Emergency Department Update

Susan Ehrlich, MD, MPP
Chief Executive Officer
I sincerely thank you for your professionalism and kindness during my time of need. You are greatly appreciated.”
TRUE NORTH

VISION
To be the best hospital by exceeding patient expectations and advancing community wellness in a patient centered, healing environment.

MISSION
To provide quality healthcare and trauma services with compassion and respect.

VALUES
Joy in our work
Thirst in Learning
Compassionate Care

True North Goals
Equity
Safety
Quality
Care Experience
Developing Our People
Financial Stewardship

THE ZSFG WAY
“How we align, improve, and enable”
OVERVIEW

ED BACKGROUND
- Patients
- Acuity
- Route of Arrival

IMPROVEMENT WORK
1. Modeling Staffing
2. Flow and Access: Diversion & Boarding
   a. CareStart
   b. Social Medicine
3. Workplace Violence
## ED PATIENT VOLUME

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>ESI1/2</th>
<th>ESI 3</th>
<th>ESI 4/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily ED volume CY18</td>
<td>226 ± 15</td>
<td>25%</td>
<td>47%</td>
<td>28%</td>
</tr>
<tr>
<td>Daily ED Volume CY19</td>
<td>219 ± 13</td>
<td>26%</td>
<td>49%</td>
<td>25%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Walk in</th>
<th>Ambulance</th>
<th>PES Transfers</th>
<th>Admit Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED volume CY18</td>
<td>72%</td>
<td>28%</td>
<td></td>
<td>16.6%</td>
</tr>
<tr>
<td>ED Volume CY19 (to date)</td>
<td>71.5%</td>
<td>28.5%</td>
<td>10/day</td>
<td>16.7%</td>
</tr>
</tbody>
</table>
Mean Age = 43 ± 19
60% Male: 40% Female

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISPANIC/LATINO</td>
<td>38.03%</td>
</tr>
<tr>
<td>BLACK OR AFRICAN AMERICAN</td>
<td>23.88%</td>
</tr>
<tr>
<td>WHITE</td>
<td>21.92%</td>
</tr>
<tr>
<td>ASIAN</td>
<td>10.86%</td>
</tr>
<tr>
<td>OTHER RACE</td>
<td>2.67%</td>
</tr>
<tr>
<td>NATIVE HAWAIIAN/PACIFIC ISLANDER</td>
<td>1.40%</td>
</tr>
<tr>
<td>AMERICAN INDIAN/ALASKAN NATIVE</td>
<td>0.73%</td>
</tr>
<tr>
<td>DECLINE TO SPECIFY</td>
<td>0.51%</td>
</tr>
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</table>
ED TO PES TRANSFERS

An increasing volume of ED to PES transfers

ED LOS before transfer increasing
ED VOLUME VARIATES BY TIME OF DAY

Approximately 3,500 Trauma activations

ED volume peaks between 8AM – 7PM

- Time when maximal beds needed to meet demand
ED VOLUME HAS INCREASED SINCE 2015

- 25% increase in ED volume from 7/2014-7/2018

- Volume peaks between 8AM and 7PM

- Hospital at >100% capacity with to 25%-30% of beds occupied by LLOC patients

- Long LOS (avg 10 hours) of admitted patients in the ED

ED daily volume

ED admitted patient LOS

Target Baseline (FY 14-15)
IMPROVEMENT WORK IS ESSENTIAL

1. Modeling Staffing

2. Flow and Access: Diversion and Boarding
   a. CareStart
   b. Social Medicine

3. Workplace Violence
1. STAFFING IS MODELED TO PREDICTED DEMAND

Beds staffed average from Oct 5– Nov 5, 2019

Daily staffing is variable with a standard deviation of ± 4-7 beds
1. LEAVES AND VACANCIES MAKE IT CHALLENGING TO STAFF TO OUR MODEL

<table>
<thead>
<tr>
<th>Position Type</th>
<th>Total Positions</th>
<th>Vacant Positions</th>
<th>Staff on Leave</th>
<th>OT, P103 and Registry hours/month*</th>
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<tbody>
<tr>
<td>RN</td>
<td>138</td>
<td>18</td>
<td>9</td>
<td>4848</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13%</td>
<td>6.5%</td>
<td></td>
</tr>
<tr>
<td>MEA</td>
<td>54</td>
<td>2</td>
<td>4</td>
<td>1854</td>
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<tr>
<td></td>
<td></td>
<td>3.7%</td>
<td>7.4%</td>
<td></td>
</tr>
<tr>
<td>Clerk</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>123</td>
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<tr>
<td></td>
<td></td>
<td>0%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>NP</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>35</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

* = Oct 5 – Nov 5
2. FLOW AND ACCESS

Began multiple improvement efforts in 2016 to address poor access to emergency care

- 59% ambulance diversion rate
- 8.3% LWBS rate

Poor flow and access = providing wrong care at the wrong time in the wrong place
2. THROUGH A COMBINATION OF EFFORTS, WE HAVE DECREASED PATIENTS LEAVING WITHOUT BEING SEEN AND AMBULANCE DIVERSION

- LWBS decrease 51% from 8.3% in FY14/15 to 4.1% in FY18/19
- Diversion decreased 20% from 59% in FY15/16

