Supplemental Figure 1. *Trauma Team Activation Criteria at Zuckerberg San Francisco General Hospital (ZSFG).* PEDI- pediatric, MVC- motor vehicle collision, MCC- motorcycle collision, PVA- pedestrian vs auto, BVA- bicycle vs auto, GSW- gunshot wound, SW- stab wound, MOI-mechanisms of injury, TTA-trauma team activation, SBP-systolic blood pressure, ED- emergency department.

Supplemental Figure 2. *Graphical representation of an interrupted time-series model and parameters.*

1. Pre-intervention trend = the slope prior to the intervention. 2. Level shift = the instantaneous change associated with the intervention. 3. Post-intervention trend = slope after the intervention. Change in slope = Post-intervention trend – pre-intervention trend. Point estimates, standard errors, confidence intervals and p-values are reported for each of these parameters.

Supplemental Figure 3. *Comparison of number of monthly reported violent crimes reported in San Francisco before and after shelter-in-place.* **A)** Box and whiskers plots of historical violent crimes reported by month 2016-2019 compared to 2020 values (diamonds). **B)** ITSA model for violent crimes reported by month adjusting for historical variation, showing seasonal monthly
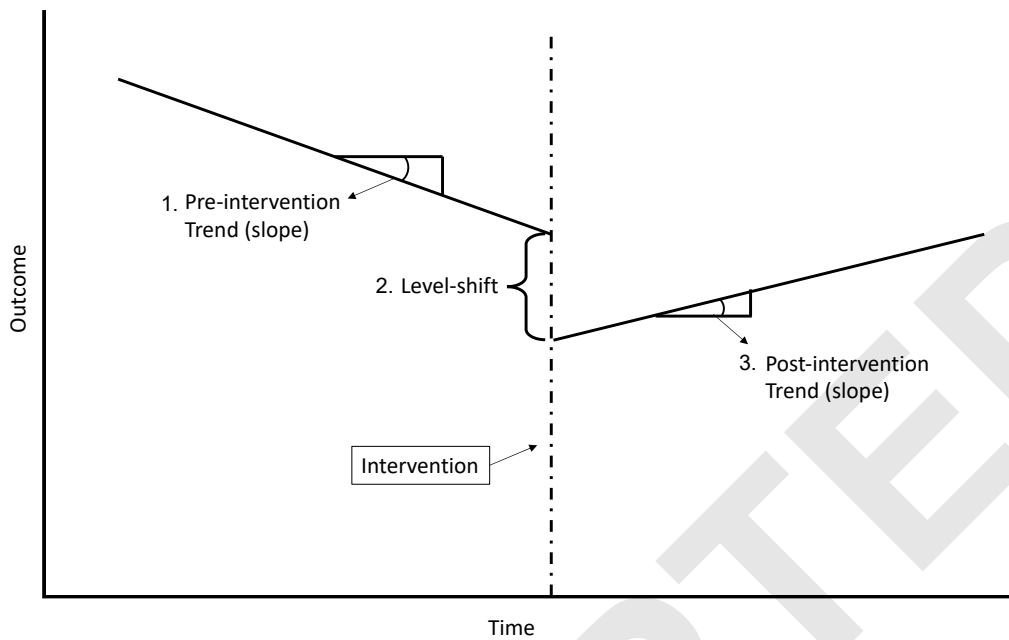
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Trauma Team Activation Criteria at ZSFG

Low Acuity

- [garbled]
- PEDI (<15yo) [garbled] or 10 feet, whichever is less.
- MVC with ejection, death of passenger, abdominal seatbelt sign **OR** passenger [garbled]
- MCC, motorized vehicles, bicycles, skateboards, scooters, etc. with > 20mph crash or with major impact
- PVA or BVA with estimated collision speed > 10 mph
- GSW or SW to head, neck, or torso not meeting 900 TTA criteria
- Re-triage of trauma patients meeting any [garbled]
- GCS 9-11 with clear evidence of traumatic etiology
- Traumatic paraplegia or focal neuro deficits.
- PEDI [garbled] with concerning MOI.
- [garbled] with major MOI not meeting 900 TTA criteria
- Patients [garbled] 65 yrs with significant MOI and:
  - SBP<110 OR
  - any long bone fractures OR
  - taking any major anticoagulation
- ED Attending, Trauma Senior Resident or ED Charge Nurse discretion.

