

FINAL REPORT: FIRE DEPARTMENT STAFFING STUDY

Town of Amherst, MA

October 2, 2017



- Review 5 years of operations.
- Evaluate approaches to staffing.
- Career vs. other approaches.
- Call / Student staffing.
- Paramedic mix / Shift staffing
- Contracts for EMS
- Operational Improvements



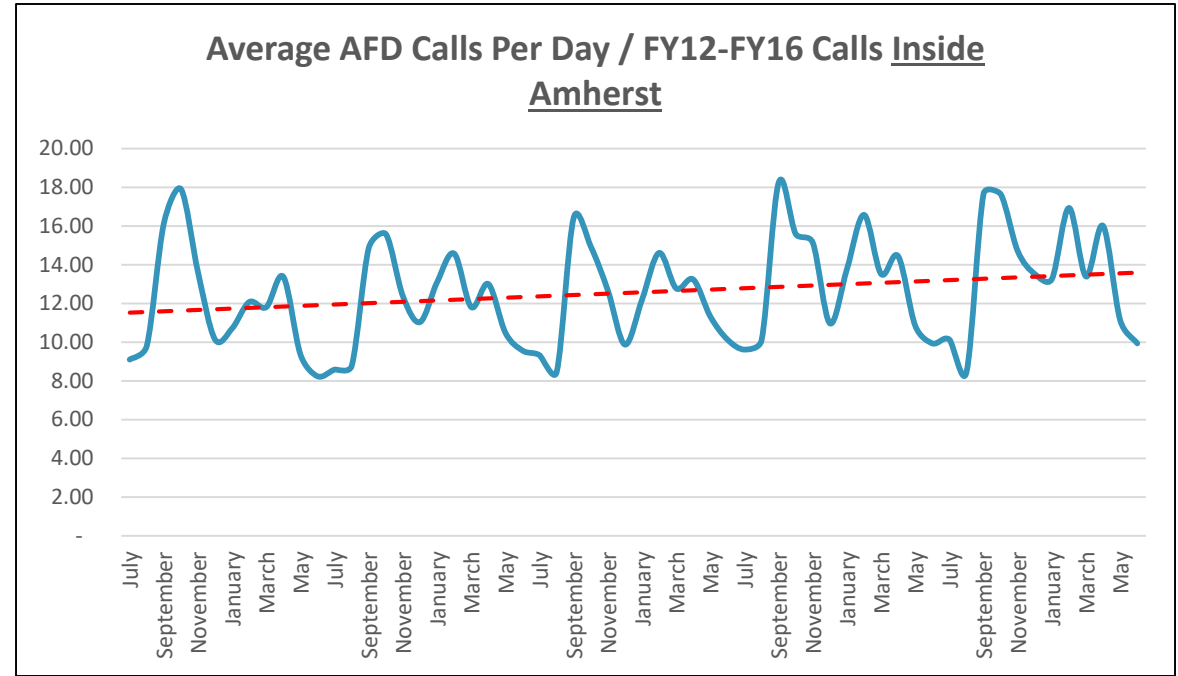
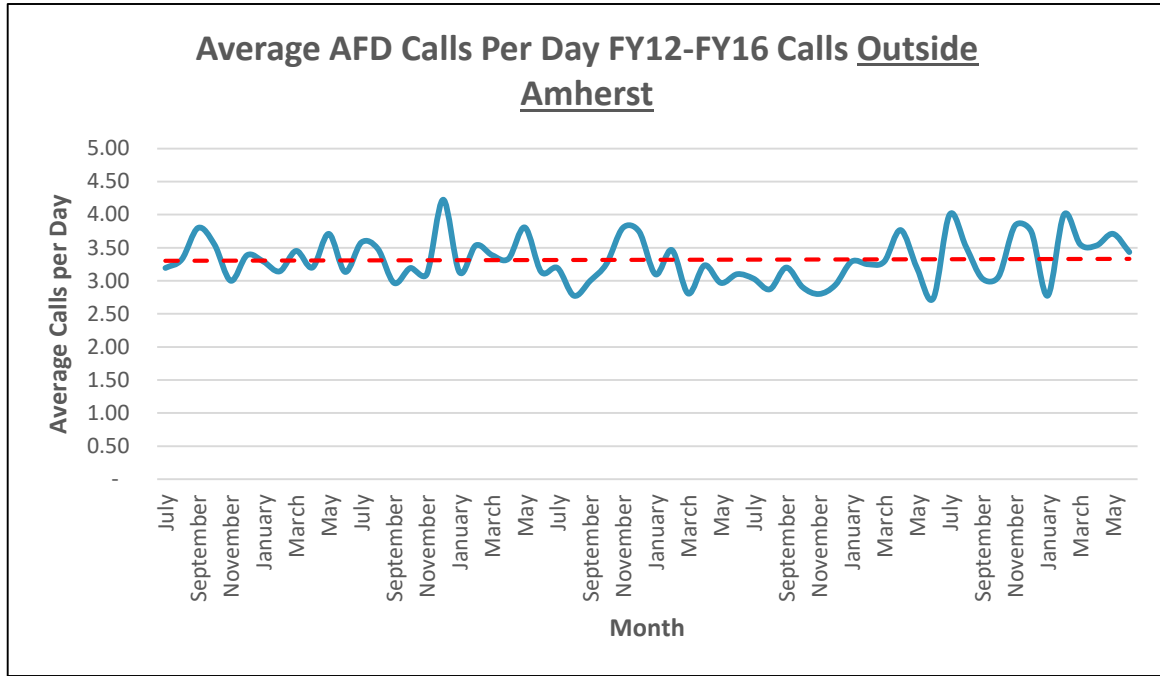
Our Understanding of the Project

