ZUCKERBERG
SAN FRANCISCO GENERAL
Hospital and Trauma Center

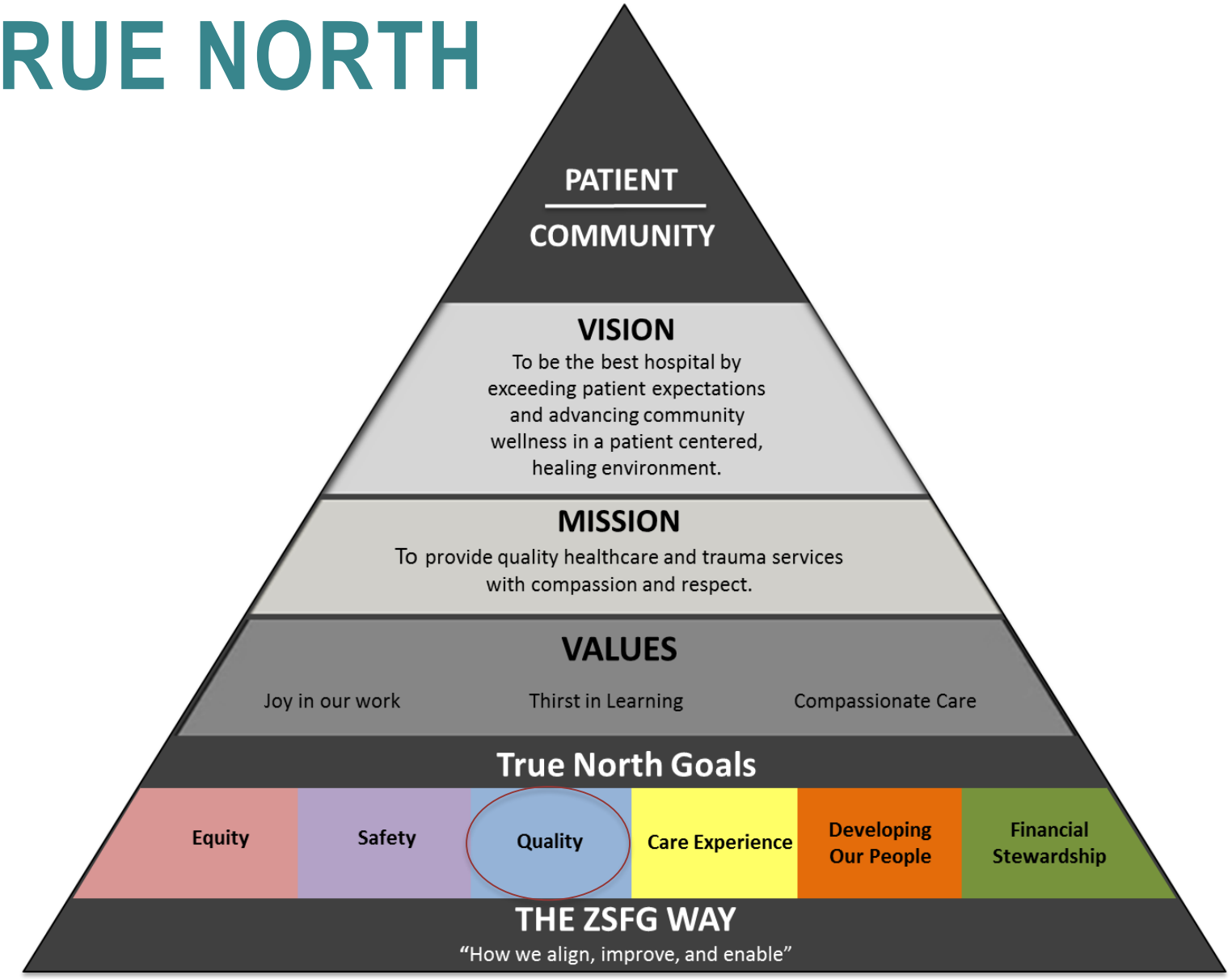
Ensuring Flow and Access

Todd May & Jim Marks

SF HEALTH NETWORK
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

San Francisco Department
of Public Health

TRUE NORTH


PATIENT
COMMUNITY
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"

Ensuring Flow and Access

Flow Tactical A3: We get patients home

Title: Ensuring Flow and Access

Owners/Date: May, Marks, Dentoni, Williams

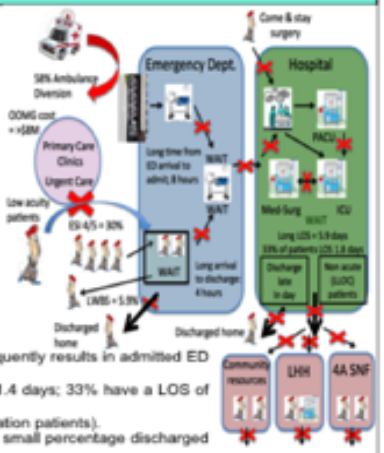
Date	3/04/17	Version 11	draft

I. Background

ZSFG has wrestled with broken patient flow for many years. In FY15-16, Leadership developed a tactical A3 to improve hospital flow as part of the Strategic Plan. The A3 identified goals focused in the ED (diversion rate, left without being seen (LWBS) and length of stay (LOS)), inpatient units (LOS, discharge by noon rate, number of lower level of care (LLOC) patients and Urgent Care (LOS). A plan was developed which involved Value Stream mapping, identification of root causes and the execution of 14 improvement workshops over the span of 16 months. The daily management system (DMS) was also spread to the ED and Urgent Care. Much was learned about factors affecting flow but the only goals that improved were a reduction in discharge ED LOS from 234 min to 217 and a reduction in LWBS from 8.3% to 5.9%, the only one of 10 goals to hit target. Flow throughout the hospital still results in reduced access to care necessitating continued work on alignment, prioritization and accountability.

II. Current Conditions

Patient flow within and between Primary Care, Urgent Care, the ED, Inpatient Units and discharge resources, such as long term care and behavioral units, is characterized by long wait times and patients receiving care in the wrong place.



Primary and Urgent Care (PC & UC):

1. 30% of patients seen in the ED are lower acuity ESI4/5 many of whom could be seen in PC or UC. X% of these do not have a PC home.

Emergency Department:

1. Mean ED LOS is long at 310 min; the largest LOS categories are admitted patients (39% of LOS), moderate acuity (ESI3) patients (26% of LOS) and lower acuity ESI4/5 (16% of LOS).
2. Admitted patient LOS is the most variable ED LOS, specifically the time from decision to admit to leaving the ED which is dependent on the number of admitted (boarded) patients that do not have hospital beds.
3. When hospital beds are full, up to 35 boarded patients accumulate in the ED reducing access for acutely ill patients.
4. 5.9% of patients leave the ED without ever receiving care.
5. Ambulances are diverted from the ZSFG ED 58% of the time resulting in ZSFG patients receiving care at other hospitals.

Inpatient Med Surg Units:

1. The hospital operates at a very high average census of 99.7% which frequently results in admitted ED patients waiting a long time for beds (average Jan 2017 = 9.5 hours)
2. Med-Surg LOS is long at 5.9 days, however 33% have a mean LOS of 1.4 days; 33% have a LOS of 12.8 days.
3. Approximately 22% of admissions do not meet admission criteria (observation patients).
4. Patients are discharged late in the day (3:21 PM on average) with only a small percentage discharged by noon (13.7%).