High Acuity

- Confirmed SBP<90 in adult or age specific hypotension in children.

AGE	Systolic Blood Pressure
<1 yr	SBP <60
1-10 yrs	SBP < (70 + 2 x age)
> 10 yrs	SBP < 90

- Clinical evidence of hemorrhagic shock when BP measurements not available (Absent pulses and/or cutaneous signs of shock may be used.
- Respiratory compromise [garbled] from trauma or burns.
- Intubated/need for intubation - from trauma or burns. .
- Re-triage/transfer of patients from other facilities meeting 900 criteria.
- GCS < 9 with clear evidence of major head trauma or major MOI
- GSW or SW to neck or torso (acute injuries < 4 hours old)
- GSW or SW to extremity proximal to elbow/knee with active hemorrhage, expanding hematoma or pulse deficit
- Traumatic amputation or mangled extremity proximal to wrist or ankle.
- Traumatic quadriplegia.
- [garbled] MOI and abdominal pain
- [garbled] otherwise meeting 900 criteria.
- ED Attending or Trauma Senior Resident discretion.
- ED Charge Nurse may activate for patients not meeting specific 900 TTA criteria after consultation with the ED Attending
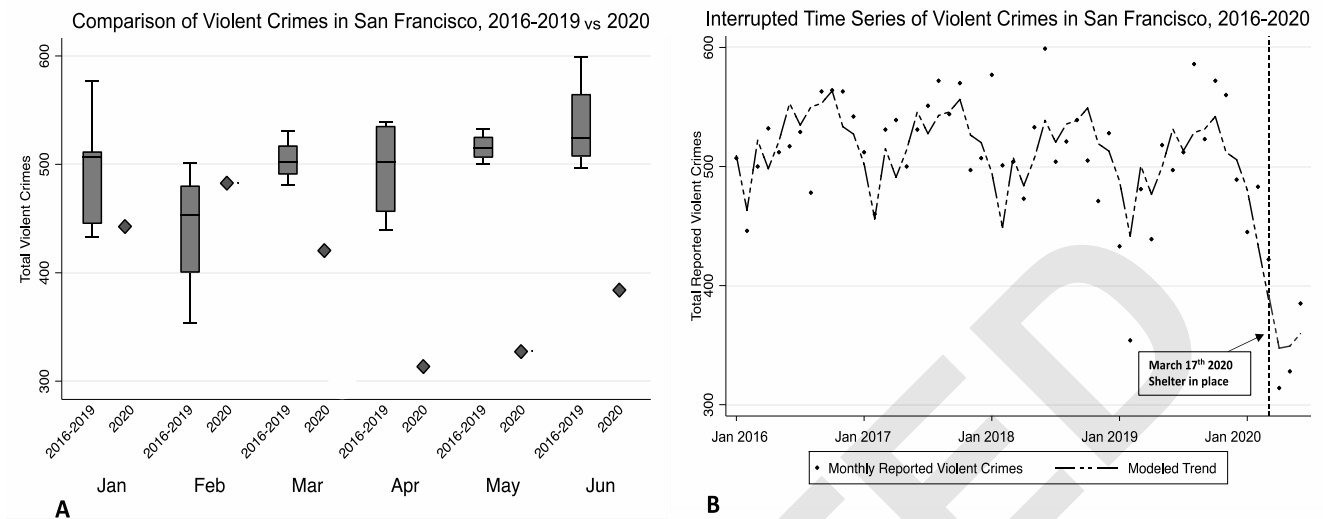
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Supplemental Figure 2. *Graphical representation of an interrupted time-series model and parameters.*

1. Pre-intervention trend = the slope prior to the intervention. 2. Level shift = the instantaneous change associated with the intervention. 3. Post-intervention trend = slope after the intervention.

