‘Deaths of Despair’ Discussion

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This work would not have been possible without publicly available national data*

- National Vital Statistics System – publicly available death records (1989-2018)
- NVSS – county-level identifiers (available through application)
- National Health Interview Survey
- Behavioral Risk Factor Surveillance System
- CDC Bridged-Race Population Series
- Human Mortality Database (International comparisons)
- World Health Organization Mortality Database (International comparisons)

- Current Population Survey
- American Community Survey
- General Social Survey

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Importance of Ongoing Data Collections in the Federal Statistical System

- A key mission of the federal statistical system is to monitor change in core indicators
- The core data systems used in the analysis presented today included the key factors needed to identify major changes in mortality rates and factors related to these changes
  - Cause of death is part of the vital statistics system and the system will pick up any change in rates by cause including by age, sex, race or geographic area
  - Surveys such as NCHS' provider based data collections will also pick up any change in reasons for contact with the health care system
- Credibility of the analysis presented is enhanced due to the fact that it is based on impartially collected data that are publicly available for reanalysis

Importance of Ongoing Data Collections in the Federal Statistical System

- Systems do not need to be created to respond to an emerging crisis but are well positioned to provide alerts of the emerging crisis
  - Change takes longer to ascertain when the change is more gradual – deaths of despair
  - Change can be monitored quickly for more dramatic shift such as pandemics

- Standard analyses should uncover the nature of trends and whether the trends vary by subgroup

Critical System Characteristics to Meet Data Needs

- The ability of Federal Statistical System to meet data needs assumes that:
  - The right information is being collected
  - Error structures are known, documented and available to the public
  - Data are processed and disseminated in a timely way

Critical System Characteristics to Meet Data Needs

Content:

- Decisions on system content are made with extensive input and oversight
- Reflects extensive subject matter expertise
- Both indicators and covariates are included
- Focus on trends and differential across subpopulations
- Commitment to testing data collection tools
- Expertise in the science and art of measurement

Quality:

- The Federal Statistical System through the Federal Committee on Statistical Methodology is investing in improving quality assessment guidelines and standards for presentation

Critical System Characteristics to Meet Data Needs

Timeliness:

- Timeliness of data has greatly improved
  - 61% of death certificates are received within 10 days
  - Allowed for the release of provisional mortality rates for many causes with a lag of four months
  - Allowed for the monthly release of the number of opioid deaths (with correction) with a lag of 8 weeks
  - Allowed for the release of COVID-19 deaths in ‘real time’ with ~80% of deaths reported with a lag of 14 days
  - Early Release of Quarterly estimates from the NHIS 6 months after data collection

