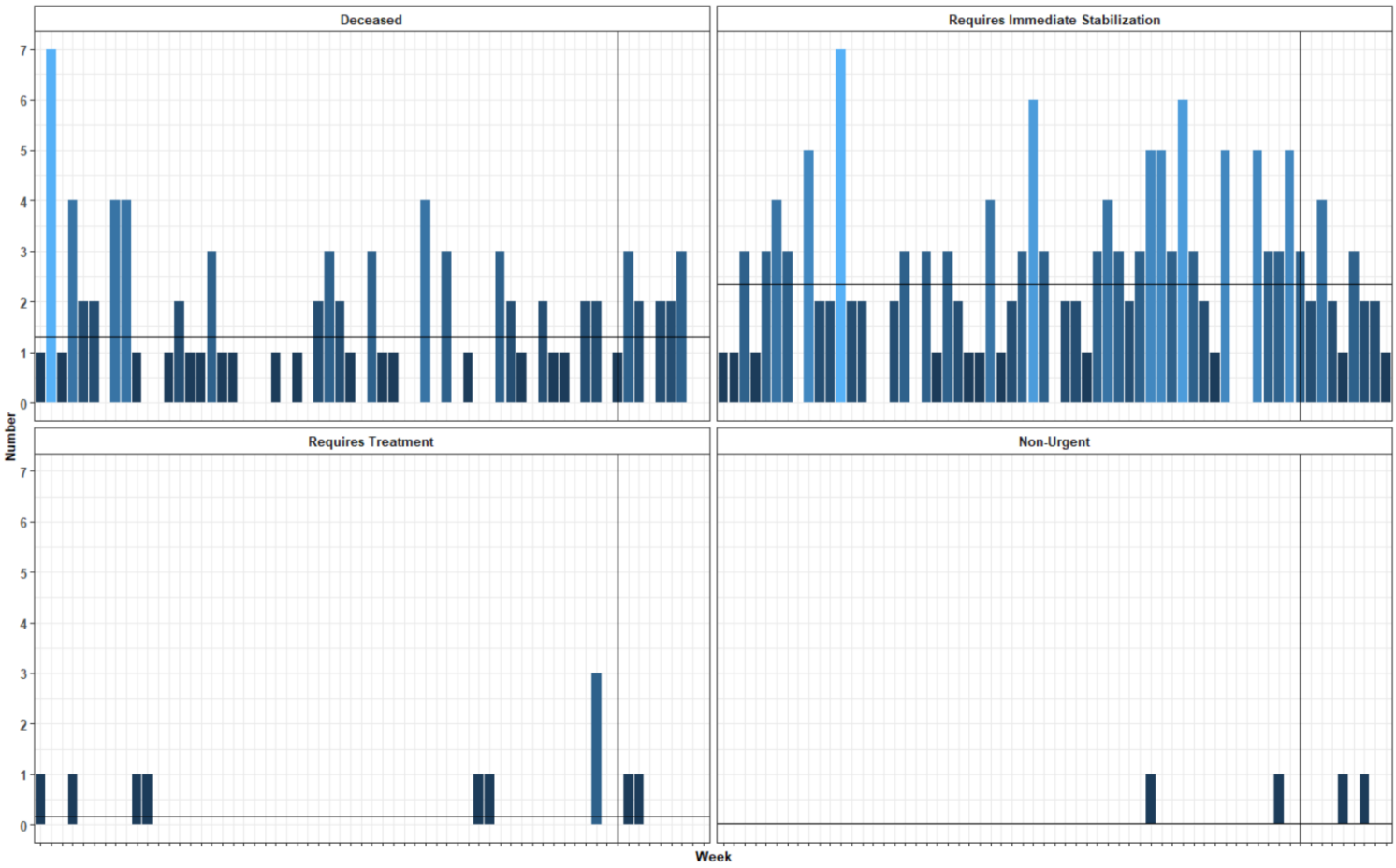
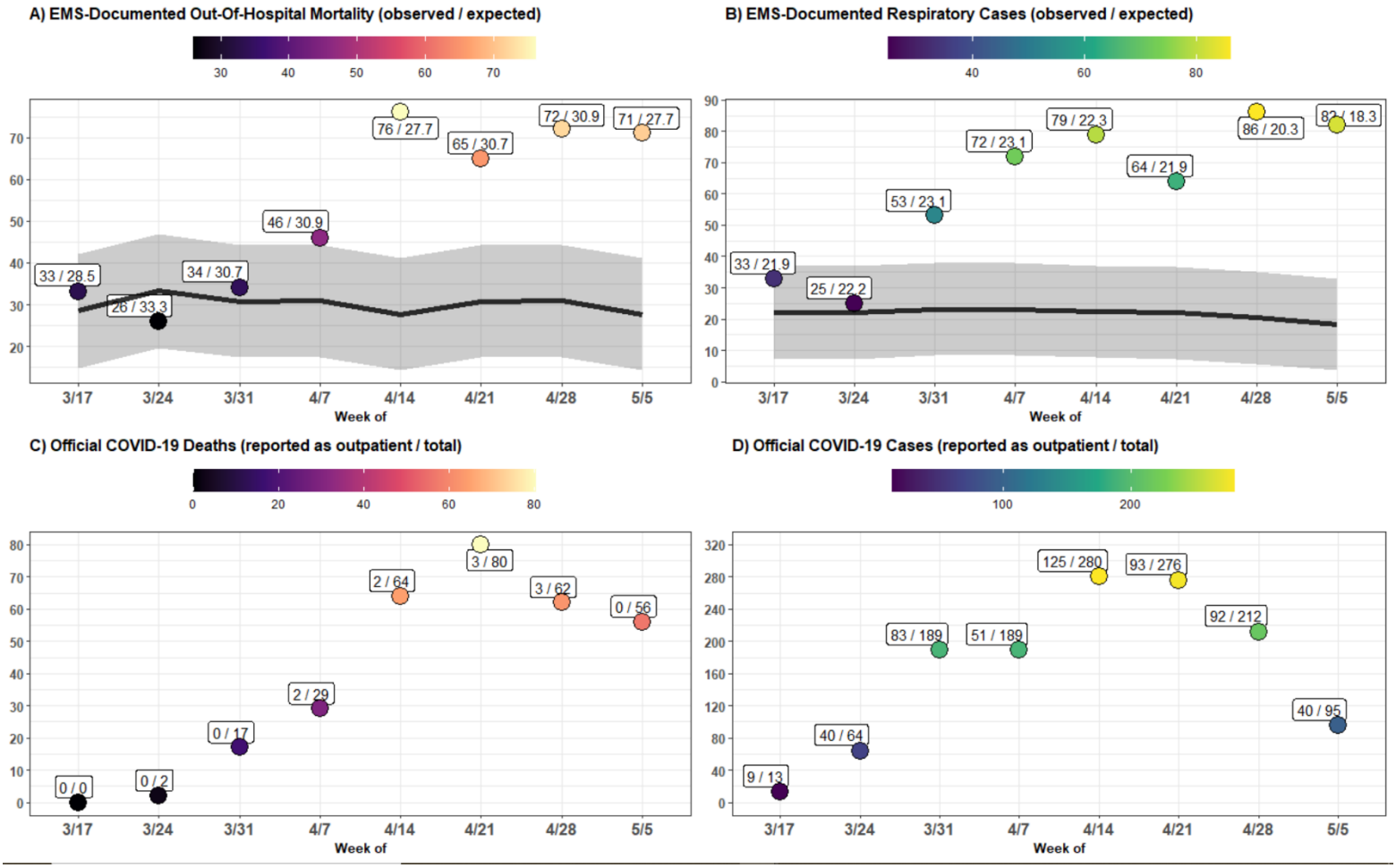
Supplement for "Excess Out-Of-Hospital Mortality and Declining Oxygen Saturation: The Sentinel Role of EMS Data in the COVID-19 Crisis in Tijuana, Mexico"