Change in slope = Post-intervention trend – pre-intervention trend. Point estimates, standard errors, confidence intervals and p-values are reported for each of these parameters.

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Supplemental Figure 3. *Comparison of number of monthly reported violent crimes reported in San Francisco before and after shelter-in-place.* **A)** Box and whiskers plots of historical violent crimes reported by month 2016-2019 compared to 2020 values (diamonds). **B)** ITSA model for violent crimes reported by month adjusting for historical variation, showing seasonal monthly trends 2016-2019, but a large level shift associated with shelter-in-place of 100 fewer violent crimes (*p*<0.01), and a trend of 22 fewer violent crimes per month starting after shelter-in-place when adjusting for month (*p*=0.05). Lags specified for autocorrelation: 12 months. See Supplemental Table 6 for complete regression model results

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Supplemental Table 1. Long-Term ITSA Model for the Association of Shelter-in-Place with Trauma Volume by Month (January 2015-June 2020)

Variable	Coefficient	Std Error	P-value	CI-low	CI-high
Pre-shelter-in-place trend (Jan 2015-Jan 2020)	-2.75	0.23	<0.01	-12.13	-3.20
Level Shift associated with shelter-in-place	-25.78	9.89	0.01	-2.61	-45.64
Slope shift associated with shelter-in-place	-4.12	3.86	0.29	-1.07	-11.86
Trend after start of shelter-in-place (March-June 2020)	-6.87	3.80	0.08	-14.50	0.76
Month (Reference, January)					
February	-16.42	14.03	0.25	-1.17	-44.59
March	-21.04	16.34	0.20	-1.29	-53.84
April	-16.94	13.94	0.23	-1.22	-44.92
May	11.83	10.59	0.27	1.12	-9.43
June	27.26	13.93	0.06	1.96	-0.70
July	20.70	21.69	0.34	0.95	-22.85
August	13.45	19.80	0.50	0.68	-26.30
September	20.20	12.95	0.13	1.56	-5.80
October	48.65	13.07	<0.01	3.72	22.41
November	17.09	10.17	0.10	1.68	-3.32
December	7.64	20.98	0.72	0.36	-34.49

Interrupted time-series analysis model (ITSA) with Newey-West standard errors, lags specified for autocorrelation: 12 months. Coefficients represent the estimates for the change in number of trauma team activations per month. CI-95% confidence intervals.

Supplemental Table 2. Short-Term ITSA Model for the Association of Shelter-in-Place with Trauma Volume by Week (September 2019-June 2020)

Variable	Coefficient	Std Error	P-Value	CI-low	CI-high
Trend, 6 months pre-Shelter-in-place	0.06	0.23	0.80	-0.41	0.53
Level Shift March 17th 2020	-28.49	3.77	<0.01	-36.11	-20.88
Slope Shift March 17th 2020	1.70	0.32	<0.01	1.06	2.35
Trend March 17th-June 30th 2020	1.76	0.22	<0.01	1.32	2.21

Interrupted time-series analysis model (ITSA) with Newey-West standard errors, lags specified for autocorrelation: 4 weeks. Coefficients represent the estimates for the change in number of trauma team activations per week. CI-95% confidence intervals.

