BEHAVIORAL HEALTH AND DETOXIFICATION - MEETING DEMAND FOR SERVICES
UNIVERSITY OF PITTSBURGH MEDICAL CENTER MERCY HOSPITAL

Publication Year: 2013

Summary:

The development of separate intake area for behavioral health and detoxification patients, Evaluation and Referral Center (ERC)

Hospital: University of Pittsburgh Medical Center Mercy Hospital Campus

Location: Pittsburgh, PA

Contact: Michael A Turturro, MD, FACEP
turturroma@upmc.edu

Category:

- C: Clinician Initial Evaluation &Throughput
- D: Disposition

Key Words:

- Behavioral Health
- Crowding
- Psychiatric
- Substance Abuse

Hospital Metrics:

- Annual ED Volume: 73,000
- Hospital Beds: 433
- Ownership: University Affiliated
- Trauma Level: 1
- Teaching Status: Yes

Tools Provided:

- ERC Data FY2013

Clinical Areas Affected:

- Addiction Medicine
- Ancillary Departments
- Consult Services

Staff Involved:

- Administrators
- Addiction Medicine Specialists
- ED Staff
- Nurses
- Physicians
- Social Workers

Copyright © 2002-2013 Urgent Matters

URGENT Matters

Innovation

In December 2008 the Commonwealth of Pennsylvania closed a long term psychiatric facility located within Allegheny County (Mayview State Hospital). Other hospitals within Allegheny County ceased to provide inpatient behavioral health care. UPMC Mercy has the only licensed inpatient detoxification service within Allegheny County (population 2.3 million) with an inpatient capacity of merely 18 beds. The ED at UPMC Mercy has a separate intake area for behavioral health and detoxification patients known as the Evaluation and Referral Center (ERC) with capacity for 13 patients.

ED visits at UPMC-Mercy for patients requesting behavioral health and detoxification services increased by nearly 325% between 2009 (2,173 visits) and 2012 (6,689 visits). This growth far outpaced the growth in ED volume over the same time period (22%). Inpatient capacity remained the same, admissions increased by 95% over the same time period. The resulting boarding of behavioral health and detoxification patients in the ED had a negative impact on ED throughput for all patients, as well as staff satisfaction in the ED and inpatient floors.

The existing staff and community resources were utilized to identify models of care for behavioral health and detoxification patients that would direct patients from the ED to outpatient services. They were also tasked to identify opportunities other than inpatient hospitalization when appropriate as well as streamline inpatient care to facilitate inpatient capacity.

Innovation Implementation

The team included the following: Vice President of Operations, Coordination of work teams, data reporting and analysis, Emergency Department Physician Director, led physician work team to develop streamlined protocols for care, outreach to outside organizations, Chief Nursing Officer, allocation of nursing staff, Emergency Department Nurse Manager, led staff training and ED flow optimization, Behavioral Health Intake (ERC) Manager, education of intake and inpatient staff, Chief of Psychiatry, outreach to community resources, Addiction Medicine Specialists, streamlining of patient care protocols, expansion of outpatient management.

Several interventions were implemented both in the ED and inpatient units:

- Utilization review training was implemented for ED and inpatient behavioral health staff.
- A partnership was developed with the largest behavioral health facility in Allegheny County (Western Psychiatric Institute and Clinic) to facilitate transfers, secure urgent outpatient post-ED follow up visits, referral to partial behavioral health hospitalization and respite programs, as well as urgent referral ambulatory detoxification programs.
- A partnership was developed with an outpatient crisis center (ReSolve) with community-based crisis clinicians from this center staffing the UPMC Mercy ED 16 hours a day to facilitate care out of the hospital when appropriate. Central to this process was a suicide risk assessment in patient expressing suicidal ideation.
- A team of nursing staff were trained to work full time in providing detoxification assessments 16 hours a day in the ED, with criteria utilized to select patients for ambulatory and partial detoxification hospitalization and rehabilitation programs. A dedicated space within the ED was identified for these assessments.
- Post discharge planning began on day 1 for admitted patients
- Access to outpatient programs was enhanced with appointments obtained within 7 days post discharge from the hospital or ED.
- Training of detoxification assessment and treatment on inpatient medical floors to decrease patient deterioration and ICU utilization.

