

## Introduction:

Vyvanse was selected because it is one of the top drugs for treatment of ADHD. The top 300 tweets were chosen from Twitter as a sample on 10/17/2016 with tweets with dates ranging from 10/11/2016 to 10/19/2016.

## Twitter Data:

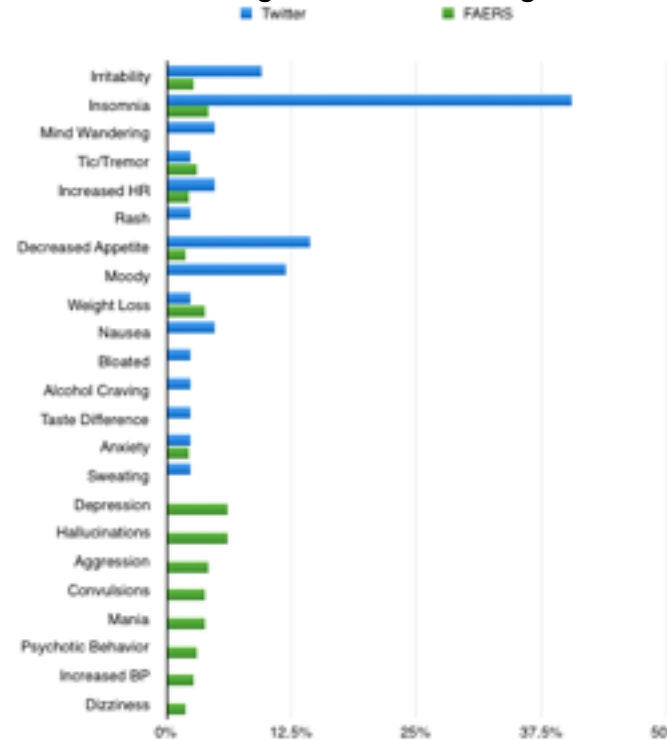
### Analysis of Tweets:

- 42 out of 300 tweets stated at least 1 adverse event (14%)
- 15 adverse events were reported.
- 4 tweets had 2 or more adverse events.

### Top 15 Twitter Reactions:

Event	Number of Events
Insomnia	17
Decreased Appetite	6
Moody	5
Irritability	4
Mind Wandering	2
Increased HR	2
Nausea	2
Shaking	1
Rash	1
Weight Loss	1
Bloated	1
Alcohol Craving	1
Taste Difference	1
Increased Anxiety	1
Increased Sweating	1

## Twitter Events vs FAERS Reported as a Percentage of Adverse Drug Events:



\*Denotes those that are in the top 15 FAERS data. If an event was not reported or reported infrequently, the percentage is represented as 0% in the chart above.

## Conclusions:

- Twitter data is not consistent with FAERS data.
- The primary adverse event reported on Twitter was insomnia.
- The primary adverse event on FAERS was depression.
- The results may be different due to Twitter being self-reported, and non-anonymous; FAERS is anonymous and is more likely to have more personal adverse reactions.
- Another possible reason for the differences between Twitter and FAERS data is that Twitter has much more recent data over a few days, while FAERS has data ranging over several years.
- It would be interesting to see how effective Vyvanse is in the people that had a reaction of depression, because depression often makes people unproductive, and Vyvanse is used to help with focus.

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## FAERS Data:

### Analysis of FAERS:

- Of 93 entries on FAERS for Vyvanse, there were 261 events.
- Of the entries FAERS received, insomnia was 4.2%.
- These dates range from 12/18/2012- 6/25/2014.

### Top 15 FAERS Reactions:

Event	Number of Events
Depression	16
Hallucination	16
Aggression	11
Insomnia	11
Weight Loss	10
Convulsions	10
Mania	10
Psychotic Behavior	8
Tic/Tremor	8
Blood Pressure Increase	7
Agitation	7
Tachycardia	6
Anxiety	6
Dizziness	5
Decreased Appetite	5