Supplemental Table 3. Long-Term ITSA Model for Association of Shelter-in-Place with Pediatric Trauma Volume (January 2015-June 2020)

Variable	Coefficient	Std Error	P-value	CI-low	CI-high
Pre-shelter-in-place trend (Jan 2015-Jan 2020)	-0.17	0.03	<0.01	-0.23	-0.10
Level Shift associated with shelter-in-place	-7.70	2.05	<0.01	-11.81	-3.59
Slope shift associated with shelter-in-place	-0.58	0.92	0.53	-2.43	1.27
Trend after start of shelter-in-place (March-June 2020)	-0.75	0.94	0.43	-2.67	1.14
Month (Reference, January)					
February	1.50	1.66	0.37	-1.83	4.82
March	3.78	1.57	0.02	0.63	6.93
April	3.71	1.55	0.02	0.60	6.82
May	8.31	2.59	<0.01	3.11	13.51
June	6.07	3.20	0.06	-0.35	12.49
July	5.63	2.11	0.01	1.40	9.87
August	2.00	1.78	0.27	-1.58	5.57
September	7.37	3.69	0.05	-0.05	14.78
October	8.13	2.34	<0.01	3.43	12.84
November	3.20	3.10	0.31	-3.03	9.42
December	1.96	2.11	0.36	-2.28	6.21

Interrupted Time-series analysis model (ISTA) using ordinary least squares regression and Newey-West standard errors, lags specified: 12 months. Coefficients represent the estimates for the change in number of pediatric trauma team activations per month.

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Supplemental Table 4. Short-Term ITSA Model for Association of Shelter-in-Place with Pediatric Trauma Team Volume (September 2019-June 2020)

Variable	Coefficient	Std Error	P-Value	CI-low	CI-high
6 months pre-Shelter-in-place	-0.03	0.02	0.29	-0.08	0.02
Level Shift March 17th 2020	-1.12	0.45	0.02	-2.04	-0.21
Slope Shift March 17th	0.10	0.05	0.03	0.01	0.20
Trend March 17th-June 30th 2020	0.08	0.04	0.05	0.00	0.15

Interrupted Time-series analysis model (ITSA) using ordinary least squares regression with Newey-West standard errors, lags specified: 4 weeks. Coefficients represent the estimates for the change in number of pediatric trauma team activations per week.

Supplemental Table 5a. ITSA Model for the Differential Association of Shelter-in-Place with Violence-Related vs Non-Violent Injury Mechanisms (September 2019-June 2020)

Variable	Coefficient	Std Error	P-value	CI-Low	CI-High
Difference in level of violence-related vs non-violent mechanisms, 6 mo prior to shelter-in-place	-38.85	3.91	<0.01	-46.63	-31.06
Difference in weekly change for violence-related vs non-violent mechanisms, 6 mo prior to shelter-in-place	0.07	0.21	0.73	-0.35	0.50
Difference in level shifts for violence-related and non-violent mechanisms associated with shelter-in-place	27.28	3.74	<0.01	19.83	34.73
Difference in weekly change for violence-related vs non-violent mechanisms, after the start of shelter-in-place	-1.40	0.33	<0.01	-2.06	-0.74
After start of shelter-in-place weekly change in violence-related mechanisms	0.17	0.15	0.26	-0.13	0.47
After start of shelter-in-place weekly change in non-violent mechanisms	1.50	0.21	<0.01	1.08	1.91

Multiple group interrupted time-series analysis model (ITSA) with Newey-West standard errors, lags specified: 4 weeks. Coefficients represent the estimates for the change in number of trauma team activations per week, compared by violence-related (all penetrating and blunt assaults, and self-harm) vs non-violent injury mechanisms (primarily falls, traffic related injuries, occupational injuries, and small volume of burns and other mechanisms)

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Supplemental Table 5b. Comparison of Trauma Volume by Mechanism of Injury Subtypes, Pre and Post Shelter in Place