Results (See ERC Data FY2013)

- Detoxification nursing staff evaluated greater than 300 patients/month with a 10-fold increase in outpatient referrals from 1st quarter of CY 2012 to 1st quarter of CY 2013.

Copyright © 2002-2013 Urgent Matters

- Crisis Center staff in the ED evaluated approximately 100 patients per month with 28% of patients directed to other levels of care, these patients would have previously remained in the ED or admitted to an inpatient behavioral health service.
- There was an 81% increase in transfers to other facilities both within and outside of Allegheny County from 1st quarter of CY 2012 to 1st quarter of CY 2013.
- There was a 160% increase in referrals to nonhospital programs from 1st quarter of CY 2012 to 1st quarter of CY 2013.
- There was a decrease in Detoxification recidivism within 30 days from 17% to 10%.
- Mean ED length of stay for patients admitted to addiction medicine service decreased from 20 hours in June 2012 to less than 6 hours in June 2013, a 70% decrease.
- Mean ED length of stay for patients discharged after detoxification evaluation decreased from over 10 hours in June 2012 to less than 5 hours in June 2013, a greater than 50% decrease.
- Mean wait time to evaluation for patients presenting for detoxification decreased from 63 minutes June 2012 to 14 minutes June 2013, a 78% decrease.
- Mean ED length of stay for patients admitted for behavioral health services decreased from 38 hours June 2012 to 11 hours June 2013, a 71% decrease.
- Mean ED length of stay for patients presenting for behavioral health services and discharged from the ED decreased from 20.25 hours June 2012 to 10.25 hours June 2013, a nearly 50 % decrease.
- Mean length of time from arrival to completion of detox assessment decreased from 300 minutes in August 2012 to 89 minutes in June 2013, a 70% decrease.
- Mean wait time to evaluation for patients presenting for behavioral health decreased from 68 minutes September 2012 to 15 minutes by June 2013.

Timeline

Work teams began to assess and address the demand for services and develop solutions in August 2012. Interventions were implemented during the last quarter of 2012 and the first quarter of 2013. Detoxification nursing staff began assessments in the ED September 2012; crisis staff in the ED began providing patient assessments January 2013.

Cost/Benefit Analysis

These throughput improvements have decreased the number of behavioral health and detoxification patients in the ED at any given time therefore requiring less RN staff to care for the patients. We have recently converted an RN position to a crisis clinician position to provide additional coverage in times of peak behavioral health patient ED occupancy. This is a savings of 33% in salaries and benefits. The organization was at a point of adding RN positions due to increases in behavioral health volume so the ability to convert an RN position was not an expected outcome. As behavioral health patients are made aware of outpatient services it is expected that instead of dramatic increase in ED visits that there will be a decrease because patients will become connected to services that can prevent the need for ED visits.

Advice and Lessons Learned

This innovative initiative can be successfully replicated because it does not involve changing numerous processes or extensive training of current staff but was built on open collaboration among leaders. Both the medical-surgical provider and a psychiatric provider must be willing to work together to review existing resources and determine how these resources can be enhanced to form partnerships that ultimately benefit both organizations and the patients that they will mutually serve. Also it is not resource intensive as the organization has seen excellent results by converting two vacant positions to crisis intervention positions. The crisis and detoxification clinicians have flourished in the ED environment because they are so valued for their knowledge and experience. These clinicians are highly trained so the speed of replication is going to be related to the recruitment and training of additional clinicians.

Sustainability

Sustainability is planned due to the decrease in resources needed to provide care to this at-risk population following this change in care delivery. This innovation (connecting highly skilled detoxification and crisis assessment clinicians to the

ED patient population) resulted in a decreased need for staff to provide ongoing care of these patients thus decreasing the overall staff required. This plan is highly sustainable because it is less resource intensive and provides the appropriate level of care for the patient.

