Supplemental Online Content

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

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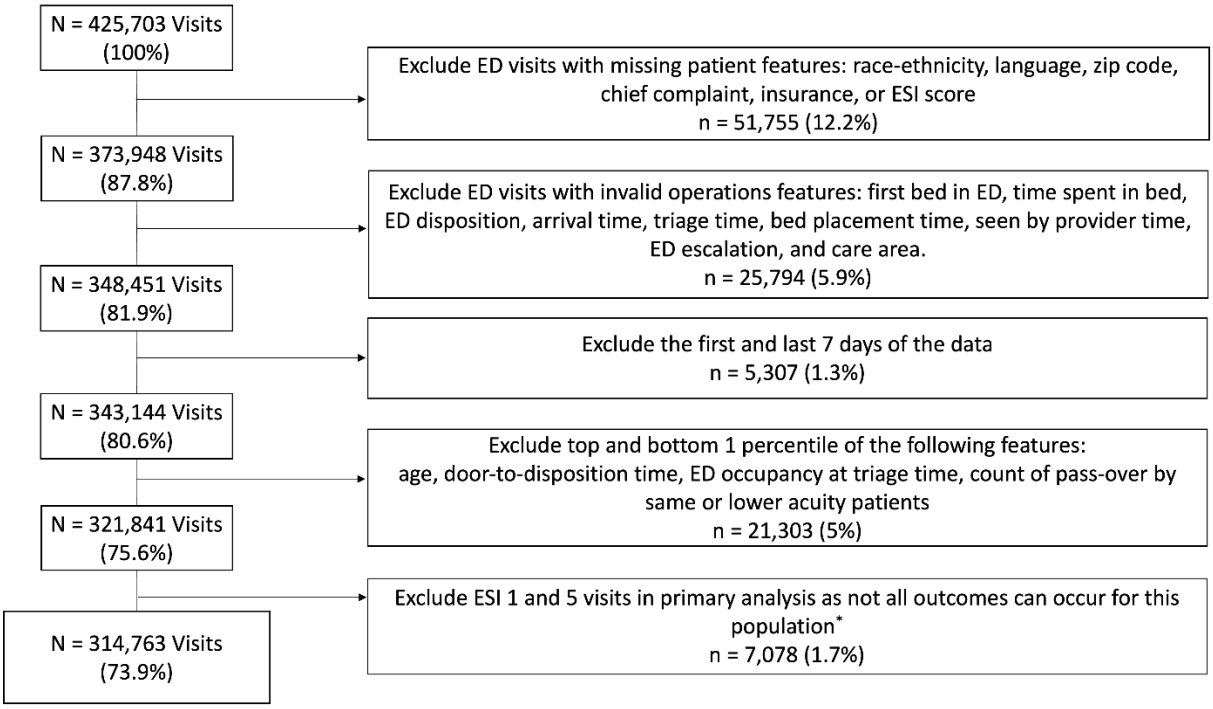
eFigure 1. Study Inclusion Criteria and Sample Selection Flow Chart



*Being passed over by lower acuity patient cannot occur to ESI-5 visits since this is the lowest acuity score. Similarly, receiving care ahead of higher acuity patients cannot occur to ESI-1 visits since this is the highest acuity score. All patients are included in census control variables.
** We twice repeated our analyses with (1) no data exclusions and (2) excluding the top and bottom 0.5 percentile. We find qualitatively identical results, except for our estimate on the association between patients who were passed over by a patient of lower acuity on the probability that the patient experienced a premature departure (AMA, LWTC, LWBS). Using the 1 percentile trim as described in this figure, the result is significant at the 0.05 level, but is not significant when we either use all data, or trim only the top and bottom 0.5 percentile.