Mechanism Subtype	Weekly Activations Pre-Shelter in Place	Weekly Activations Shelter-in-Place	P-Value*
Violence Related			
Stab wounds	4.6 ($\pm$2.2)	5.0 ($\pm$1.9)	0.60
Blunt assaults	3.6 ($\pm$1.8)	3.4 ($\pm$2.3)	0.79
Gunshot wounds	2.2 ($\pm$1.6)	3.1 ($\pm$1.8)	0.10
Self-harm	1.5 ($\pm$1.2)	1.8 ($\pm$1.1)	0.47
Non-violence Related			
Falls	24.3 ($\pm$6.0)	15.5 ($\pm$3.7)	<0.01
Pedestrian vs auto	10.8 ($\pm$3.6)	3.1 ($\pm$2.2)	<0.01
Motor vehicle collisions	8.6 ($\pm$3.1)	6.3 ($\pm$3.1)	0.03
Motorcycle collisions	5.7 ($\pm$2.7)	2.8 ($\pm$1.3)	<0.01
Bicycle vs auto	4.5 ($\pm$2.6)	5.8 ($\pm$3.5)	0.17

*P-values based on two-sided t-tests comparing mean weekly trauma activations for each mechanism subtype for 6 months prior to shelter-in-place to 4 months following shelter in place.

Supplemental Table 6. ITSA Model for Association of Shelter-in-Place with Monthly Reported Violent Crimes, San Francisco (2016-2020)

Variable	Coefficient	Std Error	P-value	CI-low	CI-high
Pre-shelter-in-place trend (Jan 2016-Jan 2020)	-0.60	0.38	0.12	-1.37	0.17
Level Shift associated with shelter-in-place	-100.75	22.49	0.00	-146.23	-55.27
Slope shift associated with shelter-in-place	-21.30	10.79	0.06	-43.13	0.53
Trend after start of shelter-in-place (March-June 2020)	-21.90	10.88	0.05	-43.91	0.11
Month (Reference, January)					
February	-45.40	21.80	0.04	-89.51	-1.30
March	14.14	25.20	0.58	-36.82	65.11
April	-9.20	22.51	0.69	-54.72	36.33
May	14.46	25.81	0.58	-37.75	66.67
June	46.92	28.77	0.11	-11.28	105.12
July	29.20	23.13	0.21	-17.58	75.98
August	45.05	40.05	0.27	-35.96	126.05
September	48.65	24.01	0.05	0.07	97.22
October	59.74	28.04	0.04	3.03	116.45
November	30.34	38.29	0.43	-47.11	107.79
December	24.69	28.54	0.39	-33.03	82.41

Interrupted Time-series analysis model (ITSA) with Newey-West standard errors, lags specified: 12 months. Coefficients represent the estimates for the change in number of violent crimes reported by the San Francisco Police Department per month, January 2016- June 2020.

Supplemental Table 7. ITSA Model for Association of Shelter-in-Place with Monthly Homicides, San Francisco (2016-2020)

Variable	Coefficient	Std Error	P-value	CI-low	CI-high
Pre-shelter-in-place trend (Jan 2016-Jan 2020)	-0.04	0.02	0.03	-0.08	-0.01
Level Shift associated with shelter-in-place	2.28	0.86	0.01	0.53	4.03
Slope shift associated with shelter-in-place	-0.53	0.38	0.18	-1.30	0.25
Trend after start of shelter-in-place (March-June 2020)	-0.56	0.37	0.15	-1.34	0.21
Month (Reference, January)					
February	-1.16	1.09	0.29	-3.36	1.04
March	-0.17	1.15	0.88	-2.50	2.16
April	0.18	1.60	0.91	-3.05	3.41
May	0.73	1.53	0.64	-2.37	3.82
June	1.88	1.06	0.08	-0.26	4.01
July	1.20	1.04	0.25	-0.90	3.30
August	-0.76	1.38	0.59	-3.55	2.04
September	1.04	1.06	0.34	-1.11	3.19
October	1.08	1.75	0.54	-2.46	4.62
November	-1.38	1.07	0.21	-3.55	0.80
December	1.67	2.29	0.47	-2.97	6.30

Interrupted time-series analysis model (ITSA) with Newey-West standard errors, for association of shelter-in-place with monthly homicides, accounting for historic and seasonal trends, lags specified: 12 months. Coefficients represent the estimates for the change in number of homicides reported by the San Francisco Police Department per month.