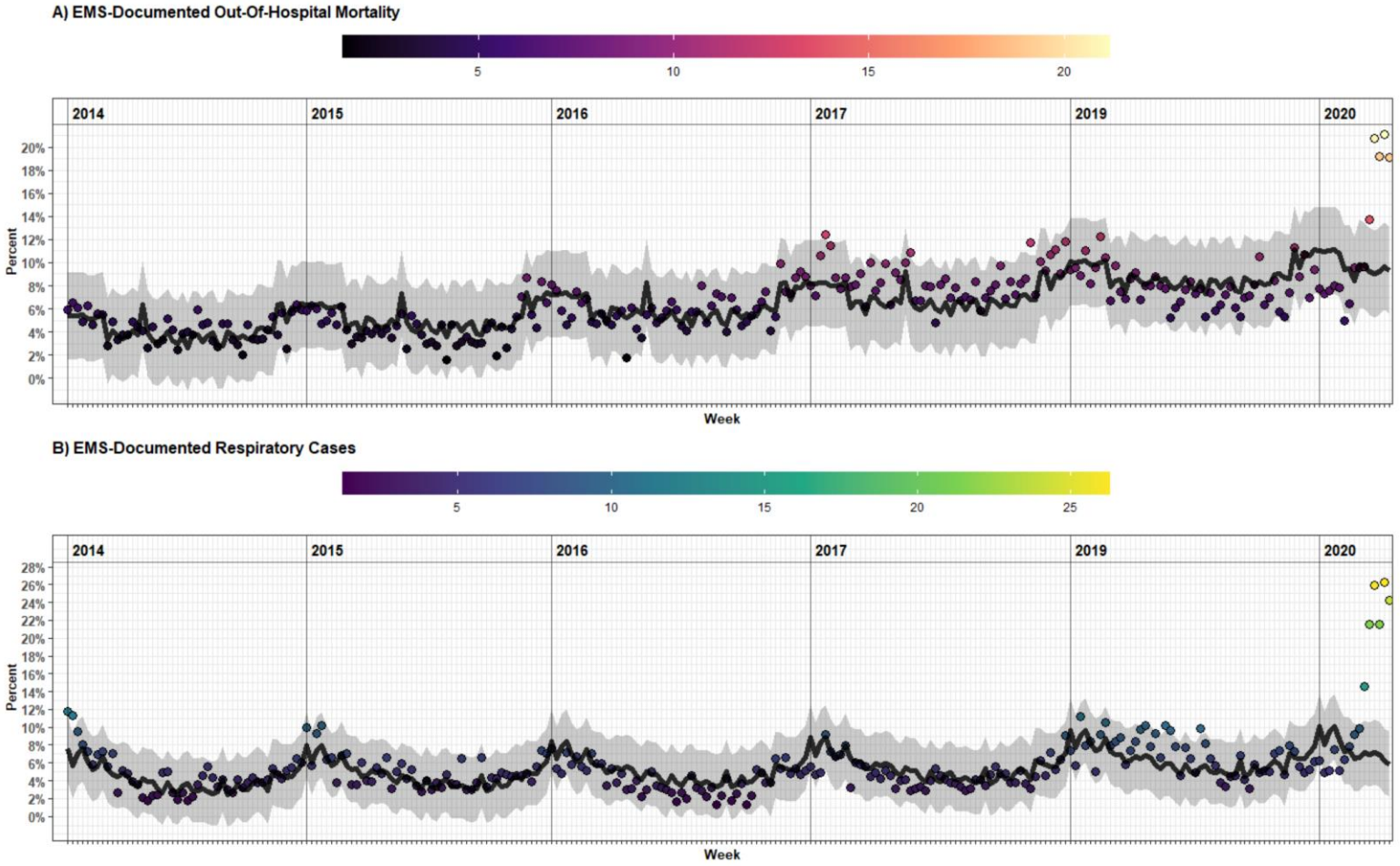
Supplemental Figure 1. Number of CPR Administrations by Triage Priority Code, 2019-2020