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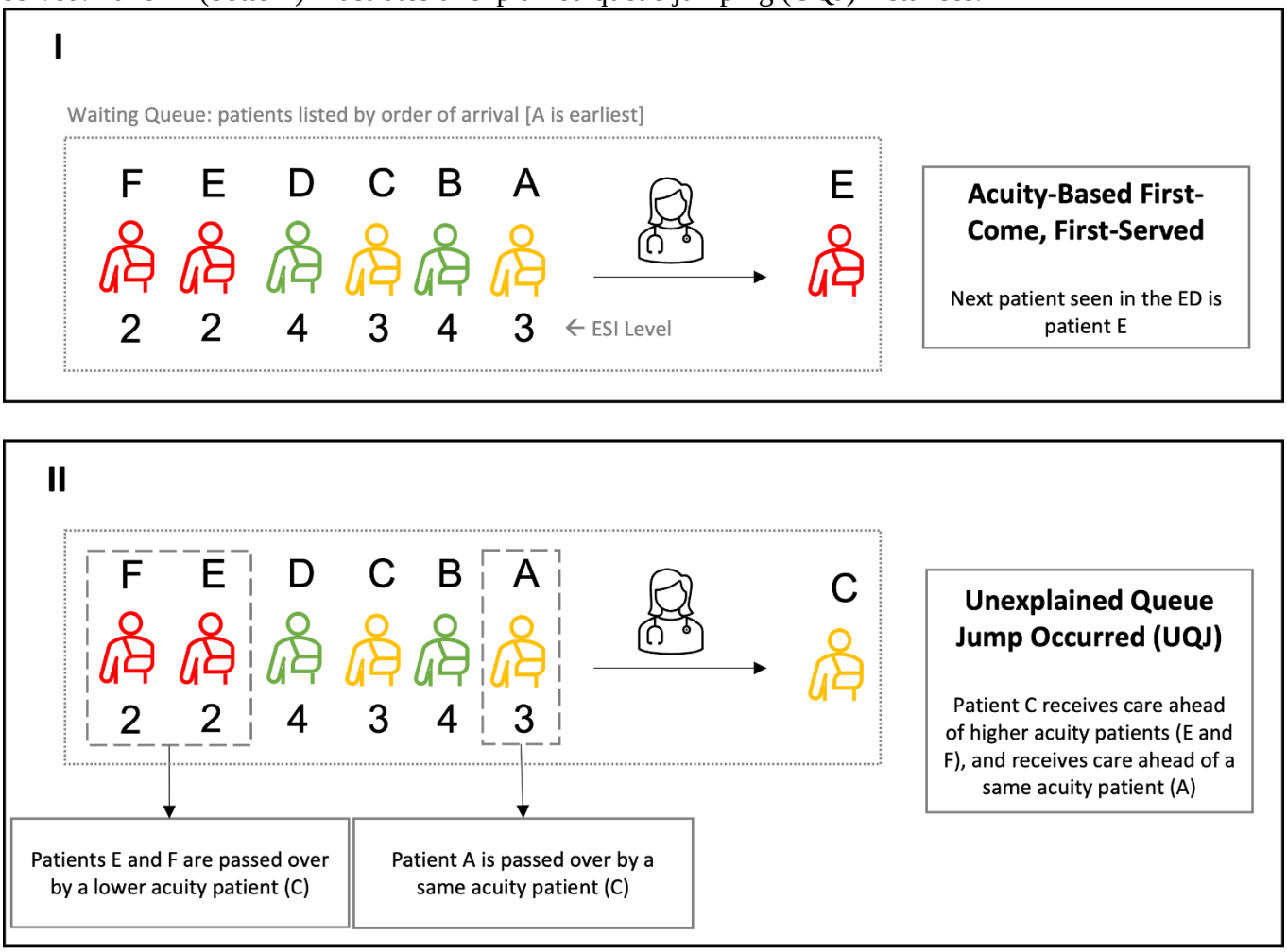
eFigure 2. Defining Unexplained Queue Jumps (UQJs). Illustrations of patient routing from the waiting room to an ED treatment bed. Panel I (top) illustrates acuity based first-come, first-served. Panel II (bottom) illustrates unexplained queue jumping (UQJ) instances.



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eTable 1. List of Control Variables Included in Regression Models

	Variables used for all outcome		
Category	**Variables**	**Primary Analysis Usage**	**Sensitivity Analysis Usage**
Social Factor	Age, Sex, Race-Ethnicity, Insurance, Language	Independent variable	Control variable
ED Encounter	Chief Complaint Type**, ESI Level, Arrival Method, Transfer In, Reevaluation, High-Utilizer, Home Zip Code, ED Location	Control variable	Control variable
ED Staffing*	Nurse-to-patient ratio, Physician-to-patient ratio, Resident-to-patient ratio	Control variable	Control variable
Time/Day	Year, Month, Time of day, Day of week, Holiday (Binary)	Control variable	Control variable
ED Occupancy*	Number of patients in ED hallway bed, Number of patients in ED regular bed, Number of patients in the waiting room, Number of patients boarding	Control variable	Control variable
ED Patient Mixture*	Average ESI for hallway patients, regular-bed patients, and all patients, Variance of ESI for hallway patients, regular-bed patients, and all patients, Number of unique chief complaints in the waiting room, Number of patients who have the same chief complaint as the index patient, Average ESI in the waiting room, the variance of ESI in the waiting room	Control variable	Control variable