Approx. 3,500 patients who did not LWBS in FY18/19
2A. CARESTART: SAFE, TEAM-BASED ASSESSMENT AND RAPID TREATMENT

• Front-end care model using a multidisciplinary, team-based approach, aimed at assessing and treating lower acuity patients
• The goals for the project were to:
  • Decrease door to provider time from 71 minutes to less than 30 minutes and;
  • Decrease LWBS rate from 7.2% to less than 5%
2A. CARESTART HAS IMPROVED FLOW

CareSTART was associated with a 29.9% decrease in door to provider time and a 40.8% decrease in LWBS rate.
2A. CARESTART HAS ALLOWED US TO REFER MORE PATIENTS TO URGENT CARE
2A. CARESTART HAS PRESERVED ED BEDS FOR THE SICKEST PATIENTS

Now referring or discharging approx. 1300 patients/month without sending to an ED bed

Represents ~ 25% of ED volume and more than 75% of ESI4/5 volume

Received “Top Abstract” Award at 2019 Stanford Improvement conference
2A. CARESTART IS STILL A WORK IN PROGRESS

- CareSTART physical space needs improvements to protect privacy and work better for the team
- CareSTART policies and procedures defining treatment are being refined
2B. SOCIAL MEDICINE PROGRAM TARGETS HOSPITALIZATION FOR SOCIAL NEEDS

- Goal: reduce short-stay hospitalizations driven by social needs by 50% (from 500 to 250/year) by December 2018
- Increase multi-disciplinary teamwork in ED to coordinate care

- Improvements:
  - Pharmacy Meds in Hand Program
  - ED MD-SW Multi-Disciplinary Rounds
  - Social Medicine Consult Service
2B. SOCIAL MEDICINE CONSULT TEAM HELPS PROVIDE MORE APPROPRIATE CARE AND AVOID UNNECESSARY ADMISSIONS

*Increase multi-disciplinary teamwork in ED to coordinate care*

![Graphs showing ED Social Medicine Consults and ED Pharmacy Medications-In-Hand over time.]

- More than 1600 referrals
- 312 hospital admissions averted
- 2019 CAPH/SNI Quality Leader Award
3. WORKPLACE VIOLENCE

Nationally
• According to American College of Emergency Physicians 70% of emergency room nurses and 47% of emergency room physicians have been physically assaulted at work

At ZSFG
• Patient on employee batteries and assault account for 86% of reported crime with high concentration in ED, Psych and PES

ZSFG Workplace Violence Committee
• Prevent and improve response to incidents of violence.

PRIORITIES
• Ensure integrity of data and reporting
• Assess and improve effectiveness of Crisis Prevention Institute training
• Perfect Code Tan
• Expand reach of Behavioral Emergency Response Team
• Maintain Regulatory Compliance with Cal-OHSA & TJC
3. WORKPLACE VIOLENCE

CHALLENGES

Under reporting

- Poor data to quantify and document WPV events
- Staff see violence as part of their job and are concerned about implications of reporting

Security system

- Reliance on law enforcement for security: uncommon model nationally
- Poor delineation of roles and responsibilities of Care Teams and SFSD in WPV events.

Process

- Lack of consistent process to assess agitation and practice de-escalation

Homelessness

- Increased SF homelessness combined with substance abuse and mental illness.
3. WORKPLACE VIOLENCE INTERVENTIONS

Trainings

- >70% of ED staff received training from crisis prevention institute (CPI)
- >90% of SFSD staff received CIP and CIT (Crisis Intervention Team) training a first-responder model of police-based crisis intervention training Security

Interdisciplinary early intervention team (Current PDSA)

- Aim to intercept patients with high propensity for violence and prevent escalation through timely provision of care
- Establish ED advisory board to evaluate WPV incidents and improve responses

Behavioral Response team (Current PDSA) models on the BERT team

- Provide early intervention with patients with behavioral issues through rounding and de-escalation
3. WORKPLACE VIOLENCE
2020 COUNTERMEASURES

- Review and validate trainings effectiveness for SFSD and ED staff
- Deploy Code BERT (Behavioral Emergency Response Team) hospital-wide
- Create centralized data source within Quality Management
- Implement Violence Prevention Screening tool to assess level of agitation and proactively use de-escalation techniques
- Utilize new equity lounge for night staff to share information about workplace violence prevention and reporting tools
Thanks so much for your amazing care! My face, hand, ribs, brain and life are recovering so quickly because of your amazing care and attention to detail!

I can’t thank you all enough for (truly) letting me be a fly on the wall in the ER last week... I’m still thinking about the care and kindness I watched one RN show to that woman whom just that morning, had assaulted a fellow staff member. Despite even that, the dedication to providing care was really evident. You all are amazing and I’d be honored to work among you one day.”
The ED is a busy and dynamic place seeing >200 patients/day

Deployed many data-driven improvements since Feb 2016

Among the improvements are in diversion, time to provider, LWBS and boarding

We will continue improvement focused on TN: equity, safety, quality, patient and staff experience, financial stewardship
THANK YOU TO OUR ED TEAM FOR THEIR DEVOTION TO OUR PATIENTS!

QUESTIONS?