- Current system is predicated on several key factors:
 - In-town and outside-of-town service delivery.
 - Seasonal and day of week impacts due to colleges
 - Extended transport times to the hospital due to distance and road network.
 - Availability of Call and Student force personnel.
- Analysis of data shows that while there are response time differences, they are not significant.
- Analysis also shows that response times in the Town when the first call is outside the Town are not significantly increased due to staffing and deployment.

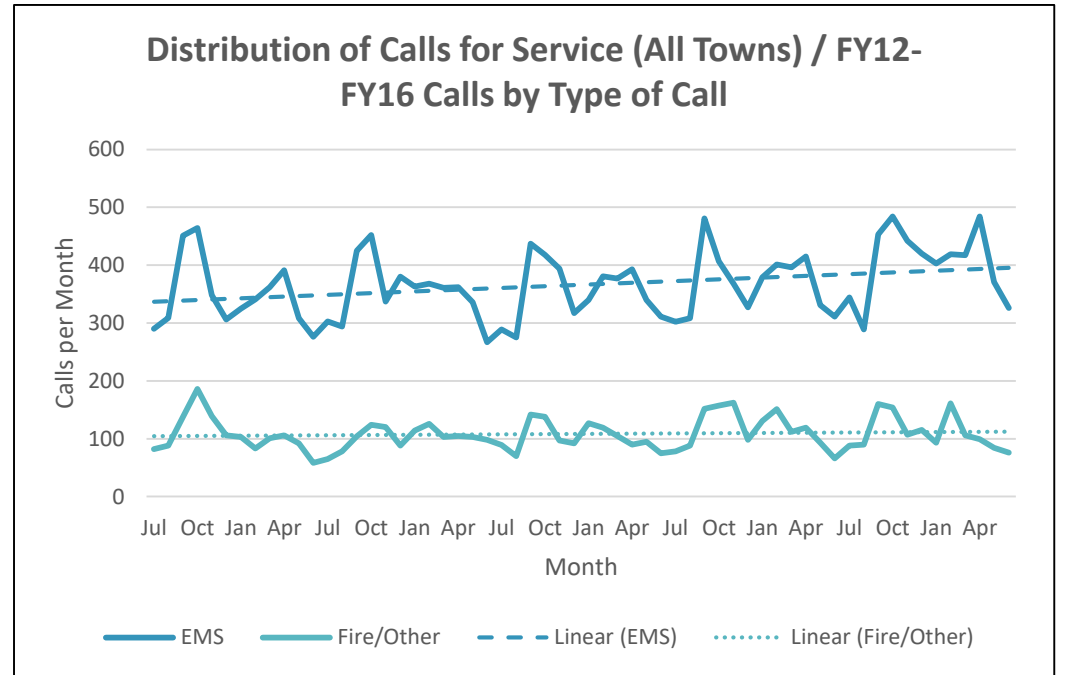
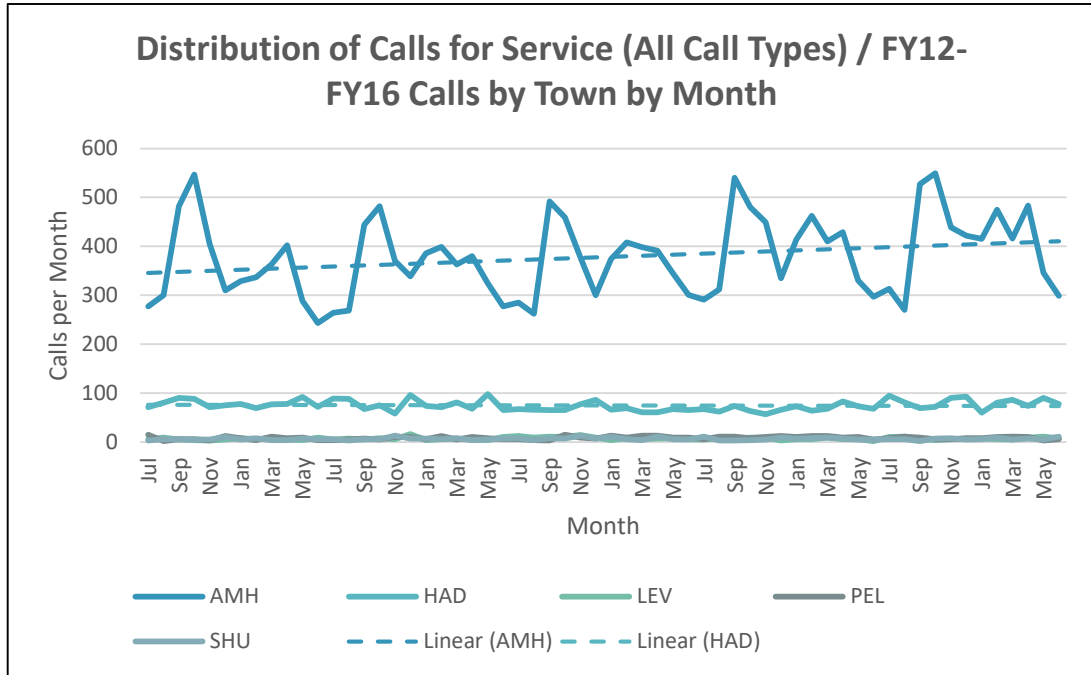
Service Delivery

- Myth: growth in workload is due to the contract EMS towns.
- Myth: university students generate disproportionate levels of workload.
- Myth: overtime can be used to address staffing issues forever.
- Myth: the current system is sustainable without changes.

