

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Rate of Bystander CPR in Non-Healthcare Facilities and Bystander AED Use in Public Locations. Rates for these bystander variables in subgroups of the main study cohort are shown below. A standardized difference of >10% denotes a significant difference between groups.

			Standardized
Variables	2019	2020	Difference, %
Bystander CPR			
<i>A. Overall Cohort</i>			
Yes	46.8% (4418/9439)	47.7% (4690/9839)	1.7
Missing	1	24	
<i>B. Excluding OHCA in nursing homes and healthcare facilities</i>			
Yes	40.2% (3198/7961)	40.0% (3291/8231)	0.4
Missing		23	
Bystander AED Use in Public Locations			
Yes	12.5% (172/1371)	8.9% (77/868)	11.9
Missing		1	

Abbreviations: AED, automated external defibrillator; CPR, cardiopulmonary resuscitation; OHCA, out-of-hospital cardiac arrest

eTable 2. Rates of Sustained ROSC During the 2020 Pandemic Period vs. 2019, Stratified by the County-Level COVID-19 Mortality

Rate. During the pandemic period, rates of sustained ROSC were lower in all communities including those with low COVID-19 mortality, when compared to the same period in 2019.

			Adjusted RR		<i>P for</i>
	2019	2020	(95% CI)	<i>P</i>	<i>Interaction</i>
Overall Cohort	2816/9440 (29.8%)	2265/9863 (23.0%)	0.82 (0.78, 0.87)	<0.001	
<i>By County-Level Covid-19 Mortality Rate</i>					0.03
0-25 per 1,000,000	740/2549 (29.0%)	583/2317 (25.2%)	0.89 (0.81, 0.98)		
26-100 per 1,000,000	1109/3532 (31.4%)	889/3495 (25.4%)	0.85 (0.78, 0.93)		
101-250 per 1,000,000	470/1562 (30.1%)	358/1759 (20.4%)	0.75 (0.66, 0.85)		
251-500 per 1,000,000	305/1130 (27.0%)	286/1429 (20.0%)	0.79 (0.65, 0.97)		
>500 per 1,000,000	192/667 (28.8%)	149/863 (17.3%)	0.67 (0.56, 0.80)		

Abbreviations: CI, confidence interval; ROSC, return of spontaneous circulation; RR, rate ratio

eTable 3. Rates of Termination of Resuscitation During the 2020 Pandemic Period vs. 2019, Stratified by the County-Level COVID-19 Mortality Rate. During the pandemic period, rates of termination of resuscitation were higher in all communities including those with low COVID-19 mortality, when compared to the same period in 2019.

			Adjusted RR		<i>P for</i>
	2019	2020	(95% CI)	<i>P</i>	<i>Interaction</i>
Overall Cohort	3768/9440 (39.9%)	5314/9863 (53.9%)	1.27 (1.23, 1.33)	<0.001	
<i>By County-Level Covid-19 Mortality Rate</i>					<0.001
0-25 per 1,000,000	1185/2549 (46.5%)	1242/2317 (53.6%)	1.12 (1.07, 1.18)		
26-100 per 1,000,000	1296/3532 (36.7%)	1689/3495 (48.3%)	1.24 (1.16, 1.31)		
101-250 per 1,000,000	603/1562 (38.6%)	921/1759 (52.4%)	1.27 (1.16, 1.40)		
251-500 per 1,000,000	463/1130 (41.0%)	888/1429 (62.1%)	1.40 (1.26, 1.55)		
>500 per 1,000,000	221/667 (33.1%)	574/863 (66.5%)	1.83 (1.62, 2.05)		

Abbreviations: CI, confidence interval; RR, rate ratio

eTable 4. Rates of Survival to Discharge During the 2020 Pandemic Period vs. 2019, Stratified by the County-Level COVID-19

Mortality Rate. During the pandemic period, rates of survival to discharge were lower in communities with a COVID-19 mortality rate of more than 250 deaths per 1,000,000 residents. This outcome was restricted to EMS agencies with complete data on the outcome of survival to discharge.

			Adjusted RR		<i>P</i> for
	2019	2020	(95% CI)	<i>P</i>	<i>Interaction</i>
Overall Cohort	332/3393 (9.8%)	239/3632 (6.6%)	0.83 (0.69, 1.00)	0.048	
<i>By County-Level Covid-19 Mortality Rate</i>					0.049
0-25 per 1,000,000	82/788 (10.4%)	67/800 (8.4%)	0.96 (0.70, 1.32)		
26-100 per 1,000,000	131/1247 (10.5%)	105/1194 (8.8%)	1.04 (0.80, 1.35)		
101-250 per 1,000,000	59/474 (12.5%)	29/580 (5.0%)	0.54 (0.36, 0.79)		
251-500 per 1,000,000	28/371 (7.6%)	18/372 (4.8%)	0.71 (0.43, 1.20)		
>500 per 1,000,000	32/513 (6.2%)	20/686 (2.9%)	0.67 (0.42, 1.05)		

Abbreviations: CI, confidence interval; RR, rate ratio

eTable 5. Comparison of 2020 vs. 2019 Outcomes During the Pre-Pandemic, Peri-Pandemic, and Pandemic Periods*. Rates of sustained ROSC and survival to discharge were lower during the pandemic period in 2020, as compared to the same time period in 2019. As additional controls for the pandemic period findings, there were no differences in rates of these outcomes during the pre-pandemic and peri-pandemic periods in 2020 vs. the same time periods in 2019.

	<u>Pre-Pandemic</u>		<u>Peri-Pandemic</u>		<u>Pandemic</u>	
	Adjusted RR	Interaction	Adjusted RR	Interaction	Adjusted RR	Interaction
SUSTAINED ROSC	(95% CI)	P value	(95% CI)	P value	(95% CI)	P value
<i>By County-Level Covid-19 Mortality Rate</i>		0.96		0.81		0.03
0-25 per 1,000,000	1.00 (0.92, 1.08)		1.09 (0.91, 1.30)		0.89 (0.81, 0.98)	
26-100 per 1,000,000	0.97 (0.92, 1.03)		1.00 (0.89, 1.13)		0.85 (0.78, 0.93)	
101-250 per 1,000,000	0.96 (0.89, 1.02)		0.94 (0.77, 1.16)		0.75 (0.66, 0.85)	
251-500 per 1,000,000	0.97 (0.79, 1.20)		0.95 (0.78, 1.16)		0.79 (0.65, 0.97)	
>500 per 1,000,000	0.96 (0.82, 1.12)		1.03 (0.70, 1.52)		0.67 (0.56, 0.80)	
SURVIVAL TO DISCHARGE						
<i>By County-Level Covid-19 Mortality Rate</i>		0.24		0.10		0.049

0-25 per 1,000,000	0.90 (0.72, 1.14)		1.53 (0.83, 2.82)		0.96 (0.70, 1.32)	
26-100 per 1,000,000	1.23 (1.04, 1.45)		1.15 (0.78, 1.68)		1.04 (0.80, 1.35)	
101-250 per 1,000,000	1.01 (0.73, 1.39)		0.87 (0.44, 1.70)		0.54 (0.36, 0.79)	
251-500 per 1,000,000	0.93 (0.65, 1.35)		0.31 (0.12, 0.85)		0.71 (0.43, 1.20)	
>500 per 1,000,000	1.06 (0.71, 1.61)		1.10 (0.52, 2.28)		0.67 (0.42, 1.05)	

Abbreviations: CI, confidence interval; RR, rate ratio, ROSC, return of spontaneous circulation

* Pre-pandemic period (January to February); Peri-pandemic period (March 1 to 15); Pandemic Period (March 16 to April)