Figures and figure supplements

National and regional seasonal dynamics of all-cause and cause-specific mortality in the USA from 1980 to 2016

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**Figure 1.** Wavelet power spectra for national time series of all-cause death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 5—figure supplement 2. Wavelet power spectra for national time series of chronic respiratory disease death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 5—figure supplement 3. Wavelet power spectra for national time series of respiratory infection death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.
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Figure 6—figure supplement 2. Wavelet power spectra for national time series of chronic respiratory disease death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 6—figure supplement 3. Wavelet power spectra for national time series of respiratory infection death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 7—figure supplement 1. Wavelet power spectra for national time series of intentional injury death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 7—figure supplement 2. Wavelet power spectra for national time series of unintentional injury death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 8. Wavelet power spectra for national time series of injury death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.
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Figure 8—figure supplement 2. Wavelet power spectra for national time series of unintentional injury death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 9. Wavelet power spectra for national time series of death rates from causes other than cancers, cardiorespiratory diseases and injuries for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 9—figure supplement 1. Wavelet power spectra for national time series of substance use disorder death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 9—figure supplement 2. Wavelet power spectra for national time series of perinatal condition death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 9—figure supplement 3. Wavelet power spectra for national time series of endocrine disorder death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 9—figure supplement 5. Wavelet power spectra for national time series of neuropsychiatric disorder death rates for 1980–2016, by age group for males. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10. Wavelet power spectra for national time series of death rates from causes other than cancers, cardiorespiratory diseases and injuries for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10—figure supplement 1. Wavelet power spectra for national time series of substance use disorder death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10—figure supplement 3. Wavelet power spectra for national time series of perinatal condition death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10—figure supplement 4. Wavelet power spectra for national time series of endocrine disorder death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10—figure supplement 5. Wavelet power spectra for national time series of genitourinary disease death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 10—figure supplement 6. Wavelet power spectra for national time series of neuropsychiatric disorder death rates for 1980–2016, by age group for females. Wavelet power values increase from blue to red. The shaded regions at the left and right edge of each box indicate the cone of influence, where spectral analysis is less robust. P-values for the presence of 12 month seasonality are to the right of each figure at the 12 month line.

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Figure 11. Mean timing of maximum and minimum all-cause and cause-specific mortality at the national level, by sex and age group for 1980–2016. Red arrows indicate the month of maximum mortality, and green arrows that of minimum mortality. The size of the arrow is inversely proportional to its respective variance.

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