Discharge resources:

1. Social services, UM, and ancillary services are less available after hours and weekends; one result is that discharges are reduced 30%-50% on Saturday and Sunday.
2. 24% of patients cannot be discharged home; Challenges placing patients that no longer require acute care results in an average of 21 LLOC patients per day which reduces hospital capacity 13%.
3. X, Y and Z patients are placed per month in 4A SNF, LHH and community resources/respite after waits of x, y, and z days

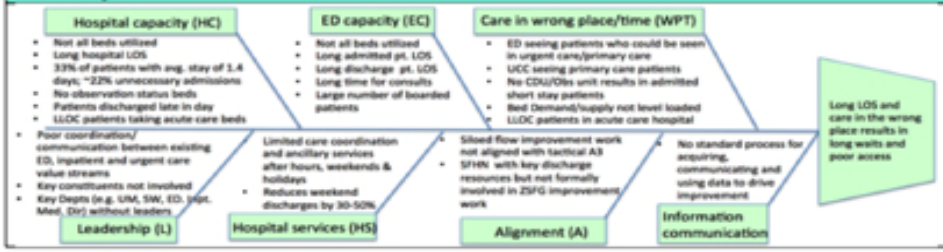
Problem Statement

Poor flow of patients throughout ZSFG results in long wait times and poor access to healthcare for our patients negatively impacting all True North pillars

III. Goals and Targets

Goal	Baseline	1 yr target	2 yr goal
Reduce mean ED length of stay by 11%	309 min	275 min	260 min
Reduce ED ambulance diversion rate by 31%	58%	40%	25%
Reduce the number of lower level of care patients/day by 63%	26.8	10	10
Reduce hospital readmission rate by 1.4%	15.26	15.04	?
Reduce Med-Surg length of stay by 10% in two years	5.9 days	5.9 days	5.3 days

IV. Analysis



V. Proposed Countermeasures

Cause	Countermeasure	Impact	Effort
HC, WPT	1. Develop and implement A3 for reducing the number of unnecessary and short stay admission	V. High	High
HS, WPT	2. Develop and implement care coordination A3 to include reducing the number of LLOC days	V. High	High
WPT	3. Develop and implement A3 for reducing the number of lower acuity patients seen in the ED	V. High	Med
HC, EC	4. Develop and implement A3 for reducing mean ED LOS	V. High	High
L, A	5. Define/hire leadership to oversee and coordinate all flow improvement work	High	Mod
IC	6. Define process for acquiring, communicating and using data to drive improvement	High	Mod
EC	7. Develop and implement A3 for reducing the ambulance diversion rate	Mod	High
HC, EC	8. Develop and implement A3 for identifying and managing acute flow issues (condition yellow)	Mod	Mod
WPT	9. Develop and implement A3 for reducing readmissions	Mod	High

VI. Plan

Countermeasure	Deliverable	Priority	Who	When
1. A3 for reducing the number of short stay admission	A3 with associated plan & resources needed	1	SR & CC	4/01/17
2. A3 for care coordination/LLOC days	A3 with associated plan & resources needed	1	DM & LH	4/01/17
3. A3 for reducing lower acuity ED patients	A3 with associated plan & resources needed	1	RL & HK	4/01/17
4. A3 for reducing mean ED LOS	A3 with associated plan & resources needed	1	GO & MM	4/15/17
5. Define/hire leadership	Leadership structure and responsible individuals	2	TM & JM	4/15/17
6. Define data utilization process	Plan for acquiring and using data in Med-Surg, ED, UC	2	TM, JM, TW, KP	5/01/17
7. A3 for reducing ambulance diversion	A3 with associated plan & resources needed	2	CC & JS	5/01/17
8. A3 for managing acute flow issues	A3 with associated plan & resources needed	3	TM & JM	5/01/17
9. A3 for reducing readmissions	A3 with associated plan & resources needed	3	LT & HH	6/01/17

The Who: TM = Todd May; JM = Jim Marks; TW = Troy Williams; KP = KPO; DM = Dennis McIntyre; LT = Larissa Thomas; CC = Chris Colwell; JS = Jeff Schmidt; GO = Gabe Ortiz; MM = Mary Mercer; TD = Terry Dentoni; RL = Ron Labougen; HK = Hemal Kanzaria; LH =Leslie Holpit; SR = Sumant Ranji

VII. Follow-Up

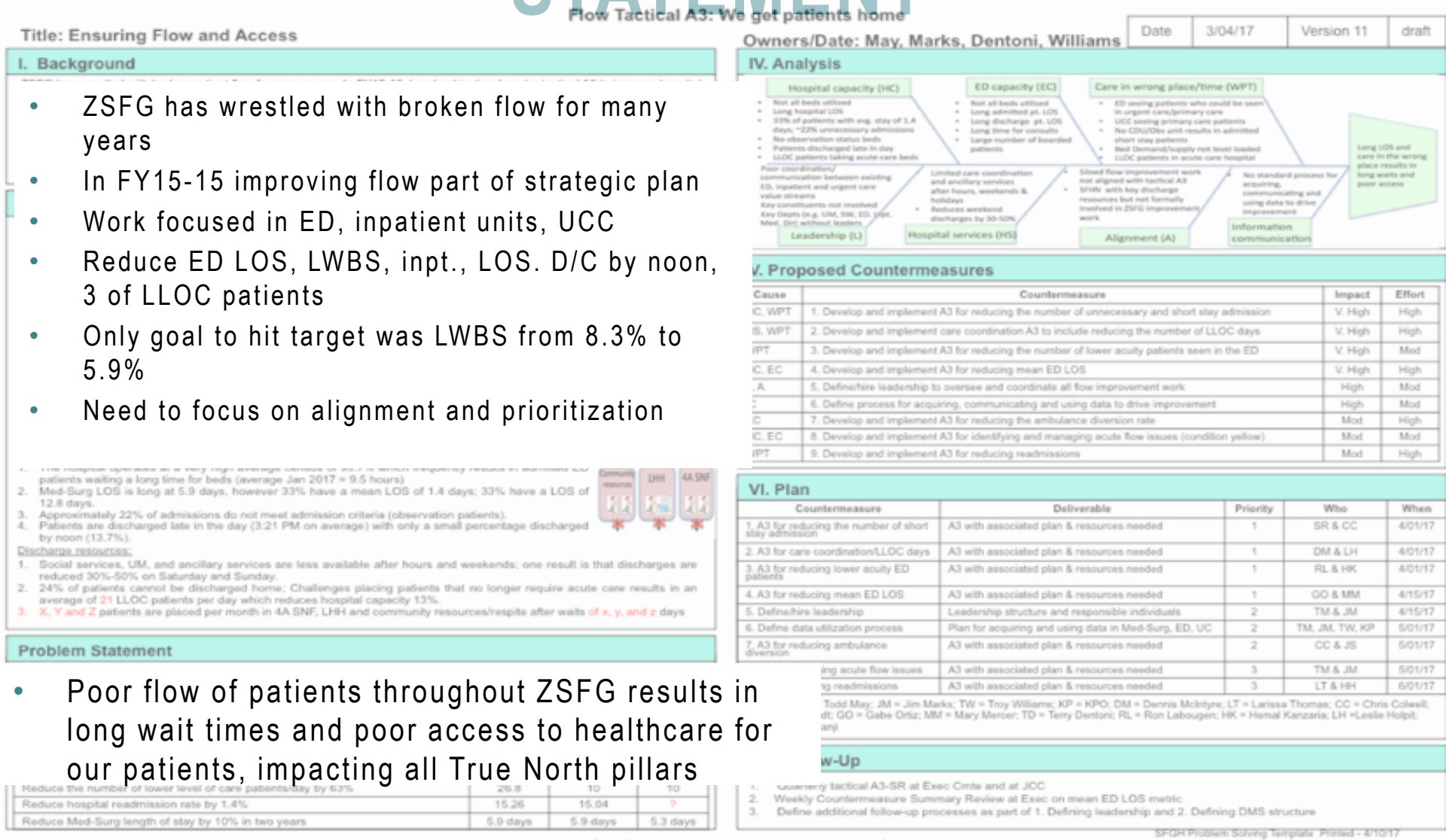
1. Quarterly tactical A3-SR at Exec Cmte and at JCC
2. Weekly Countermeasure Summary Review at Exec on mean ED LOS metric
3. Define additional follow-up processes as part of 1. Defining leadership and 2. Defining DMS structure

