caregiver experience
  - Follow-up and safety outcomes

- **Domain: Provider Information Exchange**
- SUBDOMAIN: CARE COORDINATION AND FEEDBACK

- 5 Existing Measure: Emergency Transfer Communication Measure: Percentage of patients transferred to another healthcare facility whose medical record documentation indicated that required information was communicated to the receiving facility prior to departure or within 60 minutes of transfer **(NQF #0291):**
  - Required information is communicated to the receiving facility prior to departure
  - Entire vital signs record is communicated
  - Medication information is communicated
  - Patient information is communicated
  - Physicians information is communicated
  - Nursing information is communicated
  - Procedures and test information is communicated

- 6 Concept: The proportion of patients managed by primary care physicians (or responsible specialist) who are frequent users of EDs (>=4 visits in a 12-month period) who have, (jointly when possible) created a care plan in collaboration with their primary care physician and ED (physician, nurse, PA, navigator, etc.)

- 7 Concept: A structural measure as to whether hospitals provide data to and facilitate a portal for providers to be able to view ED visits and other care delivered in outside hospitals and health systems

- 8 Concept: The proportion of EDs that have a system in place to provide feedback within referring providers for specific cases that may be useful for quality improvement

Measure / Measure Concept Prioritization (Appendix E)

- All 31 ranked as to
  - Importance
  - Feasibility
- Then ranked as potential for implementation:
  - Now
  - Mid-term
  - Future / Aspirational

Prioritization Findings: Now

Measures/measure concepts rated high in both importance and feasibility that can be **implemented today** (n = 5):

* Provider communication (EMS, ED, other facilities)
* Patient-centered communication and discharge activities
* Community resource information to support transitions

"Now", In detail

* [concept] The proportion of EMS transports where a transition of care document and verbal report is provided to the ED at ED arrival
* [measure] Patient Specific Education Resources from Certified Electronic Health Record Technology (CEHRT) provided to Patient
* [concept] Documentation of the percentage of all patients/family/caregivers who are provided an ED based telephone number that is staffed 24/7, which they may use to clarify discharge instructions, medication questions, or follow up post-discharge from the ED

- [measure] Transition Record with Specified Elements Received by Discharged Patients (Emergency Department Discharges to Ambulatory Care [Home/Self Care] or Home Health Care): Patients or their caregiver(s) who received a transition record at the time of emergency department (ED) discharge including, at a minimum, all of the following elements **(NQF #0649)**:
  - Summary of major procedures and tests performed during ED visit, AND
  - Principal clinical diagnosis at discharge which may include the presenting chief complaint, AND
  - Patient instructions, AND
  - Plan for follow-up care (OR statement that none required), including primary physician, other healthcare professional, or site designated for follow-up care, AND
  - List of new medications and changes to continued medications that patient should take after ED discharge, with quantity prescribed and/or dispensed (OR intended duration) and instructions for each

- [concept] Collect and maintain information on available resources (to include social, community and any other available resource that may support a transition of care)

Prioritization Findings for Mid-Term

Measures/measure concepts of high importance and moderate feasibility that can be **implemented in the mid-term** (n = 19). [3 measures; 16 measure concepts]

* Care managers / coordinators / navigator services in ED
* Improved discharge instructions with considerations for language, social economic status, contact information
* Timeliness of information transfer to support high-risk transitions
* Provider and patient experience

Prioritization Findings for Future

Aspirational measures/measure concepts of high importance with low feasibility for **future implementation** (n = 6). [1 measure; 5 measure concepts]

* Reduction in duplicate testing
* Improved transitions for frequent ED users
* Bi-directional communication between clinical and community resources
* Shared care plan for frequent ED users

Unintended Consequences of Performance Measures in TOC:

* One-size-fits-all TOC performance measures
  * Pt with simple forearm lac vs chronic diabetic pt with COPD, angina and dementia
* Risks:
  * Decreased throughput
  * Increased costs: personnel, IT
  * Information overload
  * Difficulty in demonstrating improved patient care/patient satisfaction/provider satisfaction

Improving Emergency Department Transitions of Care: Can It Help with ED Overcrowding?

* So far, unfortunately, not much data.
* We hope so. (It is the right thing to do, if done intelligently)
* TOC performance measures may help, but they must becarefully crafted and implemented

NQF Final Report:

Emergency Department Transitions of Care:
A Quality Measurement Framework
AUGUST 30, 2017

Available at:
https://www.qualityforum.org/Publications/2017/08/Emergency_Department_Transitions_of_Care_-_A_Quality_Measurement_Framework_Final_Report.aspx

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Thank you

Stephen V. Cantrill, MD, FACEP
stephen.cantrill@DHHA.org

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Emergency Services Forum

Managing ED Observation with Clinical Decision Areas

Rose Colangelo
Scripps Memorial Hospital La Jolla

CALIFORNIA HOSPITAL ASSOCIATION

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Managing ED Observation with Clinical Decision Areas

Rose Colangelo
Manager, ED
Scripps Memorial Hospital

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Objectives

1. Define a Clinical Decision Area (CDA)
2. Review characteristics
3. Review cost savings
4. Review improved patient throughput
5. Review improved patient satisfaction

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Clinical Decision Unit

Saying *Adieu* from the CDA

https://vimeo.com/158772533

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Definitions

CDAs are:

- ✓ an extension of the Emergency Department (ED)
- ✓ in which patients are admitted as observation patients to the CDA who
- ✓ require additional testing to determine the need for admission to the hospital

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Definitions

Observation patients are those

- ✓with > 6 hour but < 24* hour length of stay in the ED, and
- ✓requiring additional testing to determine if hospital admission is needed, and
- ✓with a 70% probability* of discharge with low co-morbidities

*(Ross, et al., 2012)

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Characteristics

- < 24 hours
- Established clinical inclusion/exclusion criteria
- Established physician protocols
- Established nursing protocols
- Closed unit attached to ED vs. separate unit
- Staffed by ED physicians

Note: If ≥ 20% of patients convert to inpatient, the inclusion/exclusion criteria should be re-evaluated for appropriateness of admission

(Bohan, 2015)

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Inclusion Criteria

Extended treatment:	Asthma, low risk CHF Dehydration, UTI
Prolonged Evaluation:	Chest Pain (R/O MI) Syncope, TIA

Additional typical observational diagnosis:
CP, Gastroenteritis, Hyperglycemia, Cellulitis

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Exclusion Criteria

Socio-economic:	Homeless, no support Unable to self-care
Psycho-social:	Cognitively/functionally impaired, Psychiatric
Inpatient Staging:	Boarding waiting for an admission bed

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Staffing

Specialized team

Current

- Emergency Nurses (now also trained to focus on moving the patient to discharge)
- Rehab services – PT, OT, ST
- Lab and Radiology
- Emergency Department Physicians

Additional

- Nurse Practitioner

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Cost Savings

Assumptions

✓ Preventing unnecessary floor admissions, reducing length of stay, and reducing overall inpatient care resources on patients admitted to the hospital floor unit vs. a CDA will yield cost savings

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Cost Savings

Assumptions

- ✓ NP rotates between the 8 bed CDA and ED from 11:00 am-11:00 pm where higher clinical skill level is required during ED peak hours
- ✓ Two ED nurses to staff 8 bed CDA 24 hours a day
- ✓ 12-hr NP shifts; 365 days/year; 2.1 FTEs
- ✓ NP compensation at $155,000/year (sal+fringe)
- ✓ RN compensation at $124,000/year/RN (sal+fringe)

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Cost Savings

Example

- Based on published studies, 5-10% of the ED census could be admitted as CDA observation patients (current yearly ED census of 36,000) would equal 1,800 to 3,600 patients
- This would equate to five (1,800/365) to ten (3,600/365) patients per day

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Cost Savings

"Most observation patients enter the hospital through the ED. Transferring to another floor and service adds unnecessary rework for a group of patients likely to leave in the next 15 hours" (Ross et al., 2012, p. 129)

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Cost Savings

Example

- If the average inpatient admission is 26 hrs and the CDA reduces this to 15 hrs, the floor nurse resource savings = 11 hrs per admission
- 11 hrs X the inpatient RN average sal+fringe cost of $57.50 ($46/hr+25% fringe) would save = **$632.50 per admission**
- 1,800 CDA admits = $1,138,500 savings potential
- 3,600 CDA admits = $2,277,000 savings potential

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Cost Savings

Example

1,800 pts/yr x $632.50/in-pt RN =		$1,138,500
Less:	Addt'l 2.1 FTE NP	- 325,500
	Addt'l 3.9 FTE RN	- 483,600
Net CDA cost savings		**$ 329,400**

3,600 pts/yr x $632.50/in-pt RN =		$2,277,000
Less:	Addt'l 2.1 FTE NP	- 325,500
	Addt'l 7.8 FTE RN	- 967,200
Net CDA cost savings		**$ 984,300**

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Cost Savings

A CDA for ED observational patients has cost avoidance. **Why ??**

With increasing CMS *denials* for patients admitted less than 24 hours, patients from the ED not mixed in with the regular hospital census will not impact expensive inpatient space and resources that will go *unreimbursed*.

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Throughput

"*In its discussion of 'improving the efficiency of hospital-based emergency care, the 2006 Institute of Medicine supports the use of EDOU [CDUs] as a means of decreasing ED boarding, ambulance diversion, and avoidable hospitalizations."*

(Ross, et al., 2012, p. 128)

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Throughput

When observation patients are admitted into inpatient beds, it occupies beds that otherwise can be used for those that truly need admission.

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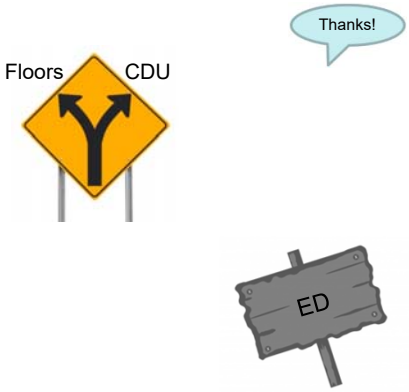
Throughput

Keeping patients from being lost in the sea of daily admissions



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Patient Satisfaction

- ✓Admission to the hospital is a disruption to the patient's everyday life and may lead to a decrease in income
- ✓Expediting discharge can return the patient to their normal daily routines
- ✓1% of what Medicare withholds from hospitals is an incentive for hospitals to achieve their patient satisfaction goals

(Geiger, 2012)

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Patient Satisfaction

"Studies have shown that when these patients are mixed with inpatients throughout a hospital, it results in LOS [length of stay] that are well beyond 24 hours, with associated decreases in patient satisfaction"

(Ross et al., 2012, p. 128)

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SWOT Analysis

Strengths:	Reduced length of stay, improved patient satisfaction and improved throughput from the ED, cost savings
Weakness:	Metrics to identify weaknesses within the inclusion/exclusion criteria in the selection of patients admitted to the CDU
Opportunities:	Protocols will be identified, used and improved through communication between the Medical Director of the CDU and the Supervisor Lead
Threats:	Protocols are not followed, exclusion criteria in patient selection not enforced

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Evaluation

Metrics to be tracked monthly by ED administration:

- ✓ # of patients admitted to CDA
- ✓ Length of stay of patients in the CDA
- ✓ Patient satisfaction scores
- ✓ # of CDA patients that require inpatient admission
- ✓ Diagnoses to expand inclusion criteria for patients that are able to be admitted to this unit

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Conclusion

Benefits of a CDA

- Increased Patient Satisfaction
- Decrease in patients left without treatment
- Decreases unbillable observation hours
- Decreases observation LOS
- Decreases labor expense

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Conclusion

Evidence Synthesis

Results, when protocol driven, show an improvement in patient satisfaction, a reduced length of stay, a decrease in the number of resources based on the decrease in the length of stay, and efficient utilization of inpatient beds to care for those who require additional resources and care.

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Clinical Decision Area Room

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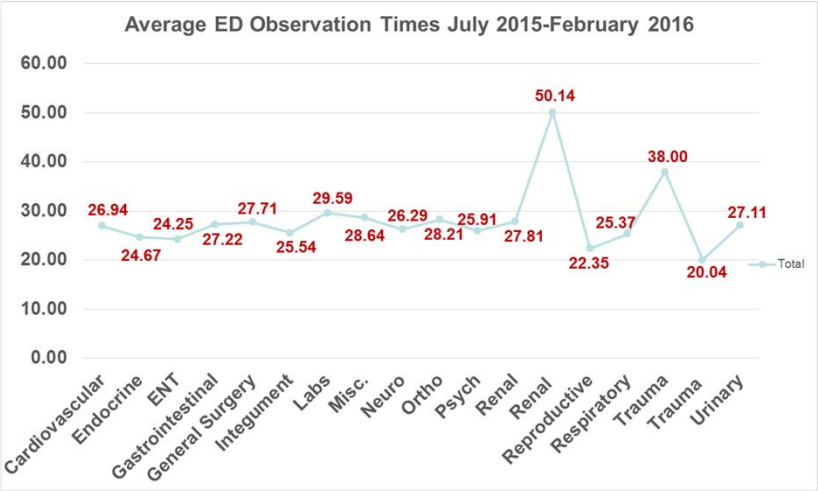
Data Collection



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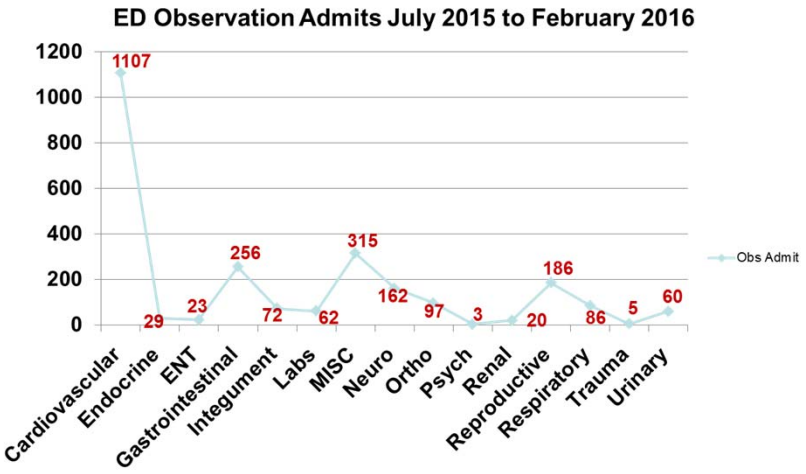
Data Collection



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Current Data

2017	Jan	Feb	Mar	Apr	May	June
CDA Volume	75	96	120	154	146	146
Convert CDA to Admit	18	23	16	31	21	20
% of CDA Conversions to Admit	24%	24%	13%	20%	14%	14%
Total CDA/Total ED Patient %	0.02%	0.03%	0.03%	0.05%	0.04%	0.04%
Total ED Volume	3547	3185	3669	3310	3424	3501
Total ED Admissions	816	689	787	702	739	690
% ED Admits to Hospital	23%	22%	21%	21%	22%	20%
% ED Admits plus CDA patients	25%	25%	25%	25%	25%	23%
Reduced % in Volume of Units	2%	3%	4%	4%	3%	3%
Average Length of Stay	15.4	16.8	16	17	15.8	17.9
# of preventable 30 day readmits	1	8	18	18	7	16
Number of CDA Clinic patients	3	38	28	65	54	61
% CDA Clinic patients	4%	40%	23%	42%	40%	42%
Number of Nursing Hours	887	1400	1959	2675	2311	2613
Number of pts admitted as OBS to the Hospital 2017	319	308	347	274	304	356
Number of pts admitted as OBS to the Hospital 2016	**369**	**349**	**395**	**340**	**395**	**367**

*CDA Opened Jan 9, 2017

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Lessons Learned

- Challenges with staffing Emergency Department Nurses
- Getting the ancillary staff onboard: Lab, Food and Nutrition, Imaging
- Everyone wants in: Sticking to the inclusion/exclusion criteria

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Questions?

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Thank you

Rose Colangelo
colangelo.rose@scrippshealth.org

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Emergency Services Forum

APOD 3.0: Using Technology to Improve Offload Delay

Pamela Allen
Redlands Hospital

CALIFORNIA HOSPITAL ASSOCIATION

Redlands Community Hospital

Using Technology to Improve Offload Delay

Pam Allen, MSN, RN, CEN

Who's Been There?

RCH Licensed Beds

- 195 General Acute
- 24 Perinatal
- 17 NICU
- 12 ICU stroke designated beds
- 59 Telemetry stroke designated beds
- 16 Skilled Nursing
- 18 Acute Psychiatric
- 21 Emergency Department beds
- 18 Observation beds

RCH- About Us

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Primary Stroke Center

- Primary Stroke Center
- Spine Joint Institute
- Outpatient Behavioral Medicine Program
  - Partial Hospital Care Program
  - Intensive Outpatient Care Program
- Family Clinics
- Home Health and Hospice

Emergency Services-About Us

- 21 Licensed Beds
- 7 Bed Fast Track
- Hallway- chairs and gurney's
- RME- 4 cubicles
- Base Station
- Internal waiting room with 4 recliners
- Remodel/Expansion- Fall 2017
  - 36 beds
  - Triple the size
- Volume: 2013: 44,000 2017: 54,000

ED Overcrowding and Ambulance Patient Off-Load Delays (APOD)

- National Study between 2006-2012
  - Hand off increased from 20 to 45 minutes
- Consequences
  - Ambulance Diversion
  - Prolonged wait times
  - Patient delay and suffering

Myriad of Issues

- Decreased ED and inpatient bed capacity
- Mandated nurse-to-patient ratio
- Increased patient acuity
- Increased volume of mental health patients
- Delays in throughput
- Shortage of primary care clinics/providers
- Millions of newly insured
- Insufficient physician reimbursement for Medi-Cal patients

Redirection Pilot Program

- Prior: No ED saturation or diversion
- Bed Delays
  - ICEMA- 25 minutes, REMSA- 30 minutes
- Trial- May 1, 2015
  - Authorizes temporary redirection of ambulances if a patient remains on an ambulance gurney more than 90 minutes
- APOD Task Force
- APOD- Behavioral Health Committee

RCH Implementation

- Install central monitor with an ambulance call light system
- Centrally located
  - Main Nursing station
  - 40 inch screen
- Increased provider and RN staffing to match patient arrival

Process

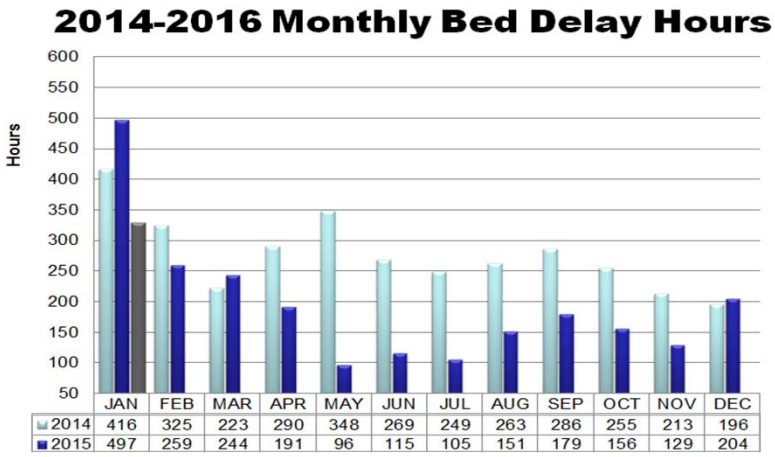
- MICN assigns crew number
- Crew arrives and presses number
- Box highlights

Process

Call's Section on 40 inch Monitor

- 0-20 minutes= **green** color
- 21-65 minutes= **yellow** color
- 66-90 minutes= **orange** color
- > 90 minutes= **red**= Redirect

Results

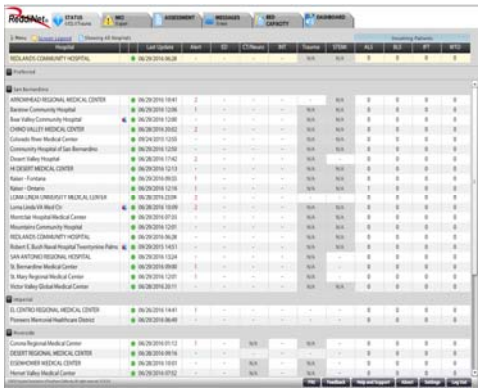


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2014	416	325	223	290	348	269	249	263	286	255	213	196
2015	497	259	244	191	96	115	105	151	179	156	129	204

Reddinett Utilization

ReddiNet®
A HASC SERVICE

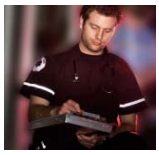
- Go Live June 22, 2015
- Notification for redirection by e-mail alerts
- Hospital calls ambulance provider when handoff occurs.
- Hospitals on Redirection are noted in Reddinett



AB -1223 Emergency Medical Services: Ambulance Transport

AB -1223 Emergency Medical Services: Ambulance Transport

- Approved September 30, 2015
- Authorizes local EMS agencies to adopt P&P and reporting of ambulance patient offload times
- Establish criteria for reporting of and quality assurance follow-up of a nonstandard patient offload times



First Watch

- Prior - Telephone call to Ambulance provider that handoff occurred.
- Implemented March 1, 2016
- Allows visualization of ambulances enroute, present at site and length of stay
- Screens are posted at:
  - Charge Nurse computer
  - Central monitor with Ambulance call light system
- Charge Nurse greets paramedics and completes TOC following handoff
- Ability to see data and pull reports

First Watch

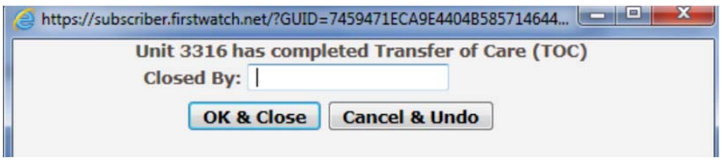
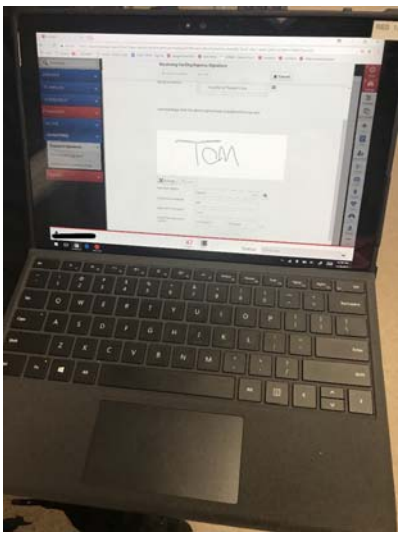
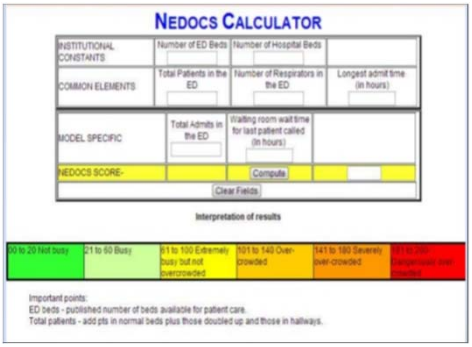


Image Trend Elite-
Sign, Clock & Lock



ED Overcrowding Surge Plan

- NEDOCS
- CEDOCS
- Storm Watch
- AB 911
  - ER Overcrowding



NEDOCS CALCULATOR

INSTITUTIONAL CONSTANTS	Number of ED Beds	Number of Hospital Beds	
COMMON ELEMENTS	Total Patients in the ED	Number of Respirators in the ED	Longest admit time (in hours)
MODEL SPECIFIC	Total Admits in the ED	Waiting room wait time for last patient called (in hours)	
NEDOCS SCORE-		Compute	
Clear Fields			

Interpretation of results

0 to 20 Not busy	21 to 60 Busy	61 to 100 Extremely busy but not overcrowded	101 to 140 Over-crowded	141 to 180 Severely over-crowded	181 to 200 dangerously over-crowded

Important points:
ED beds - published number of beds available for patient care.
Total patients - add pts in normal beds plus those doubled up and those in hallways.

Storm Watch

- Management of patient flow during periods of high demand for service
- Four response levels: Green, Yellow, Orange, and Red
- Each Level is defined and has an ED and Hospital action plan

Redlands Community ED Hospital Surge Capacity Plan

Color/Level	Description	ED Intervention	Hospital Intervention
Level 1 Green	APOD < 25 minutes MSE < 45 minutes	1.Standard operations in effect 2.Board Rounds: 0730,1930- ED Charge Nurse (ED CN) and MD 1030- ED CN, Case Manager, MD 1530- ED CN, House Supervisor & MD	Standard operations in effect Turn around time from admit order written to inpatient bed less than 2 hours.
Level 2 Yellow	1. APOD > 25 minutes-90 minutes 2. MSE 45-90 minutes 3. Charge RN is taking overflow patients 4. All monitored beds are occupied 5 Holds: a. 4 Tele/OBS/MS &/or b. 1-2 ICU	1. ED CN call Storm Watch Level 2 2. ED CN conducts board rounds to assess status of patients and to triage monitored patients. 3. ED CN determines cause for decreased throughput a. In-patient holds: ED CN talks to House Supervisor for bed assignments b. Holds transferred immediately and bedside report given (exception: no physical bed available) c. Assess psych patients for possible movement to the Obs Unit. 4. Radiology supervisor to call ED US to acknowledge 5. Lab supervisor to call ED US to acknowledge 6. Cardiopulmonary: Contact Cardiologist to complete stress tests and discharge patients.	1. Bed meeting will be held within 45 minutes from activation to include House Supervisor, Charge Nurses, ED Case Manager. a. In-patient Charge Nurses will bring most current bed status, pending discharges with identified obstacles and/or discharge times. b. Staffing Coordinator and department assistants to call staff to work. 2. Radiology to inform their services of Storm Watch and to expedite testing 3. Hospitalist offices (BMG & TH) will be contacted to facilitate admission and discharge orders. In addition, to assist in triaging in patient telemetry status for downgrades. 4. STAT clean placed on all empty rooms

Redlands Community ED Hospital Surge Capacity Plan

Color/Level	Description	ED Intervention	Hospital Intervention
Level 3 Orange	1. 3 ambulances with 2 waiting over 90 minutes 2. MSE > 90 minutes 3. ED CN has patients 4. Break nurse has assignment 5. All monitored beds occupied 6. Holds: a. 8 Tele/OBS /MS &/or b. 3 -4 ICU patients 7. Closing areas to maintain staffing	1. ED CN call Storm Watch Level 3 2. ED CN, ED physician and HS to conduct hourly board rounds until condition resolved 3. ED Director and VP of Patient Care Services/ designee to be called after hours by House Supervisor 4. ED Director to notify ED Medical Director 5. ED Leadership and office staff will be available to assist in flow.	1. Bed meeting will be held within 45 minutes from activation to include staffing coordinator, Nurse Managers, House Supervisor, Case Manager representive, EVS Director. Charge nurses to remain on unit and handoff to Nurse Managers who will bring most current bed status to meeting. 2. No outside transfers will be accepted as direct admits unless already accepted. 3. Department leadership will be available on units to assist with patient flow 4. Case management will assist units to expediate patient needs for discharge or transfer. 5. Hospitalist will review in house patients for possible discharge and expedite admission orders. 6. No flexing of staff until released by House Supervisor. 7. Consider ICU beds in PACU and/or use of PACU staff to assist with ICU patients 8. Nurse Educators will be utilized
Level 4 Red	1. 3 ambulances with APOD of > than 120 minutes 2. MSE > 120 minutes 3. Unable to maintain staffing ratios 4. The ED is at maximun capacity 5. Holds: a. > 8 Tele/Obs /MS &/or b. > 4 ICU patients	1. ED CN call Storm Watch Level 4 2. ED CN, ED physician and HS maintain hourly board rounds until condition resolved. 3. ED Nursing and Physician Leadership at hospital.	1. "Level 4/ Condition Red" Centralized Command Center is activated by House Supervisor to include VP of Patient Care Services or designee, staffing coordinator, Nurse Directors, Director of Case Management, House Supervisor, EVS Director, Hospitalist representive and ancillary department representatives. All should be prepared with current department status and number of staff on hand. 2. All Nursing Leadership at hospital. 3. All hospital meetings cancelled. 4. Consider canceling elective surgeries 5. Administrative nurses will act as additional nursing resources as delegated by the House Supervisor. 6. Closed nursing units opened if staffing allows. 7. Emergency discharge lounge/area to be identified for discharge patients awaiting rides. 8. Primary Care Physicians and Surgeons to be contacted to assist Hospitalists with patient flow.

