

Growth in Media Coverage Concerning Deaths of Despair in States Hit Hardest by Opioid Abuse

Tim Waterman

Why so serious?

The American Life Expectancy has fallen for the past 2 years

Much of this decrease is attributed to overdoses and suicide, which some have coined as “Deaths of Despair” (DOD)

Opioids in particular have taken a central role in this unsettling trend

Issue seems more societal than physiological, presenting a prominent Public Health delima for our time

Curious to see how public discourse is changing in response to this crisis in recent years

Approach

Identified online newspapers for scraping

Selected a prominently recognized publications from 3 states (*Delaware, Wisconsin, Pennsylvania*) that have had the highest increase in opioid overdoses in recent years

Return search-result web-pages by entering select search terms in each newspaper's search field

Total of 15 search-result scrapes, representing 3 states and 5 search terms (*Opioid, Overdose, Suicide, Naloxone, Alcoholism*)

Commence Selenium Scrapes and Troubleshoot

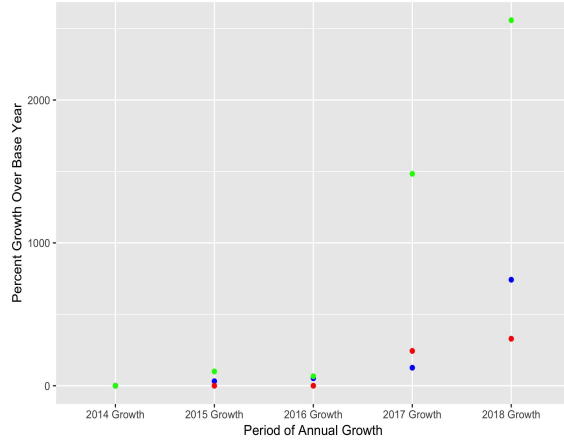
Had to troubleshoot results-pages that required scrolling, pop-up ads, mysterious disappearing text, and inconsistent article urls

Calculate the rate of base-year change with which different topics were discussed in different states

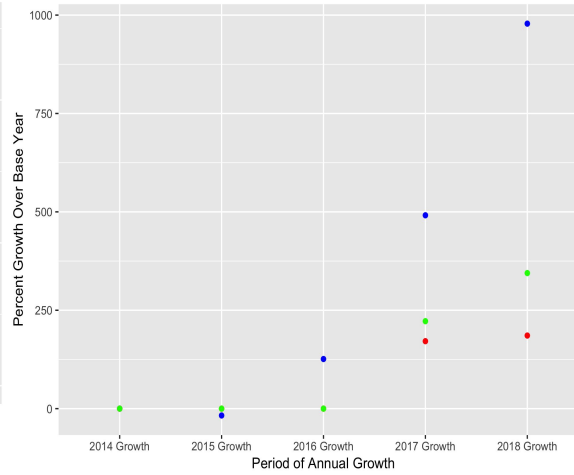
Cobble together series of poorly coded, unaesthetic graphs