SFGH Problem Solving Template Printed - 4/10/17

BACKGROUND & PROBLEM STATEMENT

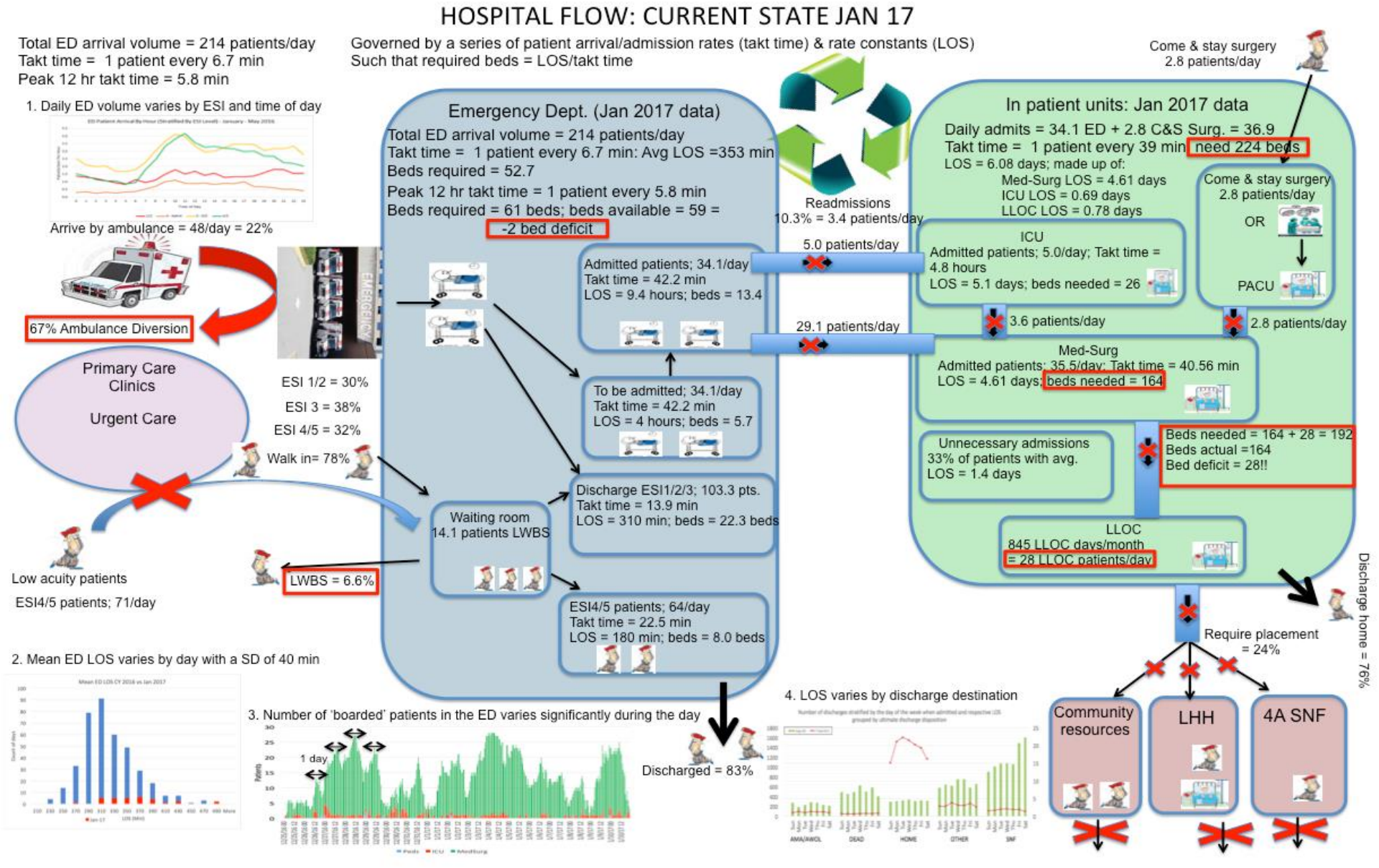
- ZSFG has wrestled with broken flow for many years
- In FY15-15 improving flow part of strategic plan
- Work focused in ED, inpatient units, UCC
- Reduce ED LOS, LWBS, inpt., LOS. D/C by noon, 3 of LLOC patients
- Only goal to hit target was LWBS from 8.3% to 5.9%
- Need to focus on alignment and prioritization

- Poor flow of patients throughout ZSFG results in long wait times and poor access to healthcare for our patients, impacting all True North pillars