Service Delivery Myths

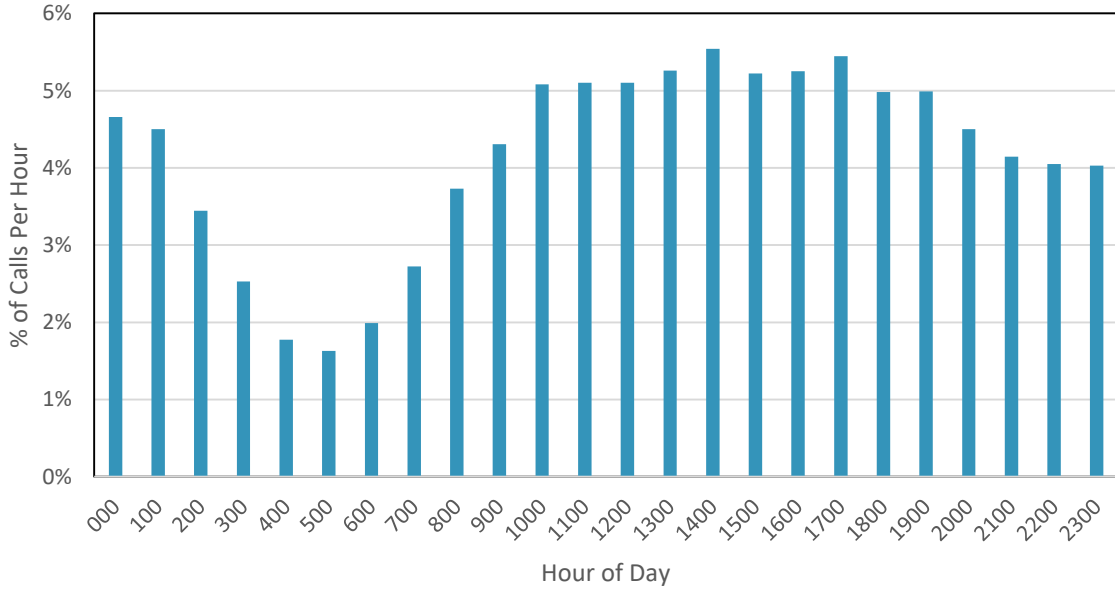


Growth in Call Volume Comes from Amherst Itself

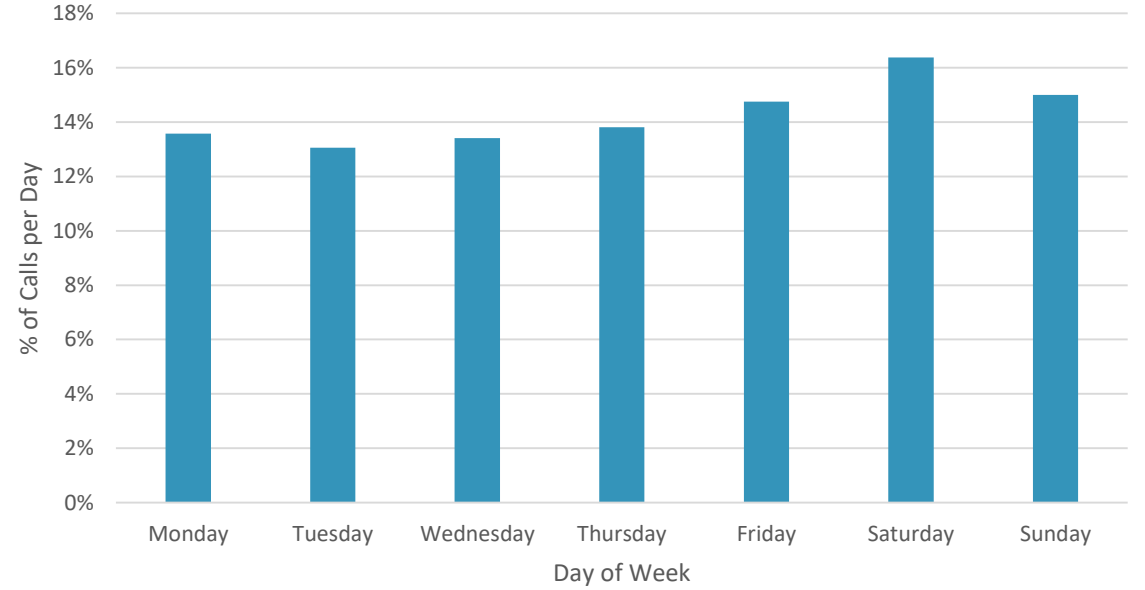


Call Volume Is Influenced by Seasonality

Distribution of Calls by Hour of Day FY12-FY16 All Calls Handled by the AFD



Distribution of Calls by Day of Week / FY12-FY16 All Calls Handled by the AFD



Call Volume Is Influenced by Hour / Day

Average Response times INSIDE Amherst by day of week:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5:38	5:41	5:50	5:36	5:52	5:34	5:58