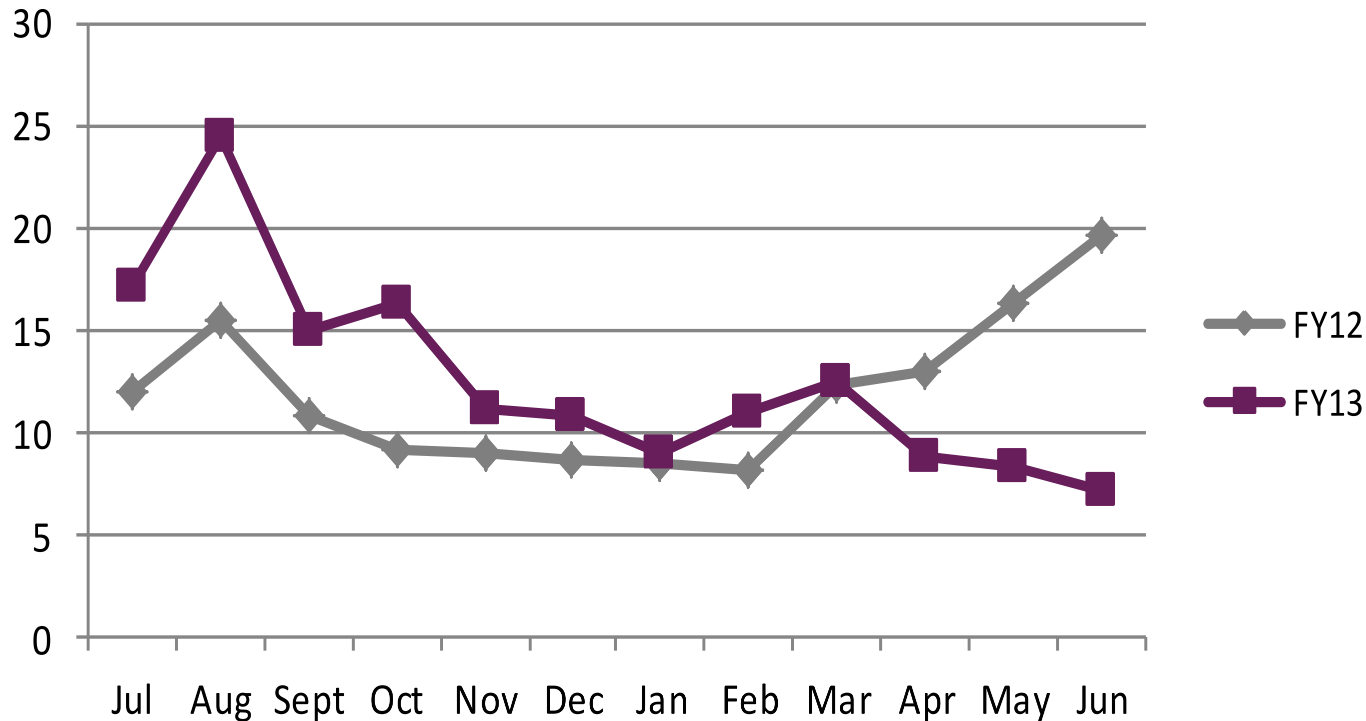
Tools to Download

- **ERC Data FY2013**

Copyright © 2002-2013 Urgent Matters

ERC Data
FY13

Inpatient Detox - admitted from ED and ERC