**Calculated at the triage time of the index encounter*

*** To keep the ED visit population homogeneous, we followed previous studies[1] and grouped 701 chief complaints into 29 categories: Abdominal symptoms, Back and neck pain, Cardiac, Device-related, Chest pain, Cold / Fever / Infection, Dermatologic, Deviating lab values, Dizziness/syncope, Extremity injury, Extremity symptoms without injury, Eye/ear/nose/throat problems, Dental, Head and face symptoms, Fall, Focal neurological symptom, GI bleeding, Rectal disorders, Nausea, vomiting and diarrhea, Genito-urinary problem, Headache, Medication/procedure, Gynecological problem, Psychiatric/social problems, Respiratory problems, Substance abuse, Traffic injury, Traumatic and Unwell.*

Additional Variables used for different secondary outcomes		
	Variables	**Usage**
1	Received care ahead of higher acuity patients, Received care ahead of same acuity patients, Passed-over(s) by lower acuity patients, Passed-over(s) by same acuity patients	As independent variable in all secondary outcomes
2	Hallway placement (Binary), Door-to-room time	As control variable in 2.2 Abnormal departure after bed placement 2.3 Revisit outcomes
3	Room-to-departure, number of radiology orders	As control variable in 2.3 Revisit outcomes
4	Door-to-doctor, doctor-to-disposition	As control variable in 2.4 Downgrade/Escalation during boarding

[1] https://www.sciencedirect.com/science/article/pii/S0099176708002584?via%3Dihub
https://tsaco.bmj.com/content/tsaco/6/1/e000604.full.pdf
https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1553-2712.2001.tb01098.x

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eTable 2. Summary Statistics of Regression Control Variables

Category	Control Variable	Summary Statistic
Patient Encounter Level	Insurance Type	Private: 13.4% // Medicaid: 45% // Medicare: 34.2% // Other: 7.4%
	Age	Mean: 50.312// SD: 20.48 // Min: 9 // Max: 94
	Sex	Female: 53.9%// Male: 46.1%
	Race-Ethnicity	Black non-Hispanic: 34% // Hispanic or Latino: 21.1% // White non-Hispanic: 42% // Other*: 2.9%
	Address Zip Code	06510: 2% // 06405: 2.8% // 06437: 1% // 06460: 1.4% // 06473: 2.6% // 06477: 1% // 06492: 1.9% // 06511: 17.1% // 06512: 5.5% // 06513: 12% // 06514: 6% // 06515: 4.6% // 06516: 9.9% // 06517: 3% // 06518: 1.8% // 06519: 7.4% // Others: 19.8%
	ED Arrival Method	Ambulance: 41.1% // Walk In: 58.9%
	Acuity – ESI Level	1: 0.6% // 2: 33.6% // 3: 44.2% // 4: 20% // 5: 1.6%
	Preferred Language	English: 90% // Other: 1.8% // Spanish: 8.1%
	Transfer Patient	Yes: 4% // No: 96%
	High ED Utilizer	Yes: 17.5% // No: 82.5%
	Chief Complaint	Abdominal symptoms : 10.5%// Back and neck pain: 3.7% // Cardiac: 1.1% // Chest pain : 6.9% // Cold / Fever / Infection: 2.9% // Dental: 1% // Dermatologic: 5.1% // Deviating lab values : 3.3% // Device-related: 0.8% // Dizziness/syncope: 3.7% // Extremity injury: 1.9% // Extremity symptoms without injury: 7.9% // Eye/ear/nose/throat problems: 3.7% // Fall: 4.7% // Female Genito-urinary problem: 2% // Focal neurological symptom : 5.3% // GI bleeding : 0.9% // Gynecological problem: 1% // Headache: 2.4% // Male Genito-urinary problem: 1.3% // Medication/procedure: 3.5% // Nausea, vomiting and diarrhea: 2.6% // Others: 0.6% // Psychiatric/social problems: 4.8% // Respiratory problems: 8.1% // Substance abuse: 5.2% // Traffic injury: 3.3% // Traumatic: 0.5% // Unwell : 1.2%
Date-Time Level	Time of Day (0-23)	0: 3.2%// 1: 2.7% // 2: 2.2% // 3: 2% // 4: 1.6% // 5: 1.5% // 6: 1.7% // 7: 2.3% // 8: 3.3% // 9: 4.9% // 10: 5.1% // 11: 7.8% // 12: 6.1% // 13: 5.8% // 14: 5.7% // 15: 5.7% // 16: 5.7% // 17: 5.7% // 18: 5.5% // 19: 5.1% // 20: 4.9% // 21: 4.4% // 22: 3.7% // 23: 3.5%
	Day of Week	Monday: 14.9% // Tuesday: 14.6% // Wednesday: 14.4% // Thursday: 14.2% // Friday: 14.5% // Saturday: 13.8% // Sunday: 13.5%
	Month	Jan: 9.5% // Feb: 8.1% // Mar: 6.3% // Apr: 6.2% // May: 6.6% // Jun: 6.4% // Jul: 9.1% // Aug: 10% // Sep: 9.6% // Oct: 9.7% // Nov: 9.1% // Dec: 9.3%
	Year	2017: 18.4% // 2018: 38.6% // 2019: 37.5% // 2020: 5.4%
	Holiday	Yes: 0.8% // No: 99.2%
ED Level	ED Location	ED Location 1: 41.9% // ED Location 2: 58.1%
	ED Occupancy[1]	Regular beds occupied: Mean: 49.7// SD: 18.78 // Min: 8 // Max: 97
		Hallway beds occupied: Mean: 11.2// SD: 8.8 // Min: 0 // Max: 46
		The number of boarding patients in the ED Mean: 16.1// SD: 11.8 // Min: 0 // Max: 80
		The number of patients in the waiting room. Mean: 5.2// SD: 4.98 // Min: 0 // Max: 39