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Supplemental Table 8a. ITSA for Association of Shelter-in-Place with of Proportion of Male Trauma Patients (September 2019-June 2020)

Variable	Coefficient	Std Error	P-Value	CI-low	CI-high
Trend, 6 months pre-Shelter-in-place	-0.06	0.10	0.52	-0.26	0.13
Level Shift March 17th 2020	8.08	2.68	0.00	2.67	13.49
Slope Shift March 17th 2020	-0.01	0.27	0.97	-0.56	0.54
Trend March 17th-June 30th 2020	-0.07	0.25	0.77	-0.58	0.43

Interrupted time-series analysis model (ITSA) with Newey-West standard errors, lags specified: 12 months. Coefficients represent the estimates for the change in weekly percentage of male trauma patients.

Supplemental Table 8b. ITSA Model for Association of Shelter-in-Place with Mean Trauma Patient Age (September 2019-June 2020)

Variable	Coefficient	Std Error	P-Value	CI-low	CI-high
Trend, 6 months pre-Shelter-in-place	0.17	0.06	0.00	0.06	0.29
Level Shift March 17th 2020	0.29	1.62	0.86	-2.99	3.57
Slope Shift March 17th 2020	-0.61	0.18	0.00	-0.99	-0.24
Trend March 17th-June 30th 2020	-0.44	0.18	0.02	-0.80	-0.09

Interrupted time-series analysis model (ITSA) using ordinary least squares regression and Newey-West standard errors, lags specified: 12 months. Coefficients represent the estimates for the change in weekly mean age of trauma patients.

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Supplemental Table 8c. ITSA Models for the Association of Shelter-in-Place with Percentages of Trauma Patients Categorized by Race/Ethnicity (September 2019-June 2020)

Variable	Coefficient	Std Error	P-Value	CI-low	CI-high
6 months pre-Shelter-in-place					
White	-0.09	0.11	0.40	-0.31	0.12
Black	0.02	0.07	0.82	-0.13	0.16
Asian	0.27	0.10	0.01	0.08	0.47
Latinx	-0.08	0.09	0.36	-0.25	0.09
Other	-0.06	0.05	0.23	-0.16	0.04
Unknown	-0.06	0.05	0.19	-0.15	0.03
Level Shift March 17th 2020					
White	11.47	5.03	0.03	1.31	21.64
Black	0.68	2.34	0.77	-4.05	5.41
Asian	-7.84	2.44	<0.01	-12.78	-2.91
Latinx	-2.70	2.06	0.20	-6.85	1.46
Other	-0.43	1.37	0.75	-3.20	2.33
Unknown	-1.18	1.14	0.31	-3.48	1.12
Slope Shift March 17th					
White	-1.31	0.39	<0.01	-2.10	-0.51
Black	0.32	0.20	0.13	-0.10	0.73
Asian	-0.09	0.31	0.77	-0.71	0.53
Latinx	0.37	0.32	0.26	-0.29	1.02
Other	-0.20	0.10	0.06	-0.01	0.42
Unknown	0.50	0.12	<0.01	0.26	0.74
Trend March 17th-June 30th 2020					
White	-1.39	0.40	<0.01	-2.21	-0.58
Black	0.33	0.19	0.09	-0.06	0.72
Asian	0.17	0.29	0.52	-0.39	0.77
Latinx	0.29	0.31	0.37	0.35	0.92
Other	0.15	0.10	0.15	-0.10	0.35
Unknown	0.44	0.11	<0.01	0.22	0.66

Interrupted time-series analysis models (ITSA) with Newey-West standard errors, lags specified: 12 months. Coefficients represent the estimates for the change in weekly mean percentage of each race/ethnicity category of trauma patients.

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