Questions & Comments?

Thank you

Pamela Allen
paa2@redlandshospital.org

Agents of change

Emergency Services Forum

Managing Workplace Fatigue in the ED

Todd Langus, PsyD
Langus, Pike & Associates

CALIFORNIA HOSPITAL ASSOCIATION

Tactical Wellness For Emergency Personnel

TACTICAL WELLNESS

A STRATEGIC PLAN FOR CAREER SURVIVAL

HOW RESPONDERS ARE TRAINED TO THINK

"Probability" *Versus "Possibility"*

Behaviors Developed for Job Survival

- "All or Nothing" thinking (Win or Lose)
- Be all things to all people all of the time
- Detachment
- Always be right
- Have an answer for every problem
- Always maintain control
- Rapid decision making

Behaviors Developed for job Survival (continued)

- The "20 minute fix"
- Black and White thinking
- Denial
- Everyone is a threat
- Always preplan/have an answer for all situations
- Defend your position/actions

Unconscious Mindset that Interferes with Treatment and Staff

- Problem solver not problem "haver"
- Keep things to yourself
- Black and White thinking of job
- "All or Nothing" mentality (Win or lose)
- Tunnel vision (focus on problem)
- Trained to control every situation
- Cannot show weakness
- Handle problems alone
- Repress Feelings

How Responders are Traumatized

- The person is not psychologically prepared for the situation
- The person is psychologically prepared for the situation; however, there are rapidly changing events that their brain cannot keep up with

How Trauma is Experienced

- Freeze Frame: Locking in of the split second where incident has greatest impact
- Rigid emotional state tied to specific moment doesn't go away when moment is past
- Ex: "I thought I was going to die." Identify officer's feelings of vulnerability and any individuals they thought of at that moment
- Ex: "I knew the baby was dead, but I had to keep trying in front of the parent."

Lethal Emotions for the Responder

Fear

- Internalized as weakness
- Antidote: Explain the bodies need for fear

Helplessness

- Internalized as a loss of control which means they have failed
- Antidote: "Purposeful acts of will."

Most Widely Used Defense Mechanism for Trauma Reactions:

ALCOHOL

It is not only accepted in the business, it is encouraged.

Post-incident stress indicators:

Behavioral signs

- Change in activity level
- Change in speech patterns
- withdrawal & isolation
- Emotional outbursts
- Suspiciousness
- Change in communications
- Loss or increased appetite
- Alcohol consumption
- Inability to rest or relax
- Little things bother them
- Hyper-alert to environment
- Bodily complaints
- Exaggerated startle response
- Psycho-motor agitation or retardation
- Change is sexual function
- Staring into space
- Look like day dreaming
- Calling in sick
- Poor work performance
- Relationship problems

Post-Incident stress indicators (Cont.)

Emotional signs:

- Anxiety
- Guilt
- Denial
- Depressed
- Grief
- Shame
- Fear of uncertainty
- Loss of emotional control
- helplessness
- Hopelessness
- Inappropriate emotional response
- Fear and apprehension
- Anger
- Irritability and agitation
- Outbursts of rage
- Flashbacks

Post-Incident stress indicators (Cont.)

Physical signs:

- Fatigue or weakness
- Muscle tremors/twitches
- High pulse or blood pressure
- Rapid heart beat
- Thirst
- Visual problems
- Nausea/vomiting
- Dizziness
- Grinding teeth
- Fainting
- Chest tight or pain
- Chills or sweating
- Difficulty breathing
- Tearful reactions
- Psychomotor agitation or retardation
- Appearance declines

Post-Incident stress indicators (Cont.)

Mental/cognitive signs:

- Confusion
- Difficulty concentrating
- Memory loss or gaps
- Poor decisions
- Impulsiveness
- Hyper-vigilance
- Problem solving difficulty
- Loss of time or place
- Disturbing thoughts
- Nightmares/sleep disturbance
- Intrusive images
- Recurrent recollections
- Obsessive rumination

Signals Of Developing Stress Reactions

- Withdrawal from Normative, Strengthening, or Pleasurable Activities
- Alterations in Mood Patterns: Despondent, Irritable, Anxious
- Physical Symptoms Irrespective of Stimulus
- Loss of Energy/Fatigue after Rest

Impacts Of Stress

- Normal Habit Patterns Altered: Physical, Emotional, Behavioral Changes
- Self-Image and Identification with Others is Altered
- Perceptions and Response Tendencies Altered
- Constant Control of Demeanor under Continuously High Arousal

Vicarious Trauma

VICARIOUS TRAUMA

Vicarious Trauma: is the process of change that happens, over time, because you care about other people who have been hurt, and feel committed or responsible to help them. Over time this process can lead to changes in your psychological, physical, and spiritual well-being.

RISK FACTORS

- That which is used to save others is the very thing that causes injury to ourselves.

RISK FACTORS CONTINUED

We do the job because we care,

Because we are naturally empathetic,

And because many of us have experienced trauma ourselves.

ALWAYS REMEMBER

- *If your compassion does not include yourself, it is incomplete.*

-The Buddha

REACTION TO VICARIOUS TRAUMA

- Difficulty managing your emotions (Stuffing).
- Difficulty accepting or feeling okay about self.
- Problems managing boundaries between self and others.
- Problems with relationships.
- Difficulty making good decisions.
- Physical problems.

[redacted]

Ways to overcome:

- Mindset. Use the negative incident as an opportunity. (ex: 911)
  - Honor your gifts.
  - Don't take things for granted
  - tomorrow is not promised
  - Celebrate your gifts

How to overcome (Cont.):

- Surround yourself with people with positive attitude.
- Exercise
- Proper diet.
- Out side work activities.
- Counseling.
- Focus on positive things in your life.
- Remind self "IT IS ONLY A JOB NOT WHO I AM."

Keys to Enjoying Your Life and Career

- Embrace your freedom to choose how you respond
- Skills only improve with practice
- Devote time to hobbies & activities you enjoy
- Maintain friendships outside of your career
- Spend time with people who are optimistic about life
- Volunteer somewhere for a cause you believe in
- Find the humor everywhere you can grab it...laugh
- Listen to your intuition
- Embrace your "purpose" in life
- Accept that you walk your own unique journey
- Find people you feel safe confiding in
- Learn to live in the moment

Dr. Todd Langus, Psy.D
Trauma Specialist
drtoddlangus@gmail.com

14101 Yorba St. Suite 104
Tustin, CA 92780

(714) 393-6111

Questions?

CALIFORNIA HOSPITAL ASSOCIATION

Thank you

Todd Langus, PsyD
drtoddlangus.gmail.com

2017 Emergency Services Forum

***December 6, 2017**

EVALUATION RESULTS

Attendees were asked to evaluate the conference and speakers on the following five point scale:
1-poor 2-fair 3-average 4-above average 5-excellent

Question	Number of Responses	Responses (Out of 5)
Overall program rating	77	4.53
Question	Yes	No
Did this program meet your educational objectives?	75	2
Were you provided with substantive online materials?	73	4
Did the program update or keep you informed of your professional responsibilities?	75	2
Did the program contain signifigant professional and/or practical content?	74	3
Was the environment suitable for learning?	75	2
Have you ever attended a CHA educational seminar?	56	21
Speaker	Overall Teaching Effectiveness	Knowledge of Subject Matter
Maria Raven	4.70	4.78
Dana Durham	4.47	4.61
Susan Bower	4.62	4.70
Nui Bezaire	4.58	4.70
David Serrano Sewell	4.65	4.71
Abbie Yant	4.69	4.75
Roneet Lev	4.72	4.75
Dimitrios Alexiou	4.63	4.75
Larry Stock	4.61	4.74
Aimee Moulin	4.61	4.68
Stephen V. Cantrill	4.51	4.66
Rose Colangelo	4.74	4.67
Pamela Allen	4.74	4.77
Todd Langus	4.60	4.68
Question	Number of Responses	Responses (Out of 5)
Overall program rating	77	4.53
Question	Yes	No
Did this program meet your educational objectives?	75	2
Were you provided with substantive online materials?	73	4
Did the program update or keep you informed of your professional responsibilities?	75	2
Did the program contain signifigant professional and/or practical content?	74	3
Was the environment suitable for learning?	75	2
Have you ever attended a CHA educational seminar?	56	21

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1-poor 2-fair 3-average 4-above average 5-excellent

Speaker	Overall Teaching Effectiveness	Knowledge of Subject Matter
Maria Raven	4.70	4.78
Excellent		
Informative and was able to keep the audience attention.		
Dana Durham	4.47	4.61
The SHIG is not something a state official should be referring anyone to		
Difficult presentation style		
All 3 of the whole person speakers complimented each other		
Susan Bower	4.62	4.70
Excellent presenter		
Nui Bezaire	4.58	4.70
David Serrano Sewell	4.65	4.71
Abbie Yant	4.69	4.75
Good info		
Roneet Lev	4.72	4.75
Outstanding		
Dimitrios Alexiou	4.63	4.75
Larry Stock	4.61	4.74
Excellent		
Great. I love the 'fire side chat' approach. We need to do something similar next year.		
Aimee Moulin	4.61	4.68
Knowledgeable and passionate.		
Excellent		
Great. Lover her analogy of a patient with multiple complaints and if she should even be in the ER.		
Stephen V. Cantrill	4.51	4.66
A Visual note taker could really add to his text laden presentation. It would make it more visual and comprehension could improve.		
Need another format for data. PowerPoint slides had too much info per slide		
Weak overall presentation, lacking substance		
Rose Colangelo	4.74	4.67
Excellent information		
Dynamic, informative		
Pamela Allen	4.74	4.77
Todd Langus	4.60	4.68
Not quite what I was expecting		
Passionate speaker		

Question	Hospital	Clinic	Freestanding Psychiatric Hospital	County Agency
Please indicate where you work	68	0	0	0
	Consulting Company	Other		
	3	5		

Corporate
Association
ER Educator
Corporate
HASC

2017 Emergency Services Forum

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Question	Chief Executive Officer	Psychiatric Administrators	Nursing Chief/Managers	Legal Counsel
Please indicate your position/department	1	5	30	1
	Clinical Directors	Psychiatrists and Psychologists	Social Workers	Risk Managers
	13	0	0	5
	Emergency Department Staff	Other		
	5	13		

RN
Staff RN
Director
Loss prevention and risk management consulting
Executive Director
House Supervisor
Safety and Risk
Policy
Psych RN
CLINICAL SUPERVISOR
Planner and Architect
Quality
RVP
RN

What areas of the seminar were most beneficial?
All
Please don't serve salmon
Specifics of CDU units and access to the slides
The ER focus ones, for me anyway! :)
Learning what is working and what is not.
Every topic was beneficial
Managing fatigue
Good discussions of changing the future--things we measure will need to be more directed in overall well-being of the patient and the health system.
Care coordination
information on utilizing 'observation bed' status to more quickly move patients with certain diagnoses safely out of the hospital, or admit them; I also appreciated the information on how counties have approached Whole Person Care, and the information on EDIE.
The information on the ED observation units and the updates on new potential core measures for EDs.
Statewide issues engaging funding/planning
The fatigue portion
Managing workplace fatigue should have been earlier in the program. So many times as responder we completely forget to take care of our wellness. Mr. Langus should have also had more time based on the content of his program. It was disheartening for his excellent information to be at the end when almost the entire conference was left with close to 40 people.
The 'fireside chats with Cal ACEP'
Information on San Diego Pilot and Challenges going forward.
ED Observation units
All beneficial to me
The areas relating to the new and unique programs are always helpful. Todd Langus is a great asset to the course, I just wish more people were exposed to his class.
All beneficial to me
Improving ED transitional of Care
Communication between ER (EDIE)
MANAGING WORKPLACE FATIGUE. AND IMPROVING TRANSITION OF CARE IN ER AND HOW TO CONTROL OVERCROWDING ER. CARE COORDINATION FOR PATIENT WHO FREQUENTLY GO TO ER AND BEING ADMITTED IN PSYCH JUST BECAUSE OF LACK OF FOLLOW UP AND MONITORING FOR PROPER TREATMENT. PEOPLE WHO ARE HOMELESS AND HAS NO INSURANCE TO HAVE A FOLLOW UP FOR OUT PATIENT TREATMENT.
Information about EDIE

2017 Emergency Services Forum

***December 6, 2017**

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Behavioral Health issues across California and what others are doing to assist with the issue by providing out patient care and programs that keep patients from coming to the ED.
Leveraging technology to improve information exchange in disparate health information systems - innovation + accountability = successful integration across care continuum.
I really liked the 'Fire side chat' with Dr Lev, Stock and Moulin'.
Todd Langus presentation should have been a show cased presentation to kick off the conference, or before lunch. It was sad to see not many in attendance - his insight was invaluable.
Whole person
Psych EMTALA
Great mix of technical + human stories. Really appreciated the wide range of presentations.
Transition of care, overcrowding in ER
Emergency Care as an Essential Element of an Integrated Heath Care Model
Suggestions for next year's topics
Consider hiring a visual note artist. It's a great way to visually absorb a talk/presentation. And pictures of the visual notes can be sent to attendees with the evaluation.
This year was not as beneficial as past years. Nothing I could bring back to the ED and apply in operations. Everything was theory or greater then one er can implement. Prob will not attend next year
Please don't serve salmon
Medi-Cal Managed Care and 5150 Changes
Shahin Thomas
A bit repetitive--several examples of monitoring the ED parameters--became repetitive. Changing the belief system of ED staff re BH patients still needs some work for the future programs. Nice environment and good organization. Thank you so much!!
Getting set for two tracts again due to size.
Managing workplace fatigue should have been earlier in the program. So many times as responder we completely forget to take care of our wellness. Mr. Langus should have also had more time based on the content of his program. It was disheartening for his excellent information to be at the end when almost the entire conference was left with close to 40 people.
More diverse collaborative groups like prehospital,etc
In the past we have heard about front line programs in EDs that are revolutionizing the way we TREAT patients. This year's program was a bit more of a higher level perspective.
There was some redundancy. It got a little boring at times.
PATIENT WHO ARE ON HOLD OR CONSERVED AND HAS STRAIGHT MEDICAL INSURANCE OR SELF PAY AND THEY ARE MEDICALLY COMPROMISE AND NEEDS A HIGHER LEVEL OF CARE. PLACEMENT ISSUES HOW YOU CAN FIND IMMEDIATE PLACEMENT. COMMON PROBLEM IS A PSYCHOTIC PATIENT WHO IS LESS THAN 20 WEEKS PREGNANT THREATENED ABORTION WITH EPISODE OF BLEEDING AND NEED TO BE TRANSFERRED TO A HIGHER LEVEL OF CARE. SAME WITH PATIENT WHO ARE MORE THAN 20 WEEKS PREGNANT. PSYCH PATIENT IN A NON LPS DESIGNATED ER. HOW TO EXPEDITE THE PSYCH EVALUATION AND THE TRANSFER. COMMON PROBLEM IS PEDIATRIC AND ADOLESCENT PATIENT.
I do not think this symposium is geared towards educators, but rather management with the capability of changing operations of ER. A management team with revenue will benefit from this symposium. I was looking forwards to the regulations of behavioral health patient care because reading manuals can be confusing at times and it would be nice to know if they care we are delivering is both compliant and standard with other hospitals.
Please consider having a visual note taking artist accompanying some of your speakers. The visual approach will be easier to express 'wordy' presentations. Slides of the note boards can be sent to attendees after the conference. Allows attendees to focus on the overall messages - details can be included in the artwork.
More focus on how to deal with aggressive or patients with dementia who can become combative. What is CA or Riverside County doing to assist with the overload in ED's with the lack of inpatient psychiatric facilities.
Caring for high risk psych patients such as pregnant and violent. Medications that are safe as well as how to keep patient safe without use of restraints.Personal encounter of a patient with a success story of how they were treated in the Ed during a psychiatric acute crisis.
Raise the screens and less verbiage on the slides. Fonts too small and unable to see

2017 Emergency Services Forum - CME

***December 6, 2017**

EVALUATION RESULTS

Attendees were asked to evaluate the conference and speakers on the following five point scale:
1-poor 2-fair 3-average 4-above average 5-excellent

Question	Number of Responses		Responses (Out of 5)	
Overall program rating	4		5.00	
As a result of this CME activity, which of these practices do you plan to implement and/or change to improve your CME activities:	Definitely	Maybe	No Change Needed	
Session Title: Emergency Department Information Exchange and High ED Utilizers Objective: Describe the benefits to patient care associated with using an emergency department information exchange system.	4	0	0	
Session Title: Whole Person Care Objective: Define the elements of a Whole Person Care pilot and provide an example of how a health information exchange could be used between different health care delivery services.	3	1	0	
Session Title: San Francisco Pilot Program — Behavioral Health Focus (Breakout) Objective: Examine the process one hospital in San Francisco employed to improve patient management, in particular patients suffering from mental illness, while reducing ambulance patient offload delay.	2	1	1	
Session Title: San Diego Pilot Program — Care Coordination Focus (Breakout) Objective: Analyze ED usage data to determine which practices and services should be the focus of the ED treatment model.	2	1	0	
Session Title: Emergency Care as an Essential Element of an Integrated Health Care Model Objective: Explain CalACEP's regional and statewide efforts to reduce ED overcrowding and the steps they are taking to speed and improve access to patient care.	3	1	0	
Session Title: Improving Emergency Department Transitions of Care — Can it Help with ED Overcrowding? Objective: Describe the National Quality Forum's preliminary recommendations related to transitions of care and the impact on EDs.	2	2	0	
Session Title: Managing ED Observation with Clinical Decision Areas (Breakout) Objective: Describe the benefits of a clinical decision area within the ED.	3	1	0	
Session Title: APOD 3.0 -- Using Technology to Improve Offload Delay (Breakout) Objective: Explain how technology can improve patient experience and safety while achieving reductions in APOD.	1	0	2	

2017 Emergency Services Forum - CME

***December 6, 2017**

EVALUATION RESULTS

Attendees were asked to evaluate the conference and speakers on the following five point scale:
1-poor 2-fair 3-average 4-above average 5-excellent

Speaker	Overall Teaching Effectiveness	Knowledge of Subject Matter
Maria Raven	4.75	4.75
Dana Durham	4.75	4.50
Susan Bower	4.75	4.75
Nui Bezaire	4.50	4.50
David Serrano Sewell	4.50	4.50
Abbie Yant	4.67	4.67
Roneet Lev, MD	4.67	4.67
Dimitrios Alexiou	4.67	4.67
Larry Stock, MD, FACEP	4.75	4.75
Aimee Moulin, MD	4.75	4.75
Stephen Cantril, MD, FACEP	4.50	4.50
Rose Colangelo, RN, MSN	4.75	4.75
Pamela Allen, RN, MSN, CEN	4.50	4.50
Todd Langus, PsyD	4.50	4.50

Question	Number of Responses	Responses (Out of 5)
Overall program rating	4	5.00

Speaker	Overall Teaching Effectiveness	Knowledge of Subject Matter
Maria Raven	4.75	4.75
Dana Durham	4.75	4.50
Susan Bower	4.75	4.75

What else did you take away from this activity that you might use in your practice?

Information exchange system among all providers is crucial.

List any barriers you must overcome to implement your planned improvements or changes

Financial support to include all community partners in the IE system.

List additional improvements or changes you plan to make as a result of attending this activity

Was there evidence of commercial bias in this presentation? If Yes, please explain

CHA ED Forum

December, 2017

Sponsors

- Capture Technologies
- Collective Medical Technologies
- Galen US Inc.
- KLA Risk Consulting
- OBP Medical
- The Abaris Group
- The Medicine Company
- University of St. Augustine for Health Sciences

Sponsorship Options

Emergency Services Forum
December 12, 2018, Riverside Convention Center

CALIFORNIA HOSPITAL ASSOCIATION

Why sponsor? In the exhibit area, participants will be able to interact with decision makers of hospital emergency departments.

What's the display space like? Sponsors will have a tabletop display in the exhibit area.

Who are our attendees? Emergency department leaders including emergency department physicians, chief nursing officers, emergency department supervisors, hospital administrators, EMS personnel and public health officials.

How many attend? Approximately 200+ participants each year.

Select Your Level of Participation

Benefits	Platinum Sponsor $3,500	Gold Sponsor $2,500	Silver Sponsor $1,500
Exclusive promotion of keynote or luncheon	√		
Exhibit table with electricity in exhibit area	√	√	√
Complimentary registrations to the educational program	2	1	1
Company logo on Emergency Services Forum website	√	√	√
Color ad in rotating PowerPoint slides and signage shown in the exhibit area	1	1	1
Acknowledgement at the beginning of the program	√	√	√
Attendee list	√	√	√

Additional Fees

$345 (Wed. only) Registration for *each additional* representative

Where and When

December 12, 2018
Riverside Convention Center
3637 Fifth Street
Riverside, CA 92501

Contact

Lisa Hartzell
Director, Education Operations
(916) 552-7502
lhartzell@calhospital.org
www.calhospital.org/promotional-opportunities

CHA reserves the right to decline exhibitor applications.

Exhibit Rules

CALIFORNIA HOSPITAL ASSOCIATION

Emergency Services Forum
December 12, 2018, Riverside Convention Center

Space Assignments
Assignment of tables will be made by the California Hospital Association (CHA) based on the following criteria: exhibitor level, order in which reservations are received, number of tables purchased, suitability and availability of locations.

Space and Services Included in Fee
Space charge is included in exhibitor fee. Items provided are: draped 6-foot table, 2 chairs, table-tent card with company name. Exhibitors are also listed in the conference program with a description of up to 75 words.

Exhibit Refund Policy
Exhibit fees are NON-REFUNDABLE.

Preliminary Exhibit Dates and Hours
(Date/Times are approximate and subject to change)

Location: Riverside Convention Center

Wednesday, December 12
Set-up: 6:00 a.m. – 7:00 a.m.
Viewing: 7:00 a.m. – 4:30 p.m.
Dismantling: 4:30 p.m.

Exhibit Set-up and Clean-up
Set-up of exhibits must be completed and ready for inspection by **7:00 a.m. on Wednesday, December 12**. No set-up work will be permitted after this time without specific permission from CHA. Exhibitors are prohibited from dismantling their exhibits until the designated tear-down time of **4:30 p.m. on Wednesday, December 12**. It is the responsibility of the exhibitor to remove all materials from the exhibit area on Tuesday.

Admittance to the Forum
Exhibit hall admittance is limited to symposium attendees and company representatives who have contracted and paid for exhibit space.

Eligible Exhibits
CHA reserves the right to refuse rental of display space, exhibit, or any part of an exhibit to any company.

Exhibitor Raffle
Exhibitors will have an opportunity to give prizes to the attendees. Each exhibitor is limited to two raffle prizes minimum value of $100 is recommended.

How the Prize Drawing Works!
An exhibit tour card with a list of each participating vendor will be made available within the exhibit area. To enter and win a prize, the attendee must receive a sticker (CHA will provide stickers) from all vendors. Once they have visited each vendor they can enter the completed card in the raffle prize basket. The raffle will take place at the last break. A CHA representative will ask you to come up and draw the winner of your prize. The attendee must be present to win and CHA will provide the winner's contact information to the donating exhibitor.

Fire and Safety
All flammable materials must be flame proofed before being placed in the exhibit area. All materials and installations are subject to the fire and safety regulations in force by state and/or city fire authorities. Exhibitors must provide certification of flame proofing if requested by show management or the fire department. Volatile or flammable fluids, substances or materials of any nature are prohibited in any booth.

Social Functions
Social functions sponsored by exhibitors must not be scheduled during exhibit hours or during the CHA education program. Any function not approved by CHA that would compete for attendees' time, either during the hours of the exhibition or hours of educational sessions, general sessions or programs is prohibited.

Security
Exhibitors are responsible for any valuables at their booth. Security guards will be present at all times.

Exhibitor Checklist

Emergency Services Forum
December 12, 2018, Riverside Convention Center

Please provide the following by **November 15, 2018**

- Exhibit fees—make checks payable to CHA/CAHHS or provide Visa, MasterCard or American Express number with expiration date.
- Company logo in high resolution .jpeg file format.
- Artwork for a full color advertisement rotating in exhibit area.
  Dimension of ad: 13"w x 10"h. Ad submitted as a .jpeg file.
- A short description of your organization (75 words or less).
- A description of your tabletop, dimensions, and product(s) being displayed.
- A description of items you may wish to contribute for the Exhibit show raffle prize drawing.
  **minimum value of $100 is recommended*

All materials can be submitted via email: lhartzell@calhospital.org • Fax: 916-552-7506
Mail: CHA, Education Department, 1215 K Street, Suite 800, Sacramento, CA 95814

Hotel & Exhibit Information

- The Mission Inn Hotel & Spa has discounted sleeping rooms available starting at $185 for single or double occupancy. For reservations, call (800) 843-7755 and mention the California Hospital Association to receive the discounted rate. Discount deadline is **November 15**.
- Additional sleeping rooms are available nearby at the Marriott Riverside at the Convention Center for $145, single or double occupancy. For reservations, call (800) 228-9290 and mention the California Hospital Association to receive the discounted rate. Discount deadline is **November 15**.
- Exhibit area includes one draped, 6 ft table, (2) chairs and a name tent listing your company's name. Please contact Lisa Hartzell at (916) 552-7502 or lhartzell@calhospital.org if you would like electricity at your tabletop and have not already signed up for it.
  NOTE: This is a table top exhibit. Each exhibitor will have roughly 8ft of space to display (this includes the 6ft table), so please plan accordingly.
- Shipping information: Packages must arrive **no sooner than Thursday, December 6, 2018.**
  Ship to: **Riverside Convention Center**
  Event Name/Date: Emergency Services Forum; Dec. 12, 2018
  ATTN: Pamela Sturrock
  3637 Fifth Street,
  Riverside, CA 92501

  *Please include your company name on the shipping label so the Convention Center knows to look out for your package.