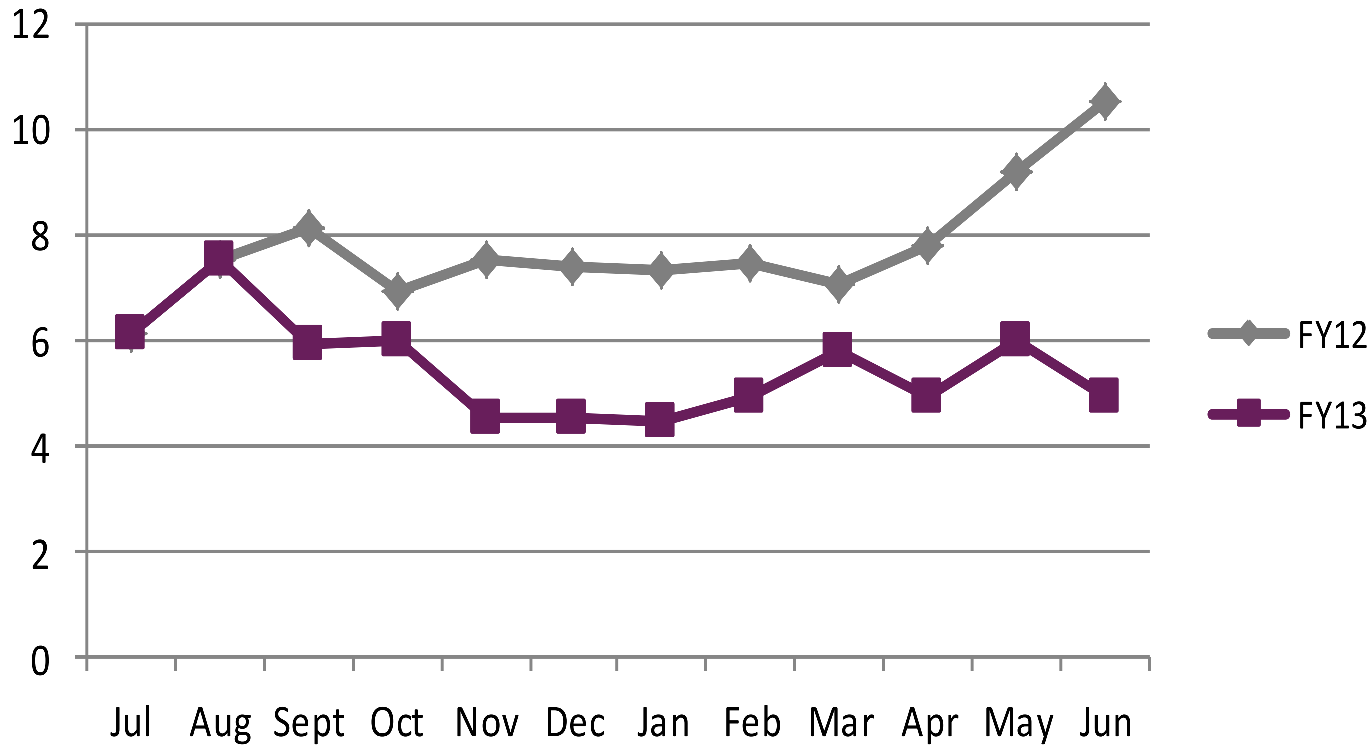


Patient Population

	FY12	FY13
Jul	74	88
Aug	86	91
Sep	79	68
Oct	73	84
Nov	71	83
Dec	69	82
Jan	71	76
Feb	61	97
Mar	72	120
Apr	81	123
May	72	136
Jun	85	125