Growth in DOD Conversation by Topic

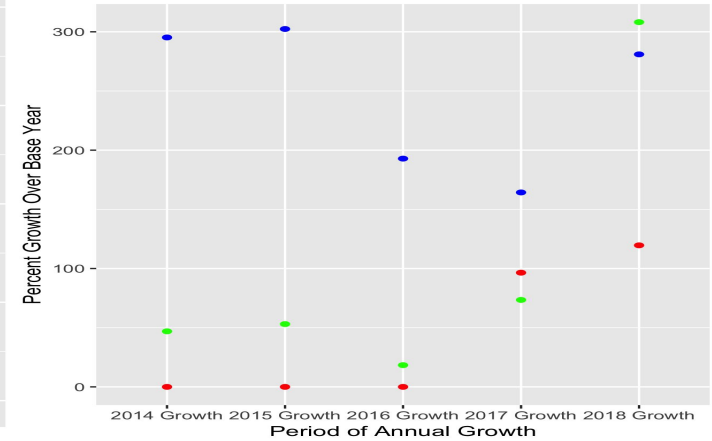
Growth in Opioid Conversation



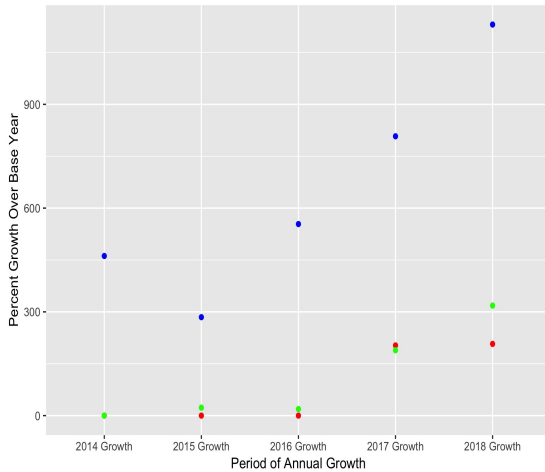
Growth in Naloxone Conversation



Growth in Suicide Conversation



Growth in Overdose Conversation

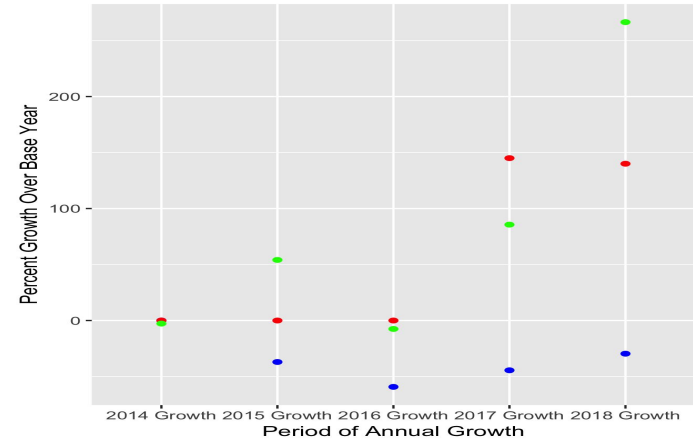


Pa = Green DE = Blue WI = Red

Delaware Overdose and Naloxone Growth

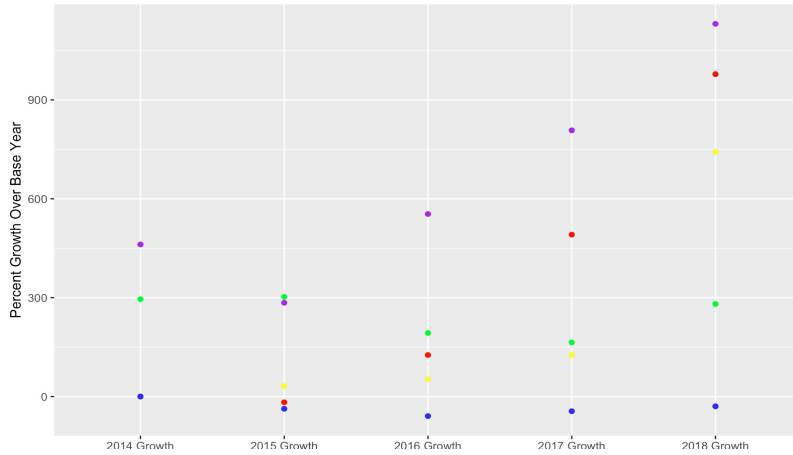
PA Opioid Growth

Growth in Alcoholism Conversation

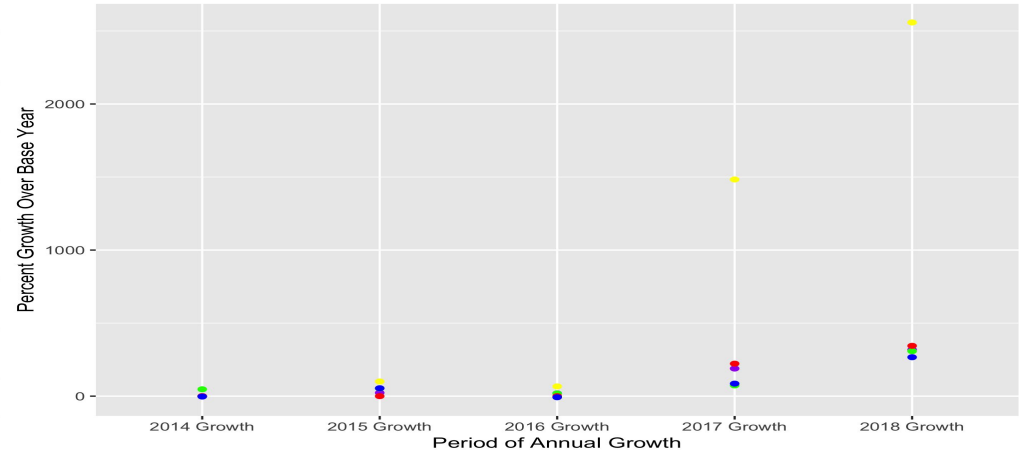


Growth in DOD Conversation by State

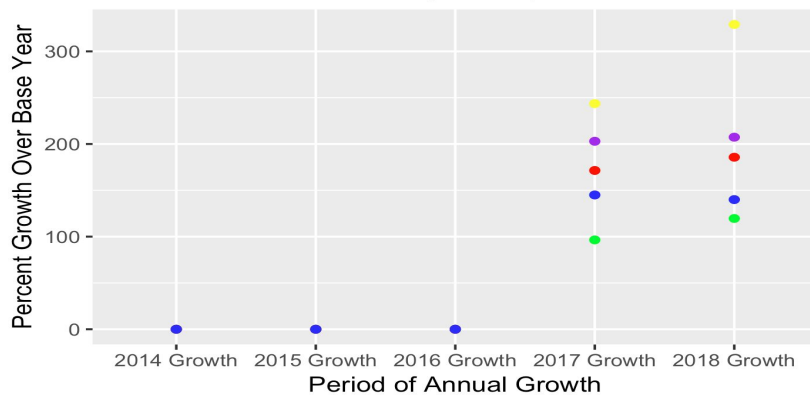
Growth in Death of Despair Topics: Delaware