Exhibit Schedule on **Wednesday, December 12**

- **Set-up:** 6:00 a.m. – 7:00 a.m.
- **Viewing:** 7:00 a.m. – 4:30 p.m.
- **Dismantling:** 4:30 p.m.

Application

CALIFORNIA HOSPITAL ASSOCIATION

Emergency Services Forum
December 12, 2018, Mission Inn Hotel & Spa and Riverside Convention Center

Submit Completed Application

Fax: (916) 552-7506
E-mail: lhartzell@calhospital.org
Mail: California Hospital Association
Education Department
1215 K Street, Suite 800, Sacramento, CA 95814
Questions: Lisa Hartzell, (916) 552-7502

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**Make checks payable to "CAHHS/CHA"*

Attending Representatives

Please list exactly as you wish it to appear in conference program.

Representative #1:

Title:

Telephone:

E-mail *(required)*:

Representative #2:

Title:

Telephone:

E-mail *(required)*:

Representative #3 *(Gold/Platinum Exhibitors Only)*:

Title:

Telephone:

E-mail *(required)*:

Representative #4 *(Platinum Exhibitors Only)*:

Title:

Telephone:

E-mail *(required)*:

Company Information

Please list your company name as you wish it to appear in marketing materials.

Company:

Contact Name/Title:

Address:

Telephone:

E-mail:

Company web address:

Please provide a brief description about your company. This description will be used in marketing materials. Please adhere to 75 words. CHA reserves the right to alter your description for marketing purposes.

Please list special request consideration in table assignments (e.g., companies you do not wish to be located next to). List specific company names, not products or services. CHA cannot guarantee requests will be met but will make every effort to accommodate them.

Authorization

Exhibitor assumes responsibility and agrees to indemnify and defend the California Hospital Association and the Riverside Convention Center and their respective employees and agents against any claims or expenses arising out of the use of the exhibition premises. The Exhibitor understands that neither the California Hospital Association nor the Riverside Convention Center maintains insurance covering the Exhibitor's property, and it is the sole responsibility of the exhibitor to obtain such insurance Our company shall be bound by the terms and conditions in the Exhibitor Rules information material.

Authorized Signature: Date

Save the Date

4th Annual

Emergency Services Forum

December 13, 2018

The Mission Inn & Riverside Convention Center

Riverside, CA

CALIFORNIA HOSPITAL ASSOCIATION

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, MS, RN, NEA-BC, VP Nursing & Clinical Services

SUBJECT: Emergency Care Systems Initiative (ECSI) Update

SUMMARY

As you recall, the Emergency Care Systems Initiative (ECSI) is our most formal and perhaps first effort to manage an issue at all levels of government rather than being bill centric. All four boards endorsed this initiative in 2016-17 and we have been educating or new CEO, Carmela Coyle about the work.

CHA is closely engaged with potential funders for ECSI. CARESTAR, our potential funder will be officially able to apportion grant funds in April and CHA has submitted Request for Proposals to numerous firms to assist with the initiative implementation. The proposals will be reviewed next week and we anticipate stakeholder convening to begin by May 1, 2018.

We are reviewing the stakeholder list to see if any additional stakeholders need to be added or deleted (see Stakeholder List attached). We are also contemplating what metrics we should measure that we do not have now to gauge ED crowding, costs, quality and patient satisfaction.

San Francisco and San Diego will update us on the ECSI type activity occurring in their areas.

DISCUSSION QUESTIONS:

1. What ED metrics are being tracked presently, and what metrics would we need to develop a well-rounded Emergency Services Report card? (See ACEP Report Card Attached)
2. What stakeholders need to be added or deleted?

Attachments: Stakeholder List
ACEP Report Card – California
Coordination Program Reduce Acute Care Use article – Health Affairs, October 2017
Emergency Department Visits for Firearm-Related Injuries in the US article – Health Affairs, October 2017
Persistent Frequent Emergency Department Use article – Health Affairs, October 2017

BJB:br

STAKEHOLDERS

A. Healthcare
   1. Federal
      a. American Hospital Association (AHA)
      b. US Department of Health and Human Services (HHS)
      c. Centers for Medicare and Medicaid (CMS)
      d. American Medical Association (AMA)
      e. American Dental Association (ADA)
   2. State
      a. California Department of Health Care Services (DHCS)
      b. California Hospital Association (CHA)
      c. CHA Emergency Services/Trauma Committee
      d. CHA Center for Behavioral Health
      e. CHA Rural Healthcare Center
      f. CHA Center for Post-Acute Care
      g. California Association of Health Plans (CAPH)
      h. California Emergency Nurses Association (ENA)
      i. Association of California Nurse Leaders (ACNL)
      j. California American College of Emergency Physicians (California ACEP)
      k. California Trauma Managers (TMAC)
      l. California Association of Public Hospitals (CAPH)
      m. California Association of Health Facilities (CAHF)
      n. California Children's Hospital Association (CCHA)
      o. State Community Health Center Consortia
      p. California Health Clinics (CPCA)
      q. California Medical Association (CMA)
      r. Health Officers Association of California
   3. Regional/Local
      a. Hospital Council of Northern and Central California (HC)
      b. Hospital Association of Southern California (HASC)
      c. Hospital Association of San Diego and Imperial Counties (HASDIC)
      d. Trauma Hospital(s) Representation

e. Community Hospital(s) Representation
f. Rural Hospital(s) Representation
g. Critical Access Hospital(s) Representation
h. Psychiatric Hospitals
i. Local Community Health Center Consortia
j. County Clinic Consortia
k. Local EMS groups
l. Local Medical Societies

4. Local LEMSA Directors, Medical Directors

B. Public Health

1. Federal
2. State
   a. California Department of Public Health (CDPH)
   b. California Behavioral Healthcare Directors Association (CBHDA)
   c. California Public Health Association (CPHA)
   d. California State Association of Counties (CSAC)
   e. California Welfare Directors Association (CWDA)
3. Regional/Local
   a. County Director of Public Health
   b. County Director of Behavioral Health
   c. County Director of Social Services

C. Public Safety

1. Federal
2. State
   a. Emergency Services Authority (EMSA)
   b. Emergency Medical Services Administrator Association (EMSAAC)
   c. Emergency Medical Directors Association (EMDAC)
   d. State Law Enforcement, Police and Sheriff
   e. California Professional Firefighters
   f. California Association of Firefighters
   g. California Fire Chiefs
   h. California Ambulance Association

3. Regional/Local
    a. Local EMS Agency Directors
    b. City and County Fire Chiefs
    c. City and County Law Enforcement, Police and Sheriff
    d. Local Ambulance providers

D. Health Care Consumers
1. Federal
    a. AARP
    b. NAMI
    c. Veterans Associations
2. State
    a. NAMI State Chapters
    b. AARP – California
3. Local
    a. County/Region based chapters of consumer advocate organizations

E. Health Care Payers
1. Federal
2. State
    a. California Association of Health Plans
    b. California Behavioral Health Directors Association (CBHDA)
    c. California Department of Health Care Services (DHCS)
    d. Local Health Plans of California (LHPC)
3. Local
    a. CEOs of local initiative Medi-Cal managed care plans

California

C-

California continues to rank among the top 10 states for *Public Health and Injury Prevention* and has improved in three of the other four categories. However, this large and diverse state suffers from poor overall *Access to Emergency Care*, with an inadequate supply of medical facilities and low rates of health insurance coverage.

Strengths. California is a national leader in *Public Health and Injury Prevention*. It has extremely low rates of adult smoking (13.7%) and obesity (23.8%). California's infant mortality rate (4.7 per 1,000 live births) is among the lowest in the nation, and the infant mortality disparity ratio is better than average. California has implemented strong child safety seat and seat belt legislation, primary enforcement of distracted driving laws, and requires motorcycle helmet use for all riders. These state policies, in concert with the provision of outstanding trauma care in a large state where 97.7% of the population lives within 60 minutes of a Level I or II trauma center, contribute to a low overall rate of traffic fatalities (5.3 per 100,000 people).

California continues to support a favorable *Medical Liability Environment* and has been rewarded with lower-than-average medical liability insurance premiums, which will help recruit physicians to the state and improve access to emergency care. The state encourages physician apologies by preventing them from being admitted as evidence in a trial. California has enacted a $250,000 cap on non-economic damages in medical liability cases, which helps to control health care costs by keeping medical liability insurance premiums affordable.

Overcrowding and lack of medical specialty facilities are critical problems affecting Californians' access to emergency care.

California has also improved in *Disaster Preparedness* since the 2009 Report Card. It is one of only 11 states that has a state budget line item for disaster preparedness funding specific to health care surge. In 2011, it conducted more than nine emergency drills per hospital involving hospital personnel, equipment, or facilities. California has been accredited by the Emergency Management Accreditation Program.

Challenges. California continues to struggle with provider and facility shortages in *Access to Emergency Care*. Overcrowding and lack of access to needed medical facilities are critical problems for the state. California has the lowest number of emergency departments (ED) per capita (6.7 per 1 million people) and lacks adequate numbers of staffed inpatient beds (223.8 per 100,000 people) and psychiatric care beds (18.3 per 100,000 people). The state also has extremely low rates of orthopedists and hand surgeon specialists (8.5 per 100,000 people) and registered nurses (664.0 per 100,000 people), and has a shortage of physicians accepting Medicare fee-for-service patients. All these factors contribute to high ED wait times, which average 334 minutes (or 5.6 hours) from ED arrival to ED departure for admitted patients.

Financial barriers to care persist in California, impeding access to care. The state has one of the highest rates of adults with no health insurance (22.7%) and a high rate of children with no health insurance (10.8%). It also has moderately high rates of underinsurance for adults (8.2%) and children (18.9%).

While California has regionalized much of its emergency medical services (EMS), there are some key aspects of the *Quality and Patient Safety Environment* that the state could support, including funding for quality improvement of the EMS system and the development of state field triage protocols. California lacks a statewide trauma registry and a uniform system for providing pre-arrival instructions.

Recommendations. California must work to address a number of issues in *Access to Emergency Care*, including a gap in medical facilities, financial barriers to care, and long wait times in the emergency department. It should invest in ensuring that its citizens can afford doctor visits. Without a concentrated effort to increase the health care workforce and support adequate facilities, the problem of overcrowding will worsen.

	2009		2014	
	Rank	Grade	Rank	Grade
Access to Emergency Care	51	F	42	F
Quality & Patient Safety Environment	44	D-	32	C-
Medical Liability Environment	9	B-	20	C+
Public Health & Injury Prevention	6	B+	10	B+
Disaster Preparedness	40	D+	30	C-
OVERALL	37	D+	23	C-

Despite its improved *Disaster Preparedness* grade, California should consider developing additional statewide systems and procedures to ensure that all citizens are protected in the event of a disaster. California does not have a statewide patient tracking system or a real-time or near real-time syndromic surveillance system. While this kind of surveillance system has been installed in some counties, the state could work to ensure that all counties have access to this technology.

California could also improve its overall emergency care system by enhancing its *Medical Liability Environment*, including pretrial screening panels or case certification, which would help discourage frivolous lawsuits. Additional liability protection for care mandated by the Emergency Medical Treatment and Labor Act (EMTALA) would help ensure fairness regarding the liability burden placed on emergency care providers and help encourage specialists to be on call for high-risk patients.

ACCESS TO EMERGENCY CARE	F
Board-certified emergency physicians per 100,000 pop.	10.5
Emergency physicians per 100,000 pop.	12.9
Neurosurgeons per 100,000 pop.	1.8
Orthopedists and hand surgeon specialists per 100,000 pop.	8.5
Plastic surgeons per 100,000 pop.	3.1
ENT specialists per 100,000 pop.	3.3
Registered nurses per 100,000 pop.	664.0
Additional primary care FTEs needed per 100,000 pop.	1.7
Additional mental health FTEs needed per 100,000 pop.	0.4
% of children able to see provider	93.1
Level I or II trauma centers per 1M pop.	1.2
% of population within 60 minutes of Level I or II trauma center	97.7
Accredited chest pain centers per 1M pop.	0.8
% of population with an unmet need for substance abuse treatment	9.1
Pediatric specialty centers per 1M pop.	3.2
Physicians accepting Medicare per 100 beneficiaries	2.9
Medicaid fee levels for office visits as a % of the national average	123.4
% change in Medicaid fees for office visits (2007 to 2012)	108.7
% of adults with no health insurance	22.7
% of adults underinsured	8.2
% of children with no health insurance	10.8
% of children underinsured	18.9
% of adults with Medicaid	12.9
Emergency departments per 1M pop.	6.7
Hospital closures in 2011	0
Staffed inpatient beds per 100,000 pop.	223.8
Hospital occupancy rate per 100 staffed beds	69.8
Psychiatric care beds per 100,000 pop.	18.3
Median minutes from ED arrival to ED departure for admitted patients	334
State collects data on diversion	Yes

MEDICAL LIABILITY ENVIRONMENT	C+
Lawyers per 10,000 pop.	17.7
Lawyers per physician	0.6
Lawyers per emergency physician	13.7
ATRA judicial hellholes (range 2 to -6)	-2
Malpractice award payments/ 100,000 pop.	2.1
Average malpractice award payments	$143,192
Databank reports per 1,000 physicians	27.7
Provider apology is inadmissible as evidence	Yes
Patient compensation fund	No
Number of insurers writing medical liability policies per 1,000 physicians	1.1
Average medical liability insurance premium for primary care physicians	$9,834
Average medical liability insurance premium for specialists	$39,135
Presence of pretrial screening panels	No
Pretrial screening panel's findings admissible as evidence	N/A
Periodic payments	Upon request
Medical liability cap on non-economic damages	$250,000
Additional liability protection for EMTALA-mandated emergency care	No
Joint and several liability abolished	Partially
Collateral source rule, provides for awards to be offset	Yes, No offset
State provides for case certification	No
Expert witness must be of the same specialty as the defendant	No
Expert witness must be licensed to practice medicine in the state	No

QUALITY & PATIENT SAFETY ENVIRONMENT	C-
Funding for quality improvement within the EMS system	No
Funded state EMS medical director	Yes
Emergency medicine residents per 1M pop.	14.1
Adverse event reporting required	Yes
% of counties with E-911 capability	100.0
Uniform system for providing pre-arrival instructions	No
CDC guidelines are basis for state field triage protocols	No protocols
State has or is working on a stroke system of care	Yes
Triage and destination policy in place for stroke patients	Yes
State has or is working on a PCI network or a STEMI system of care	Yes
Triage and destination policy in place for STEMI patients	Yes
Statewide trauma registry	No
Triage and destination policy in place for trauma patients	Yes
Prescription drug monitoring program (range 0-4)	2
% of hospitals with computerized practitioner order entry	81.9
% of hospitals with electronic medical records	94.6
% of patients with AMI given PCI within 90 minutes of arrival	94
Median time to transfer to another facility for acute coronary intervention	64
% of patients with AMI who received aspirin within 24 hours	99
% of hospitals collecting data on race/ ethnicity and primary language	44.4
% of hospitals having or planning to develop a diversity strategy/plan	35.3

PUBLIC HEALTH & INJURY PREVENTION	B+
Traffic fatalities per 100,000 pop.	5.3
Bicyclist fatalities per 100,000 cyclists	3.0
Pedestrian fatalities per 100,000 pedestrians	5.9
% of traffic fatalities alcohol related	32
Front occupant restraint use (%)	96.6
Helmet use required for all motorcycle riders	Yes
Child safety seat/seat belt legislation (range 0-10)	8
Distracted driving legislation (range 0-4)	4
Graduated drivers' license legislation (range 0-5)	1
% of children immunized, aged 19-35 months	80.4
% of adults aged 65+ who received flu vaccine in past year	57.2
% of adults aged 65+ who ever received pneumococcal vaccine	68.1
Fatal occupational injuries per 1M workers	19.0
Homicides and suicides (non-motor vehicle) per 100,000 pop.	16.1
Unintentional fall-related fatal injuries per 100,000 pop.	5.6
Unintentional fire/burn-related fatal injuries per 100,000 pop.	0.4
Unintentional firearm-related fatal injuries per 100,000 pop.	0.2
Unintentional poisoning-related fatal injuries per 100,000 pop.	9.6
Total injury prevention funds per 1,000 pop.	$272.29
Dedicated child injury prevention funding	Yes
Dedicated elderly injury prevention funding	No
Dedicated occupational injury prevention funding	No
Gun-purchasing legislation (range 0-6)	5
Anti-smoking legislation (range 0-3)	0
Infant mortality rate per 1,000 live births	4.7
Binge alcohol drinkers, % of adults	18.6
Current smokers, % of adults	13.7
% of adults with BMI >30	23.8
% of children obese	15.1
Cardiovascular disease disparity ratio	2.8
HIV diagnoses disparity ratio	9.6
Infant mortality disparity ratio	2.4

DISASTER PREPAREDNESS	C-
Per capita federal disaster preparedness funds	$6.98
State budget line item for health care surge	Yes
ESF-8 plan shared with all EMS and essential hospital personnel	Yes
Emergency physician input into the state planning process	Yes
Public health and emergency physician input during an ESF-8 response	Yes
Drills, exercises conducted with hospital personnel, equipment, facilities per hospital	9.5
Accredited by the Emergency Management Accreditation Program	Yes
Special needs patients in medical response plan	Yes
Patients on medication for chronic conditions in medical response plan	No
Medical response plan for supplying dialysis	No
Mental health patients in medical response plan	No
Medical response plan for supplying psychotropic medication	No
Mutual aid agreements with behavioral health providers	State-level
Long-term care and nursing home facilities must have written disaster plan	Yes
State able to report number of exercises with long-term care or nursing home facilities	Yes
"Just-in-time" training systems in place	County- or city-wide
Statewide medical communication system with one layer of redundancy	Yes
Statewide patient tracking system	No
Statewide real-time or near real-time syndromic surveillance system	No
Real-time surveillance system in place for common ED presentations	No
Bed surge capacity per 1M pop.	358.8
ICU beds per 1M pop.	236.5
Burn unit beds per 1M pop.	5.3
Verified burn centers per 1M pop.	0.2
Physicians in ESAR-VHP per 1M pop.	43.7
Nurses in ESAR-VHP per 1M pop.	180.0
Behavioral health professionals in ESAR-VHP per 1M pop.	8.3
Strike teams or medical assistance teams	Yes
Disaster training required for essential hospital, EMS personnel	NR
Liability protections for health care workers during a disaster (range 0-4)	4
% of RNs received disaster training	43.7

NR = Not reported
N/A = Not applicable

By Roberta Capp, Gregory J. Misky, Richard C. Lindrooth, Benjamin Honigman, Heather Logan, Rose Hardy, Dong Q. Nguyen, and Jennifer L. Wiler

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HEALTH AFFAIRS 36,
NO. 10 (2017): 1705–1711

Coordination Program Reduced Acute Care Use And Increased Primary Care Visits Among Frequent Emergency Care Users

ABSTRACT Many high utilizers of the emergency department (ED) have public insurance, especially through Medicaid. We evaluated how participation in Bridges to Care (B2C)—an ED-initiated, multidisciplinary, community-based program—affected subsequent ED use, hospital admissions, and primary care use among publicly insured or Medicaid-eligible high ED utilizers. During the six months after the B2C intervention was completed, participants had significantly fewer ED visits (a reduction of 27.9 percent) and significantly more primary care visits (an increase of 114.0 percent), compared to patients in the control group. In a subanalysis of patients with mental health comorbidities, we found that recipients of B2C services had significantly fewer ED visits (a reduction of 29.7 percent) and hospitalizations (30.0 percent), and significantly more primary care visits (an increase of 123.2 percent), again compared to patients in the control group. The B2C program reduced acute care use and increased the number of primary care visits among high ED utilizers, including those with mental health comorbidities.

Roberta Capp (roberta.capp@ucdenver.edu) is an assistant professor and director for care transitions in the Department of Emergency Medicine, University of Colorado School of Medicine, and medical director of Colorado Access Medicaid, both in Aurora.

Gregory J. Misky is an associate professor in the Hospitalist Division, Department of Internal Medicine, at the University of Colorado School of Medicine.

Richard C. Lindrooth is a professor in the Department of Health Systems, Management, and Policy at the Colorado School of Public Health, in Aurora.

Benjamin Honigman is a professor in the Department of Emergency Medicine, University of Colorado School of Medicine.

Heather Logan is director of the Accountable Care Collaborative for the Metro Community Provider Network, in Arvada, Colorado.

Rose Hardy is a graduate student in the Department of Health Systems, Management, and Policy at the Colorado School of Public Health.

Dong Q. Nguyen is an analyst in the Department of Emergency Medicine at the University of Colorado School of Medicine.

High utilizers of acute care services—patients who use the emergency department (ED) or require hospitalization multiple times per year—are often insured by Medicaid.[1–4] Ten percent of ED visits made by Medicaid beneficiaries are considered low acuity, but Medicaid beneficiaries visit the ED six to seven times more often than privately insured patients.[5,6] This discrepancy arises from the specific needs of Medicaid beneficiaries, who consistently note their lack of access to health and social care (for instance, a lack of transportation options or timely access to a primary care provider).[7–9] Studies show that providing care coordination services and better access to primary care can reduce waste in health care spending.[10] Therefore, in 2013 the Centers for Medicare and Medicaid Services (CMS) urged states to implement care coordination programs and improve access to primary care to reduce ED use and hospital admissions among high utilizers.[11]

Several programs to address low-income high utilizers of the ED in the United States have been implemented and evaluated. Most of them focused on ED care coordinators who developed care plans, addressed social determinants of health, and coordinated appointments with providers of outpatient care.[12] However, these programs were hospital based and had been developed with little or no involvement by the communities they aimed to help.[12] In addition, they had varying effectiveness on reducing ED use, and some even increased it.[13,14] These mixed results have been attributed to a dearth of community members' primary care engagement, effective behavioral health services, and coaching for the target patient population.[12]

One program that addresses some of these limitations was developed by the Camden Coali-

Jennifer L. Wiler is an associate professor in and vice chair of the Department of Emergency Medicine, University of Colorado School of Medicine.

tion of Healthcare Providers.[15] It uses multidisciplinary, community-based primary care and care coordination, as well as hotspotting—a data-driven process for quickly identifying extreme patterns of utilization.[16] The results of the program, including a 48 percent reduction in hospital use within six months, attracted national attention.[17,18] However, the analysis of results lacked a control group and thus did not account for regression to the mean, which could yield an expected reduction in visit frequency over time even with no intervention.[17,18]

To address such gaps, we implemented Bridges to Care (B2C), an ED-initiated, multidisciplinary, community-based program. B2C was one of four sites funded by a Center for Medicare and Medicaid Innovation grant to help other cities adopt the Camden Coalition approach. It was led by the Rutgers University Center for State Health Policy and developed in collaboration with four Colorado community stakeholders: an urban academic hospital, a network of thirteen local federally qualified health centers, a mental health clinic program, and a community advocacy organization. In this article we compare participants in the B2C program with patients who received standard care (the control group) with respect to three outcomes: ED use, hospital admission, and primary care use.

Study Data And Methods

PROGRAM DESCRIPTION B2C, a multidisciplinary program based on the Camden Coalition model, was developed collectively by the community and health care provider stakeholders and the Innovation Center project sites.[16] It provides intensive medical, behavioral health, and social care coordination services, with up to eight home visits within sixty days of an ED visit or hospital discharge from a team comprising a primary care provider, care coordinator, health coach, behavioral health evaluator, and community health worker (all of whom are employed by the local federally qualified health center). The up-front investment in building the infrastructure of the program was $500,000 over one year. The ongoing cost of the program is estimated to be $640 per sixty-day intervention per patient.

The B2C intervention begins with enrollment, a brief assessment, and scheduling of home visits while the patient is still in the ED or hospital. The first home visit occurs 24–72 hours after the enrollment date and is conducted by the community health worker and the care coordinator to complete the enrollment forms, provide the patient with B2C contact information, and talk about the patient's goals. The second visit is conducted by the primary care provider within one week of the ED visit or hospital discharge. At the third and fourth visits, conducted within thirty days of program enrollment, behavioral health evaluators and primary care providers do a behavioral health screening and address the patient's acute medical issues. The fifth and sixth visits are conducted by various team members (for instance, the community health worker and primary care provider), depending on the patient's needs. The final two visits are conducted by the health coach, care coordinator, and primary care provider. In these two visits, the aforementioned providers help the patient learn empowerment skills, take advantage of "teach back" opportunities (a technique in which the patient is asked to summarize the results of a medical visit with the provider to ensure that the patient understands the results and next steps), and help the patient transition out of the program and successfully into his or her primary care clinic.

As part of the initial assessment, all enrollees can choose to be interviewed by a liaison from a community advocacy organization about their experiences with the health care system. Each individually tailored sixty-day care plan and associated patient services can include assistance with obtaining housing resources, insurance or disability benefits, refugee services, and access to transportation; coordinating primary and specialty care; and filling prescriptions. A behavioral health evaluator conducts depression screenings and provides Screening, Brief Intervention, and Referral to Treatment services to all clients.

Upon completing the sixty-day program, enrollees have their health care services transitioned to the primary care medical home at the federally qualified health center. Successful B2C "graduates" are offered the chance to become peer-to-peer advocates for active B2C enrollees.

This retrospective cohort study involved high utilizers of acute (ED and inpatient) care at the ED of a large urban academic medical center who were enrolled in B2C in the period January 2013–October 2014. The Colorado Multiple Institutional Review Board approved the study.

STUDY OUTCOMES We assessed the impact of B2C participation on subsequent ED use (the primary outcome) and subsequent hospitalization and primary care use (the secondary outcomes). We also conducted a subanalysis of patients who had a mental health diagnosis.