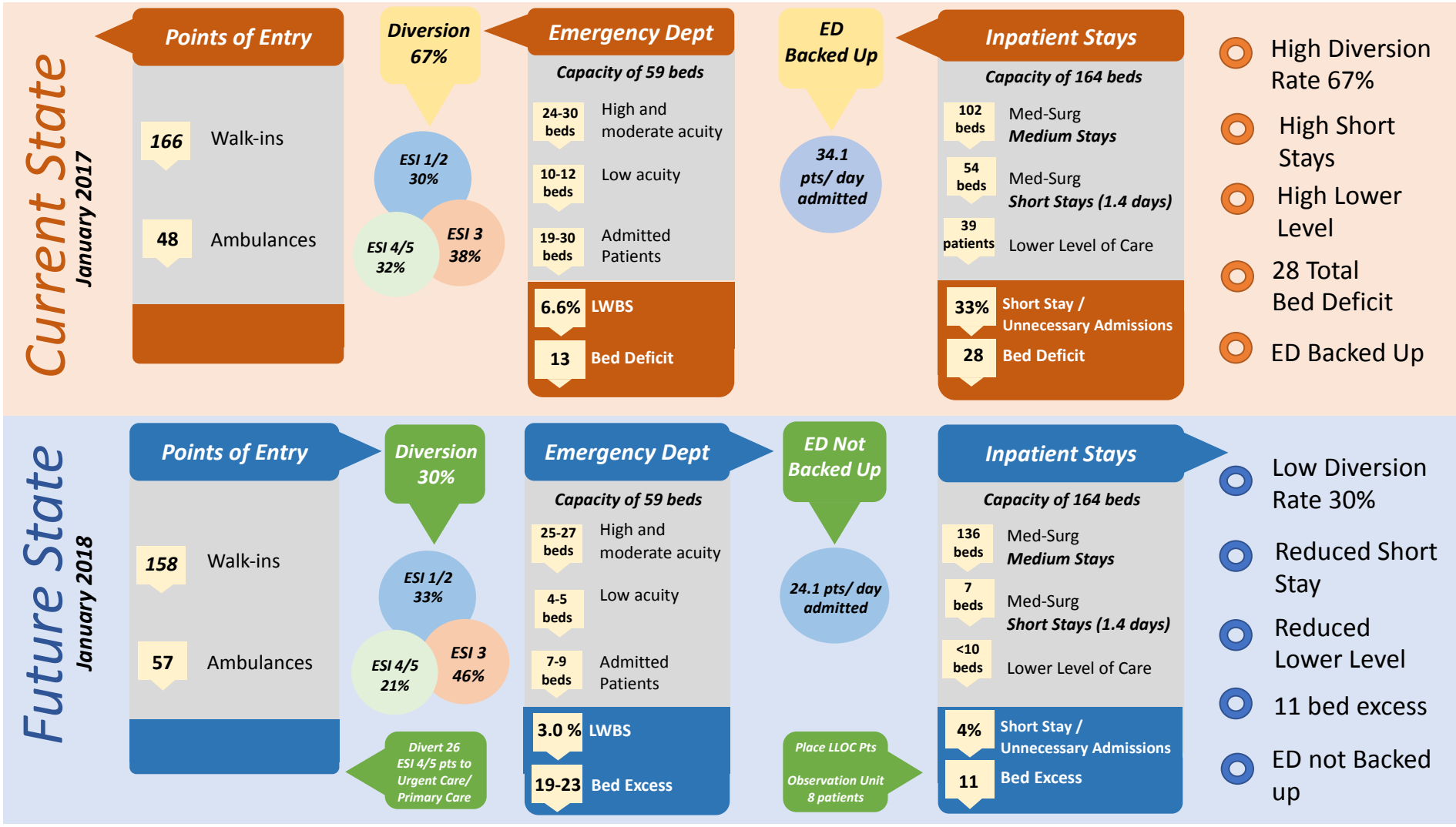


Current state/Future state

Defined by a series of mathematical equations relating capacity need to volume and LOS



Current state/Future state



Root Cause

Providing care in the wrong place

Four key countermeasures

No.	Root Cause	Countermeasures	Just Do It	1-3 Months	3 Month Milestone	3-6 Months	6-12 Months

1.	Non-acute patients occupying acute care beds (preventable hospital bed-days)	Decrease and Maintain lower level of care (LLOC) patients to <10	• L Holpit devoting substantial time to Care Coordination leadership
			• Social Workers assigned to each inpatient team
				• Develop Operational A3
				  • May/Dentoni Exec Sponsors
				  • McIntyre/Holpit
				• Daily accurate data
				  • No. of patients
				  • Discharge destination
				  • Barriers
				  • Next steps
				• Weekend staffing PDSA
					• LLOC A3
					• Achieve maximum 10 LLOC patients at ZSFG
					• Analysis of PDSA
						• LLOC A3-SR	• Maintain maximum 10 LLOC patients at ZSFG (TN goal)

2.	Short stay and non-acute patients admitted to acute care hospital (preventable admissions)	Lower Hospital Admits by Establishing CDU /Observation Unit	• Pilot Flow Director / Coordinator position Jeff S/Terry D	• Develop Operational A3
				  • Dentoni/Marks Exec Sponsors
				  • Malini/Ranji
				• Visit UCSF CDU--done
				• PDSA Virtual CDU in ED
					• CDU A3
					• Analysis of PDSA Virtual CDU
						• Establish CDU at 6 months	• Decrease short-stay admits by > 5/day
							• CDU utilizes 80% of designed capacity

3.	Lower acuity patients who could be seen elsewhere are seen in the ED (preventable ED visits)	Divert 26 ESI 4/5 patients /day from Emergency Department to Urgent Care Center or Primary Care	• Meet with Urgent Care and Call Center to discuss capacity and standard work to refer patients from ED (ensure compliance with EMTALA)	• Develop Operational A3
				  • Boyo/Williams Exec Sponsors
				  • Labuguen/Singh/ Ferrer/Day
				• PDSA Referrals to UCC
					• Lower Acuity patient A3
					• Divert 5 patients/ day to Urgent Care Center or Primary Care
						• Lower Acuity patient A3-SR
						• Prepare for UCC move
							• Divert 26 patients/ day to Urgent Care Center or Primary Care

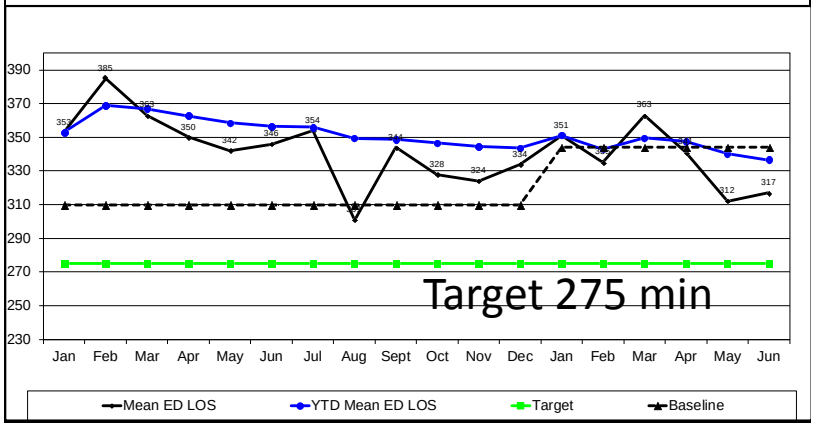
4.	Admitted patients are boarded in the ED due to lack of hospital beds	Decrease Emergency Department length of stay for non-fast track patients		• Develop Operational A3
				  • Marks/Williams Exec Sponsors
				  • Ortiz/Mercer/ Staconis/Holpit
				• PDSA Hallway Admits: Terry/Todd
					• ED LOS Reduction A3
					• Analysis of PDSA Hallway Admits
						• ED LOS reduction A3-SR	• Achieve TN goal for average ED length of stay (275 min)

TARGET AND GOALS

Mean ED LOS

2018 Scorecard: Hospital Wide Focus
True North: QUALITY
Measure Of: ***Minutes***
Owner: May, Marks, Dentoni, Williams
Goal Statement: Reduce ED mean length of stay to 275 minutes by December 31, 2018

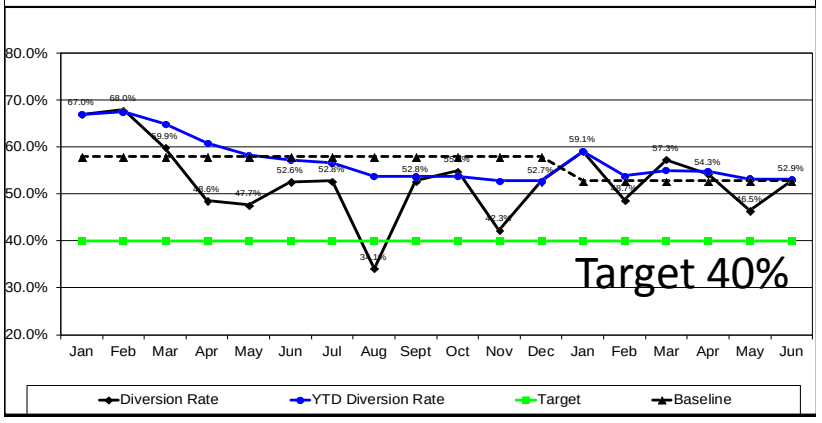
2018 Target:	275.0
Yr End % Improvement:	20.1%
2017-18 Baseline:	344.0
2018 YTD:	342.7
YTD % Improvement:	0.4%



Ambulance Diversion Rate

2018 Scorecard: Hospital Wide Focus
True North: QUALITY
Measure Of: ***Percentage of Time***
Owner: May, Marks, Dentoni, Williams
Goal Statement: Reduce ED Ambulance Diversation rate to 40% by December 31, 2018