UPMC LIFE CHANGING MEDICINE

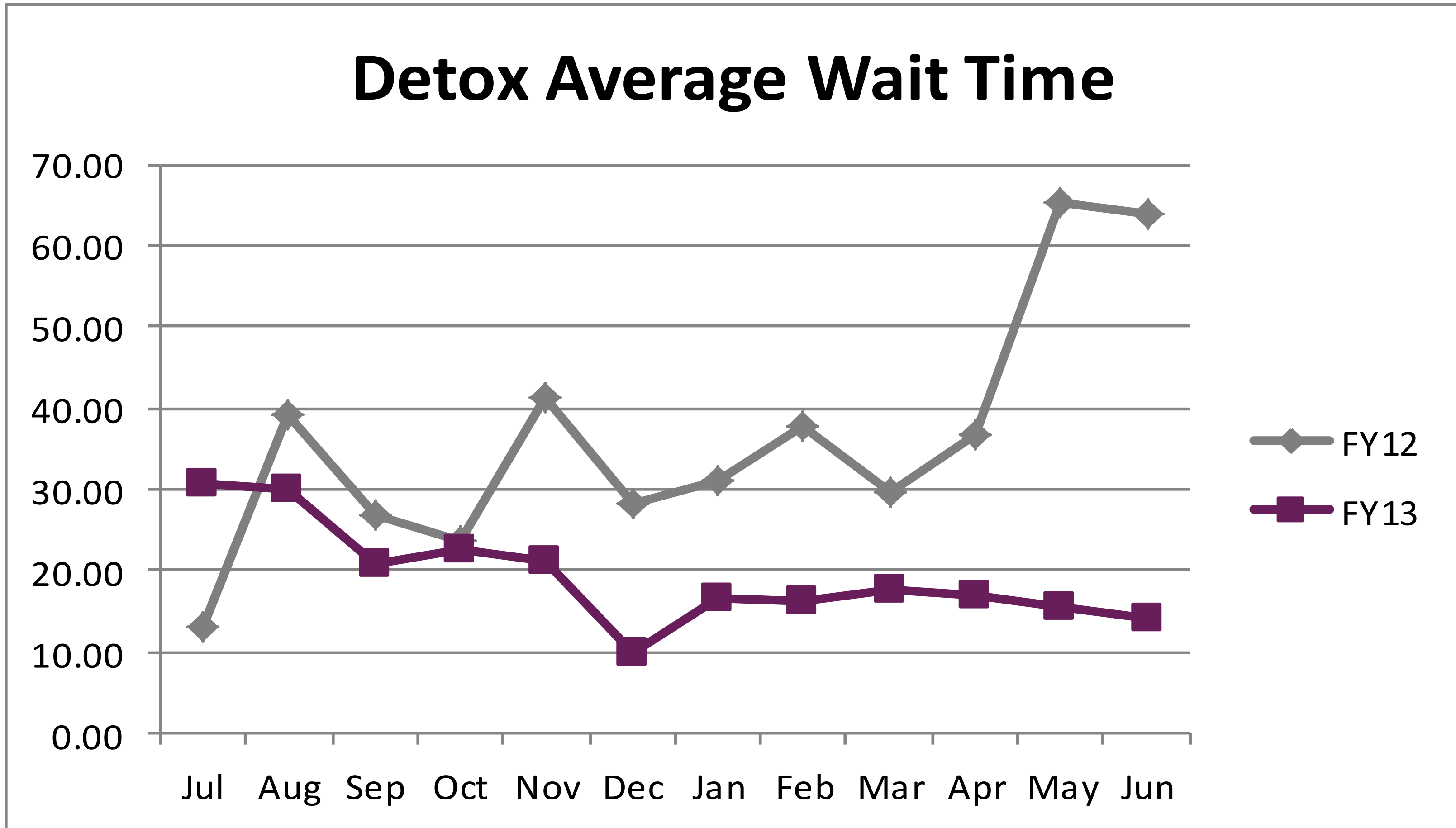
Detox Discharges - from ED and ERC



Patient Population		
	FY12	FY13
Jul	283	324
Aug	287	502
Sep	305	272
Oct	295	238
Nov	266	193
Dec	267	200
Jan	292	224
Feb	239	139
Mar	373	169
Apr	326	178
May	328	168
Jun	363	197