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ED Patient Mix	Number of unique chief complaints in the waiting room at the index patient's triage time	Mean: 4.6// SD: 4.1 // Min: 0 // Max: 29
	Number of patients in the waiting room who have the same chief complaints as the index patient at the index patient's triage time	Mean: 1// SD: 0.55 // Min: 0 // Max: 12
	Average ESI score for patients who have been moved to a bed in the ED at the index patient's triage time (Regular and Hall)	Mean: 2.562// SD: 0.2 // Min: 2 // Max: 3.429
	Variance of ESI score for patients who have been moved to a bed in the ED at the index patient's triage time. (Regular and Hall)	Mean: 2.57// SD: 0.572 // Min: 2 // Max: 5
		Mean: 0.403// SD: 0.119 // Min: 0.062 // Max: 1.306
		Mean: 0.383// SD: 0.281 // Min: 0 // Max: 3.04
ED Staffing Level	Patient-Nurse Ratio	Mean: 2.97// SD: 0.645 // Min: 0.941 // Max: 7.1
	Patient-Resident Ratio	Mean: 6.48// SD: 1.7 // Min: 1.5 // Max: 17
	Patient-Physician Ratio	Mean: 11.9// SD: 7.3 // Min: 2 // Max: 43.5

*Race-Ethnicity "Other": 2.9% -
American Indian or Alaska Native: 0.27%
Asian: 1.3%
Native Hawaiian or Other Pacific Islander: 0.062%
Not Listed : 1.2%

eTable 3 Assigned ESI Level by Race and Ethnicity

	Black Non-Hispanic	Hispanic or Latino	White Non-Hispanic	Other*	
ESI	109,546	67,912	135,125	9,258	X2=19,795.9 ***
1	487 (0.4%)	236 (0.3%)	1,273 (0.9%)	39 (0.4%)	
2	29,698 (27.1%)	15,732 (23.2%)	59,938 (44.4%)	2,726 (29.4%)	
3	46,835 (42.8%)	32,962 (48.5%)	58,029 (42.9%)	4,348 (47%)	
4	29,868 (27.3%)	17,771 (26.2%)	14,846 (11%)	2,010 (21.7%)	
5	2,658 (2.4%)	1,211 (1.8%)	1,039 (0.8%)	135 (1.5%)	

*** $p < 0.001$
** Other Race-Ethnicity:*
American Indian or Alaska Native, Asian, Native Hawaiian, Native Hawaiian or Other Pacific Islander and Not Listed

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eTable 4. Regression Results for Passed Over Outcomes
The first column is the regression result for the count of passed over by same or lower acuity patients, the second column is the regression result for the count of passed over by lower acuity patients, the third column is the regression result for the count of passed over by same acuity patients. Coefficients presented are the incidence rate ratio (or relative risk), where values above 1.0 represent an increase in the incidence rate, and values below 1.0 represent a decrease in the incidence rate.