Average Response times OUTSIDE Amherst by day of week:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
9:6	8:27	8:33	8:53	8:39	8:59	8:43

Service Delivery by Day of Week Shows Little Variance

Average Response times INSIDE Amherst by month:

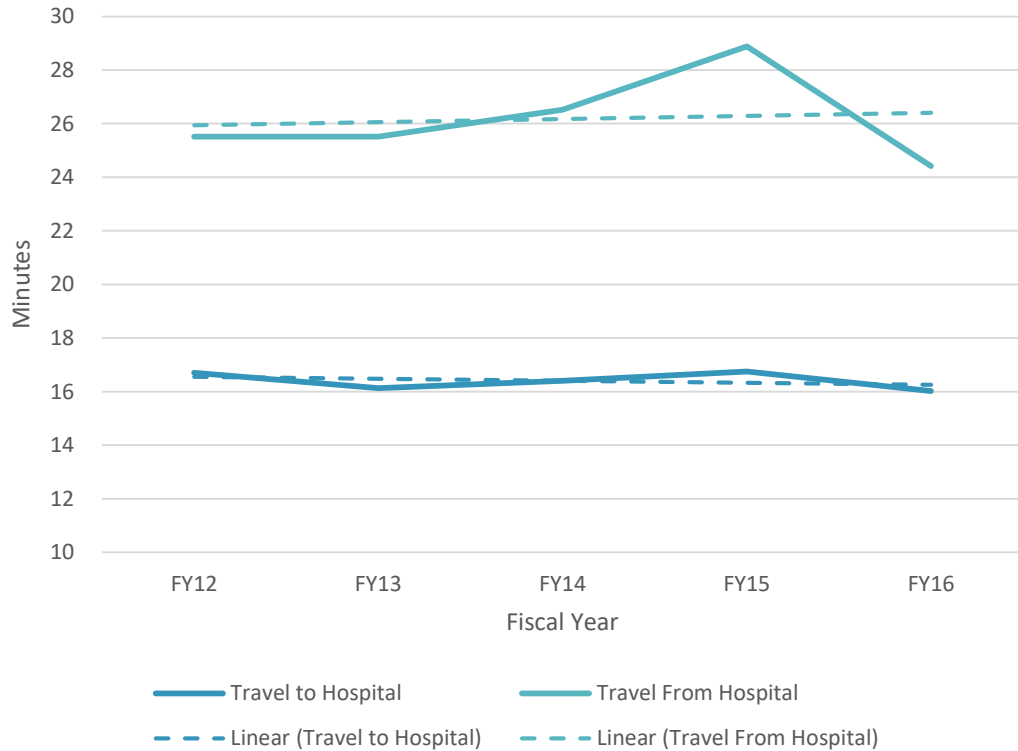
July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
5:48	5:38	5:56	5:34	6:06	5:24	5:32	6:10	5:33	5:36	5:30	5:55

Average Response times OUTSIDE Amherst by month:

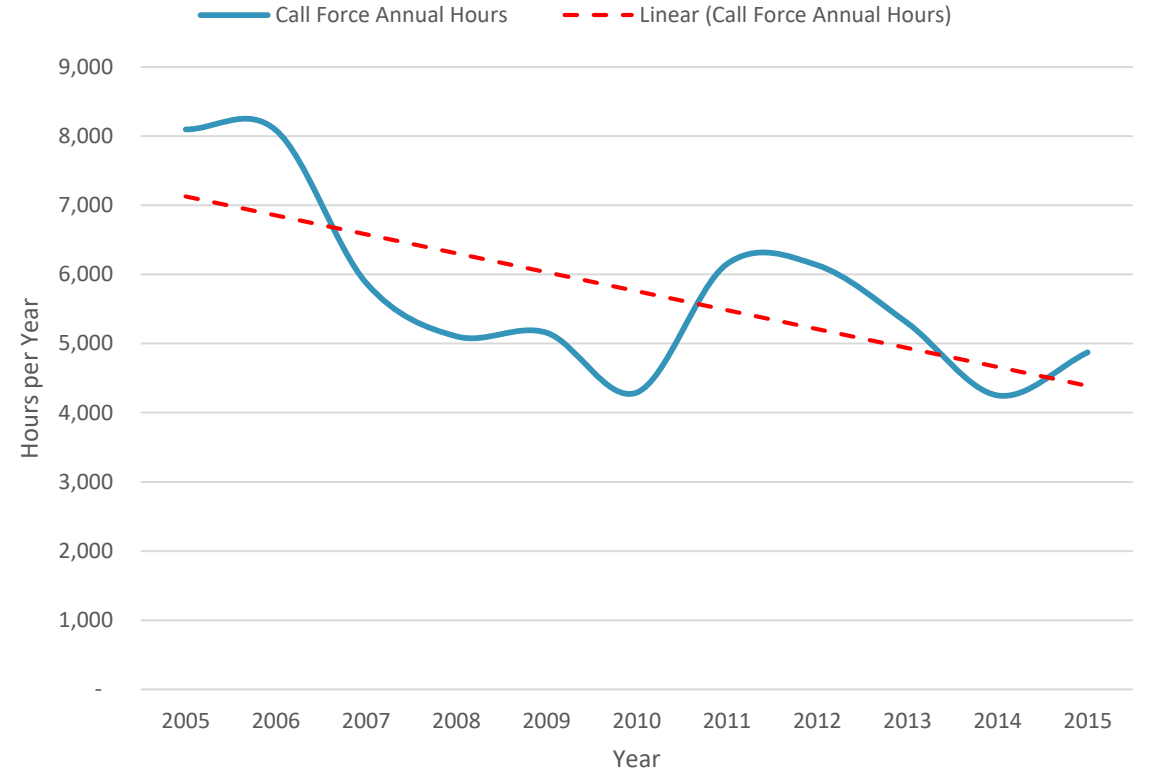
July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
8:39	9:20	8:57	8:48	8:15	8:08	8:58	8:38	8:15	9:16	8:42	9:32

Service Delivery by Month Shows Little Variance

Average Drive Times to and From Hospital (by Fiscal Year) for all EMS Calls + Transport