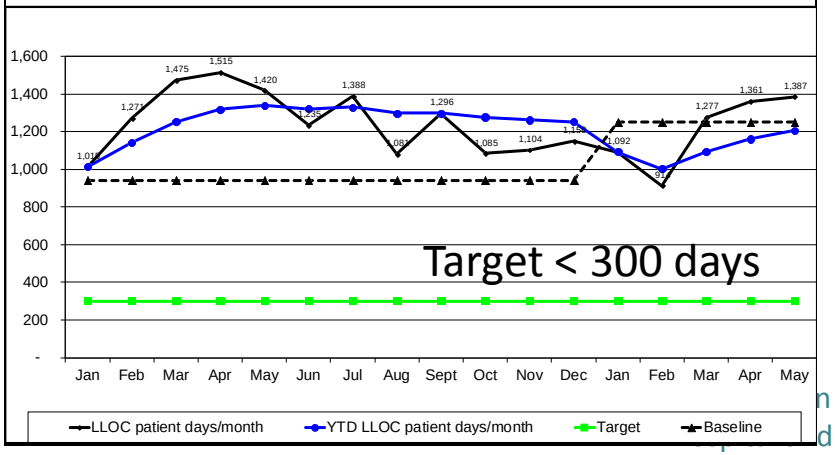
2018 Target:	40%
Yr End % Improvement:	30.6%
2017-18 Baseline:	57.6%
2018 YTD:	52.9%
YTD % Improvement:	8.1%



Number of LLOC patients

2018 Scorecard: Hospital Wide Focus
True North: QUALITY
Measure Of: ***# LLOCDays/month***
Owner: May, Marks, Dentoni, Williams
Goal Statement: Reduce number of LLOC days/month to 300 by December 31, 2018

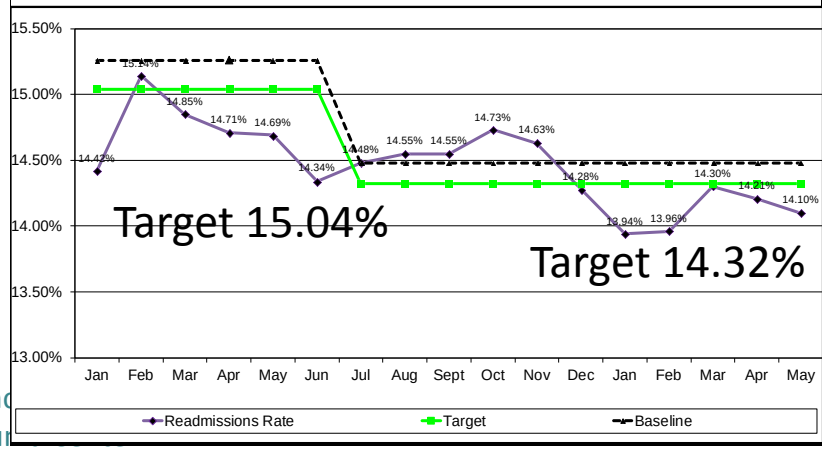
2018 Target:	300.0
Yr End % Improvement:	76.1%
2017-18 Baseline:	1253.0
2017-18 YTD:	1239.2
YTD % Improvement:	1.1%



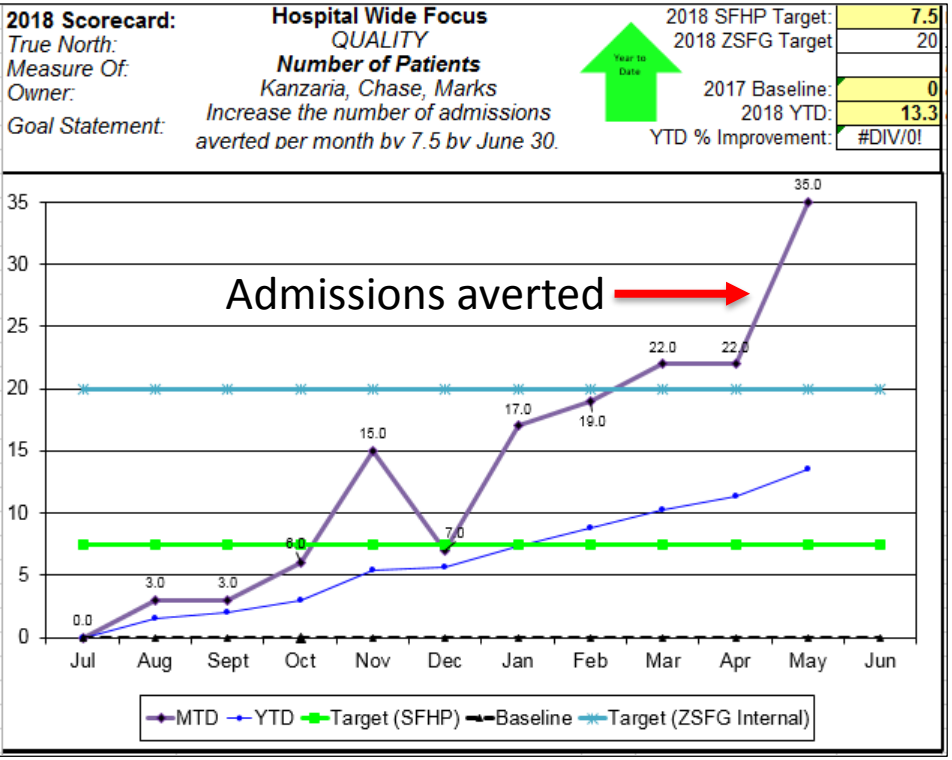
PRIME Readmission Rate

2018 Scorecard: Hospital Wide Focus
True North: QUALITY
Measure Of: ***Percentage of Readmissions***
Owner: May, Marks, Dentoni, Williams
Goal Statement: Reduce hospital readmissions rate to 15.04% by June 30, 2018

2018 Target:	14.3%
Yr End % Improvement:	1.1%
2017-18 Baseline:	14.5%
2017-18 YTD:	14.2%
YTD % Improvement:	1.9%



2017-18 ACHIEVEMENTS: Reducing social admissions



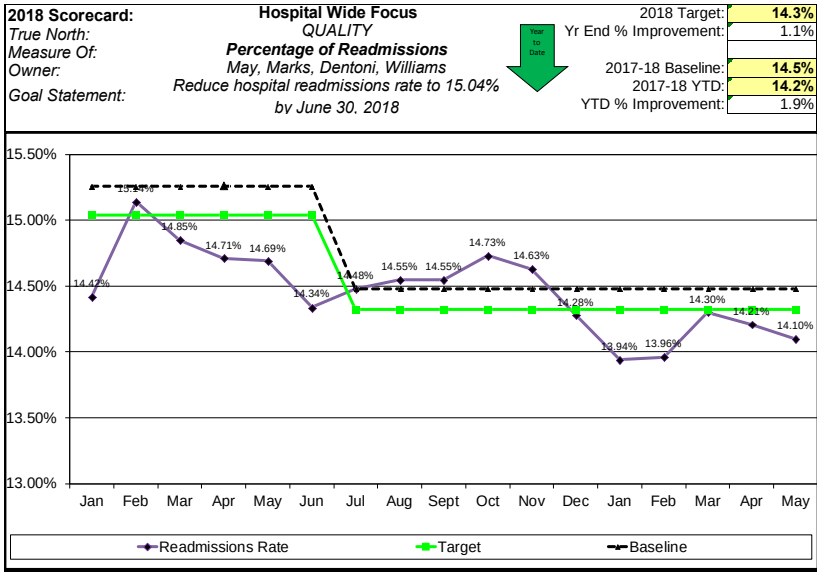
Averted Admissions & Readmissions

- From Jan-May 2018 ZSFG's Social Determinants of Health Work has:
  - Averted **115** inpatient "social admissions"
  - Prevented **22** readmissions