TARGET POPULATION *High utilizers* were defined as people ages eighteen and older from the local community who had had two or more ED visits or hospital admissions within the previous 180 days and who either reported having a primary care provider at the partner federally qualified health center or reported having no

primary care provider. We excluded patients who were pregnant; had a primary diagnosis of substance use disorder (defined as a diagnosis related to the use of alcohol, stimulants, opioids, or hallucinogens), active malignancy, or end-stage renal disease; had a caregiver or power of attorney who was making primary decisions; had had a psychiatric hospitalization during the previous 180 days; or had undergone major surgery in the past month. High utilizers with severe mental illness and substance use disorder diagnoses were excluded because the intervention did not have sufficient clinical capacity to treat such patients adequately. Nonetheless, approximately 6 percent of all B2C enrollees had substance use disorders at B2C team evaluation and screening and received referrals to the local detoxification center from B2C staff members. The B2C program aimed primarily to serve high utilizers who were Medicaid beneficiaries, but it also enrolled high utilizers who were not insured but eligible for Medicaid or were insured by Medicare.

High utilizers were electronically flagged in real time on the ED patient track board, using data from patients' electronic health records (EHRs). During business hours on weekdays, the program's community health worker conducted outreach and enrollment while the patient was in the ED. At other times, ED care team providers (physicians and nurses) could electronically refer clients to the community health worker, who would follow up by phone. The community health worker also received a daily list of patients from the previous day's ED visits, for telephonic outreach and enrollment.

CONTROL GROUP The patients in the control group met all eligibility criteria for B2C at the time of their ED visit but were not enrolled in B2C for one of the following reasons: the index ED visit occurred when a study coordinator was not present, the patient declined to participate, or the patient was erroneously excluded during the screening process. Control patients were retrospectively identified from information collected in the ED.

To control for nonrandom enrollment in B2C, we estimated a propensity score and constructed inverse probability weights, a method described below and in the online Appendix.[19]

DATA We combined data about 63,546 patients of the program's participating federally qualified health center with data from the enrollment hospital and another local hospital, because a previous study found that 58 percent of high utilizers use multiple hospitals.[2] This combination resulted in a total of 17,948 people who were patients of the participating federally qualified health center and had visited the enrollment hospital at least once in the six months before the study. EHRs for all patients who visited the federally qualified health center's clinic in the community in the period July 2012–June 2015 were used to create a data set on all patients who were eligible for B2C, which included 406 people who enrolled in the program and 17,542 possible members of the control group. We excluded from our control group patients who never used the ED at the enrollment hospital during the study period. We used individual identifiers from the data set to abstract data from the second local hospital. Because some patients used both hospitals, ED visits and hospital admissions included data from either hospital before and after B2C participation.

B2C enrollees' index ED visits were deemed to be the visit at which the community health worker assessed eligibility criteria, received informed consent, and enrolled the patients. An index ED visit for a member of the control group was deemed to be the visit during which a person who met B2C enrollment criteria was not enrolled. Because the pretreatment period was defined as 180 days before the index visit and the posttreatment period as 180 days after completion of the 60-day intervention, the outcome assessment window began 61 days after the index visit for both B2C enrollees and controls. We chose the pre- and post-treatment windows of 180 days because the study inclusion criteria were based on the number of visits within 180 days. To learn more about the long-term effects of the program, we conducted a subanalysis on patients for whom we had available data for a longer period (up to 360 days of data after the intervention ended).

All variables—patient demographic characteristics, insurance type, comorbidities, whether the patient arrived by ambulance, and whether the ED visit occurred during regular business hours—were obtained from the enrollment's site EHR database. In Colorado, patients in Medicaid can be randomly assigned to a Medicaid plan known as the Accountable Care Collaborative, whose beneficiaries have access to a care manager and are assigned a primary care provider.

STATISTICAL ANALYSIS We estimated a propensity score, using logit specification of the probability of B2C enrollment after the index visit, to create the inverse probability weights. We expressed the estimate of the average treatment effect as the change in outcome and in percentage terms. As part of a sensitivity analysis, we estimated inverse probability weight specifications with and without regression adjustment of the outcomes. The analyses were conducted in Stata, version 14.1. Robust standard errors were computed for all models.

PROPENSITY SCORE SPECIFICATION In the propensity score, we included variables that the program's clinical team hypothesized would correlate with both the probability of enrollment and the primary outcome (Exhibit 1 and Appendix Exhibits 2, 3, and 5).[19] For further details, see Appendix Exhibits 1–4.[19]

LIMITATIONS This study's results should be evaluated in the context of a few limitations. First, it was conducted at a single center in a low-income community. Although the program could be useful in many similar communities, it might not be replicable in nonurban or higher-income settings.

Second, we used data from the two hospitals in the city where enrollment took place, but it is possible that patients may have traveled to nearby cities and used other hospitals. We also identified the control group using EHR information, which might have had missing data on comorbidities and other variables. Nonetheless, we found the EHR to be the most comprehensive data source, given that many of the patients in the study were uninsured, and thus relatively unlikely to appear in claims data.

Third, our numbers of primary care visits may be understated for patients who used primary care services other than those at the local federally qualified health center. However, this center had thirteen clinics in the community and served more than half of all Medicaid and uninsured patients who used the enrollment hospital.

Fourth, this was not a randomized controlled trial. Instead, we used robust methodological techniques to create an artificial control group.

Finally, because this was not designed as a research study, we do not know how many eligible patients refused to participate in the program, and we did not conduct a power calculation to determine how many patients were needed for our results to be significant. It is possible that our hospital admission reduction results would have been significant if the study had been appropriately powered.

EXHIBIT 1

Patient characteristics at the time of the index visit, in the Bridges to Care (B2C) and control groups

	Control (n = 3,396)		B2C (n = 406)	
Characteristic	**No.**	**Percent**	**No.**	**Percent**
RACE/ETHNICITY				
White (ref)	1,616	48	146	36
Black	982	29	144	35
Hispanic	691	20	103	25
Other	107	3	14	3
SEX				
Male	1,511	44	128	31
AGE RANGE (YEARS)				
18–25	545	16	42	10
26–35 (ref)	939	28	108	27
36–45	688	20	86	21
46–55	722	21	97	24
56 or more	501	15	74	18
TYPE OF INSURANCE				
Medicaid (ACC)	940	28	105	26
Colorado Indigent Care Program	818	24	118	29
Medicaid (non-ACC) (ref)	577	17	61	23
Medicare	530	16	55	13
Private	129	4	12	3
Self-pay	409	12	55	13
COMORBIDITIES				
Asthma	733	22	120	29
Atrial fibrillation	65	2	11	3
Chronic kidney disease	114	3	16	4
Chronic pain	319	9	19	5
Congestive heart failure	177	5	25	6
COPD/emphysema	239	7	38	9
Coronary artery disease	149	4	27	7
Cyclic vomiting	35	1	7	2
Diabetes	604	18	104	26
End-stage renal disease	5	0.2	5	1
Hypertension	1,236	36	195	49
Mental health comorbidity	1,450	43	175	43
Myocardial infarction	103	3	16	4
Obesity	85	2	13	3
Sickle cell disease	59	2	5	1
Stroke	34	1	6	2
REASON FOR VISIT				
Mental health	41	1	1	0.2
Substance use disorder	294	9	19	5

SOURCE Authors' analysis of data from electronic health records. **NOTES** Numbers might not sum to totals and percentages might not sum up to 100 because of rounding. ACC is the Accountable Care Collaborative (explained in the text). COPD is chronic obstructive pulmonary disease.

Study Results

The 406 B2C participants and the 3,396 members of the control group were primarily white, female, and ages 26–35 (Exhibit 1). The most common comorbidities were hypertension, mental health disorder, asthma, and diabetes. We note that 27.6 percent of enrollees did not complete the sixty-day program. Four people went through the full training and credentialing process and graduated to become peer advocates for the program. Approximately 70 percent of the graduates volunteered to advocate on the behalf of the program (such as being mentioned in a press release and speaking with policy makers). Approximately 8 percent of all B2C enrollees were homeless and received their "home" visits at shelters, fast-food restaurants, or libraries or in parks.

STUDY SETTING Appendix Exhibit 5 shows the index-visit characteristics used in our propensity-score specification.[19] More index visits occurred in 2014 for the control group than the B2C group, and the control group also had

more ED visits and hospitalizations during the six months before the index visit. Although the two groups had significant differences in the mean unadjusted numbers of ED visits, hospitalizations, and primary care visits, these differences were small in magnitude and no longer significant after weighting (Appendix Exhibit 2).[19] The propensity score allowed us to balance appropriate patient characteristics so that the control and intervention groups looked alike ($p = 0.40$). Appendix Exhibits 1 and 2 contain the overlap graph and the summary of covariate balance, respectively.[19]

Consistent with the inverse probability weight unadjusted outcomes in Appendix Exhibit 1,[19] the groups had no significant adjusted difference in utilization during the 180 days before the index visit (Exhibit 2). However, during the 180 days after the intervention, the B2C group had significantly fewer ED visits (mean difference: −0.821) and hospitalizations (−0.270) and significantly more primary care visits (1.307) than the control group (Exhibit 3).

In the subgroup of patients with a comorbid mental health diagnosis, recipients of B2C services had significantly fewer ED visits (a difference of 29.7 percent) and hospitalizations (30.0 percent), and significantly more primary care visits (123.2 percent), than did members of the control group (Exhibit 3).

For the subset of 2,634 patients for whom we had data for up to 360 days after the intervention was completed, we saw a decrease in ED use (a reduction of 1.623 visits) and hospital admissions (0.906 visits) and an increase in primary care utilization (1.932) (Exhibit 4).

Discussion

The innovative model of care that we studied—an ED-initiated, multidisciplinary, community-based care coordination program—was associated with reduced use of the ED for acute care among high ED utilizers. In our subanalysis, we found a long-term reduction (over the 360 days after the intervention) in both ED visits and hospital admissions. In fact, it appeared that as time went on, the differences in utilization between the intervention and control groups got larger. This may be due to the fact that there was an increasing amount of time for outcomes to occur. To our knowledge, B2C intervention is the first program for high ED utilizers to combine active outreach in the ED with multidisciplinary, community-based services. We believe that the program's success stems from bringing together different health care systems (hospitals, federally qualified health centers, and others), breaking down silos between disciplines, and focusing on continuity of care in the outpatient setting.

In previous studies, providing care coordination services to high utilizers upon ED presentation had varying effectiveness on future ED use—a variation probably attributable to differences in the intensity and duration of the care coordination services.[12] Some studies showed an unexpected increase in ED visits, perhaps because patients lacked an ongoing relationship with a primary care provider, especially if they were not told about the importance of follow-up doctor visits.[13,14] Other studies showed that high utilizers of the hospital are also high utilizers of the primary care setting.[1] Interestingly, there is a subset of patients for which that is not necessarily the case. For example, in our study, the average number of primary care provider visits in the six months before the intervention period was 1.2. The program in our study effectively reached out to high utilizers in the ED in real time and then delivered ongoing care coordination, health coaching, primary care, and behavioral health care through the patient's current (or newly assigned) primary care medical home. Thus, it provided a bundle of services to smooth the transition from ED to primary care that reduced patients' subsequent need of ED visits and increased their subsequent use of primary care.

This study highlights the intensity and multi-

EXHIBIT 2

Patients' use of health care 180 days before the index visit to the hospital or ED, Bridges to Care (B2C) and control groups

	Average per person use					
	Unadjusted			Inverse probability weighted		
	ED visits	Hospital admissions	PCP visits	ED visits	Hospital admissions	PCP visits
B2C	3.810	0.786	1.700	4.929	1.149	1.406
Control	5.069	1.189	1.386	4.965	0.995	1.481
Difference	−1.259***	−0.403***	0.314**	0.036	−0.154	0.075

SOURCE Authors' analysis of data from electronic health records. **NOTES** Significance was measured by a *z*-test. ED is emergency department. PCP is primary care provider. **$p < 0.05$ ***$p < 0.01$

EXHIBIT 3

Changes over time in patients' use of health care related to the Bridges to Care (B2C) program

	Average per person use							
	Before the index visit			After the treatment period			Difference-in-differences	
	B2C	Control	Difference	B2C	Control	Difference	Number	Percent
ALL PATIENTS								
ED visits	5.116	4.932	0.184	2.785	3.606	−0.821	−1.005***	−27.9***
Hospital admissions	1.043	1.154	−0.111	0.753	1.023	−0.270	−0.159*	−15.5*
PCP visits	1.499	1.409	0.090	2.376	1.069	1.307	1.218***	114.0***
PATIENTS WITH A MENTAL HEALTH DIAGNOSIS[a]								
ED visits	6.145	6.002	0.143	3.383	4.611	−1.228	−1.377***	−29.7***
Hospital admissions	1.386	1.389	−0.003	0.970	1.390	−0.420	−0.417***	−30.0***
PCP visits	1.292	1.388	−0.096	2.448	1.140	1.308	1.404***	123.2***

SOURCE Authors' analysis of data from electronic health records. **NOTES** The "before" and "after" periods were each 180 days. The covariates used to adjust the outcomes for the inverse probability weighted regression are shown in Exhibits 1 and 2. Significance was measured by a z-test. ED is emergency department. PCP is primary care provider. [a]There were 1,450 patients with a mental health diagnosis in the control group and 175 in the B2C group. *$p < 0.1$ **$p < 0.05$ ***$p < 0.01$

tude of services that populations of high utilizers need to reduce their subsequent use of acute care services. This is likely the case because high utilizers have a high burden of chronic diseases, including mental illness.[3,4,20] Since ED care is responsible for only 5–6 percent of all health care expenses, it might seem that the cost benefits of the B2C program would exceed the savings on short-term ED visits.[21] However, more than half of all hospital admissions come from the ED (the percentage is even higher among patients with Medicaid or no insurance).[22] Furthermore, studies of thirty-day hospital readmissions show that one in five previously hospitalized patients return to the ED and that almost half of those are readmitted.[23] Finally, the ED's infrastructure does not support ongoing preventive care and chronic disease management, and more than half of high utilizers have at least one chronic condition.[24] We therefore believe that interventions such as B2C must be initiated in the ED and continued in home and primary care settings.

Our findings also show the importance of including patients with mental health disorders in an intervention program. John Billings and Maria Raven noted that more than a third of high utilizers have at least one claim with a mental health disorder diagnosis.[24] Other studies have noted that people with mental health disorders have higher rates of receiving ED and inpatient care.[20] Most of the patients enrolled in our study had either depression or anxiety. While B2C did not target people with severe mental health needs (such as those recently hospitalized at a psychiatric facility), to our knowledge, the program is unique in having a behavioral health provider screen every enrollee for mental health disorders—and then address those conditions as appropriate.

This study has several implications for policy and health care practice. Some experts argue that an intervention program should reduce ED utilization by 40–50 percent, but we believe that the reductions we found in ED use and hospital admissions (of 28 percent and 16 percent, respectively) are more realistic—and replicable, given that our study had a control group.[17,18,25]

In addition, building and implementing an intensive, community-based, transition-of-care program such as B2C requires an up-front financial investment, with a delayed return on investment. Also, no billable codes exist for providing ED care transitions, where programs such as this could be funded in the future. We learned that for B2C to reduce the use of acute care, outreach to and enrollment of high utilizers had to happen in real time in the ED.

EXHIBIT 4

Changes in patients' use of health care related to the Bridges to Care (B2C) program after the treatment period, by length of time

	Difference-in-differences			
Length of time (days)	Sample size	ED visits	Hospital admissions	PCP visits
90	4,227	−0.531***	0.015	0.701***
120	4,107	−0.699***	0.006	0.836***
180	3,802	−1.005***	−0.159*	1.218***
270	3,312	−1.091***	−0.438***	1.517***
360	2,634	−1.623***	−0.906***	1.932***

SOURCE Authors' analysis of data from electronic health records. **NOTES** The covariates used to adjust the outcomes for the inverse probability weighted regression are shown in Exhibits 1 and 2 (end-stage renal disease was excluded because of collinearity). Significance was measured by a z-test. ED is emergency department. PCP is primary care provider. *$p < 0.1$ ***$p < 0.01$

Conclusion

The comprehensive Bridges to Care program modestly reduced avoidable hospital use for vulnerable high utilizers of the ED. Outreach in the ED is key to enrolling and engaging high utilizers. For a program such as B2C to be effective, behavioral health services must be provided to high utilizers to ensure comprehensive, multidisciplinary care. We note that in a subset of the B2C population, the reduction in use of the ED and hospital admissions and the increase in use of primary care appear to last at least as long as 360 days after the intervention ends. Future studies should evaluate the long-term impact of programs such as B2C, including a cost analysis and the identification of subgroups within high-utilizer populations whose members would benefit most from the programs' services. ■

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By Faiz Gani, Joseph V. Sakran, and Joseph K. Canner

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Emergency Department Visits For Firearm-Related Injuries In The United States, 2006–14

ABSTRACT Firearm-related deaths are the third leading cause of injury-related deaths in the United States. Yet limited data exist on contemporary epidemiological trends and risk factors for firearm-related injuries. Using data from the Nationwide Emergency Department Sample, we report epidemiological trends and quantify the clinical and financial burden associated with emergency department (ED) visits for firearm-related injuries. We identified 150,930 patients—representing a weighted total of 704,916 patients nationally—who presented alive to the ED in the period 2006–14 with firearm-related injuries. Such injuries were approximately nine times more common among male than female patients and highest among males ages 20–24. Of the patients who presented alive to the ED, 37.2 percent were admitted to inpatient care, while 8.3 percent died during their ED visit or inpatient admission. The mean per person ED and inpatient charges were $5,254 and $95,887, respectively, resulting in an annual financial burden of approximately $2.8 billion in ED and inpatient charges. Although future research is warranted to better understand firearm-related injuries, policy makers might consider implementing universal background checks for firearm purchases and limiting access to firearms for people with a history of violence or previous convictions to reduce the clinical and financial burden associated with these injuries.

Faiz Gani (fgani1@jhmi.edu) is a postdoctoral research fellow in the Department of Surgery, Johns Hopkins University School of Medicine, in Baltimore, Maryland.

Joseph V. Sakran is an assistant professor in the Department of Surgery, Johns Hopkins University School of Medicine.

Joseph K. Canner is acting codirector of the Johns Hopkins Surgery Center for Outcomes Research, Johns Hopkins University School of Medicine.

The rate of firearm-related deaths in the United States is higher than the rate in comparable high-income countries, with firearms accounting for approximately 36,252 US deaths in 2015 (the most recent data available).[1,2] Seventeen percent of all injury-related deaths are caused by firearms, making them the third leading cause of injury-related deaths in the United States—trailing only poisoning and motor vehicle crashes.[3,4] In 2015 alone, firearm-related homicides and suicides accounted for 12,979 and 22,018 deaths, respectively, with the clinical burden of nonfatal firearm-related injuries estimated to be approximately three times that of fatal injuries.[2] It has been estimated that, collectively, fatal and nonfatal firearm-related injuries resulted in more than $700 million in annual inpatient costs between 2006 and 2014,[5] and an annual cost of $174 billion related to lost work, health care costs, criminal justice claims, and decreased quality of life in 2010.[6]

Despite the significant mortality and financial burden associated with firearm-related injuries, limited data evaluate epidemiological trends or risk factors for firearm-related injuries. Most current data are limited to single-center studies performed at tertiary referral centers and Level I trauma centers, or report on state-specific clinical and financial outcomes among patients in-

jured in firearm-related violence.[7–9] Furthermore, contemporary studies that evaluate both fatal and nonfatal firearm injuries are lacking. Rather, the majority of recent studies focus exclusively on mortality, instead of evaluating firearm-related injuries as a whole.[10–12]

Contemporary, nationally representative epidemiological data describing the incidence, prevalence, and risk factors for firearm-related injury are needed to guide policy making to address this public health challenge.[13] To help fill this need, we used a nationally representative sample of patients to evaluate the incidence of emergency department (ED) visits for firearm-related injuries among patients who presented to the ED after surviving a firearm-related injury. Patients who died before reaching the hospital or patients who did not present to the ED after such an injury were excluded. Our secondary aims were to identify risk factors associated with firearm-related injuries and to estimate the financial burden associated with the management of firearm-related injuries in the ED and hospital.

Study Data And Methods

DATA SOURCES AND PATIENT POPULATION This retrospective analysis was performed using data from the Nationwide Emergency Department Sample of the Healthcare Cost and Utilization Project. Patients presenting to the ED in the period 2006–14 for the management of a firearm-related injury were identified using *International Classification of Diseases*, Ninth Revision, Clinical Modification (ICD-9-CM), external cause of injury codes, or E-codes[14,15] (for the ICD-9-CM E-codes used to identify patients, see online Appendix Exhibit A1).[16]

The sociodemographic information recorded for each patient included age, sex, insurance status, and median household income; up to fifteen ICD-9-CM diagnosis codes were also recorded. Median household income was determined using the patient's ZIP code, and patients were categorized into one of four quartiles, with patients in a given ZIP code with the lowest median household income in the first quartile and those with the highest income in the fourth quartile. Preexisting comorbidity was classified according to the Charlson Comorbidity Index,[17] and patients were characterized into one of three groups according to their Charlson Comorbidity Index score: 0, 1, or 2 or more. Patients presenting with concomitant mental health disorders were identified using the Agency for Healthcare Research and Quality's (AHRQ's) Clinical Classifications Software codes 650–53 and 656–59[18] (for the codes we used to identify mental health disorders, see Appendix Exhibit A2).[16] The presence of substance abuse was determined using ICD-9-CM diagnosis codes (304** and 305**).

The International Classification of Diseases Program for Injury Categorization (ICDPIC) mapping algorithm was used to enrich patient records with injury-specific parameters.[19] Injury severity was categorized according to the Abbreviated Injury Scale, which is a graded six-point scale based on probability of death, body region, and nature of injury (a score of 1 indicates minor injuries, and a score of 6 indicates unsurvivable injuries).[20] We then calculated the Injury Severity Score as the sum of the squares of the Abbreviated Injury Scale scores for the three most severe injuries.[21–23] Using guidelines from the Centers for Disease Control and Prevention (CDC), we categorized the intent of each injury as unintentional, suicide, assault, legal, or undetermined, while the type of firearm used was classified as a handgun, shotgun, hunting rifle, military rifle, or unspecified or other.[14,15] "Legal" injuries are injuries inflicted by police or other law enforcement agents (including active-duty members of the military) during the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and performing other legal actions.[24] Injuries caused by civil insurrections are excluded from this subgroup.[24]

In addition to patient and injury characteristics, detailed hospital-level characteristics were also recorded in the Nationwide Emergency Department Sample. These included hospital region, teaching status, and trauma center designation. Hospitals classified as Level I or II trauma centers were categorized as trauma centers, while all other hospitals were categorized as non–trauma centers.[25]

MORTALITY, DISCHARGE DISPOSITION, AND HOSPITAL CHARGES The primary outcomes of interest were discharge disposition from the ED, mortality rates in the ED or hospital, and total ED or hospital charges. We categorized patients who were discharged alive in the following discharge dispositions: routine discharge (if the patient was discharged to home without any additional care), discharge with additional care (if the patient was discharged to a short-term facility or another facility, such as a skilled nursing facility or intermediate care facility), or admitted to inpatient care (if the patient was admitted to the same facility for inpatient care). Mortality in the ED or hospital was defined as any death occurring during the ED visit or during the inpatient admission. Total charges for the ED visit or inpatient admission were also recorded for each patient. Using the Department of Labor's Consumer Price Index, total charges were adjusted for inflation and reported in 2017 dollars.[26]

Because the Nationwide Emergency Depart-

Efforts to reduce firearm-related injuries have been limited as a result of the politicized environment surrounding gun violence.

ment Sample is a limited data set, meaning that all identifiable information has been removed, patients' consent was not required. This study was approved by the Johns Hopkins Institutional Review Board.

STATISTICAL ANALYSIS Categorical data were reported as whole numbers and percentages, while continuous data were reported as means with standard deviations (SDs). Categorical data were compared using Pearson's chi-square test, while continuous data were compared using Student's *t*-test. The Cochrane-Armitage test of trends was used to compare trends over time.

Using the methodology outlined by AHRQ, discharge-level weights provided within the Nationwide Emergency Department Sample were applied to the study sample to calculate nationally representative, population-level estimates.[27] Specifically, population-level estimates were calculated in accordance with the stratified sampling methodology employed by AHRQ and explicitly accounted for patients presenting to all EDs based on geographical region, trauma center designation, urban versus rural location, hospital teaching status, and hospital ownership.[27] Age- and sex-specific population estimates were calculated using census data. Specifically, weighted estimates by patient age and sex were divided by the total number of people in each patient group and reported as estimates per 100,000 people. A p value of < 0.05 was used to determine significance.

All analyses were performed using Stata, version 14.0.

LIMITATIONS The current study had several limitations. First, as the study used data from the Nationwide Emergency Department Sample, it included only patients who presented to the ED and could not account for patients who either died before reaching an ED or hospital (prehospital deaths) or did not present to an ED or hospital following a firearm-related injury. Thus, the study results underestimate the true burden of firearm-related injuries in the United States, the number of people who died from a firearm-related injury, and the financial burden associated with the management of these injuries. This is particularly important in the case of people who died at the location of injury and those who completed suicide but were never transported to an ED or hospital.

Second, given that we used administrative data, our results were subject to all potential limitations inherent in the use of such data. These include the potential for misclassification or miscoding of variables and the omission of important physiological and injury-specific variables.[28] To overcome this limitation, we used ICD-9-CM codes specified by the CDC and a previously validated mapping algorithm to generate injury-specific measures.[1,2]

Third, as the Nationwide Emergency Department Sample does not report patient race, we could not evaluate the burden of firearm-related injuries relative to patients' race or report on trends in firearm-related injuries by patients' race, which has been identified as a potential risk factor for firearm-related injury.[7]

Fourth, as the sample does not provide ED-specific cost-to-charge ratios, we could not calculate the actual costs associated with firearm-related injuries and could report only the total ED charges—which might not always reflect the true financial burden associated with these injuries. It is important to note, however, that a significant proportion of our population was uninsured or categorized as self-pay, and such patients may incur hospital bills equal to the full hospital charge.

Finally, as the Nationwide Emergency Department Sample is a cross-sectional database, we could not follow each patient over time and were therefore unable to report on long-term outcomes, including recidivism, survival, or functional outcomes such as the quality of life—all of which may be correlated with the clinical and financial burden of disease. Furthermore, we could not calculate the financial burden associated with the long-term sequelae of firearm-related violence, including subsequent readmissions, rehabilitation, and the costs associated with lost work and productivity following a firearm-related injury.