The number of CPR administrations among non-trauma patients was visualized by triage priority code for 2019 through May 2020. The vertical black line marks the week of March 10th through March 16th. The 2019 average number of CPR administrations is shown with a horizontal black line for each category. Overall, a very low number of CPR applications was observed in this population, with no substantial differences noted during the observed peak COVID-19 period.



Supplemental Figure 2. EMS-Documented Dead-On-Arrival Mortality and Respiratory Cases Compared to Official COVID-19 Case and Mortality Numbers, March 17th – May 11th

A supplemental version of figure 3 in the main text, using only dead-on-arrival mortality. Shown as a sensitivity analysis. The results in the main text use all pre-hospital mortality, including dead-on-arrival (which are the majority) and individuals who died in transit.



Supplemental Figure 3. Long-Run EMS-Documented Out-Of-Hospital Mortality and Respiratory Percent of Cases, 2014-2020
A supplemental version of figure 2 in the main text using % of non-trauma caseload instead of total number of cases, to control for possible differences in overall volume. A) EMS-documented out-of-hospital mortality. B) EMS-documented respiratory cases. Parts A and B include expected values (black line) and 95% prediction intervals (grey band) based on model fit on data from 2014-2019, with forecasts through April of 2020. Both series exclude trauma-patients.

	0%-50% (N=23)	50%-59% (N=27)	60%-69% (N=31)	70%-79% (N=44)	80%-89% (N=120)	90%-100% (N=175)
Week						
March 31st	0 (0%)	1 (3.7%)	2 (6.5%)	4 (9.1%)	12 (10.0%)	31 (17.7%)
April 7th	3 (13.0%)	5 (18.5%)	5 (16.1%)	5 (11.4%)	19 (15.8%)	32 (18.3%)
April 14th	3 (13.0%)	2 (7.4%)	7 (22.6%)	8 (18.2%)	29 (24.2%)	27 (15.4%)
April 21st	2 (8.7%)	6 (22.2%)	6 (19.4%)	4 (9.1%)	14 (11.7%)	30 (17.1%)
April 28th	8 (34.8%)	5 (18.5%)	5 (16.1%)	15 (34.1%)	25 (20.8%)	27 (15.4%)
May 5th	7 (30.4%)	8 (29.6%)	6 (19.4%)	8 (18.2%)	21 (17.5%)	28 (16.0%)
Age						
Mean (SD)	58.7 (13.6)	57.7 (14.0)	58.5 (14.0)	54.8 (13.4)	54.7 (16.4)	51.4 (18.8)
Median [Min, Max]	59.0 [35.0, 88.0]	55.0 [31.0, 89.0]	58.0 [22.0, 86.0]	57.0 [27.0, 81.0]	54.0 [24.0, 94.0]	50.0 [1.00, 97.0]
Missing	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Categorical Age						
18-64: Adult	16 (69.6%)	19 (70.4%)	21 (67.7%)	34 (77.3%)	86 (71.7%)	128 (73.1%)
65+: Senior	7 (30.4%)	8 (29.6%)	10 (32.3%)	10 (22.7%)	34 (28.3%)	42 (24.0%)
0-18: Pediatric	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (2.9%)
Missing	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Gender						
Female	9 (39.1%)	10 (37.0%)	11 (35.5%)	12 (27.3%)	46 (38.3%)	75 (42.9%)
Male	14 (60.9%)	17 (63.0%)	20 (64.5%)	32 (72.7%)	74 (61.7%)	100 (57.1%)
Insurance						
IMSS	14 (60.9%)	16 (59.3%)	19 (61.3%)	25 (56.8%)	85 (70.8%)	117 (66.9%)
ISSSTE	2 (8.7%)	0 (0%)	1 (3.2%)	1 (2.3%)	4 (3.3%)	6 (3.4%)
Uninsured	6 (26.1%)	9 (33.3%)	8 (25.8%)	13 (29.5%)	21 (17.5%)	35 (20.0%)
Seg. Pop. INSABI	1 (4.3%)	0 (0%)	3 (9.7%)	5 (11.4%)	7 (5.8%)	8 (4.6%)
Private	0 (0%)	2 (7.4%)	0 (0%)	0 (0%)	3 (2.5%)	9 (5.1%)
Life Support						
Basic CPR	1 (4.3%)	0 (0%)	0 (0%)	0 (0%)	2 (1.7%)	0 (0%)
Missing	22 (95.7%)	27 (100%)	31 (100%)	44 (100%)	118 (98.3%)	175 (100%)
Level of Concious.						
Alert	14 (60.9%)	17 (63.0%)	23 (74.2%)	36 (81.8%)	100 (83.3%)	160 (91.4%)
Painful Stimulus	2 (8.7%)	2 (7.4%)	2 (6.5%)	4 (9.1%)	3 (2.5%)	6 (3.4%)
Verbal Stimulus	6 (26.1%)	5 (18.5%)	0 (0%)	2 (4.5%)	7 (5.8%)	6 (3.4%)
Unresponsive	0 (0%)	0 (0%)	3 (9.7%)	1 (2.3%)	5 (4.2%)	0 (0%)
Missing	1 (4.3%)	3 (11.1%)	3 (9.7%)	1 (2.3%)	5 (4.2%)	3 (1.7%)

Supplemental Table 1. Characteristics of Respiratory Patients by Categorical SpO2

Numbers exclude trauma-related patients and pre-hospital deaths. Data are shown for the peak observed respiratory case period, from March 31st to May 11th.