Anomalous temperature and injury mortality in the USA: age-, sex- and injury-specific impacts: supplementary information

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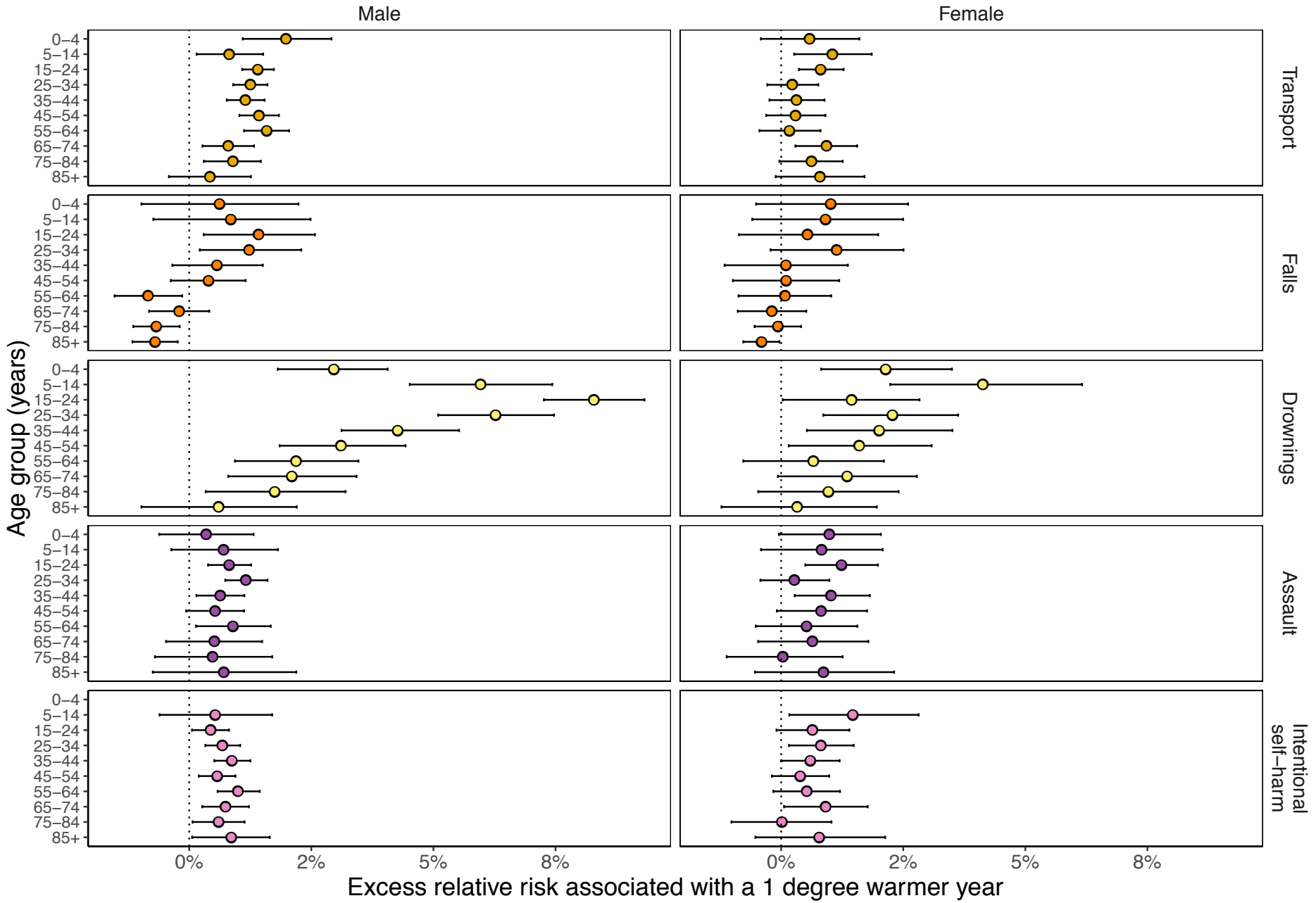
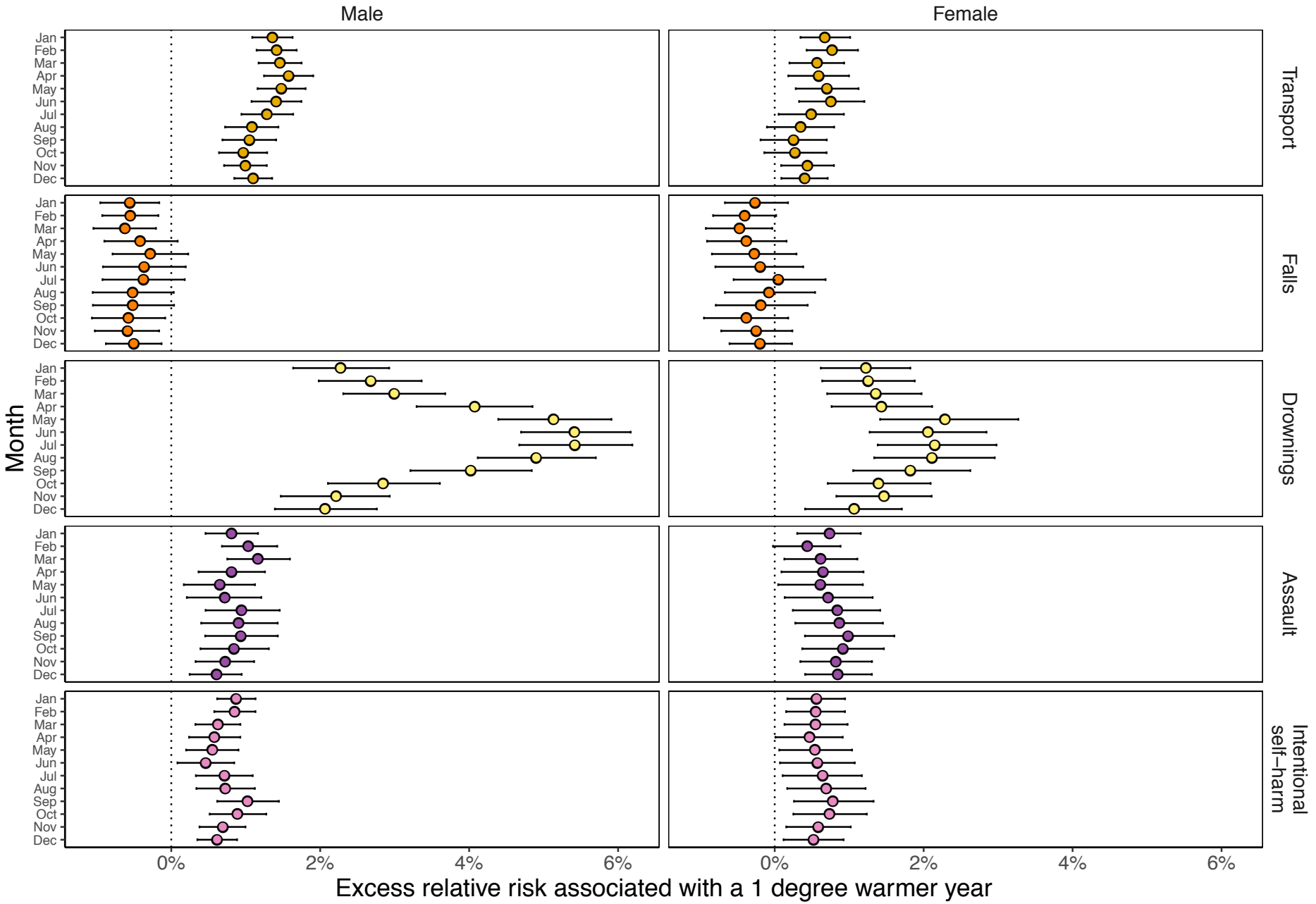
Supplementary Figure 1. Percent change in death rates in year in which each month was +1°C compared with 1980-2009 norm temperatures by type of injury, sex and age group.