Study Results

INCIDENCE OF FIREARM-RELATED INJURIES BY AGE AND SEX We identified 150,930 people

who presented alive to the ED with a firearm-related injury in the period 2006–14. This represented a weighted estimate of 704,916 patients, or an estimated 25.3 ED visits per 100,000 people (for the characteristics of the unweighted and weighted populations, see Appendix Exhibit A3).[16]

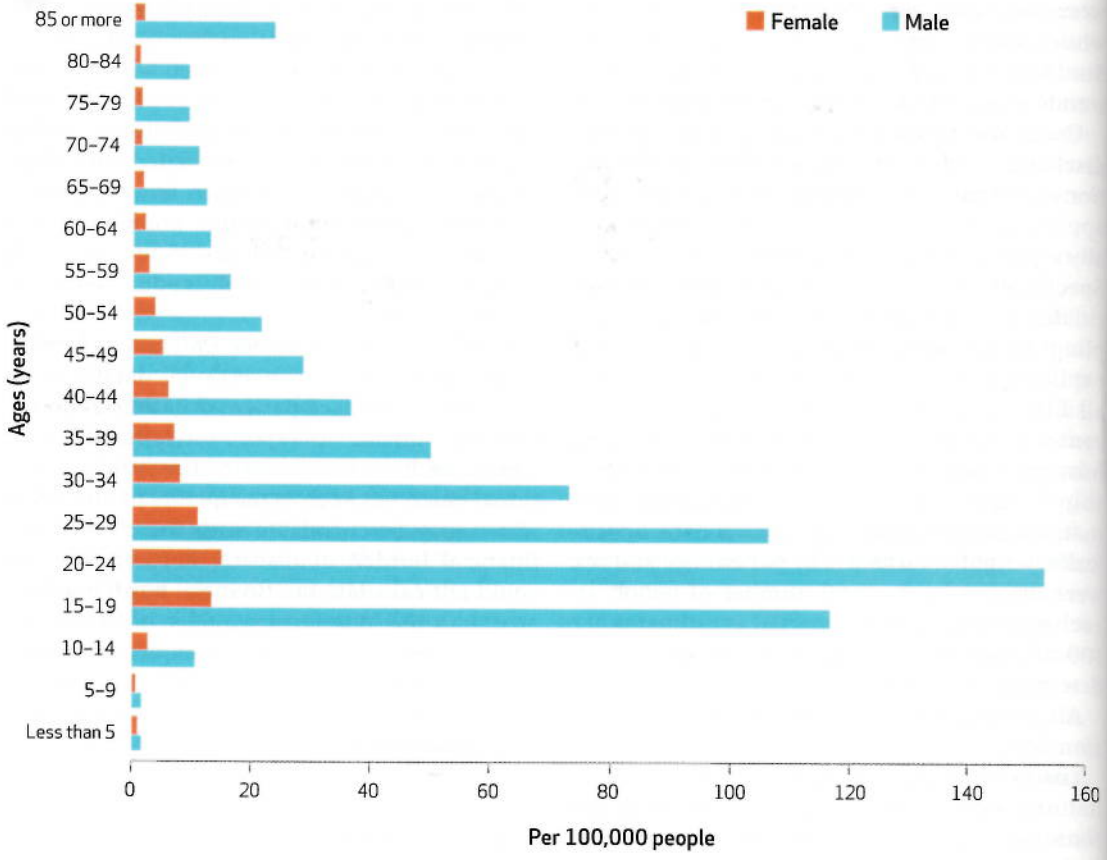
The incidence of ED visits for firearm-related injuries was observed to vary with patient age and was lowest among patients younger than age 10 (per 100,000 people, those ages 0-4 years had 1.4 ED visits, and those ages 5–9 had 1.3 visits), and highest among patients ages 15–29 (per 100,000 people, those ages 15–19 had 66.4 ED visits; ages 20–24, 85.7 visits; and ages 25–29, 59.2 visits) (for a graphical presentation of these numbers, see Appendix Exhibit A4).[16] Although this pattern by patient age was observed among both male and female patients, the incidence of firearm-related injuries was approximately ninefold higher among male patients (45.8 ED visits per 100,000 people) than among females (5.5 visits). For males ages 20–24, 152.8 patients per 100,000 people presented to the ED for a firearm-related injury during the study period (Exhibit 1).

INCIDENCE OVER TIME BY PATIENT, INJURY, AND HOSPITAL CHARACTERISTICS The incidence of ED admissions for firearm-related injuries decreased from 27.9 ED visits per 100,000 people in 2006 to 21.5 visits in 2013 (a decline of 22.9 percent; $p < 0.001$, using the Cochrane-Armitage test of trends) (for trends over time in ED visits per 100,000 people, see Appendix Exhibit A5).[16] Interestingly, an increase in the incidence of firearm-related injuries was observed in the last year of the study, with 26.6 ED visits per 100,000 people in 2014 (an increase of 23.7 percent in one year; $p < 0.001$, using the Cochrane-Armitage test of trends).

Over the study period, male patients demonstrated a disproportionately higher incidence of ED visits for firearm-related injuries, compared with female patients. Of note, while the incidence of ED admissions for firearm-related injuries was observed to decrease among patients ages 18–29, the incidence increased among older patients during the study period (for character-

EXHIBIT 1

Incidence of emergency department visits for firearm-related injuries, by patient age and sex



SOURCE Authors' analysis of data for 2006–14 from the Nationwide Emergency Department Sample.

istics of patients by time interval, see Appendix Exhibit A6).[16] Similarly, we saw increases over time in the proportions of patients presenting with a diagnosis of a mental health disorder (from 5.3 percent in 2006–08 to 7.5 percent in 2012–14, for an increase of 41.5 percent; $p < 0.001$) and patients with an unintentional firearm-related injury (from 33.7 percent to 37.4 percent, for an increase of 11.0 percent; $p = 0.050$).

PATIENT, INJURY, AND HOSPITAL CHARACTERISTICS BY INTENT OF INJURY AND FIREARM USED

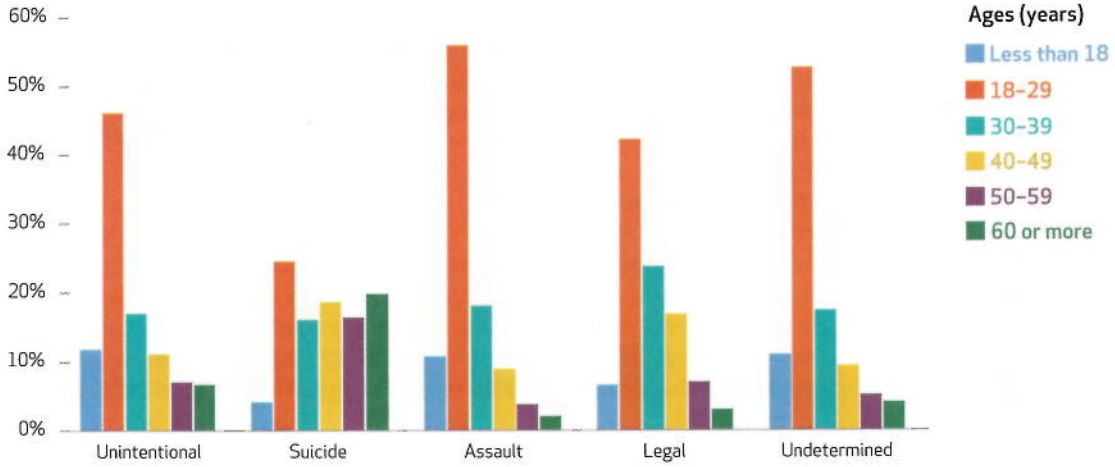
The majority of patients who presented alive to the ED for a firearm-related injury were injured in an assault (348,691 patients, or 49.5 percent) or unintentionally (248,938 patients, or 35.3 percent). Attempted suicides and legal interventions accounted for 5.3 percent (37,653 patients) and 2.4 percent (17,167), respectively. Patients sustaining a firearm-related injury unintentionally or in an assault or legal intervention were more likely to be younger, compared with patients injured in a suicide attempt (Exhibit 2). Assault was the most common mechanism for a firearm-related injury among patients enrolled in Medicaid (91,531 patients, or 57.3 percent) and among those who were categorized as self-pay (148,421 patients, or 52.0 percent) or no charge (42,872 patients, or 57.3 percent). However, the proportion of patients injured in an attempted suicide was more than twofold higher among Medicare enrollees, compared with patients enrolled in other insurance plans: The proportion of patients injured in an attempted suicide was 20.0 percent for those with Medicare but only 8.3 percent for those with private insurance, 3.2 percent for those with Medicaid, 3.5 percent for those categorized as self-pay, and 3.9 percent for those categorized as other ($p < 0.001$) (for characteristics of patients, in addition to payer, by intent of injury, see Appendix Exhibit A7).[16] Patients injured during a suicide attempt were also more likely to be in the highest income quartile, while the incidence of assault-related injuries was the highest among patients in the lowest income quartile (for characteristics of patients by median household income quartile determined by ZIP code, see Appendix Exhibit A8).[16]

Of note, the incidence of mental health disorders was highest among patients injured in an attempted suicide: 40.8 percent (or 15,364) patients (for characteristics of patients by the presence of mental health disorders, see Appendix Exhibit A9).[16] Substance abuse disorders were also observed to be significantly higher among patients injured this way (16.8 percent, or 6,308 patients) and among patients injured in a legal intervention (18.5 percent, or 3,172 patients) (for characteristics of patients by the presence of substance abuse disorders, see Appendix Exhibit A10).[16]

Among patients who presented alive to the ED, handguns were the most commonly used identified firearm (27.0 percent, or 190,396 patients), followed by shotguns (5.9 percent, or 41,500 patients) and hunting rifles (2.0 percent, or 14,256 patients). The primary firearm used was unspecified or other for 64.9 percent (457,492 patients). Of note, the incidence of mental health disorders was higher among patients injured by a hunting (12.6 percent) or

EXHIBIT 2

Percentages of firearm-related injuries by intent of injury and patient age



SOURCE Authors' analysis of data for 2006–14 from the Nationwide Emergency Department Sample. **NOTES** "Legal" refers to injuries incurred during legal interventions (explained in the text). Additional data are presented in Appendix Exhibit A7 (see Note 16 in text).

military rifle (12.5 percent), compared with those injured by a handgun (9.2 percent) or shotgun (8.8 percent) (for characteristics of patients by firearm type, see Appendix Exhibit A11).[16] In contrast, the incidence of substance abuse disorders was higher among patients injured by a handgun (11.2 percent) or a shotgun (10.5 percent), compared with those injured by a hunting (7.3 percent) or military rifle (6.6 percent).

Overall, assault was the most common mechanism of a firearm-related injury for patients injured via a handgun (104,569 patients, or 54.9 percent) or a shotgun (19,552 patients, or 47.1 percent) (Exhibit 3 and Appendix Exhibit A11).[16] In contrast, 71.2 percent (10,145) of the patients injured by a hunting rifle suffered unintentional injuries, while 15.4 percent (2,191) were injured in an attempted suicide. Of the patients injured by a military rifle, 56.9 percent (722 patients) were injured unintentionally.

PATIENT, INJURY, AND HOSPITAL CHARACTERISTICS ASSOCIATED WITH MORTALITY AND DISCHARGE DISPOSITION Among all patients presenting to the ED with a firearm-related injury, 48.0 percent (338,279 patients) were discharged home and 7.7 percent (54,541) were discharged to additional care facilities, while 37.2 percent (262,032) were admitted to inpatient care and 5.2 percent (36,873) died during their ED visit (for characteristics of patients by discharge disposition, see Appendix Exhibit A12).[16] Mental health and substance abuse disorders were more common among patients who were admitted to inpatient care. Patients admitted to inpatien care also presented with higher injury severit scores. After an inpatient admission, 72.6 per cent (190,099) of patients underwent a routin discharge, and 17.8 percent (46,716) were dis charged to additional care; in-hospital mortalit was 8.0 percent (20,897).

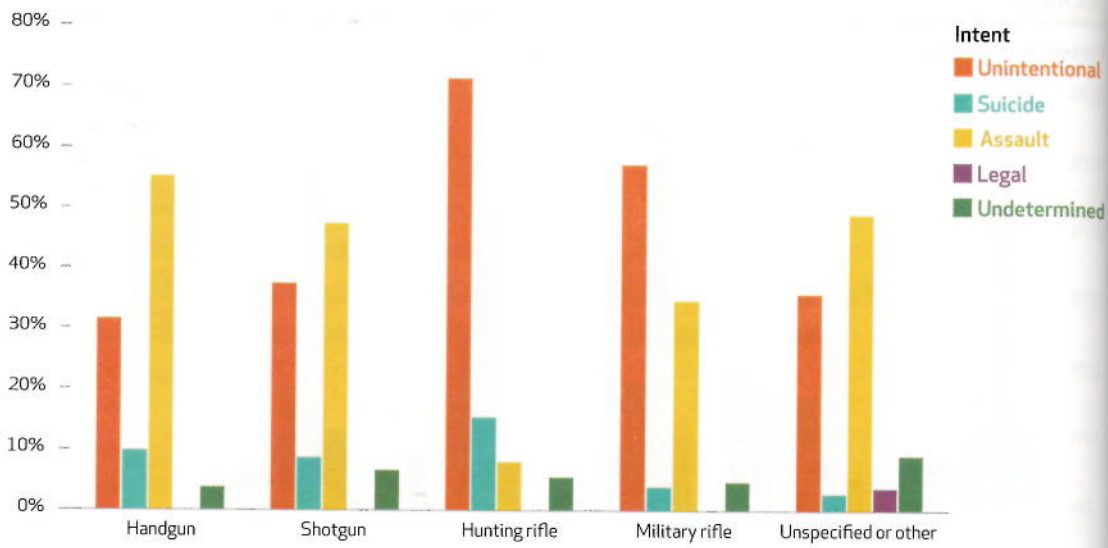
Overall 8.3 percent (57,752) of the patient died in the ED or during their inpatient admis sion (for characteristics of patients by ED o inpatient mortality, see Appendix Exhibit A13).[1 Mortality increased as patient age did and wa highest among those ages sixty and older— 23.3 percent (7,926 patients) (Exhibit 4 and Appendix Exhibit A13).[16] Compared to patients presenting with less severe injuries, those with mor severe injuries had a higher mortality rate 32.7 percent (24,705) of patients with an Injur Severity Score of 15 or more died in the ED o during an inpatient admission.

Although assaults accounted for 42.1 percen of all deaths (Appendix Exhibit A13),[16] mortalit was disproportionately higher among patient injured in an attempted suicide (7.0 percen for assault versus 38.5 percent for suicide) (Exhibit 4). Of note, deaths in the ED or hospital following an attempted suicide accounted fo 24.9 percent of all deaths that occurred durin an ED visit or inpatient admission for a firearm-related injury.

EMERGENCY DEPARTMENT AND INPATIENT CHARGES The mean per person charge for services rendered in the ED was $5,254 (SD: $9,256), while the mean per person charge for

EXHIBIT 3

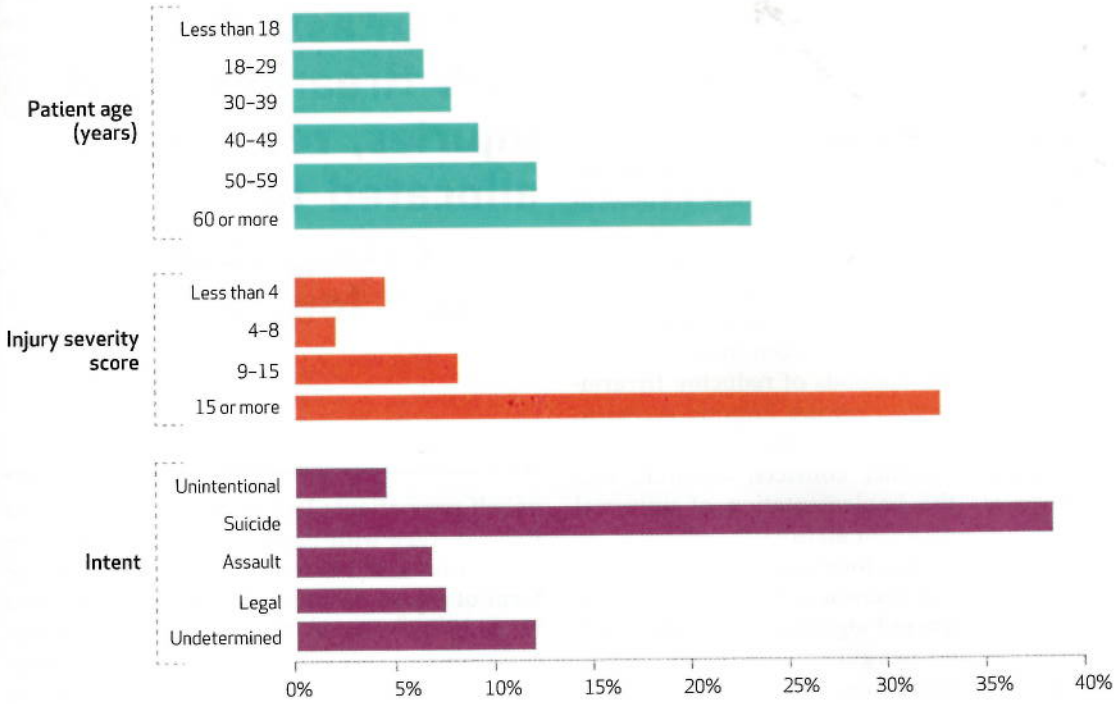
Percentages of firearm-related injuries by type of firearm used and intent of injury



SOURCE Authors' analysis of data for 2006–14 from the Nationwide Emergency Department Sample. **NOTES** "Legal" refers to injuries incurred during legal interventions (explained in the text). Additional data are presented in Appendix Exhibit A11 (see Note 16 in text).

EXHIBIT 4

Percentages of emergency department (ED) or inpatient mortality among patients who reached the ED alive after a firearm-related injury, by selected characteristics



SOURCE Authors' analysis of data for 2006–14 from the Nationwide Emergency Department Sample. **NOTES** The injury severity score is explained in the text. "Legal" refers to injuries incurred during legal interventions (explained in the text). Additional data are presented in Appendix Exhibit A13 (see Note 16 in text).

services rendered in the inpatient setting was $95,887 (SD: $156,596) (for average and total ED and inpatient charges, see Appendix Exhibit A14).[16] This amounted to a total of $2.9 billion in ED charges and a total of $22.0 billion in inpatient charges during the study period. Patients who died during an ED visit demonstrated the highest mean ED charge ($11,463; SD: $15,365) and accounted for 11.7 percent of the total ED charges. In contrast, the highest mean inpatient charge ($179,565; SD: $244,622) was observed among patients discharged to additional care, who accounted for 33.4 percent of all inpatient charges.

Discussion

The results of the current study are consistent with previous estimates of firearm-related injuries in the United States. For example, according to data collected by the CDC, an estimated 970,622 individuals suffered a firearm-related injury in the period 2006–14.[2,29] Furthermore, according to these estimates, the burden of nonfatal firearm-related injuries was 2.4 times that of fatal injuries. While more recent research has focused on fatal firearm-related injuries, contemporary estimates evaluating firearm injuries as a whole are lacking. The current study is important because it adds to existing research that examined the epidemiology of firearm-related injuries and provides contemporary estimates for these injuries. In our nationally representative study, the overall incidence of ED visits for firearm-related injuries for the period 2006–14 was 25.3 per 100,000 people. Although the incidence of ED visits for firearm-related injuries decreased over time, there was a significant increase in 2014, the last year of the study period. Furthermore, the overall observed incidence was disproportionately higher in the United States than in other high-income countries, including Germany, Japan, and the United Kingdom.[3,4]

Although numerous previous studies have identified and proposed effective interventions to limit firearm-related violence, efforts to reduce firearm-related injuries have been limited as a result of the politicized environment surrounding gun violence and a lack of will to consistently implement proposed policies.[30,31] Furthermore, while policy makers have proposed improved access to mental health facilities as a way to curtail gun violence, data from the current study and others suggest that although

these efforts would likely reduce the number of deaths associated with mental health disorders—particularly those due to a suicide attempt—they would have a limited impact on the overall burden of firearm-related injuries, given the small share of patients with such injuries who have a mental health disorder.[32,33] For example, only 6.5 percent of patients in the current study were diagnosed with a mental health disorder. It is important to note, however, that while attempted suicides accounted for only 5.3 percent of firearm-related injuries in the current study, the mortality for this subgroup of patients was 38.5 percent, and the subgroup accounted for 24.9 percent of the patients who died during their ED visit or inpatient admission.

More effective methods of reducing firearm-related injuries may involve limiting access to firearms for people with a history of violence, drug addicts, former convicts, children, and fugitives via the implementation of universal background checks for all firearm purchases regardless of location (for example, online or at a gun show). The concept of universal background checks has garnered significant approval from both people who own guns and those who do not, and a recent report suggests that 74 percent of members of the National Rifle Association are in favor of them.[13,34] Furthermore, encouraging gun owners to be registered with local agencies and limiting the unchecked sale or resale of firearms would promote additional responsibility and accountability, thereby reducing firearm-related violence.[35] Multiple studies have demonstrated that background checks—particularly among people with mental illness, fugitives, and those with a history of misdemeanors—have reduced rates of suicide and homicide.[36,37] Future policies must promote more effective ways of limiting firearm access, particularly among people with a history of mental health disorders or criminal records.

In the current analysis, the financial burden associated with firearm-related injuries was estimated to be $24.9 billion in ED and inpatient charges during the study period, amounting to approximately $2.8 billion per year. Charges were observed to vary by several patient and injury characteristics, with higher ED charges for uninsured and severely injured patients. Similarly, inpatient charges were highest among the middle-aged, Medicare enrollees, patients presenting with preexisting comorbidity (specifically, mental health disorders), and severely injured patients.

These findings have several policy implications, given the disproportionate share of firearm-related injuries among those patient populations. For example, because uninsured or self-pay patients lack negotiating power and thus leverage with payers, either they bear the entire financial burden of their injuries in the form of out-of-pocket spending, or these costs remain unrecovered—thereby adding to the uncompensated care provided by hospitals, physicians, and health care systems.[38] Additionally, it important to note that given the incremental costs associated with postdischarge physical therapy, trauma counseling, in-home care, and lost income, our results likely underestimate the true financial burden associated with these injuries.[39] Using data from the CDC's Web-Based Injury Statistics Query and Reporting System (WISQARS),[40] we estimated that the annual financial burden of firearm-related injuries amounted to $45.6 billion, combining medical costs ($1.1 billion) and work-loss related costs ($44.5 billion) (see Appendix Exhibit A15).[16]

Despite the high clinical and financial burden associated with firearm-related injuries, resources allocated to preventing them remain low.

Although firearm-related injuries are a major public health concern with significant financial consequences, research in this area has been limited as a result of a lack of funding.[41] For example, while gun violence is responsible for about as many deaths as sepsis is, funding for gun violence research is equivalent to 0.7 percent of the funding allocated for sepsis, and for every hundred articles published on sepsis, only about four are published on gun violencee.[42] Historically, federal funding for gun violence research has been limited because of the Dickey Amendment of 1996, a provision in that year's federal government omnibus spending bill stating that funds made available to the CDC for injury research cannot "be used to advocate or promote gun control." Despite recent efforts to repeal this amendment, research funds for the study of firearm-related injuries have yet to be appropriated by Congress.[43] Researchers, politicians, and gov-

ernment officials must work together to ensure that research funds are allocated to promote the understanding of the complex interplay between social, economic, and medical factors associated with firearm-related injuries.[44] Only through the adoption of an evidence-based public health approach can the resulting substantial medical and financial burden be reduced.[44,45]

Conclusion

Using a nationally representative data set, we demonstrated that in the period 2006–14, 25.3 patients per 100,000 people presented to the ED for a firearm-related injury. Among these patients, 37.2 percent (262,032) were admitted as inpatients, and 8.3 percent (57,752) died in the ED or during their inpatient admission. Firearm-related injuries for our study population resulted in an estimated financial burden of approximately $25 billion in ED and hospital charges over the study period. Despite the high clinical and financial burden associated with firearm-related injuries, resources allocated to preventing them remain low. Future policies related to firearms should focus on better understanding and preventing these injuries. ■

Some of the contents of this article were presented at the Clinical Congress of the American College of Surgeons, San Diego, California, October 22–26, 2017.

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16 To access the Appendix, click on the Details tab of the article online.

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By Hemal K. Kanzaria, Matthew J. Niedzwiecki, Juan Carlos Montoy, Maria C. Raven, and Renee Y. Hsia

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Persistent Frequent Emergency Department Use: Core Group Exhibits Extreme Levels Of Use For More Than A Decade

Hemal K. Kanzaria (Hemal.Kanzaria@ucsf.edu) is an assistant professor in the Department of Emergency Medicine at the University of California, San Francisco (UCSF), and director for Complex Care Analytics for the San Francisco Health Network.

Matthew J. Niedzwiecki is an assistant professor in the Department of Emergency Medicine and a core faculty member at the Philip R. Lee Institute for Health Policy Studies (PRL-IHPS), both at UCSF.

Juan Carlos Montoy is a clinical instructor in the Department of Emergency Medicine at UCSF.

Maria C. Raven is an associate professor in the Department of Emergency Medicine and an affiliated faculty member at the PRL-IHPS, both at UCSF.

Renee Y. Hsia is a professor in the Department of Emergency Medicine and a core faculty member at the PRL-IHPS, both at UCSF.

ABSTRACT Many frequent emergency department (ED) users do not sustain high use over time, which makes it difficult to create targeted interventions to address their health needs. We performed a retrospective analysis of nonelderly adult frequent ED users in California to measure the persistence of frequent ED use in the period 2005–15, describe characteristics of persistent and nonpersistent frequent users, and identify predictors of persistent frequent use. Of the frequent ED users in 2005, 30.5 percent remained frequent users in 2006. A small but nontrivial population (16.5 percent, 5.7 percent, and 1.9 percent) exhibited persistent frequent use for three, six, and eleven consecutive years, respectively. The strongest predictor of persistent frequent ED use was the intensity of ED use in the baseline study year. The rate at which frequent users stopped using the ED frequently decreased over time, leaving a core group of chronic persistent users. These persistent frequent users differ from nonpersistent frequent users, who engaged in temporary intense use of the ED. Identifying and differentiating persistent frequent users is important, as they may be candidates for distinct interventions.