Provisional COVID-19 Death Counts

Data as of May 7, 2020

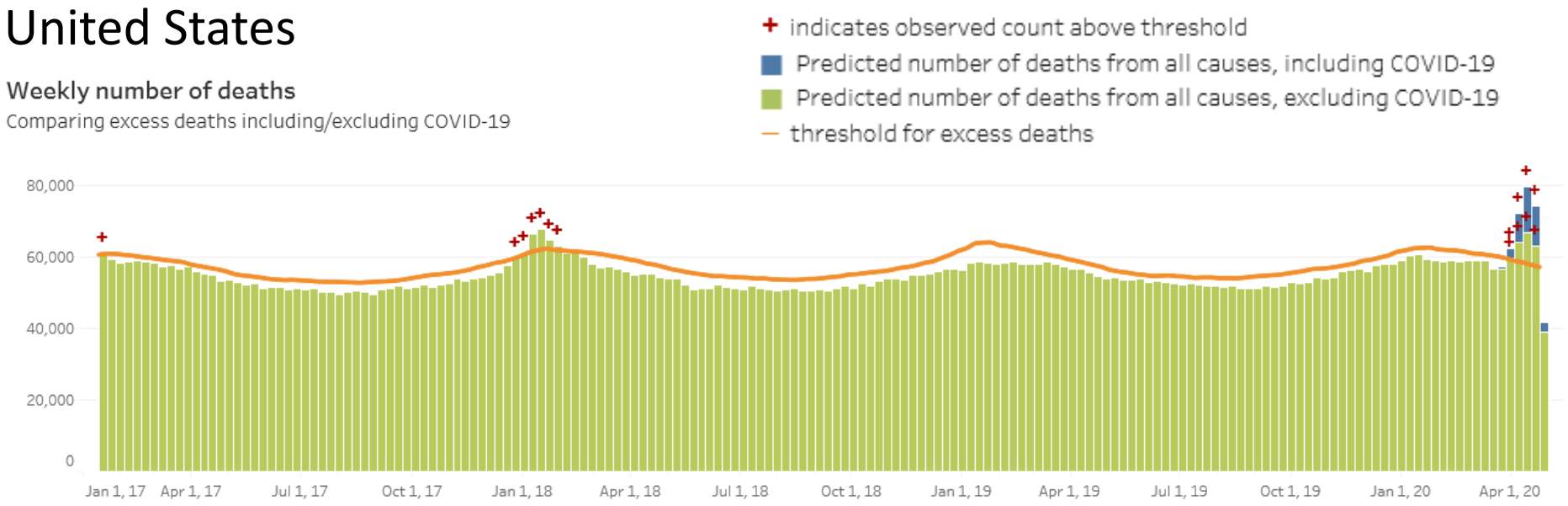
Week ending date in which the death occurred	COVID-19 Deaths (U07.1)[1]	Deaths from All Causes	Percent of Expected Deaths[2]	Pneumonia Deaths (J12.0–J18.9)[3]	Deaths with Pneumonia and COVID-19 (J12.0–J18.9 and U07.1)[3]	Influenza Deaths (J09–J11)[4]	Deaths with Pneumonia, Influenza, or COVID-19 (U07.1 or J09–J18.9)[5]
Total Deaths	45,632	780,085	98	71,451	20,196	6,000	102,028
2/1/2020	0	57,439	97	3,699	0	471	4,170
2/8/2020	1	57,760	97	3,686	0	499	4,186
2/15/2020	0	57,065	97	3,708	0	520	4,228
2/22/2020	1	57,028	98	3,573	0	541	4,115
2/29/2020	7	57,236	99	3,662	5	623	4,287
3/7/2020	30	56,815	98	3,765	17	594	4,371
3/14/2020	50	54,851	96	3,726	25	588	4,338
3/21/2020	500	54,939	97	4,226	227	503	4,996
3/28/2020	2,758	58,290	104	5,710	1,257	416	7,579
4/4/2020	8,386	65,768	117	8,969	4,021	441	13,557
4/11/2020	13,134	70,035	126	10,459	5,856	444	17,851
4/18/2020	12,280	63,131	116	8,910	5,237	232	16,014
4/25/2020	7,318	47,684	88	5,735	3,076	108	10,010
5/2/2020	1,167	22,044	35	1,623	475	20	2,326

https://www.cdc.gov/nchs/nvss/vsrr/COVID19/

Provisional COVID-19 Death Counts: Modeling and Visualizations

Excess Deaths Associated with COVID-19 - Visualization

https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm



Current Challenges

- Systems are still too slow to alert to change in key indicators so that interventions can be implemented early in a crisis
  - In some cases, a delay of a few weeks can make a real difference
  - Appreciable delay still associated with deaths requiring medical examiner/coroner intervention
- Administrative data systems are not designed so that data can flow with no or little intervention from the provider
- Systems are not flexible enough so that content can be changed quickly

Current Challenges

- Systems are not flexible enough so that modes can change if the situation causes disruption in how a data collection is administered
- Systems are not designed to include multiple modes so to allow modes of data collection to change as conditions change and so results can be calibrated to address the mode change
- Efforts to reduce burden to improve response works against comprehensiveness of data content that might be needed with changing circumstances
- Systems are not necessarily aligned across topics

New Challenge: Implications of COVID-19

- Disruption of the economy and social networks present unique challenges to data collection and analysis
  - Spans all sectors addressed by Federal statistics: including health and health care, economic, education, justice, transportation
  - Experience in assessing “deaths of despair” may help in assessing implications of economic disruption on well-being, mental health, social and economic factors associated with health
- Do we have the quality data we need? When we need it? Will interruptions to data collection systems impede our ability to monitor impact?