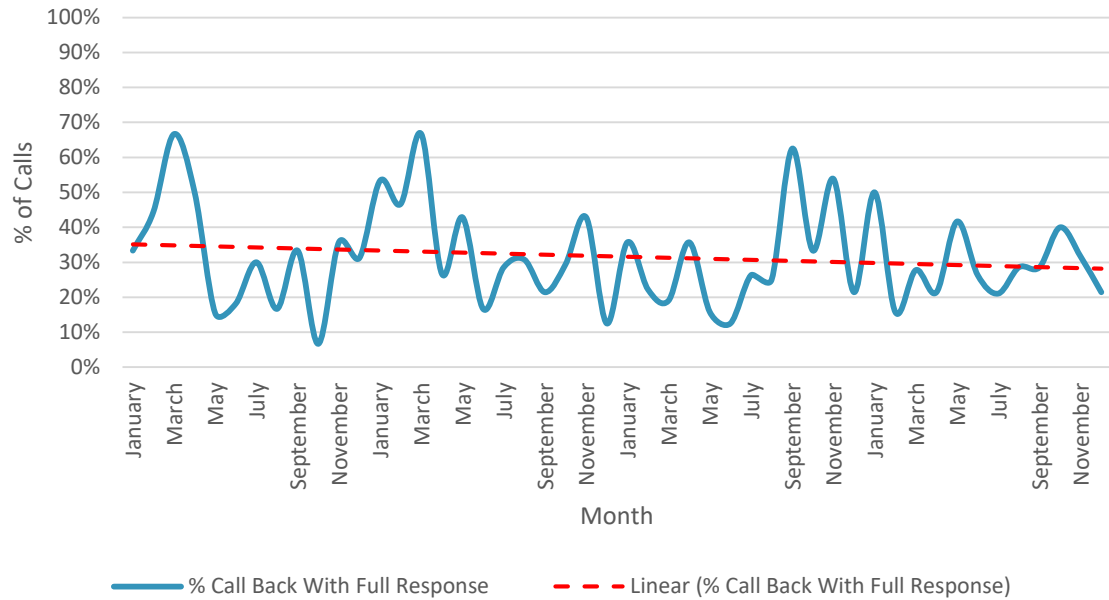


Call Force Annual Hours (2005-2015)