Frequent users of emergency department (ED) services have attracted significant interest from policy makers. While frequent ED users represent 4–8 percent of ED patients, they account for 21–28 percent of all ED visits, with significant associated costs.[1,2] Additionally, these users may suffer from substantial medical and behavioral illness, as well as poor social determinants of health.[1,2] Identifying patients with persistent frequent use and predicting which patients will be in this category could allow policy makers to better target interventions that address unmet health and social needs while simultaneously reducing ED use.[2,3]

Previous investigations have defined thresholds of frequent ED use,[2,4,5] described patient characteristics,[1,2,5–8] and examined whether interventions such as care management improve health outcomes.[2,5,9,10] Although the population of frequent users has been widely studied, many important questions about it—including what characteristics distinguish persistent from nonpersistent frequent ED users—remain unanswered. Leaders in the field of emergency medicine have articulated a strong remaining need to differentiate persistent from nonpersistent frequent users and to examine comprehensive patterns of use over extended periods of time.[2,5]

Attrition of frequent use—the rate at which frequent users stop using the ED frequently—has been noted previously.[2,7,8,11–14] Reasons for attrition include regression to the mean, intense short-term medical need followed by recovery, and death. However, to our knowledge, there

have been no robust long-term analyses to date that examined patients for persistent frequent ED use. Previous investigations have estimated that approximately 20–40 percent of frequent users in one year remain frequent users in the following year.[7,8,11–15] Yet these studies have important methodological limitations, such as being restricted to data from a single health center without accounting for ED use elsewhere or having limited follow-up periods, often only one to two years. Notably, in one single-center study with a five-year follow-up period, the attrition rate in each consecutive year slowed, resulting in a core group of chronic frequent users.[13] Several policy makers have recognized the importance of predicting who will become persistent frequent users. Such patients may be different from nonpersistent frequent users and may be better candidates for interventions such as housing or care management services.[2,13,16]

Using data from the California Office of Statewide Health Planning and Development, we conducted a statewide analysis of frequent ED users. We sought to examine the persistence of frequent ED use over an eleven-year period, describe characteristics of persistent versus nonpersistent frequent ED users, and identify predictors of persistent frequent ED use.

Study Data And Methods

We performed a retrospective analysis of nonelderly adults to predict persistent frequent ED use over one, two, five, or ten years following a single calendar year in which a patient had four or more ED visits. We used patient characteristics available in ED discharge summaries in our data. This study was deemed exempt from review by the Institutional Review Board at the University of California, San Francisco.

SETTING AND STUDY POPULATION We used nonpublic data for 2005–15 from the data set of the California Office of Statewide Health Planning and Development that provides information on all ED visits at nonfederal licensed hospitals in the state, linked at the patient level. Since the data include all nonfederal hospitals in California and all payers, we could accurately and comprehensively capture ED use among patients who visited multiple EDs or changed insurance status.[12,17]

We first selected a cohort of individuals with four or more ED visits in 2005, the baseline year. We used a unique record linkage number to track each patient's utilization over a decade, through 2015. We used previous literature to determine thresholds of occasional, frequent, and super ED use and to distinguish persistent from nonpersistent frequent ED use.[3–5,9,11,18] *Occasional ED use* was defined as one to three ED visits a year, *frequent ED use* was defined as four or more visits a year, and *super use* (a subset of *frequent use*) was defined as eighteen or more visits a year.

We defined *persistent use* as four or more ED visits in consecutive years beyond 2005.[5,11] We focused on adults ages 18–55 in 2005. We excluded patients over age 55 so that during our study period they would not age into Medicare—an insurance change that might affect ED use. We also excluded patients without a valid record linkage number or ZIP code and those who did not live in California. In a sensitivity analysis, we censored our results for mortality so that patients who died during the outcomes period were not included in the regression (for example, patients who died within five years of the index year were not included in analyses that measured the association between covariates and persistent ED use over five years). The final sample included 1,185,892 ED visits by 173,273 frequent ED users. (For a flow diagram of the cohort creation, see online Appendix Exhibit A1.)[19]

OUTCOMES The primary outcome was persistent frequent ED use at one, two, five, and ten years after the index year. We looked at the association between observable patient characteristics based on ED visits in 2005 and persistent frequent ED use in consecutive years. Covariates were observed in the baseline year, 2005, and included patients' age, sex, race/ethnicity, insurance status, poverty rate in the patient's ZIP code, residence in an urban or rural county, number of ED visits, the percentage of visits resulting in hospital admission, the number of unique EDs visited, whether the patient was ever admitted to the hospital, and Clinical Classifications Software (CCS) single-level diagnosis groups.[20] Other studies have found these covariates to be associated with frequent ED use.[1,5,21,22]

STATISTICAL ANALYSIS We performed descriptive statistical analyses to identify the volume and proportion of patients and visits for differing lengths of persistent frequent ED use. We then used a logistic regression model to predict persistent frequent ED use—four or more visits in each consecutive year—over the following time horizons: one, two, five, or ten years after 2005. Patients who were frequent users in 2005 but not in 2006 were the reference group in each regression.

Patients with one to three ED visits in 2005 were considered occasional ED users. We provided basic information on these patients for descriptive comparisons, but the patients were excluded from our primary regression analyses. Results are reported as odds ratios. Standard errors were robust to heteroskedasticity. We did

not cluster the standard errors because each observation represented a single patient, not a visit.

We used Stata, version 13.1, for all analyses.

LIMITATIONS There were several limitations to our analysis. First, we examined trends in nonelderly adults, so our results are not generalizable to pediatric or elderly populations. Additionally, while the nonpublic data set from the California Office of Statewide Health Planning and Development is comprehensive and covers all nonfederal acute care hospitals in the state, we did not have information about visits to hospitals located outside of California. Therefore, our results might not be generalizable to other states. However, California is diverse and populous (containing 12 percent of the US population), and we would be surprised if trends in other regions differed substantially. While it is plausible that we did not capture the complete extent of frequent ED use for patients who moved away from California or visited EDs in federal hospitals, this study is one of the largest and longest evaluations of frequent ED users. In addition, ED use per thousand people in California is substantially lower than in other states,[23] which suggests that our findings may be conservative estimates of frequent and persistent ED use across the United States.

Second, our study cohort included only patients with a valid record linkage number, which might have resulted in the disproportionate exclusion of patients who were homeless or unable to provide documentation information. While homelessness has been associated with frequent ED use,[24] our approach was needed to match ED visits across time and location to enable the longitudinal tracking of patients. The number of missing records was small (for details, see Appendix Exhibit A1),[19] but that would mean that, if anything, our results slightly underestimated frequent ED use.

Finally, like many large administrative data sets, ours did not allow us to examine important social determinants of health—such as homelessness, food insecurity, social connectivity, education, and individual income—that could influence persistent and nonpersistent frequent ED use. The diagnostic information in our data was limited to that from ED encounters and admissions linked to ED visits. Thus, we could not incorporate information from ambulatory medical and mental health services or social services, or correctional data. In future work we hope to use unique integrated data sources that better capture relevant social risk factors, as well as associated behavioral health and social service utilization, to evaluate their impact on frequent ED users.

Persistent frequent users may be better candidates for interventions such as housing or care management services.

Study Results

Compared to occasional ED users in 2005, nonpersistent frequent ED users were more likely to be female, non-Hispanic white or black; to be covered by public insurance; and to live in a high-poverty ZIP code (Exhibit 1). In addition, a higher proportion of nonpersistent frequent ED users had been hospitalized; suffered from mental illnesses (such as anxiety, mood disorders, and psychoses) and substance abuse disorders; and visited more unique EDs.

Compared to nonpersistent frequent ED users, on average, a higher proportion of persistent frequent users were female, non-Hispanic white or black, and publicly insured and had a mental health diagnosis in the index year. Patients with persistent frequent ED use for more than five or ten consecutive years demonstrated higher use and visited more unique EDs in 2005.

In 2005, of the 2,563,758 patients in California who used the ED, 6.7 percent had four or more ED visits and accounted for 27.4 percent of all ED visits. A very small portion of ED users (0.7 percent) had more than ten ED visits, but they accounted for 8.4 percent of all ED visits (Appendix Exhibits A2–A4).[19]

Exhibit 2 graphically depicts the longitudinal patterns of ED use of the study cohort from 2005 onward, while Appendix Exhibits A3 and A4 show related data in tabular form.[19] Of the 173,273 patients identified as frequent ED users in 2005, 30.5 percent remained frequent users in 2006. While attrition continued over time, small but nontrivial populations exhibited persistent frequent use over time: 28,656 (16.5 percent) over three years, 9,954 (5.7 percent) over six years, and 3,297 (1.9 percent) over eleven years (Exhibit 2). Within three years, among the surviving patients without persistent frequent ED use, approximately half had no ED use.

Beyond the second year of the study, there was a substantial decline in the rate of attrition of

EXHIBIT 1

Selected characteristics of emergency department (ED) users in California in 2005, by persistence and frequency of ED use

	Occasional ED user	Nonpersistent frequent ED user	Persistent frequent ED user for: 2 years	3–5 years	6–10 years	11 years
DEMOGRAPHIC CHARACTERISTICS						
Average age (years)	35.8	37.2	38.0	38.7	38.4	38.0
Male	46.1%	41.3%	39.8%	37.5%	33.5%	28.1%
Female	53.9	58.7	60.2	62.5	66.5	71.9
Race/ethnicity[a]						
Non-Hispanic white	48.6%	57.8%	60.4%	63.8%	64.3%	59.3%
Non-Hispanic black	10.3	19.0	19.7	20.1	22.3	27.1
Hispanic	27.5	30.5	28.4	27.3	26.7	30.4
Other or unknown	16.9	19.0	18.7	19.0	21.5	26.7
TYPE OF INSURANCE[b]						
Private	49.7%	24.7%	21.1%	18.6%	17.2%	16.9%
Medicare	3.7	10.9	13.8	15.8	15.5	15.0
Medicaid	15.3	36.0	39.9	42.4	45.5	48.3
None	21.0	20.2	18.2	16.8	15.5	14.5
Other	10.3	8.3	7.0	6.3	6.2	5.4
RESIDENCE						
In urban county[c]	96.8%	94.9%	94.1%	94.0%	94.0%	96.4%
Residents in ZIP code in poverty[d]	17.6	19.6	19.7	19.7	19.7	19.7
EMERGENCY DEPARTMENT VISITS						
Any inpatient admission	12.7%	40.7%	44.4%	47.5%	48.2%	50.3%
Any mental health diagnosis	7.7%	35.1%	40.9%	45.5%	48.4%	53.6%
Any substance use disorder diagnosis	5.2%	25.6%	30.2%	34.0%	34.6%	34.9%
Number of ED visits	1.3	6.8	7.7	9.8	12.9	16.7
Number of unique EDs visited	1.1	2.1	2.2	2.5	2.9	3.3

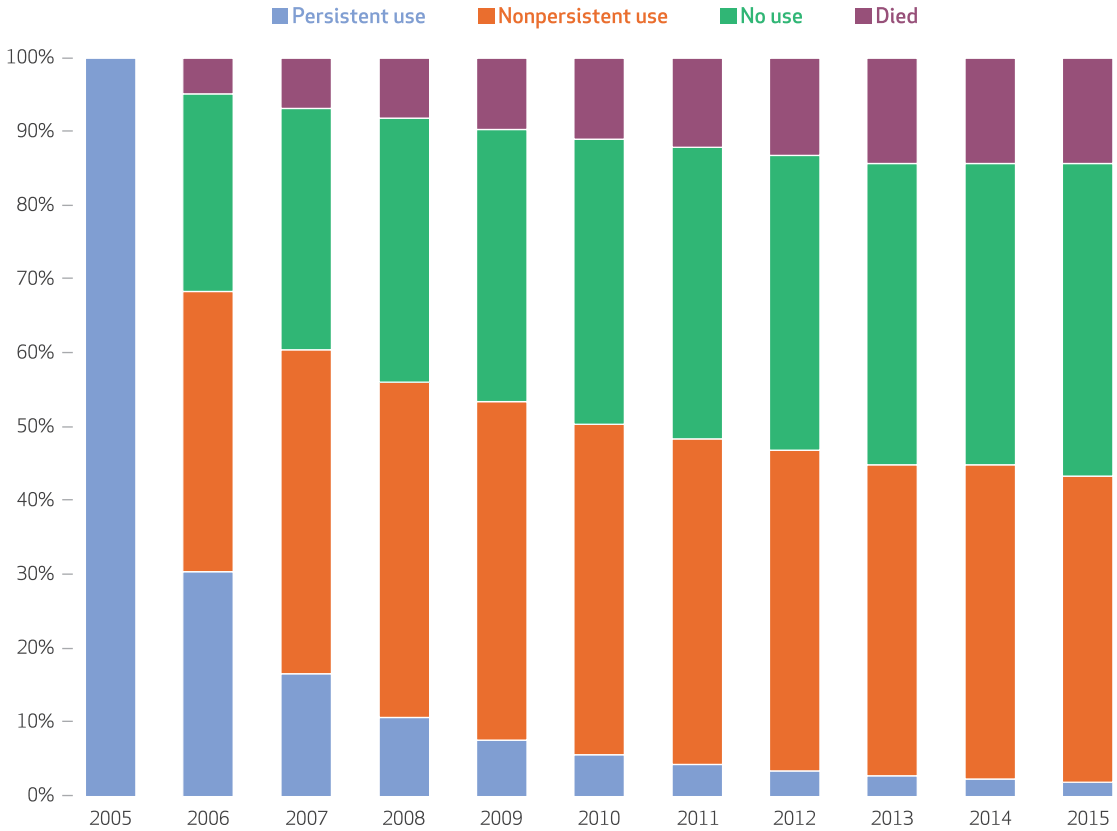
SOURCE Authors' analysis of data for 2005–15 from the California Office of Statewide Health Planning and Development. **NOTES** An occasional user is a patient with one to three ED visits in 2005. A frequent user is a patient with four or more ED visits in a given year. Nonpersistent users are patients who had four or more ED visits in 2005 but fewer ED visits in the consecutive year. Persistent users are patients who had four or more ED visits in the baseline year of 2005 and in one or more consecutive subsequent years. [a]Defined by whether the patient was ever coded as having a given race/ethnicity. [b]Patients were assigned the insurance category that was associated with the majority of their ED visits. For patients with an equal number of visits with different insurance types, the following hierarchy was used to determine designation: uninsured, Medicaid, Medicare, private, and then other. [c]Based on 2010 census data. [d]With incomes below federal poverty level (based on 2010 census data).

persistent users over time. For example, for patients who were frequent users for two consecutive years (2005 and 2006), 54 percent remained frequent users in the following year (Exhibit 3). Over 80 percent of patients who had been persistent frequent ED users for the previous decade continued as frequent users in the final study year. Similarly, over a third of the patients who were frequent ED users for five consecutive years remained so for the entire eleven-year study period. In other words, the longer a patient had been a frequent ED user, the more likely he or she was to persist in that pattern of high ED utilization. The 3,297 patients with persistent frequent ED use in all eleven years averaged over twenty ED visits per patient per year (Appendix Exhibit A3).[19]

The results of the logistic regression model predicting persistent frequent ED use are shown in Exhibit 4 and Appendix Exhibit A5.[19] While several covariates were significantly associated with persistent frequent ED use, intensity of ED use in the baseline year (2005) demonstrated the strongest relationship, even after other relevant characteristics were controlled for. Compared to patients who had four ED visits in 2005, patients with eight to eleven visits had 8.5 greater adjusted odds of persistent frequent use for eleven consecutive years (Exhibit 4). Greater intensity of ED use was associated with increasing odds of long-term persistent frequent use. For example, patients with eighteen or more ED visits (which has been considered a threshold for super-users)[4,5] in the baseline year had 66.9

EXHIBIT 2

Percentages of the 173,273 frequent emergency department (ED) users in California in 2005 who remained frequent users, 2006–15



SOURCE Authors' analysis of data for 2005–15 from the California Office of Statewide Health Planning and Development. **NOTES** A frequent user is a patient with four or more ED visits in a given year. Those with persistent use are patients who had four or more ED visits in the baseline year of 2005 and in one or more consecutive subsequent years. Those with nonpersistent use are patients who had four or more ED visits in 2005 but fewer ED visits in the consecutive year. Those with no ED use are patients who had four or more ED visits in 2005 but no ED visits in some consecutive year. Those categorized as having died are patients who had four or more ED visits in 2005 and died during the study period. Death data were unavailable for 2014 and 2015, so we assumed that death data were unchanged from 2013, as this represented the most conservative estimate.

greater odds of persistent frequent use through the eleven-year study period, compared to patients with four ED visits in the baseline year.

Other factors that were associated with increased odds of persistent frequent ED use included non-Hispanic black race, female sex, urban residence, and public insurance. Neither a history of hospital admission nor the percentage of ED visits that resulted in hospital admission were associated with persistent frequent ED use (Appendix Exhibit A5).[19] Censoring for mortality did not meaningfully alter the results (data available upon request).

Discussion

This analysis of frequent ED users in California supports and extends several previous investigations[3,7,8,11,13,14] and, to our knowledge, is the first study using statewide data to assess long-term persistent frequent ED use. The study had five main findings.

First, a small but nontrivial group (3,297) of frequent ED users persisted in that level of use across the eleven-year study period and commonly exhibited extreme levels of ED use. Differentiating persistent from nonpersistent frequent users is important: Each subpopulation affects the health care system differently and may require distinct interventions.[2,5,11,13] Previous investigations have suggested that the intensity of frequent ED use typically regresses to the mean—that is, over time, a high number of visits will decline statistically toward a true average. This was true for nonpersistent frequent users in our study. However, an important group of patients persisted as frequent users for up to eleven years. Given the sustained, repetitive interface these

patients have with the health care system, it makes sense to prioritize their access to high-intensity interventions such as supportive housing or care management.

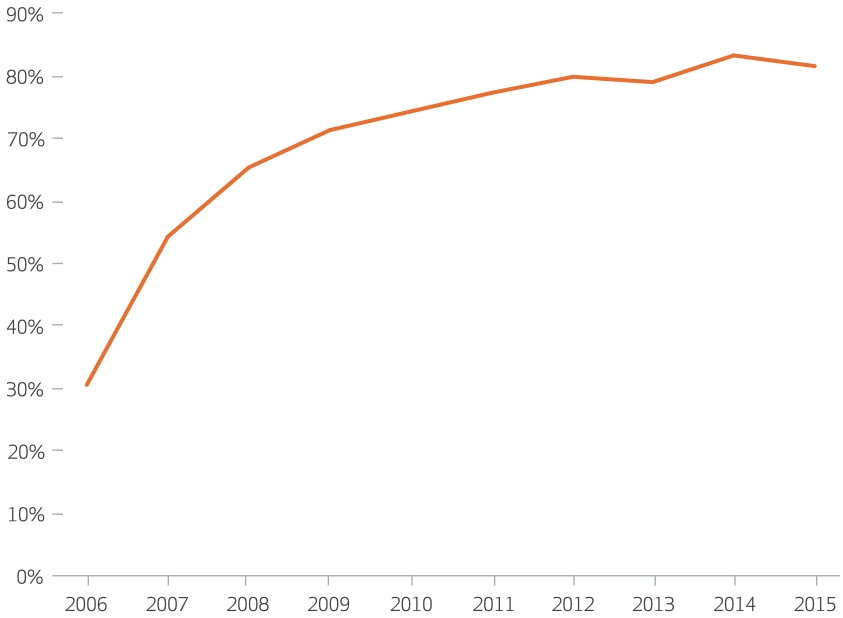
Many care management programs are focused on improving health and reducing recidivism for frequent ED users.[9,10] These programs are often resource limited and aim to target the individuals most likely to benefit from intervention. To date, however, there are limited data to help establish enrollment thresholds that identify the patients most likely to remain frequent ED users over time. We found that people with at least eight ED visits in the index year had substantially increased odds of persistent frequent ED use for up to eleven consecutive years. While we cannot comment on whether such patients would definitely benefit from care management services, our findings provide some guidance on the selection of a target population that is least likely to regress to the mean and most likely to use the ED persistently over many years. Given the high attrition rate in the frequent user population, the use of a control group when evaluating the effectiveness of interventions to reduce frequent use is critical.

Along these lines, our second main finding was that the attrition rate of frequent ED use was nonconstant and declined over time. In fact, the longer a patient had been a frequent ED user, the more likely he or she was to persist with that pattern. After patients had been persistent frequent users for five years, over 70 percent maintained this pattern of utilization for the rest of the eleven-year study period. With our longitudinal follow-up period across the entire state of California, these findings support and extend the work of previous investigations of single health systems.[8,13]

Third, among surviving patients without persistent frequent ED use, within three years the cohort split about evenly into patients with some ED use and those with none. These proportions remained stable over the following seven years of the study period. However, the dichotomy is likely not stable at the individual level, and it should be a consideration for future investigations. As others have also shown,[8] many people who are frequent ED users have an intense yet temporary need for health care services. Interventions may incorrectly be credited with reducing the persistence of frequent use when, in fact, patients' reduction in ED use merely represents a natural regression to the mean. This finding has important implications for interventions designed to aid these patients, and it highlights the need to be able to identify which patients will have sustained levels of potentially avoidable ED use.[8]

EXHIBIT 3

Percentages of frequent emergency department (ED) users who had been frequent users in the previous year, 2006–15



Authors' analysis of data for 2005–15 from the California Office of Statewide Health Planning and Development. **NOTE** A frequent user is defined as a patient with four or more ED visits in a given year.

Fourth, our measurement of frequent visits was more accurate than those used in previous studies, which were unable to link patients across EDs and thus may have under- or overestimated frequent users. By linking patients across California hospitals, our study detected nearly 50 percent more frequent users (173,273 versus 117,773) than methodologies without record linkage would have found, even if they were able to observe information for all of the hospitals in our data set. Furthermore, not linking patients could count those who were frequent users in each of two or more EDs (12,624 patients in our sample) as multiple frequent users rather than as just one patient.

Finally, high-intensity ED use—not any of the social, demographic, economic, or clinical attributes contained in our data—was the strongest predictor of persistent frequent ED use. Superusers (those with eighteen or more ED visits in 2005) had tremendous odds of sustaining heavy ED use throughout the study period. A few previous studies have suggested that such superusers differ from other less frequent ED users. These patients may be less medically ill, with larger proportions of their ED visits related to substance abuse and mental illness, and may rely on the ED as their main source of care.[3,4,25] A two-year analysis of a nationally representative sample of Medicare beneficiaries found that fre-

EXHIBIT 4

Predictors of persistent frequent emergency department (ED) use, 2005 and consecutive years

	Persistent use for:			
	2 years	3 years	6 years	11 years
DEMOGRAPHIC CHARACTERISTICS				
Non-Hispanic white	1.00	1.00	1.00	1.00
Non-Hispanic black	0.99	0.97	1.07*	1.34****
Hispanic	0.90****	0.87****	0.87****	1.10*
Other	0.83****	0.76****	0.82***	1.00
Unknown	0.98	0.93***	0.99	1.17***
TYPE OF INSURANCE[a]				
Private	1.00	1.00	1.00	1.00
Medicare	1.46****	1.73****	1.86****	1.79****
Medicaid	1.34****	1.53****	1.66****	1.71****
None	1.09****	1.14****	1.13**	1.11
Other	0.97	0.97	0.99	0.89
RESIDENCE				
In urban county[b]	0.96	1.01	1.10	1.80****
Medium tercile poverty[c]	0.99	0.97	0.95	1.04
Highest tercile poverty[c]	1.00	0.99	0.99	1.03
EMERGENCY DEPARTMENT VISITS				
Number of unique EDs visited				
1	1.00	1.00	1.00	1.00
2–4	1.03*	1.01	1.06*	1.08
5 or more	0.96	0.95	1.00	1.16*
Number of ED visits				
4	1.00	1.00	1.00	1.00
5–7	1.60****	1.97****	2.52****	2.83****
8–11	2.67****	4.78****	7.65****	8.49****
12–17	4.01****	8.72****	19.13****	21.91****
18 or more	6.07****	15.72****	46.07****	66.89****
MENTAL HEALTH DIAGNOSES				
Anxiety disorders	1.01	0.99	1.01	1.14**
Mood disorders	1.07***	1.04	1.00	1.02
Schizophrenia or other psychotic disorders	0.99	0.88****	0.87**	0.93
Alcohol-related disorders	1.10****	1.16****	1.15***	1.00
Substance-related disorders	1.09****	1.09****	1.02	1.07
Attempted suicide or intentional self-inflicted injury	1.43****	1.49****	1.61****	1.98****

SOURCE Authors' analysis of data for 2005–15 from the California Office of the Statewide Health Planning and Development. **NOTES** The exhibit shows adjusted odds ratios based on logistic regression analysis in which the dependent variable was an indicator for whether a patient remained a frequent user for two, three, six, or eleven years. The reference group was patients who were frequent ED users (that is, they had four or more ED visits) in 2005 but were not persistent frequent users (that is, they did not also have four or more ED visits in one or more consecutive years in the study period). All predictors are as of 2005. A complete exhibit, with 95% confidence intervals and additional patient demographic and visit characteristics, is available as online Appendix Exhibit A5 (see Note 19 in text). [a]Patients were assigned the insurance category that was associated with the majority of their ED visits, as described in more detail in the Notes to Exhibit 1. [b]Based on 2010 census data. [c]Poverty variables (terciles) are based on the fraction of the population in a given ZIP code that are living below the federal poverty level. The lowest-poverty group (omitted) had less than 10.8 percent of the population living in poverty, the medium tercile had 10.9–19.2 percent living in poverty, and the highest tercile had more than 19.2 percent living in poverty. *$p < 0.10$ **$p < 0.05$ ***$p < 0.01$ ****$p < 0.001$

quent use in the index study year was the single greatest risk factor for frequent use in the subsequent year, which suggests that our findings may hold true for the population older than age sixty-five.[11] A study of Medicaid enrollees in New York City found that 1.7 percent of patients had three or more ED visits and 0.8 percent had five or more ED visits over five consecutive years.[3] The study also found that persistent frequent ED users appeared to exhibit very high volumes of ED use each year over the entirety of the five-year study period. The authors noted that the majority of these patients had significant comorbid medical and psychosocial disease and often remained loyal to a single primary care physician, while demonstrating simultaneously high rates of ambulatory primary care, specialty care, and ED use.

Predictive modeling, which we used in this study, is a useful technique for identifying patients who are the most likely to incur significant use of health services in the future. While many predictive analytic models have focused on targeting patients at risk for hospitalization, readmissions, and high expenditures,[26–28] policy makers have suggested that predictive modeling be used to identify frequent ED users.[3,5,7,8,29] In a consensus article on frequent ED use, the authors specifically referred to the need for a longitudinal study to identify these patients and predict which patients will remain persistent frequent users.[5] Our study addresses this need, while also accounting for ED use throughout California—which is critical since single-site analysis is inadequate for comprehensively identifying patterns of frequent use.[17]

Future work on this topic should similarly focus on regional, statewide, or national data sets as opposed to single centers. Predictive models may be further enhanced if they can incorporate patient attributes related to behavioral and social determinants of health. Interventions focused on frequent ED users have historically targeted patients based on previous use of medical services without examining co-occurring use of behavioral health and social services. Future efforts should not be limited to initiatives to reduce costs or use of the ED but must attend to the many psychosocial risk factors that contribute to the vulnerability of such patients and their persistent ED use.[29,30]

Conclusion

In our study of frequent ED users in California in the period 2005–15, we found a small but nontrivial group of persistent frequent ED users who exhibited extreme levels of ED visits. Very high ED users in 2005—especially super-users, with more than eighteen ED visits that year—were most likely to remain frequent ED users over longer time horizons of five or ten years. Identifying patients at risk of becoming persistent frequent users is important, as such patients likely differ from short-term frequent users and may be candidates for distinct interventions. ■

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CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, MS, RN, NEA-BC, VP Nursing & Clinical Services

SUBJECT: Leading the Way

SUMMARY

CHA's, "Leading the Way, Addressing California's Growing Behavioral Health Crises" - is a multi-stakeholder coalition to address behavioral health needs for consumers, their families, and providers of services. The coalition is headed by Darrell Steinberg, Jessica Cruz, from the National Alliance on Mental Illness – California, and, Carmela Coyle, President & CEO, California Hospital Association.