Reduced ED Utilization and Inpatient LOS

- Avg ED visits 60 days prior to intervention: **2.40**
- Avg. ED visits 60 days post intervention: **2.17**
- Avg. IP LOS prior to intervention: **6.2**
- Avg. IP LOS post intervention: **5.3**

PRIME Readmission Rate



2017 LESSONS LEARNED: Seasonal surging of hospital capacity reduces ED LOS and ambulance diversion

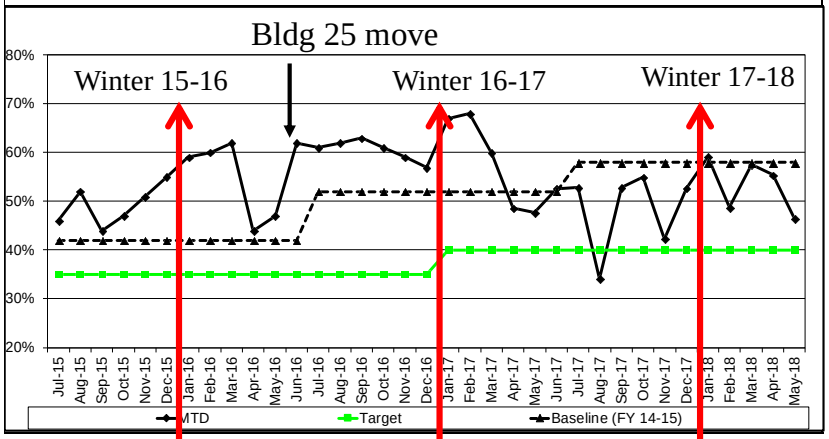
Ambulance Diversion

FY 15-16 Scorecard:
True North:
Measure Of:
Owner: TD&JM
Goal Statement:

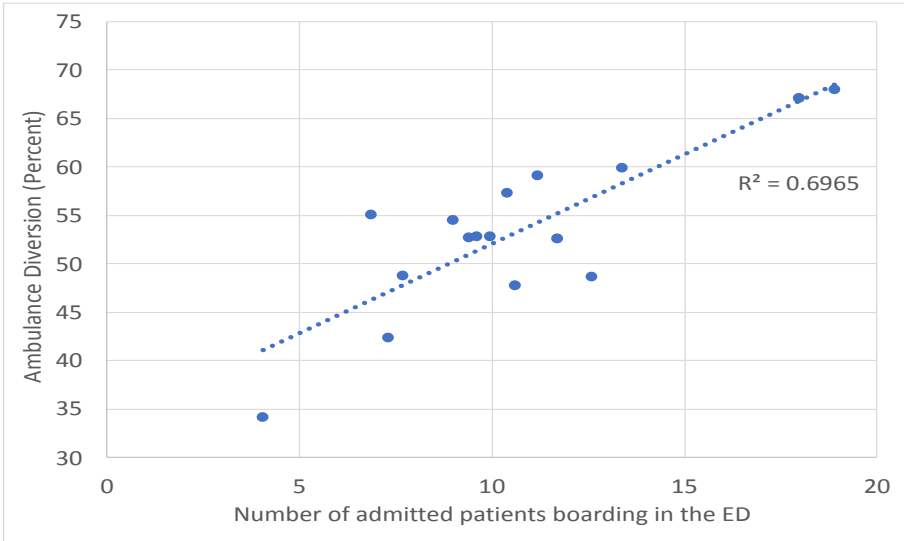
ZSFG
Care Experience
Access and Flow (%)

Decrease ED Diversion Rate from 42% to 35% by June 30, 2016

FY 15-16 Target:	35%
Yr End % Improvement:	18.2%
FY 14-15 Baseline:	43%
FY 15-16 YTD:	53%
YTD % Improvement:	-24.1%



ED Boarding correlates with diversion

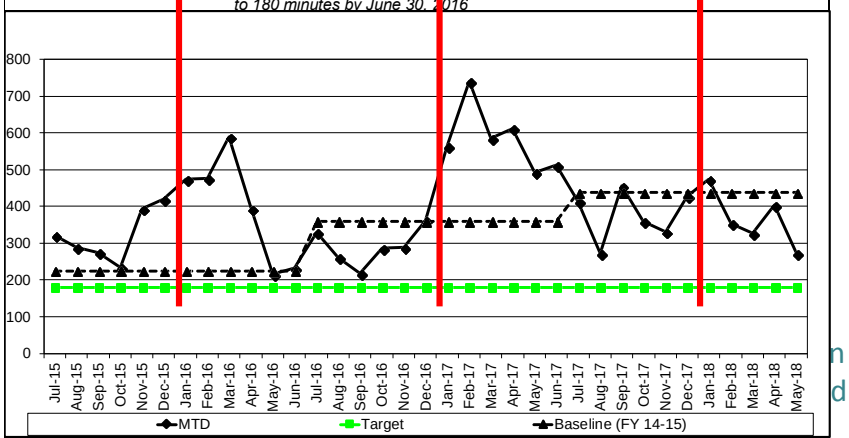


Admitted patient LOS: decision to admit to leave ED

FY 15-16 Scorecard:
True North:
Measure Of:
Owner:
Goal Statement:

ZSFG
Care Experience
Access and Flow (Means Minutes)
Terry Dentoni & Jim Marks
Reduce Admit Decision Time to ED Departure
Time for Admitted Patients from 225 minutes to 180 minutes by June 30, 2016

FY 15-16 Target:	180
Yr End % Improvement:	23.5%
FY 14-15 Baseline:	235
FY 15-16 YTD:	357
YTD % Improvement:	-51.8%

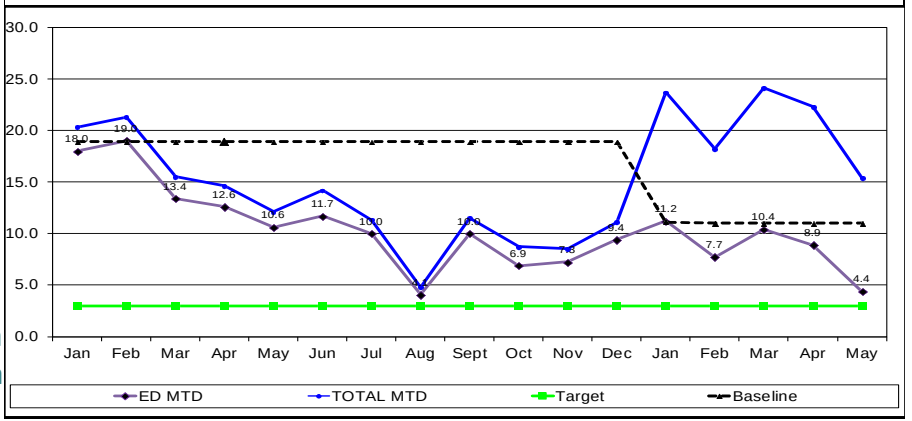


ED Boarding of admitted patients

FY17/18 Scorecard
True North:
Measure Of:
Owner:
Goal Statement:

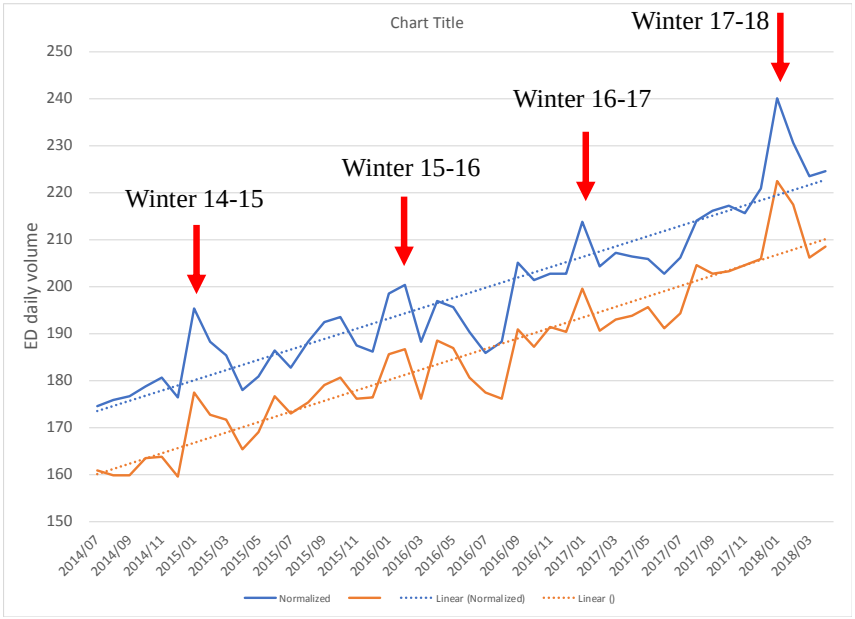
Hospital Wide Focus
QUALITY
umber of admitted patients boarding in
May, Marks, Dentoni, Williams
Reduce number of boarded patients from 18.9 to 3 by June 30, 2017

FY 17/18 Target:	3
Yr End % Improvement:	73.0%
FY16/17 Baseline:	11
FY 17/18 YTD:	11.1
YTD % Improvement:	0.1%

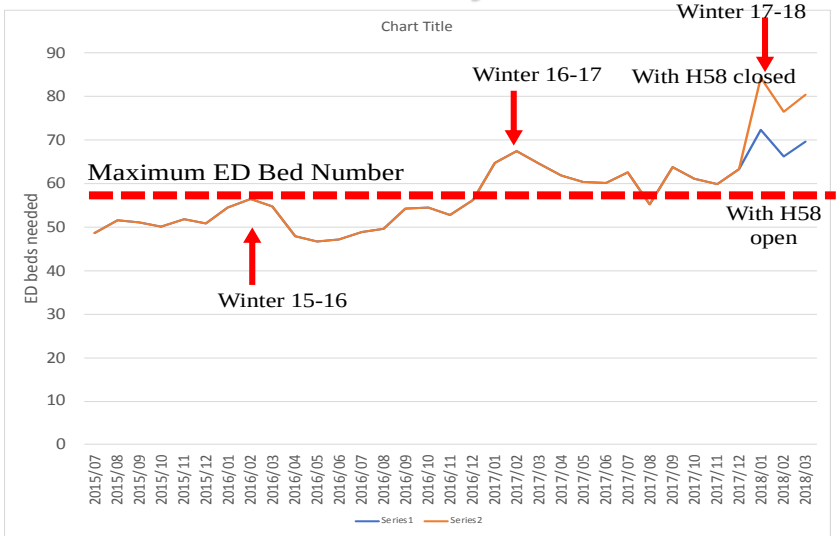


2017 LESSONS LEARNED: ED volume is exceeding ED capacity at current LOS

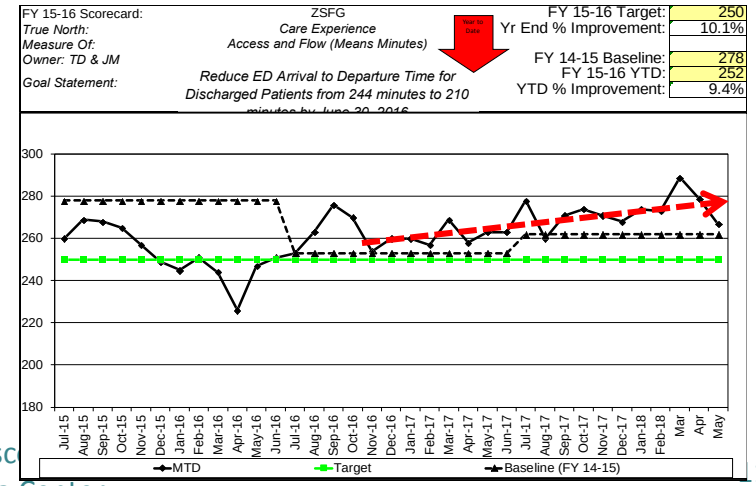
ED patients registered and seen: FY14/15 - FY17-18