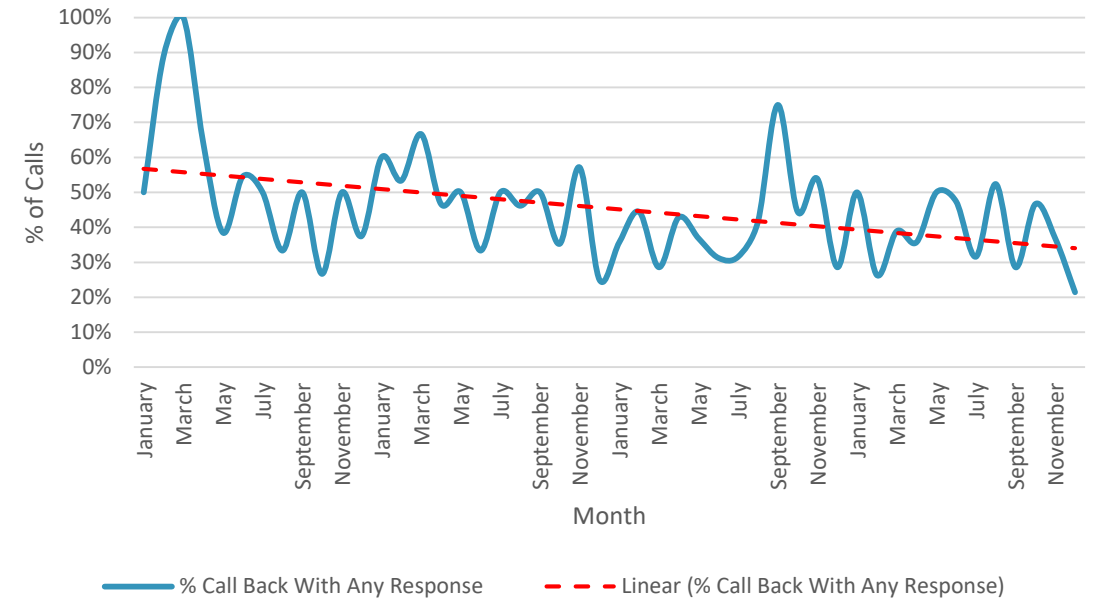


While Response Times Are Good There Are Challenges

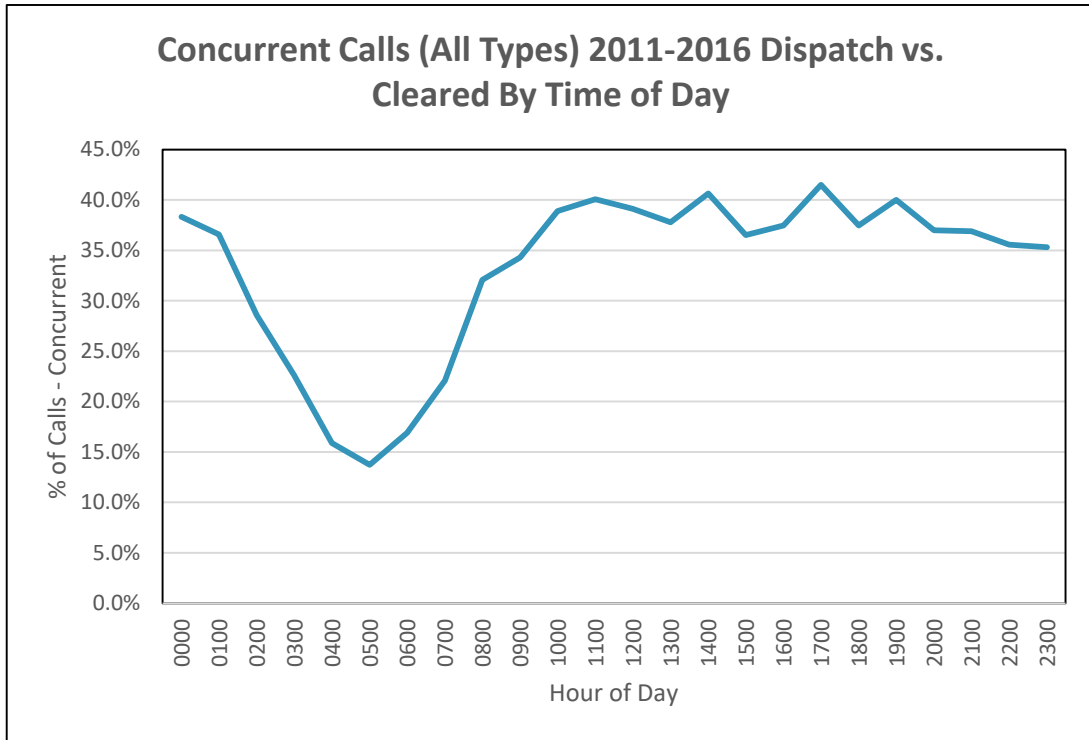
**Call Backs Receiving a Full Response
Percent of Calls (2011-2016)**



**Call Backs Receiving Any Response
Percent of Calls (2011-2016)**



Call Backs Are a Declining Source for Coverage



Concurrent Calls (All Types) 2011-2016 Dispatch vs. Cleared

# of Calls	At Least		
	2 Calls	3 Calls	4 Calls
Total Calls Matched	10,026	2,661	530
Total Call Handled	28,727	28,727	28,727
% Concurrency	34.9%	9.3%	1.8%

Concurrent Calls (All Types) 2011-2016 Dispatch vs. In Quarters

# of Calls	At Least		
	2 Calls	3 Calls	4 Calls
Total Calls Matched	13,107	4,204	996
Total Call Handled	28,727	28,727	28,727
% Concurrency	45.6%	14.6%	3.5%

Concurrency Is Driven by Calls and by Drive Times

- Town of Amherst has several existing contracts to provide EMS services to neighboring towns.
- Contracts for service include an annual payment to Amherst.
- This year will generate more than \$230,000. Changes in Hadley could impact the Town of Amherst at least in the short term.
- Does not specify who keeps ambulance fees recovered – this should be clarified.
- Trade off to be considered – extra revenue vs. staffing (is the Town staffing extra units). Amherst needs the staff to handle its workload – so the contract EMS program makes sense.

Contracts for Service With Other Towns

- The Student and Call Forces augment the full-time staff. Cannot provide the breadth of service delivered by career personnel.
- Increase expectations for call-back response.
- Implement pilot program for peak staffing of an additional ambulance.
 - Year One: Start with 2 firefighter / paramedics on 5-day, 8-hour shift.
 - Alternate Year One: 4 firefighter / paramedics on a 7-day, 12-hour shift.
 - Year Two: Expand to 4 firefighter / paramedics on a 7-day, 12-hour shift.
 - Tests: Have call backs been reduced? Have call back response improved?
- Changes in any of the key elements, and / or continued growth will impact ultimate staffing solutions and will require reexamination.

Recommendations