The Coalition has met four times and prioritized activity into three workgroups: 1) Legal and Regulatory Barriers, 2) Workforce, and 4) Delivery System/Finance. The workgroups are developing specific action items to create a plan to improve access and effective treatment for future behavioral health care needs across the state.

Specific recommendations and activities are noted on the attachment provided.

ACTION REQUESTED

- Information for the committee to encourage discussion on the "intersectionality" of many of the issues such as behavioral health that affect emergency care services.

DISCUSSION QUESTIONS

1. How will we complement behavioral health and Leading the Way initiatives with ECSI?

Attachments: LTW, February 7 Meeting Information

BJB:br

1215 K Street, Suite 800, Sacramento, CA 95814 • *Telephone:* 916.443.7401 • *Facsimile:* 916.552.7596 • www.calhospital.org

Leading the Way

Addressing California's Growing Behavioral Health Crisis

February 7, 2018
9:00 a.m. – Noon
The California Endowment
1414 K St., Sacramento

AGENDA

I	9:00	Opening Remarks • Darrell Steinberg, facilitator • Jessica Cruz, CEO, National Alliance on Mental Illness – California • Carmela Coyle, President/CEO, California Hospital Association
II	9:10	Introductions (Principals) • Identify your organization, name and title; also for observer, if applicable
III	9:20	Coalition Framework Review & Discussion (Carmela Coyle)
IV	9:45	Committee Recommendation Priorities (Sheree Lowe)
V	10:00	Committee Reports • Barriers – Legal & Regulatory – Facilitator, Elena Lopez-Gusman, CalACEP • Workforce – Facilitator, Dustin Corcoran, CMA – Reporting: Cathy Martin, CHA • Delivery System/Finance (Joint Report) – Facilitators, Allison Homewood, CAPH (Finance) and Kirsten Barlow, CBHDA (Delivery System)
VI	10:15	Facilitator-Led Group Discussion (All Attendees) • Create a Focused Agenda
VII	11:45	Other Business
VIII	11:55	Next Meeting: May 2018
IX	12:00	Adjournment

LEADING THE WAY

Our Purpose

To join in a powerful and diverse coalition to lead California to an improved system of addressing behavioral health needs for consumers, their families, and providers of services.

Our Objectives

To Elevate – it is the mission of this coalition to lift the issue of behavioral health to the top of the list of federal, state and local priorities. We will work together to create opportunities to give voice to the problems, needs and potential solutions for improving behavioral health in California.

To Educate – this coalition will play a leading role in educating and influencing elected officials and other key decision makers, the many professionals who witness California's behavioral health challenges every day, and the public about issues, challenges and needed improvements.

To Innovate – a key role of this coalition is to be an incubator for new ideas…to think differently about ways to address behavioral health needs, remove legal and regulatory barriers to improvement, create new and innovative ways to prevent, treat and support Californians in need.

Our Path Forward

Focus on the "intersectionality" of the many interests represented.

Develop, collect and share best Practices to inform all those involved.

Identify implementable change for service gaps, models of care, and funding streams to support.

Create a plan to improve access and effective treatment for the behavioral health care needs of Californians.

Revised 2/1/18

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
Barriers – Legal & Regulatory			
Circulate the Office of Health Information Integrity's booklet that will explain the laws about sharing information related to patients with behavioral health conditions.	Disseminate (Cal-OHII) material, when available (published, then pulled for revision)	All coalition members	1
Pursue legislation regarding local zoning decisions. The legislation might raise the threshold before a conditional use permit would be required (perhaps to 15 patients); streamline zoning requirements in underserved areas of the state; prohibit discrimination against entities providing services to behavioral health patients; and/or require each community to make provision for housing for individuals with behavioral health conditions.	Develop legislation	Develop a compilation of state and federal laws prohibiting discrimination against facilities serving behavioral health patients.	2
Support legislation that extends the Stanislaus pilot project regarding alternate destinations for mental health patients.	Develop legislation	Outcome data from 2017 pilots will inform.	3
Pursue legislation to streamline the licensing process for mental health providers.	Develop legislation	Community and hospital-based providers	4
Convene a legal team to consider strategies to gain clarification on the Lanterman-Petris-Short Act.	Legal consultation	May lead to legislation. Attorney General opinion is another option.	5 (tie)
Undertake a thorough evaluation of current licensing categories and requirements with an eye toward creating new categories or revising existing regulations to better fit delivery systems for children through seniors.	Gap analysis of delivery system	Use 1980/81 California model as template	5 (tie)
Support legislation that would reduce mental health disparities for racial, ethnic, LGBTQ, and other underserved communities and facilitate their access to mental health services and programs.			7
Encourage adoption of a standardized screening tool to permit the safe implementation of alternate destinations to hasten access to appropriate care.	Develop uniform statewide tool	Tools exist in Contra Costa, Fresno and Alameda Counties	8

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
Pursue legislation to repeal the Medi-Cal prohibition on paying for two visits on the same day.	Develop legislation	Past legislation (AB 858, 2015; AB 1445, 2009; SB 260, 2007) vetoed by Governor due to cost to Medi-Cal.	9
Support AB 501, which would create a new licensing category for children's crisis residential programs.	legislation AB 501 (Ridley-Thomas)	Coalition support letter, legislation signed by Gov. Oct 12, 2017	N/A
Delivery System / Continuum of Care / Crisis Services			
STIGMA - Stigma and discrimination continue to impact the behavioral health delivery system. Local governments across California can face resistance from the public when trying to find appropriate locations to open new treatment sites. Given the shared experience, it would be helpful to problem solve together and share best practices for addressing community concerns and overcoming this barrier.	Synthesize material to combat NIMBYism	Develop tool kit	1
PREVENTION - Strategies to improve crisis care must be paired with efforts to prevent crisis. The committee identified two key opportunities to further advance behavioral health prevention and early intervention: • Building Awareness & Capacity: Education to raise public awareness about early warning signs, paired with training to expand access to early intervention. • State of the State on Physical-Behavioral Health Integration & Early Intervention**:** In part thanks to investments from foundations and the MHSA, integrated approaches have taken hold in many places throughout California. It seems an opportune time to assess what has been accomplished so far and what work still remains, illuminating next steps from both the clinical/operational and policy perspectives.	Evaluate current prevention, early intervention & physical/behavioral integration models	Numerous organizations, including CBHDA, CPCA, and OAC, may have information related to this.	2

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
CRISIS - Facilitate a statewide dialogue aimed at increasing access to crisis services. As a starting place, the group could share lessons learned from the SB 82 grants, jointly strategize to sustain and build upon progress in SB 82 counties, and facilitate public-private partnerships to spread successful crisis care models throughout the state. Review national models and identify those both nationally and in California that best meet crisis needs.	Evaluate current crisis care models	MHSOAC and CHFFA maintain this information. DHCS and counties maintain payment data and licensure data for community-based providers. CDPH maintains data on hospital-based services.	3
CONTINUUM - Articulate a best practice continuum of behavioral health services and supports that every Californian should have access to, regardless of type of coverage. The continuum would be a useful planning tool for purposes including but not limited to: • Conducting local gap analyses to prioritize areas for further investment; explore public-private partnerships to fill prioritized gaps. • Mapping out the various pathways individuals may take in accessing different services over time to identify opportunities for better coordination and improved transitions of care. • Assessing priority areas for policy intervention based on commonality across the state.	Determine the ideal care continuum	Use 1980/81 California model as template	4 (tie)
At the Nov. 3 Leading the Way Coalition meeting, the Finance and Delivery System/Continuum of Care/Crisis Services Committees jointly recommended that the Coalition should seek external funding to examine California's current behavioral health care system and provide recommendations for the development, financing, oversight and monitoring of a comprehensive behavioral health care system in California for all. (See Finance Subcommittee Recommendations, #2)	Seek external funding to examine California's current behavioral system and provide recommendations for the development, financing, oversight and monitoring of a comprehensive behavioral health care delivery system in California.		4 (tie)

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
Finance			
To address the complex challenges that will help us collectively work to improve behavioral health care delivery in California, LTW should invite funders and researchers to explore with us an effort to conduct an in-depth policy analysis to examine the following: • California's behavioral healthcare delivery system as a whole and how systems work together to create improved care coordination from crisis, to stabilization, maintenance and housing; • Current behavioral health funding, including opportunities to leverage other sources of funding, and/or develop alternative funding opportunities; • Capacity, training and opportunities to expand the behavioral health workforce; • Various legal and regulatory barriers for behavioral health care access; and • Create enhanced and improved methods and strategies to promote mental health and prevent mental illness.		Foundation supported activity. Well Being Trust funding grant opportunity should be accessed when available.	1
The *Leading the Way* Coalition (Coalition) should seek external funding to contract with an objective third-party entity to inventory funding sources - including ones identified by the *Leading the Way* Finance Committee (Finance Committee) - analyze the information, and consult with the Coalition on recommendations that will: • Improve the health and well-being of Californians • Identify methods of collecting and using data affecting consumer outcomes and experiences • Leverage existing funding • Identify risks, gaps, and vulnerabilities in current financing of services • Inform delivery system transformation • Increase available funding • Incentivize spending that produces improved consumer outcomes	External inventory and analysis of funding sources	Foundation supported activity. Well Being Trust funding grant opportunity should be accessed when available.	2

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
Workforce			
The LTW workforce committee recommends that LTW consider sponsoring legislation to establish Psych Rehabilitation Practitioner certification.	Develop legislation		1
The LTW workforce committee recommends a legislative proposal that would be the equivalent of AB 1340 but specific to continuing education requirements for allied health professionals, who often are on the front lines of encountering patients who may be experiencing a mental or behavioral health condition.	Develop legislation	Long-Term Legislative Solutions (2018 and beyond)	2 (tie)
The LTW workforce committee also recommends that LTW consider sponsoring legislation to create peer counselor certification in California.	Develop legislation	Past legislative efforts have not been successful.	2 (tie)
Assess inventory of and support for psychiatric graduate medical education residencies in California versus other specialties as evidence to support the development of an advocacy campaign that communicates the need to increase the number of psychiatric residencies in the state.	Inventory psychiatric GME residency programs	Develop advocacy campaign	4
Conduct a field scan for identifying strategies within the behavioral health delivery system that lead to positive outcomes for individuals experiencing crisis, focusing on high-risk and high-need populations (e.g. the formerly incarcerated) that dominate behavioral health related encounters. Using these findings, develop a framework for workforce planning and development in behavioral health that aligns with and supports quality improvement, especially for populations that are resource intense (high utilizers of resources).	Field scan of promising practices	Development of framework for workforce planning & development	5 (tie)
The LTW workforce committee should coordinate and align with the LTW finance committee on recommendations related to reimbursement given the impacts of low reimbursement rates on medical students' (and other practitioners') decisions to practice (or not) in the field of behavioral health.	Develop comprehensive strategy	Align efforts with Finance committee	5 (tie)

Leading the Way Committee Recommendations

December 21, 2017

HIGHLIGHTS IDENTIFIED AS COMPLETED

RECOMMENDATIONS	ACTIONS	SUGGESTIONS	PRIORITY
With a framework for behavioral health workforce planning and development created, the LTW coalition should commission an independent, comprehensive statewide report that examines various skills and credential standards for the non-physician behavioral health workforce. This report will make recommendations regarding workforce education, training standards and requisite skills (including "soft-skills" such as communication and compassion) that may or *may not* require formal licensure or certification. The purpose of these recommendations is to inform new, innovative recruitment and retention strategies that address workforce shortages while improving patient outcomes. The report will examine barriers that prevent those with lived experience from entering the behavioral health workforce pipeline and make recommendations accordingly.	Comprehensive examination of recommended workforce skills	Independent statewide report	7
Support AB 1340 (Maienschein): Requires the Medical Board of California, in determining its continuing education requirements for licensed physicians and surgeons, to consider including a course in integrating mental and physical health care in primary care settings, especially as it pertains to early identification of mental health issues in children and young adults and their appropriate care and treatment.	Signed by the Governor, Oct. 12, 2017.	Short-Term Legislative Solutions (2017)	N/A
The LTW workforce committee recommends that LTW leverage the efforts of the newly established California's Future Health Workforce Commission, which will have as members CEOs of the prominent health foundations, California lawmakers, as well as the University of California President, and Chancellors for the California State University and the California Community Colleges. This commission has been established to create a master plan for health workforce in California. A priority of the commission will be to educate candidates and incumbent lawmakers, as well as the incoming administration, about the need to address health workforce shortages and disparities in California. While primary care workforce will be top tier, behavioral health workforce will be included as a priority.	Submit a letter to the Future Health Workforce Commission emphasizing prioritization of behavioral health workforce. Letter sent Sept. 26, 2017.	Invited to speak and join committee.	N/A

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, RN, MS, NEA-BC, VP Nursing & Clinical Services
Keven Porter, Regional Vice President, Hospital Association of San Diego and Imperial Counties
Bruce Barton, Director, Riverside County EMS Agency
Pam Allen, RN, MSN, CEN, Director of Emergency Services, Redlands Hospital

SUBJECT: Ambulance Patient Offload Times/Delay Update

SUMMARY

CHA continues to work closely with hospital and prehospital providers on ambulance patient offload delays. A presentation on APOT next steps was presented at the December ED Forum and CHA continues to monitor LEMSA collection and reporting system. Information and the LEMSA reporting spreadsheet can be found at https://emsa.ca.gov/apot/.

ACTION REQUESTED

- Discussion on how APOT and APOD times are being tracked and monitored at this point and what other work needs to be done to improve accurate valid and reliable reporting?

DISCUSSION QUESTIONS

1. What is the present state of APOT/APOD in your ED?
2. What is the additional work that needs to be done to improve accurate, valid and reliable reporting?
3. Are LEMSA's reporting times on their individual sites?
4. Are LEMSA's reporting their times to EMSA and if so, which ones?

BJB:br

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: Carla Schneider, MSN, CEN, Director ED, Hoag Hospital

SUBJECT: Reducing Ambulance Diversions

SUMMARY

Carla will present "Reducing Ambulance Diversion" discussion on how her ED improved emergency services key metrics and diversion.

ACTION REQUESTED

- Discussion

DISCUSSION QUESTION

1. Where is diversion activity occurring across the state?
2. Are the metrics used in this work similar to what others use?
3. Does county diversion status help or hinder improved wait times?
4. Is it over or underused?

Attachment: Presentation

BJB:br

California Hospital Association

EMS/Trauma Committee

Carla Schneider, MSN, CEN, Director ED

March 7, 2018

hoag

HHNB/HHI Unit Demographics

HHNB	HHI
56 beds plus a code room	14 beds, 4 FT chairs, 6 hall beds
118 Registered Nurses (Includes Radio RNs)	56 Registered Nurses
43 Emergency Care Techs	30 Emergency Care Techs
30 Emergency Physicians & 16 Advanced Practitioner (PA/NP)	
3 Community Navigators	
3 Psychiatrists	

hoag

ED Team Accomplishments

Decreased LOS for Discharged Patients & Overall

Decreased LWOTs

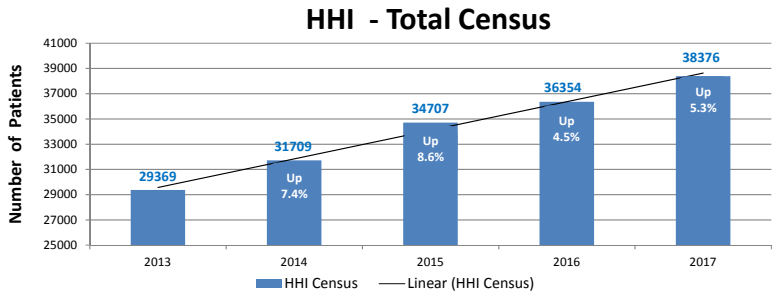
Decreased/Eliminated Diversions

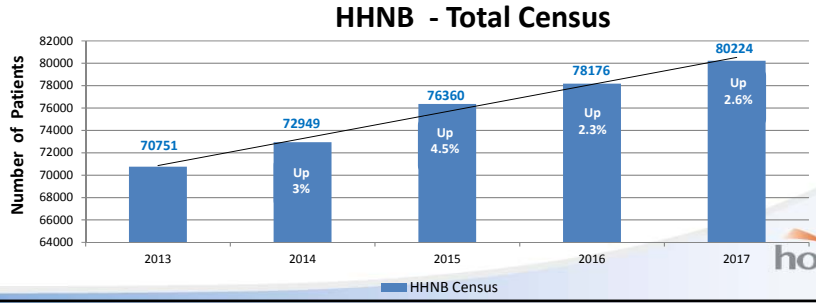
Increased Patient Experience Scores

2nd Kaizen Event Team

hoag

ED Census per Campus





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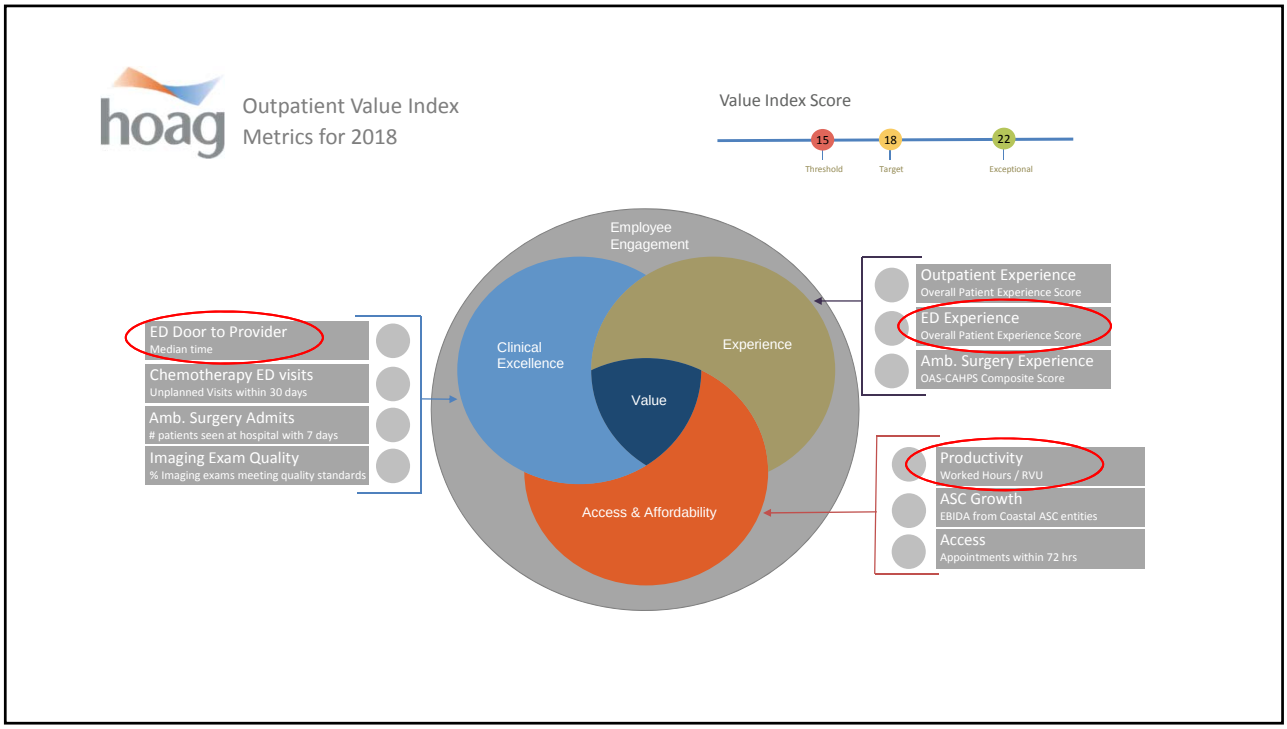


Provider-in-Triage (PIT) Process

Purpose: Expedite care and reduce length of stay
Supports patient safety & decreases risk/need for diversion

PIT team includes: NP/PA, RN, ECT, Phlebotomist, Registration

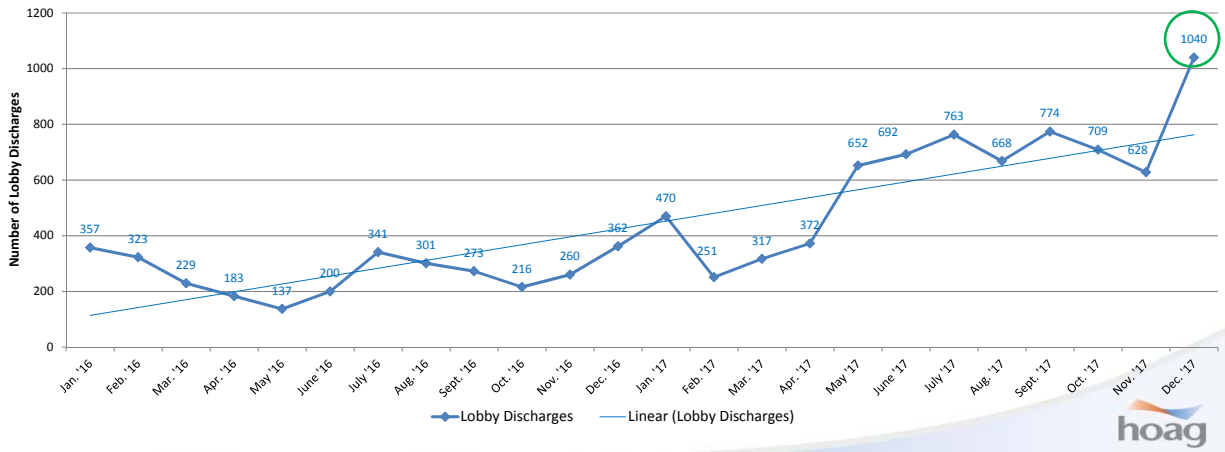
- NP/PA works in parallel process with the Triage Nurse to see patients as they arrive
- NP/PA assesses (includes diagnostic tests), treats and discharges as indicated, per criteria

hoag

HHNB

Increased Discharges from PIT Process Positively Impacts Overall LOS

→ *supports throughput efforts and decreases risk/need for diversion*



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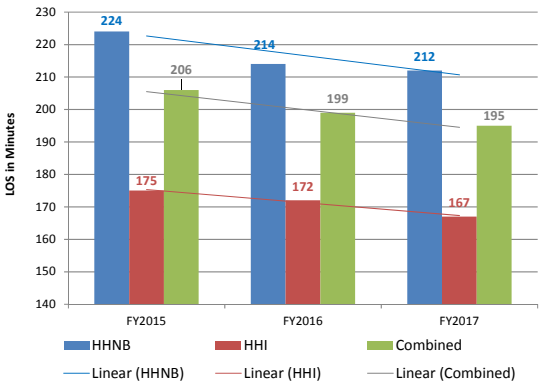
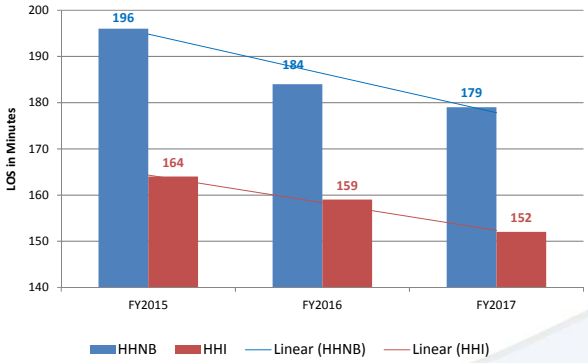
Length of Stay

Length of Stay (LOS) Overall for All Patients



Length of Stay (LOS) for Discharged Patients



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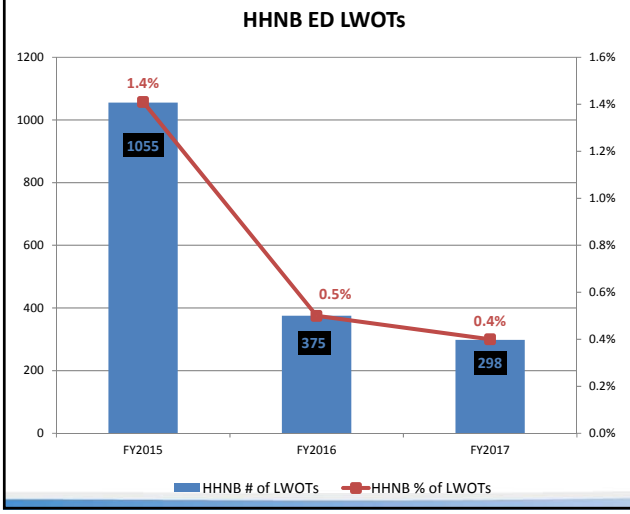
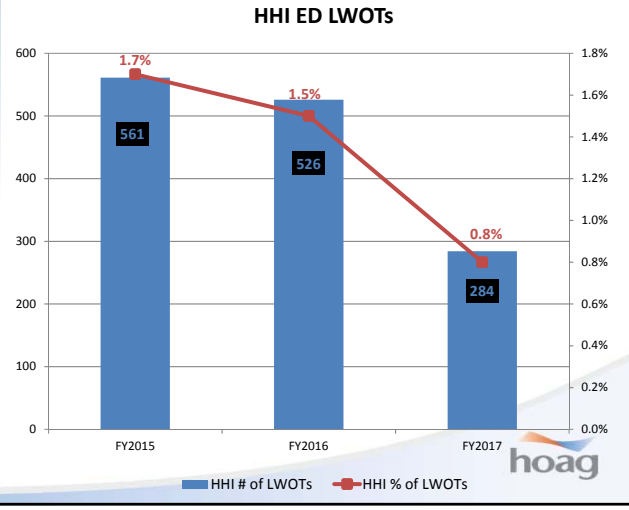
Left Without Treatment (LWOT)

(National Benchmark 2% or less)