ED beds needed 7A-7P by month FY14/15-FY17-18

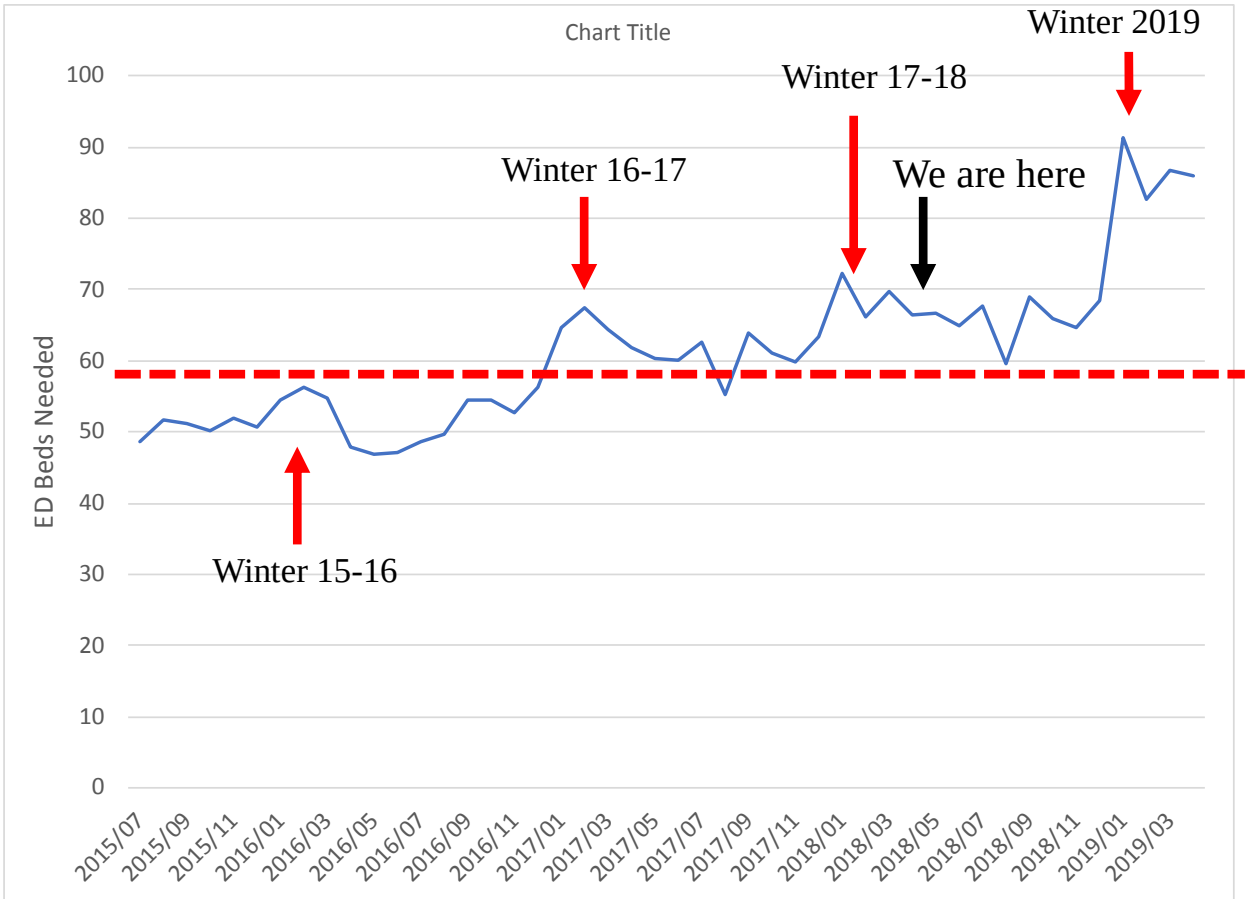


LOS of patients discharged from the ED



2017 LESSONS LEARNED: Our flow model predicts next winter volume and current LOS will create an ED capacity criticality

Model of next years ED beds needs*



* Volume increases 8%/yr; use prior years mean LOS

2018 STRATEGIES

8

- Advancing Equity
- Improving Value and Patient Outcomes
- Ensuring Flow and Access
- Optimizing Care Experience
- Optimizing Workforce Care & Development
- The ZSFG Way
- Building for the Future
- Implementing an enterprise-wide Electronic Health Record

3

- The ZSFG Way
  - Advancing Equity
  - Improving Value and Patient Outcomes
  - Ensuring Flow and Access
  - Optimizing Care Experience
  - Financial Stewardship
- Building for the Future
- Implementing an enterprise-wide Electronic Health Record

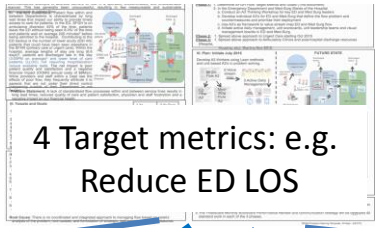
Moving the Flow Strategy to the Operational Level

True North Metric(s)
(Organization wide goals)

True North Metric
- Access and Flow

Optimize Patient Flow A3

Tactical A3's
(Organization wide plan)



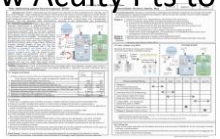
4 Target metrics: e.g.
Reduce ED LOS

Operational A3's
(Front line problem solving)
Multiple (4) driver metrics

Reduce ED LOS

Reduce LLOC

Low Acuity Pts to UCC



Develop CDU

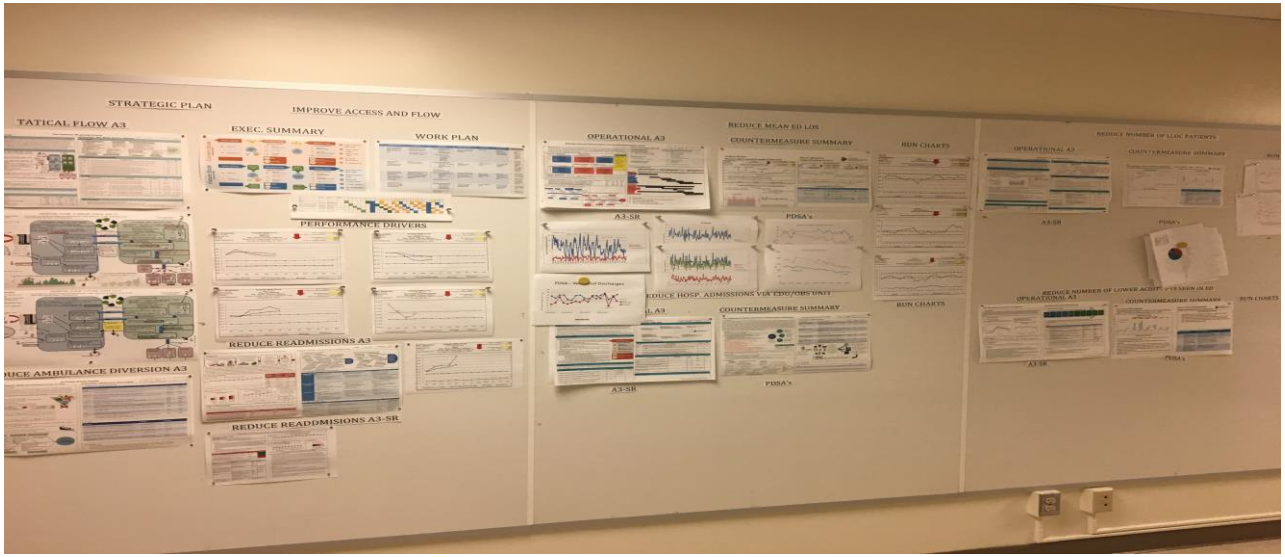
Unit/workshop A3's

Align Vertically

Improve horizontally at the unit level

Monitoring Progress/Driving Improvement

- Weekly Exec Flow Mtg with Operational A3 owners



Goal	Executive Owner	Operational A3 Owner	Operational A3 Title	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	4-Sep	11-Sep	18-Sep	25-Sep
Times								12-12:30	12-12:30		12-12:30	2-2:30	12-12:30	12-12:30	12-12:30	2-2:30	12-12:30	12-12:30	12-12:30	12-12:30	2-2:30	12-12:30	12-12:30		2-2:30	12-12:30	12-12:30
Reduce the number of LLOC patients to <10	Todd May, Terry Dentoni	Leslie Holpit, Dennis McIntyre		Catchball					Final A3	Holiday			CM		CM		SR			CM		CM		Holiday		SR	
Reduce number of low acuity ESI 4/5 Patients seen in the ED by 26/day	Troy Williams, Tosan Boyo	Malini Singh, Ron Labuguen, Rosaly Ferrer			Catchball						Final A3		CM			CM		SR			CM		CM				SR
Reduce the number of short stay admissions via a CDU/Obs Unit	Jim Marks, Terry Dentoni	Sumant Ranji, Malini Singh				Catchball						Final A3		CM			CM		SR			CM			CM		
Reduce mean ED LOS to 275 min	Jim Marks, Troy Williams	Mary Mercer, Gabe Ortiz					Catchball						Final A3		CM			CM		SR			CM			CM	
Reduce the number of avoidable admissions	Jim Marks, Terry Dentoini	Hemal Kanzaria, Jack Chase						Catchball						Final A3		CM			CM		SR				CM		CM

Countermeasures and Next Steps

Root Cause	Countermeasure	Owner	Date
Increased ED volume	1. Complete analysis of sources of ED volume increase 2. Engage relevant stakeholders for focused CMs (PC, ED to UCC)	1. Marks/To 2.Marks/May/SFHN	May 2018 - ongoing
Increased LLOC days	1. LLOC placement team work 2. Roll out DMS in CC 3. Capacity and Reduce Social Admits A3/PDSA	1.May/Dentoni/Hirose/ Hiramoto 2. KPO 3.Ortiz/Chase/Kanzaria	March 2017-present
Increased discharge ED LOS	1. Continue Care-Start PDSA 2. Review and prioritize RN and Provider staffing to cover CS and FT	1. Navarro/Singh 2. Navarro/Colwell/Williams/ Marks	April 2018-ongoing