**Analysis of Covid-19 Deaths vs. Influenza Deaths**

The data utilized was retrieved from the **National Center for Health and Statistics** (**NCHS**).

Utilizing Line Graphs

**Step 1**: Evaluate **Total Deaths** for the past five years.

Findings: There was **325,221** increase in **Total Deaths** from 2019 to 2020. In a normal year, most deaths accumulate during the winter months. Mainly when many people are the least active, given cold weather conditions. This is also coincides with the peak of the flu season.

**Step 2**: Evaluate **Pneumonia Deaths** for the past five years.

Findings: Total pneumonia deaths saw about a **64.6%** increase from 2019 to 2020. Pneumonia deaths normally account for most of the deaths associated with viral respiratory illnesses, given other viral symptoms are mostly manageable with existing medications.

**Step 3**: Evaluate **Covid-19 Deaths** for 2020.

Findings: There were **235,745 Covid-19 Deaths**.

**Step 4a**: Calculate **Covid-19 Pneumonia Deaths** in targeted 2020 timeframe.

**Step 4b**: Calculate **Covid-19 Non-Pneumonia Deaths** in targeted 2020 timeframe.

**Step 4c**: Calculate **Influenza Pneumonia Deaths** in targeted 2020 timeframe.

**Step 4d**: Evaluate **Targeted Pneumonia Deaths** in targeted 2020 timeframe.

Findings: This chart analyzes pneumonia deaths from the first Covid-19 death associated with it to early November, and compares it to previous timeframes in 2016-2019. Noticed that 2020 deaths other than Covid-19 seemed slightly influenced by it.

**Step 4e**: Use correlation analysis to verify **Influenza Pneumonia Deaths** were statistically consistent with the same timeframe in previous years.

Findings: Correlation testing was done comparing 2020 pneumonia deaths other than Covid-19 with the previous years displayed with a minimum factor of **0.82**, which represents a strong correlation.

**Step 4f**: Use ANOVA analysis to verify **Influenza Pneumonia Deaths** were statistically distributed with the same timeframe in previous years.

Findings: ANOVA testing was done on the correlation datasets, generating a **0.33** **pvalue** indicating there is no significant statistical difference in those datasets.

Utilizing Pie Charts

**Step 5**: Compare 2020 **Influenza Pneumonia** and **Non-Pneumonia Deaths**.

Findings: Pneumonia **94.7%** (**168,377**), Non-Pneumonia **5.3%** (**9,361**)

**Step 6**: Compare 2020 **Covid-19 Pneumonia** and **Non-Pneumonia Deaths**.

Findings: Pneumonia **46.0%** (**108,462**), Non-Pneumonia **54.0%** (**127,283**)

References

**Step 7**: Provide a link concerning **Comorbidities** associated with Covid-19 deaths.

Findings: <https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm>

**Comorbidities**

Table 3 shows the types of health conditions and contributing causes mentioned in conjunction with deaths involving coronavirus disease 2019 (COVID-19). For **6%** of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were **2.9** additional conditions or causes per death.

**Step 8**: Provide a link concerning **CARES Act** compensation made available to hospitals during the Covid-19 epidemic.

Findings: <https://www.aha.org/advisory/2020-04-16-coronavirus-update-cms-releases-guidance-implementing-cares-act-provisions>

The Centers for Medicare & Medicaid Services (CMS) yesterday released new guidance implementing several provisions included in the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

These provisions include:

A Medicare add-on payment of 20% for both rural and urban inpatient hospital COVID-19 patients; Waiver of the long-term care hospital (LTCH) site-neutral policy for COVID-19 patients; Waiver of the LTCH “50% Rule” for COVID-19 patients; and

Waiver of the inpatient rehabilitation facility (IRF) “3-hour Rule” for COVID-19 patients

Thoughts

**Step 9**: Reflect on a little of what was seen in the previous charts.

The inactivity concerning the winter months that was previously mentioned was probably made worse by various factors associated with the Covid-19 response (shutdowns, unemployment, restrictions, fears, etc…).

**Step 10**: Provide some explanation of link information.

Concerning the links above, the first shows that those with **comorbidities** were mostly likely to die from Covid-19, predominately the elderly who have them. The second shows that the hospitals were gave an economic incentive via the **CARES** act (**$100 billion allocated**) to identify and treat Covid-19 patients, whether they were insured or not, and whether they had or were being treated for other comorbidities or not.

**Step 11**: Perform calculations to obtain an estimated number of **Weighted Covid-19 Deaths**.

**General Calculations**

235,745 Covid-19 Deaths x **0.06** = 14,144.7 Covid-19 Only Deaths

235,745 Covid-19 Deaths - 14,144.7 Covid-19 Only Deaths = 221,600.3 Covid-19 Deaths With Comorbidities

221,600.3 Covid-19 Deaths With Comorbidities / **3.9** Average Comorbidities Including Covid-19 = 56,820.59 Porportioned Covid-19 Deaths

56,820.59 Porportioned Covid-19 Deaths + 14,144.7 Covid-19 Only Deaths = **70,965.29 Weighted Covid-19 Deaths**

A Final Question

**Step 12**: Pose a final question concerning the results, calculations, and information reviewed.

***Does a 54% proportion of non-pneumonia deaths associated with Covid-19 make sense to you?***