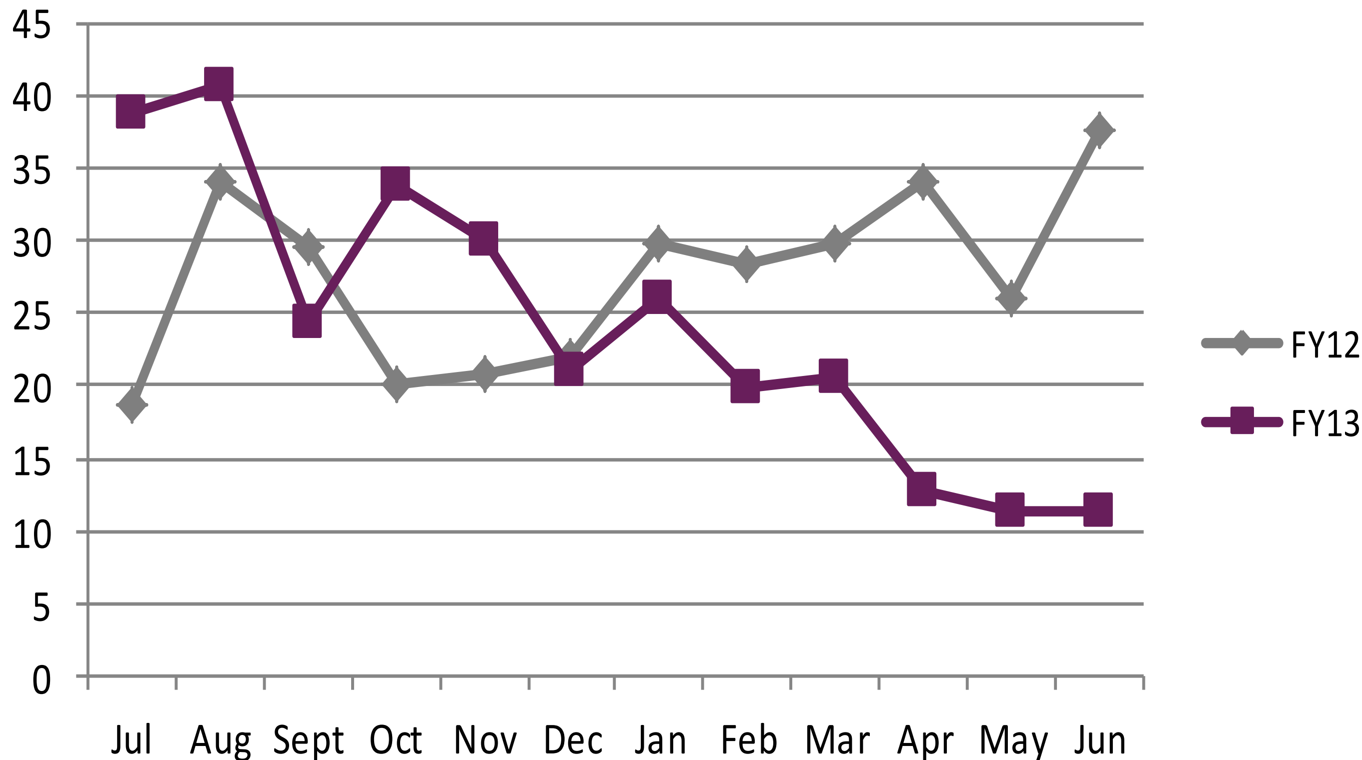
UPMC LIFE CHANGING MEDICINE

Detox - wait time in ED and ERC



UPMC LIFE CHANGING MEDICINE

Inpatient BHU – admitted from ED and ERC