Growth in Death of Despair Topics: Pennsylvania



Growth in Death of Despair Topics: Wisconsin



Opioid = Yellow Overdose = Purple Suicide = Green
Naloxone = Red Alcoholism = Blue

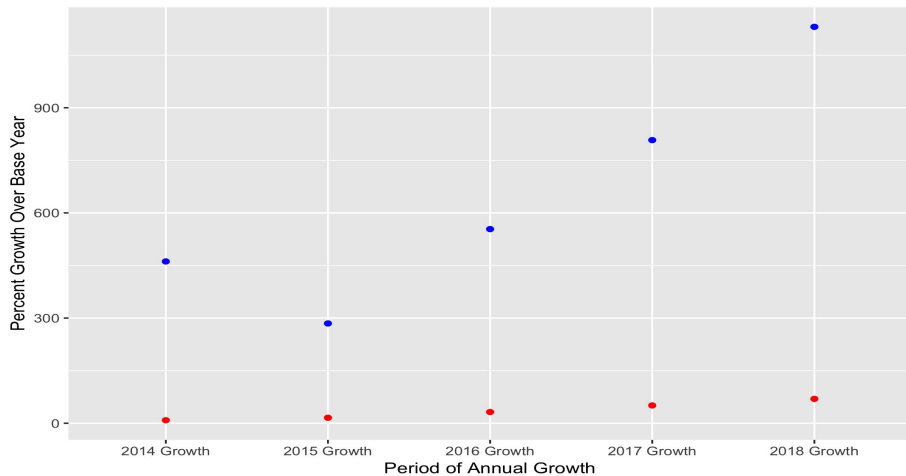
Opioid Pennsylvania

Overdose Naloxone Delaware

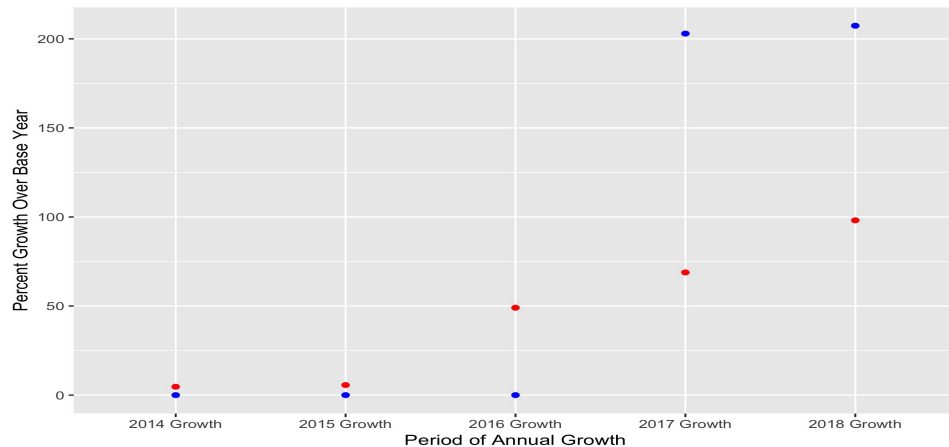
Wisconsin across the board

Overdose Coverage v Overdose Rate Increase

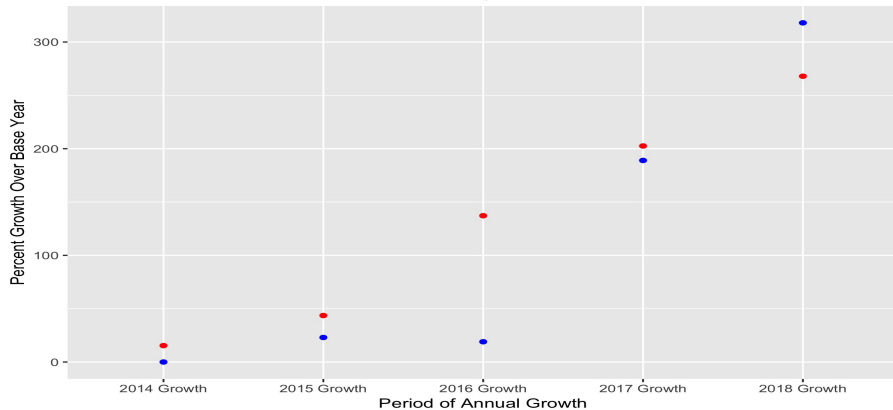
Overdose Deaths v Conversation: Delaware



Overdose Deaths v Conversation: Wisconsin



Overdose Deaths v Conversation: Pennsylvania



Overdose Coverage = red Overdose Rate = Blue

Pennsylvania close correlation

Wisconsin coverage exceeds overdose increase

Delaware coverage exceeds overdose increase

Potential Next Steps

Analyze the discussion of web-scraped results through Word Clouds and Natural Language Processing techniques

Apply web-scraping techniques to RSS platforms

Analyze additional newspapers from different states, and different newspapers within the states already analyzed

Apply web-scraping techniques to social media platforms

Expand the body of key search terms

Improve graph aesthetics