Male
Female
Transport
Falls
Drownings
Assault
Intentional self−harm
Age group (years)
0–4
5–14
15–24
25–34
35–44
45–54
55–64
65–74
75–84
85+
0%
2%
5%
8%
Excess relative risk associated with a 1 degree warmer year

Supplementary Figure 2. Percent change in death rates in year in which each month was +1°C compared with 1980-2009 norm temperatures by type of injury, sex and month.


Male
Female
Transport
Falls
Drownings
Assault
Intentional self−harm
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0%
2%
4%
6%
Excess relative risk associated with a 1 degree warmer year

Supplementary Table 1. Injury groups used in the analysis with ICD-9 and ICD-10 codes.

Injury type	ICD-9	ICD-10
All injuries	E800-E999	V0-Y89
Unintentional	E800-E949, E980-E989	V0-V99, W0-99, X0-X59, Y10-Y34, Y40-Y89
Transport	E800-E807, E810-E838, E840-E849	V0-V99
Falls	E880-E888	W0-W19
Drowning	E910-E910	W65-W74
Intentional	E950-E979.9, E990-E999	X60-X99, Y0-Y9, Y35-Y39
Intentional self-harm	E950-E959	X60-X84
Assault	E960-E979, E990-E999	X85-X99, Y0-Y9, Y35-Y39

Supplementary Table 2. Correlation coefficients between monthly anomalies generated from daily mean temperature and daily maximum and minimum temperatures. Each correlation coefficient was calculated in each state for each month for 1980-2016, then averaged over all states for each month.

Month	Mean daily temperature and maximum daily temperature	Mean daily temperature and minimum daily temperature
January	0.98	0.98
February	0.98	0.98
March	0.97	0.97
April	0.97	0.96
May	0.96	0.94
June	0.95	0.92
July	0.97	0.94
August	0.96	0.93
September	0.93	0.91
October	0.91	0.93
November	0.96	0.97
December	0.97	0.98

Supplementary Table 3. Correlation coefficients between anomaly of mean daily temperature and measures of extreme anomalous temperature described in Methods. Each correlation coefficient was calculated in each state for each month for 1980-2016, then averaged over all states for each month.

Temperature variables	Anomaly of mean (main analysis)	Anomaly of 90th percentile	Number of days above long-term 90th percentile	Number of 3+ day episodes above long-term 90th percentile
Anomaly of mean (main analysis)		0.79	0.75	0.6
Anomaly of 90th percentile	0.79		0.89	0.77
Number of days above long-term 90th percentile	0.75	0.89		0.86
Number of 3+ day episodes above long-term 90th percentile	0.6	0.77	0.86	