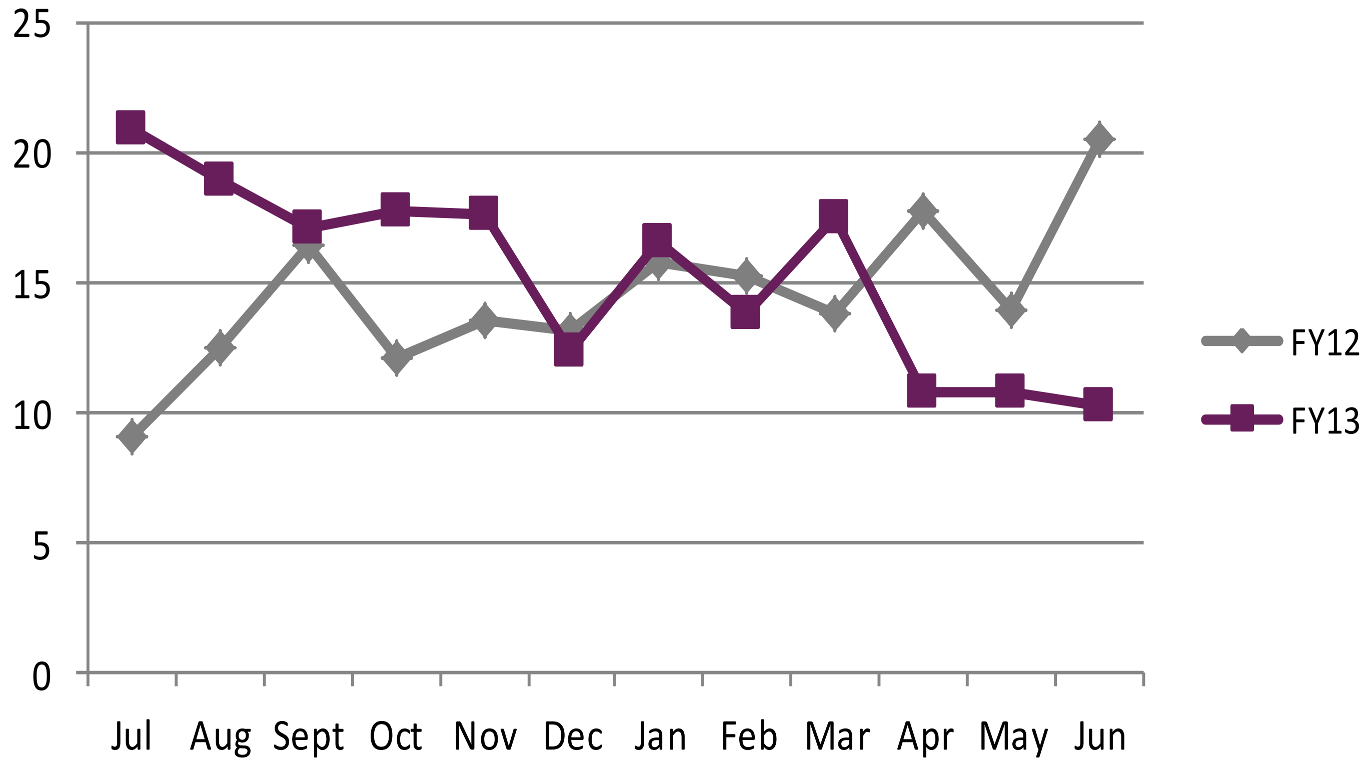


Patient Population

	FY12	FY13
Jul	115	95
Aug	125	98
Sep	108	74
Oct	117	108
Nov	123	80
Dec	94	81
Jan	102	103
Feb	102	101
Mar	128	100
Apr	111	99
May	115	87
Jun	100	95