County of Orange
Health Care Agency
Emergency Medical Services

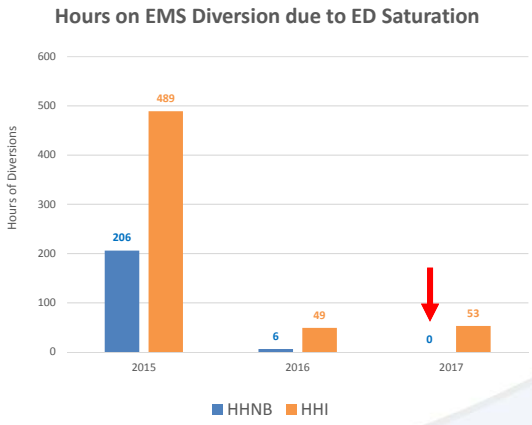
Ambulance Patient Offload Time (APOT-1)

January Report 2018

Hospital	2017 Totals			January 2018				
	Transports	90th Percentile APOT Time (Min:Sec)	Diversion Hours	Transports	90th Percentile APOT Time (Min:Sec)	Mean APOT Time (Min:Sec)	Median APOT Time (Min:Sec)	Diversion Hours
Anaheim Global Medical Center	3,902	23:27	165	339	26:08	11:34	7:37	45
Anaheim Regional Medical Center	5,773	30:31	303	503	40:15	17:30	11:15	70
Chapman Global Medical Center	792	15:02	65	104	18:30	8:11	5:36	8
Children's Hospital of Orange County	2,354	18:36	0	206	17:18	8:59	7:12	0
Foothill Regional Medical Center	719	18:21	15	123	21:29	10:55	6:59	6
Fountain Valley Reg Hosp and MC	8,854	25:00	274	836	32:50	16:21	10:36	10
Garden Grove Hosp and MC	4,430	34:55	3	420	33:30	15:10	10:00	1
Hoag Hospital Irvine	6,834	20:34	61	695	21:06	11:36	9:42	29
Hoag Memorial Hosp Presbyterian	18,126	18:05	0	1,623	17:37	10:31	9:27	0
Huntington Beach Hospital	4,387	20:07	44	429	34:31	14:43	7:52	10
Kaiser Permanente - Anaheim MC	4,874	30:00	347	416	41:45	19:00	12:16	82
Kaiser Permanente - Irvine MC	4,577	28:50	234	430	36:40	17:49	12:09	36
La Palma Intercommunity Hospital	1,619	57:12	81	148	116:36	39:07	18:02	78
Los Alamitos Medical Center	5,201	47:49	710	426	62:42	27:55	20:01	151
Mission Hospital - Laguna Beach	2,809	35:01	46	316	38:54	17:18	11:00	40
Mission Hospital Regional MC	13,375	36:09	401	1,142	40:05	18:02	11:10	125
Orange Coast Memorial MC	5,158	24:35	324	472	34:02	16:29	11:39	91
Orange County Global MC	8,967	25:26	210	737	23:52	11:51	8:28	66
Placentia Linda Hospital	3,932	16:58	65	411	14:23	8:09	6:46	57
Saddleback Memorial MC	8,768	25:23	336	752	27:43	14:47	14:47	73
South Coast Global Medical Center	1,961	22:39	14	166	23:20	13:38	8:15	0
St. Joseph Hospital	10,342	25:05	437	1,004	22:34	11:49	9:00	61
St. Jude Medical Center	10,756	45:16	268	950	47:47	22:36	17:44	75
UCI Medical Center	9,605	29:07	769	749	30:05	12:18	7:16	142
West Anaheim Medical Center	7,982	42:07	72	663	57:20	24:06	14:15	74
Median Hospital 90th Percentile APOT Time		25:23			32:50			
InterQuartile Range		20:34, 34:55			22:34, 40:05			
OC EMS System Total (Aggregate)	156,097	28:55		14,060	33:05			
OCEMS System Mean APOT Time		14:06			15:31			
Standard Deviation		+/- 16:35			+/- 18:07			
OCEMS System Median APOT Time		10:00			10:36			
InterQuartile Range		05:05, 17:16			05:04, 19:01			

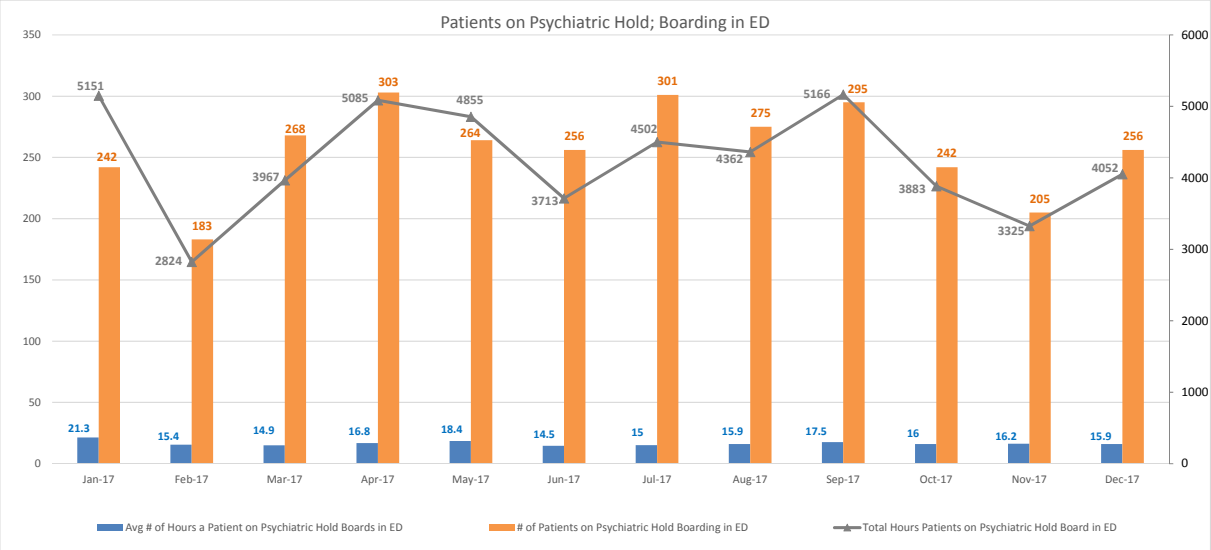
Paramedic Diversion

- The average number of EMS arrivals to hospitals in Orange County in 2017 was 6,244
  - Hoag Newport Beach received the most patients *(18,126) and is one of 2 hospitals with zero diversions for 2017*
- The median OC hospital wall time for 2017 is 25:23 min.
  - Hoag Newport Beach was **18:05** min.



hoag

Hours & Number of Patients on Psychiatric Hold Boarding in ED at HHNB



Audit - Measure - Improve

- Focusing on process improvements to expedite throughput improves quality of care & times related to all metrics
  - Door-to-Provider
  - Length-of-Stay for all patients
    - Discharge Disposition Order-to-Exit ED
    - Admit Bed Request-to-Exit ED
  - APOT

hoag

CALIFORNIA HOSPITAL ASSOCIATION

Providing Leadership in Health Policy and Advocacy

March 7, 2018

TO: EMS/Trauma Committee Members

FROM: BJ Bartleson, RN, MS, NEA-BC, VP Nursing & Clinical Services

SUBJECT: Community Paramedicine, AB 1795 and SB 944

SUMMARY

CHA is co-sponsoring AB 1795 with LA County that gives local emergency medical services agencies the authority to develop alternate destination programs for patients with mental health and alcohol intoxication needs. This would provide more direct access to appropriate care and increase efficiency for local emergency response systems.

Current law requires paramedics responding to emergency 911 calls to transport all patients who show signs of mental health problems or inebriation to hospital emergency departments. Existing law also allows law enforcement officers to direct a person to a mental health urgent care center or sobering center.

Organized medicine and labor are in opposition and we are working with many stakeholders previous to Assembly Health Committee in April.

ACTION REQUESTED

- Discussion

DISCUSSION QUESTION

1. Are you familiar with any alternate destination projects?
2. Would you be willing to help us testify and visit with legislators to support the bill?
3. Can you attend our special Legislative Day event on April 4th to lobby Assembly Health members?

Attachments: AB 1795
SB 944

BJB:br

1215 K Street, Suite 800, Sacramento, CA 95814 • *Telephone:* 916.443.7401 • *Facsimile:* 916.552.7596 • www.calhospital.org

ASSEMBLY BILL No. 1795

Introduced by Assembly Member Gipson

January 9, 2018

An act to amend Sections 1797.52, 1797.172, and 1797.218 of, and to add Sections 1797.98 and 1797.260 to, the Health and Safety Code, relating to emergency medical services.

LEGISLATIVE COUNSEL'S DIGEST

AB 1795, as introduced, Gipson. Emergency medical services: community care facilities.

Existing law, the Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act, establishes the Emergency Medical Services Authority, which is responsible for the coordination and integration of all state agencies concerning emergency medical services. Among other duties, the authority is required to develop planning and implementation guidelines for emergency medical services systems, provide technical assistance to existing agencies, counties, and cities for the purpose of developing the components of emergency medical services systems, and receive plans for the implementation of emergency medical services and trauma care systems from local EMS agencies.

The act also authorizes each county to develop an emergency medical services program and requires local EMS agencies to plan, implement, and evaluate an emergency medical services system. Existing law requires local EMS agencies to be responsible for the implementation of advanced life support systems, limited advanced life support systems, and for the monitoring of specified training programs for emergency personnel. Existing law defines advanced life support as special services

designed to provide definitive prehospital emergency medical care, as specified, at the scene of an emergency, during transport to an acute care hospital, during interfacility transfer, and while in the emergency department of an acute care hospital until responsibility is assumed by that hospital.

This bill would authorize a local emergency medical services agency to submit, as part of its emergency services plan, a plan to transport specified patients to a community care facility, as defined, in lieu of transportation to a general acute care hospital. The bill would make conforming changes to the definition of advanced life support to include prehospital emergency care provided before and during, transport to a community care facility, as specified. The bill would also direct the Emergency Medical Services Authority to authorize a local EMS agency to add to its scope of practice for specified emergency personnel those activities necessary for the assessment, treatment, and transport of a patient to a community care facility.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

SECTION 1. Section 1797.52 of the Health and Safety Code is amended to read:

1797.52. "Advanced life support" means special services designed to provide definitive prehospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital as part of a local EMS system at the scene of an emergency, during transport to an acute care hospital, during interfacility transfer, ~~and~~ while in the emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of that ~~hospital.~~ *hospital, at the scene of an emergency for the purpose of determining transport to a community care facility or an acute care hospital, and during transport to a community care facility as part of an approved local EMS agency emergency medical services plan.*

SEC. 2. Section 1797.98 is added to the Health and Safety Code, to read:

1797.98. "Community care facility" means a mental health urgent care center or sobering center staffed with medical personnel that is designated by a local EMS agency, as part of an approved local emergency medical services plan.

SEC. 3. Section 1797.172 of the Health and Safety Code is amended to read:

1797.172. (a) The authority shall develop and, after approval by the commission pursuant to Section 1799.50, adopt minimum standards for the training and scope of practice for EMT-P.

(b) The approval of the director, in consultation with a committee of local EMS medical directors named by the EMS Medical Directors Association of California, is required prior to implementation of any addition to a local optional scope of practice for EMT-Ps proposed by the medical director of a local EMS agency.

(c) Notwithstanding any other ~~provision of~~ law, the authority shall be the agency solely responsible for licensure and licensure renewal of EMT-Ps who meet the standards and are not precluded from licensure because of any of the reasons listed in subdivision (d) of Section 1798.200. Each application for licensure or licensure renewal shall require the applicant's social security number in order to establish the identity of the applicant. The information obtained as a result of a state and federal level criminal offender record information search shall be used in accordance with Section 11105 of the Penal Code, and to determine whether the applicant is subject to denial of licensure or licensure renewal pursuant to this division. Submission of fingerprint images to the Department of Justice may not be required for licensure renewal upon determination by the authority that fingerprint images have previously been submitted to the Department of Justice during initial licensure, or a previous licensure renewal, provided that the license has not lapsed and the applicant has resided continuously in the state since the initial licensure.

(d) The authority shall charge fees for the licensure and licensure renewal of EMT-Ps in an amount sufficient to support the authority's licensure program at a level that ensures the qualifications of the individuals licensed to provide quality care. The basic fee for licensure or licensure renewal of an EMT-P shall

not exceed one hundred twenty-five dollars ($125) until the adoption of regulations that specify a different amount that does not exceed the authority's EMT-P licensure, license renewal, and enforcement programs. The authority shall annually evaluate fees to determine if the fee is sufficient to fund the actual costs of the authority's licensure, licensure renewal, and enforcement programs. If the evaluation shows that the fees are excessive or are insufficient to fund the actual costs of the authority's EMT-P licensure, licensure renewal, and enforcement programs, then the fees shall be adjusted accordingly through the rulemaking process described in the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code). Separate additional fees may be charged, at the option of the authority, for services that are not shared by all applicants for licensure and licensure renewal, including, but not limited to, any of the following services:

(1) Initial application for licensure as an EMT-P.

(2) Competency testing, the fee for which shall not exceed thirty dollars ($30), except that an additional fee may be charged for the cost of any services that provide enhanced availability of the exam for the convenience of the EMT-P, such as on-demand electronic testing.

(3) Fingerprint and criminal record check. The applicant shall, if applicable according to subdivision (c), submit fingerprint images and related information for criminal offender record information searches with the Department of Justice and the Federal Bureau of Investigation.

(4) Out-of-state training equivalency determination.

(5) Verification of continuing education for a lapse in licensure.

(6) Replacement of a lost licensure card. The fees charged for individual services shall be set so that the total fees charged to EMT-Ps shall not exceed the authority's actual total cost for the EMT-P licensure program.

(e) The authority may provide nonconfidential, nonpersonal information relating to EMS programs to interested persons upon request, and may establish and assess fees for the provision of this information. These fees shall not exceed the costs of providing the information.

(f) At the option of the authority, fees may be collected for the authority by an entity that contracts with the authority to provide

any of the services associated with the EMT-P program. All fees collected for the authority in a calendar month by any entity designated by the authority pursuant to this section to collect fees for the authority shall be transmitted to the authority for deposit into the Emergency Medical Services Personnel Fund within 30 calendar days following the last day of the calendar month in which the fees were received by the designated entity, unless the contract between the entity and the authority specifies a different timeframe.

(g) Upon approval of a plan to transport patients to a community care facility submitted pursuant to Section 1797.260, the authority shall authorize a local EMS agency to add to its scope of practice for an EMT-P those activities necessary for the assessment, treatment, and transport of a patient to a community care facility.

SEC. 4. Section 1797.218 of the Health and Safety Code is amended to read:

1797.218. Any local EMS agency may authorize an advanced life support or limited advanced life support program which provides services utilizing EMT-II or EMT-P, or both, for the delivery of emergency medical care to the sick and injured at the scene of an emergency, during transport to a general acute care hospital, during interfacility transfer, while in the emergency department of a general acute care hospital until care responsibility is assumed by the regular staff of that hospital, ~~and~~ during training within the facilities of a participating general acute care ~~hospital.~~ *hospital, at the scene of an emergency for the purpose of determining transport to a community care facility or an acute care hospital, and during transport to a community care facility as part of an approved local EMS agency emergency medical services plan.*

SEC. 5. Section 1797.260 is added to the Health and Safety Code, to read:

1797.260. A local EMS agency may submit, as part of its emergency services plan, a plan to transport patients to a community care facility that is not a general acute care hospital based on a determination that there is no need for emergency health care. This plan shall include, without limitation, all of the following:

(a) Criteria for designating a facility as a community care facility, including appropriate medical staffing and administrative medical oversight such as a medical director.

(b) One or more policies for prompt evaluation and treatment of patients within a facility.

(c) A communication plan between prehospital medical personnel.

(d) A secondary transport plan to include criteria for contacting the jurisdictional prehospital provider for transport to an emergency department of an acute care hospital.

(e) Medical equipment and monitoring protocols.

(f) Required submission of a quality improvement plan and patient outcome data to the local EMS agency.

(g) Additional education requirements for paramedics.

(h) Protocols for handling patient destination considerations including requests by patients.

O

SENATE BILL No. 944

Introduced by Senator Hertzberg

January 29, 2018

An act relating to community paramedicine.

LEGISLATIVE COUNSEL'S DIGEST

SB 944, as introduced, Hertzberg. Community paramedicine programs: guidelines.

Existing law, the Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act, governs local emergency medical services (EMS) systems. The act establishes the Emergency Medical Services Authority, which is responsible for the coordination and integration of emergency medical services. Among other duties, the authority is required to develop planning and implementation guidelines for emergency medical services systems, provide technical assistance to existing agencies, counties, and cities for the purpose of developing the components of emergency medical services systems, and receive plans for the implementation of emergency medical services and trauma care systems from local EMS agencies.

This bill would declare the intent of the Legislature to enact legislation that establishes statewide guidelines for, and authorizes the implementation of, community paramedicine programs in California, as specified.

Vote: majority. Appropriation: no. Fiscal committee: no. State-mandated local program: no.

The people of the State of California do enact as follows:

SECTION 1. It is the intent of the Legislature to enact legislation that establishes statewide guidelines for, and authorizes

the implementation of, community paramedicine programs in California that utilize existing providers, promote continuity of care, and maximize existing efficiencies within the first response and emergency medical services system.

O

CA AB 263

AUTHOR: Rodriguez [D]
TITLE: Emergency Medical Services Workers: Working Conditions
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 01/31/2017
LAST AMEND: 06/21/2017
DISPOSITION: Pending
LOCATION: Senate Rules Committee
SUMMARY:

Relates to the Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act. Requires an employer that provides emergency medical services as part of an emergency medical services system or plan to authorize and permit its employees to take prescribed rest periods. Requires a specified report concerning violent incidents involving EMS providers. Specifies application of these provisions to employers that are air carriers.

STATUS:

09/01/2017 From SENATE Committee on APPROPRIATIONS: Do pass to Committee on RULES. (5-2)

INDEX: 35, 57
ISSUES: BJ, GBS*
LOBBYIST: CD, KAS*
POSITION: F, X

CA AB 451

AUTHOR: Arambula [D]
TITLE: Health Facilities: Emergency Services and Care
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/13/2017
LAST AMEND: 07/05/2017
DISPOSITION: Pending
LOCATION: Senate Appropriations Committee
SUMMARY:

Specifies that a psychiatric unit within a genera acute care hospital, a psychiatric health facility, or an acute psychiatric hospital is required to provide emergency services to care to treat a person with a psychiatric emergency medical condition who has been accepted by the facility if the facility has appropriate facilities and qualified personnel. Makes conforming changed to related provisions.

STATUS:

09/01/2017 In SENATE Committee on APPROPRIATIONS: Held in committee.

INDEX: 35, 77
ISSUES: BJ, SL*
LOBBYIST: AH*, CD
POSITION: N/A, X

CA AB 735

AUTHOR: Maienschein [R]
TITLE: Swimming Pools: Public Safety
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/15/2017
LAST AMEND: 05/26/2017

DISPOSITION: Pending
LOCATION: Senate Appropriations Committee
SUMMARY:

Requires public swimming pools that are required to provide lifeguard services and that charge a direct fee to provide an Automated External Defibrillator during pool operations. Requires the State Department of Education, in consultation with the State Department of Public Health, to issue best practices guidelines related to pool safety at K-12 schools.

STATUS:

09/01/2017 In SENATE Committee on APPROPRIATIONS: Held in committee.

INDEX: 35
ISSUES: BJ
LOBBYIST: CD
POSITION: F

CA AB 1116

AUTHOR: Grayson [D]
TITLE: Peer Support and Crisis Referral Services Act
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/17/2017
LAST AMEND: 09/08/2017
DISPOSITION: Pending
FILE: A-41
LOCATION: Senate Inactive File
SUMMARY:

Creates the Peer Support and Crisis Referral Services Act. Defines peer support team as a local critical incident response team composed of individuals from the emergency services professions and other fields who have completed a training course developed by certain emergency agencies. Establishes a privilege for communications between emergency service personnel and peer support team members or staff of a crisis hotline or referral service. Relates to liability for team members.

STATUS:

09/11/2017 In SENATE. Read second time. To third reading.
09/11/2017 In SENATE. From third reading. To Inactive File.

INDEX: 31, 35
ISSUES: BJ, CLH*
LOBBYIST: CD, KAS*
POSITION: F

CA AB 1795

AUTHOR: Gipson [D]
TITLE: Emergency Medical Services: Community Care Facilities
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 01/09/2018
DISPOSITION: Pending
LOCATION: Assembly Health Committee
SUMMARY:

Authorizes a local emergency medical services agency to submit, as part of its emergency services plan, a plan to transport specified patients to a community care facility in lieu of transportation to a general acute care hospital.

STATUS:

01/22/2018	To ASSEMBLY Committee on HEALTH.
INDEX:	35
ISSUES:	BJ*, DP
LOBBYIST:	CD
POSITION:	S, X

CA AB 2118

AUTHOR:	Cooley [D]
TITLE:	Medi-Cal: Ground Emergency Medical Transportation
FISCAL COMMITTEE:	no
URGENCY CLAUSE:	no
INTRODUCED:	02/08/2018
DISPOSITION:	Pending
LOCATION:	ASSEMBLY

SUMMARY:

Makes a technical, nonsubstantive change to a statement of legislative intent to provide supplemental reimbursement to certain ground emergency medical transportation providers.

STATUS:

02/08/2018	INTRODUCED.
INDEX:	35, 65
ISSUES:	AO*, BJ, DP
LOBBYIST:	BG*, CD
POSITION:	PR

CA AB 2262

AUTHOR:	Wood [D]
TITLE:	Coast Life Support District Act: Urgent Medical Care
FISCAL COMMITTEE:	no
URGENCY CLAUSE:	no
INTRODUCED:	02/13/2018
DISPOSITION:	Pending
LOCATION:	Assembly Health Committee

SUMMARY:

Authorizes Coast Life Support District to provide urgent medical care services.

STATUS:

03/01/2018	To ASSEMBLY Committees on HEALTH and LOCAL GOVERNMENT.
INDEX:	33, 35
ISSUES:	BJ*, DP, PW
LOBBYIST:	BG, CD*
POSITION:	PR

CA AB 2280

AUTHOR:	Chen [R]
TITLE:	Medi-Cal: Emergency Medical Transports: Data
FISCAL COMMITTEE:	no
URGENCY CLAUSE:	no
INTRODUCED:	02/13/2018
DISPOSITION:	Pending
LOCATION:	ASSEMBLY

SUMMARY:

Makes technical, nonsubstantive changes to the provisions governing reports regarding emergency medical transports.

STATUS:

02/13/2018	INTRODUCED.

INDEX: 35, 65
ISSUES: AK, BJ*, DP
LOBBYIST: BG, CD*
POSITION: PR

CA AB 2961

AUTHOR: O'Donnell [D]
TITLE: Emergency Medical Services
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/16/2018
DISPOSITION: Pending
LOCATION: ASSEMBLY
SUMMARY:

Makes technical nonsubstantive changes to existing law which authorizes a local EMS agency to adopt policies and procedures to calculate and report ambulance patient offload time.

STATUS:

02/16/2018 INTRODUCED.

INDEX: 35
ISSUES: BJ
LOBBYIST: CD
POSITION: F, X

CA SB 398

AUTHOR: Monning [D]
TITLE: Acquired Brain Trauma
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/15/2017
LAST AMEND: 04/06/2017
DISPOSITION: Pending
LOCATION: Assembly Human Services Committee
SUMMARY:

Relates to a program of services for persons with acquired traumatic brain injury. Makes that program operative indefinitely. Requires the Department of Rehabilitation to pursue all sources of funding and by authorizing the department to require that service providers meet specified program and operational certification standards in order to receive ongoing funding.

STATUS:

06/20/2017 From ASSEMBLY Committee on HEALTH: Do pass to Committee on HUMAN SERVICES. (15-0)

INDEX: 35, 65
ISSUES: AK*, AO, DBR
LOBBYIST: BG*, CD
POSITION: F

CA SB 792

AUTHOR: Wilk [R]
TITLE: Local Government: Measure B Oversight Commission
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/17/2017
LAST AMEND: 05/26/2017
DISPOSITION: Pending
LOCATION: Assembly Local Government Committee

SUMMARY:

Requires the County of Los Angeles to establish the Measure B Oversight Commission and requires a certain report regarding the County of Los Angeles trauma network and the special tax levied on all improved parcels in the County to provide funding for the Countywide System of Trauma Centers, Emergency Medical Services, and Bioterrorism Response. Requires the posting of certain information on an Internet Web site.

STATUS:

06/28/2017 In ASSEMBLY Committee on LOCAL GOVERNMENT: Heard, remains in Committee.

INDEX: 109, 35
ISSUES: AM*, BJ
LOBBYIST: BG*, KAS
POSITION: F

CA SB 944

AUTHOR: Hertzberg [D]
TITLE: Community Paramedicine Programs: Guidelines
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 01/29/2018
DISPOSITION: Pending
LOCATION: Senate Rules Committee

SUMMARY:

Declares the intent of the Legislature to enact legislation that establishes statewide guidelines for, and authorizes the implementation of, community paramedicine programs in California.

STATUS:

02/08/2018 To SENATE Committee on RULES.

INDEX: 35
ISSUES: BJ*, DP
LOBBYIST: CD
POSITION: F, X

CA SB 1372

AUTHOR: Pan [D]
TITLE: MediCal: Emergency Medical Transport Providers
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/16/2018
DISPOSITION: Pending
LOCATION: SENATE

SUMMARY:

Makes technical, nonsubstantive changes to provisions of existing law establishing the MediCal program.

STATUS:

02/16/2018 INTRODUCED.

INDEX: 35, 65
ISSUES: AK*, AO, BJ
LOBBYIST: BG*, CD
POSITION: PR

Uber launches 'Uber Health' to transport patients to physicians' offices

Written by Alyssa Rege | March 01, 2018 | Print | Email

Ride-hailing service app Uber on March 1 announced its intent to team up with various healthcare organizations nationwide to provide transportation for patients traveling to and from medical appointments, according to *NPR*.

The service, Uber Health, aims to help patients make it to their medical appointments on time. For patients without smartphones, receptionists or other staffers at participating physicians' offices can schedule their rides for immediate pickup or dropoff up to 30 days in advance.

"Transportation barriers are the greatest for vulnerable populations," said Chris Weber, general manager of Uber Health, adding the service "will provide reliable, comfortable transportation for patients," but will not act as a supplement to ambulances for patients in critical need of care.

Rather than operating through an app, Uber Health will send passengers their ride information via text message. Drivers, however, will still locate and pick up riders through the Uber app, allowing them to abide by the patient privacy laws outlined in HIPAA.

Roughly 100 healthcare facilities nationwide participated in Uber Health's test program. The company said it plans to roll out the feature to participating facilities gradually. Officials also said they hope to introduce an option for passengers to receive a call with their trip details to their landline, according to the report.

More articles on patient flow:
9 recent hospital ward, unit closures and service terminations
Chicago hospital to shutter pediatric unit pending approval
Massachusetts hospital to close, transition inpatient services to Boston Medical Center