UPMC LIFE CHANGING MEDICINE

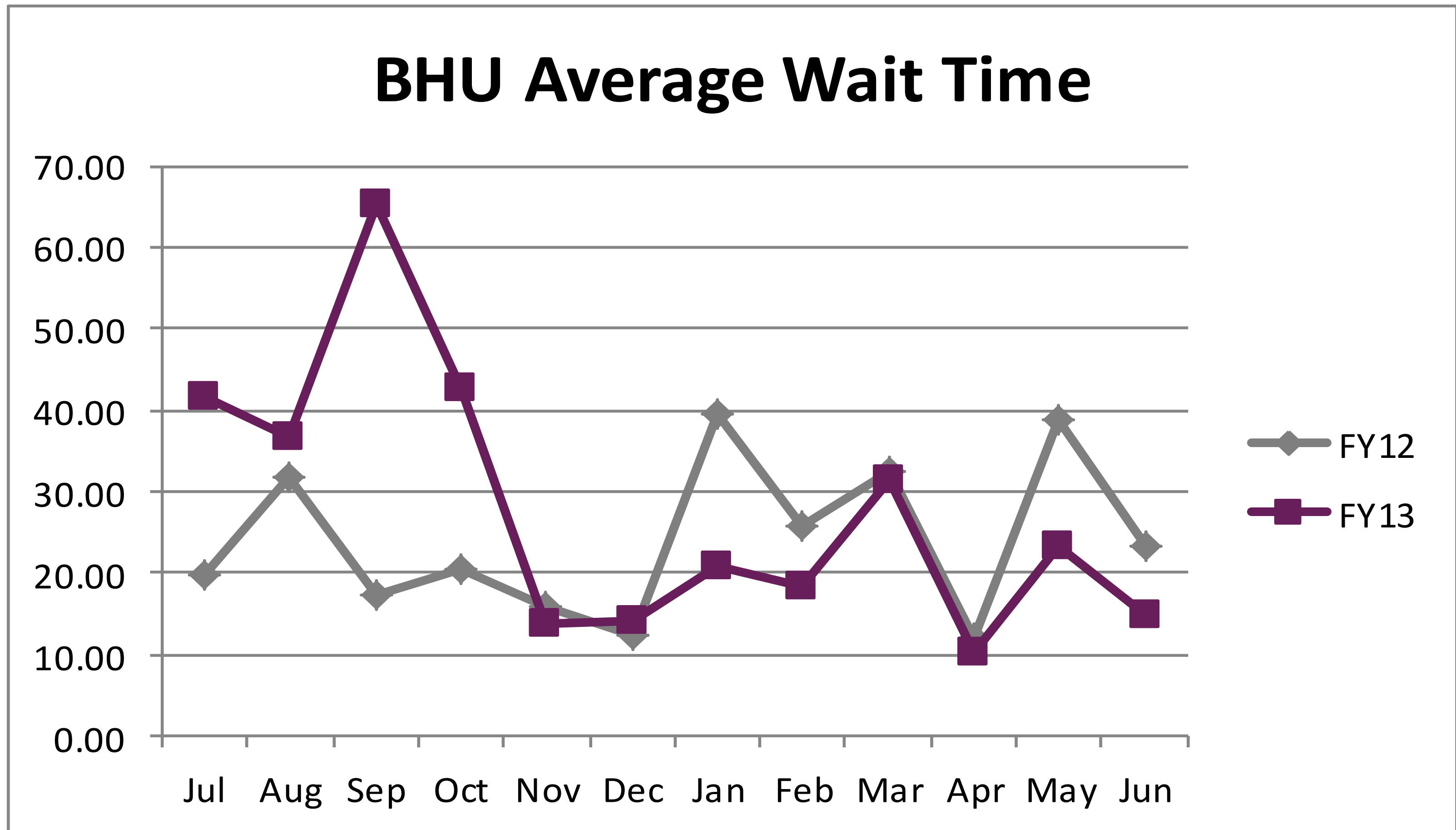
BHU discharges - from ED and ERC



Patient Population		
	FY12	FY13
Jul	76	125
Aug	86	119
Sep	78	89
Oct	95	112
Nov	92	89
Dec	72	93
Jan	83	130
Feb	76	174
Mar	118	188
Apr	90	180
May	102	177
Jun	104	171

UPMC LIFE CHANGING MEDICINE

BHU - wait time in ED and ERC



UPMC LIFE CHANGING MEDICINE

Detox & BHU – Diagnoses

- Abuse alcohol
- Abuse cocaine
- Abuse drug
- Abuse marijuana
- Abuse polysubstance
- Alcohol delirium
- Alcohol dementia
- Alcohol dependence
- Alcohol hallucinosis
- Alcohol intox
- Alcohol withdraw
- Alcohol hepatitis
- Alcohol liver damage
- Alcohol alcoholism
- Benzo
- Bipolar affective d/o
- Bipolar de affective disorder
- Bipolar disorder
- Confusion
- Delirium, Tremens
- Dependence opioids
- Dependence depressive
- Dependence neurotic
- Depressive,neurotic
- Depressive reaction
- Depression,depresive

- Drug ingestion
- Drug intoxication
- Drug seeking behavior
- Drug withdraw
- Hallucinations
- Heroin Dependencies
- Mental disorder
- Mental status change
- Methadone conversion
- Methadone dependence
- OD, accidental non-med
- OD, drug or medicinal
- Opium dependence
- Opioid type dependence
- Overdose
- Paranoid
- Paranoid, chronic psychos
- Psychosis
- Psychosis, unsp
- Schizo-affective
- Schizophrenia,paranoid
- Schizophrenia,unspec
- Suicidal tendencies
- Suicidal attempt
- Withdraw alcohol
- Withdraw alcohol with del
- Withdraw narcotic

Criteria:

- FY13 LOS: Provides total length of stay by total hours averaged by month for selected dispositions
- Wait Time: Provides average of wait time by month for selected dispositions

UPMC LIFE CHANGING MEDICINE