Social Risk Factors for Getting Passed Over

	Dependent variable:		
	Passed over by same or lower acuity patients	*Passed over by lower acuity patients*	*Passed over by same acuity patients*
	IRR (95%CI LB,UB)	*IRR (95%CI LB,UB)*	*IRR (95%CI LB,UB)*
	(1)	*(2)*	*(3)*
Age	0.99327***(0.99244,0.99411)	0.99321***(0.99205,0.99437)	0.99333***(0.99246,0.99419)
Arrival Method: Walk-In (ambulance as baseline)	3.29521***(3.18456,3.40969)	3.40447***(3.24396,3.57292)	3.13334***(3.02354,3.24711)
High Utilizer	1.05351***(1.02858,1.07903)	1.03457*(1.00312,1.067)	1.0555***(1.02903,1.08265)
Sex: Male (Female baseline)	0.99844(0.98261,1.01453)	0.98286(0.96049,1.00575)	1.00167(0.98536,1.01824)
ESI3(ESI 2 as baseline)	1.72804***(1.66703,1.79128)	1.05533***(1.01975,1.09214)	2.43689***(2.34672,2.53052)
ESI4(ESI 2 as baseline)	0.27888***(0.26433,0.29424)	0.03841***(0.03419,0.04314)	0.49908***(0.47241,0.52726)
Transfer In: Yes	0.78425***(0.73767,0.83379)	0.83901***(0.77238,0.91137)	0.74516***(0.69503,0.79892)
Race-Ethnicity: Black non-Hispanic (White non-Hispanic as baseline)	1.04951***(1.02566,1.0739)	1.05024**(1.01727,1.08428)	1.06214***(1.03599,1.08894)
Race-Ethnicity: Hispanic or Latino (White non-Hispanic as baseline)	1.05427***(1.02481,1.08458)	1.06416**(1.02189,1.10818)	1.05822***(1.02725,1.09013)
Race-Ethnicity: Others* (White non-Hispanic as baseline)	1.00307(0.95622,1.05221)	0.96691(0.9034,1.03489)	1.01369(0.96522,1.0646)
Insurance: Medicaid (private insurance as baseline)	1.10679***(1.07451,1.14003)	1.10937***(1.06428,1.15638)	1.10591***(1.07274,1.14012)
Insurance: Medicare (private insurance as baseline)	1.00352(0.97539,1.03246)	1.00843(0.97024,1.04813)	0.99283(0.9641,1.02241)
Insurance: Other (private insurance as baseline)	1.06939***(1.0291,1.11126)	1.05629*(1.00207,1.11345)	1.07076***(1.02874,1.1145)
Language: Other (English as baseline)	1.01257(0.95447,1.07421)	1.02124(0.94159,1.10763)	1.02268(0.96282,1.08627)
Language: Spanish (English as baseline)	1.05833***(1.02157,1.09641)	1.05506*(1.00559,1.10695)	1.05441**(1.01658,1.09364)
ED Level Controls:	YES	YES	YES
Staffing Level Control	YES	YES	YES
Patient mixture Control	YES	YES	YES

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Day of Week Control (factor)	YES	YES	YES
Time of Day Control (hour, factor)	YES	YES	YES
Year Control (year, factor)	YES	YES	YES
Patient Residential Zipcode Control (factor)	YES	YES	YES
Patient Chief Complaint Control (factor)	YES	YES	YES
Constant	0.23795***(0.17264,0.32796)	0.45233***(0.29486,0.6939)	0.11136***(0.07718,0.16068)
Observations	314,763	314,763	314,763
Log Likelihood	-329,351.70000	-165,094.40000	-275,001.30000

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001

** Other Race-Ethnicity:*
American Indian or Alaska Native, Asian, Native Hawaiian, Native Hawaiian or Other Pacific Islander and Not Listed

eTable 5 Regression Results for Receiving Care Ahead of Others
The first column shows the regression results for receiving care ahead of same or higher acuity patients, the second column shows the regression result for receiving care ahead of higher acuity patients, the third column is the regression result for receiving care ahead of same acuity patients. Coefficients presented are odds ratios where values below 1.0 represent a decrease in the odds, and values above 1.0 represent an increase in the odds.

Social Risk Factors for Receiving Care Ahead

	Dependent variable:		
	Received care ahead of same or higher acuity patients	*Received care ahead of higher acuity patients*	*Received care ahead of same acuity patients*
	OR (95%CI LB,UB)	*OR (95%CI LB,UB)*	*OR (95%CI LB,UB)*
	(1)	*(2)*	*(3)*
Age	1.00712***(1.00601,1.00825)	1.00349***(1.0019,1.00508)	1.00903***(1.00769,1.01037)
Arrival Method: Walk-In (ambulance as baseline)	0.27285***(0.26036,0.28593)	0.37344***(0.34575,0.40335)	0.25689***(0.24416,0.27029)
High Utilizer	0.95394**(0.92325,0.98566)	0.90308***(0.84977,0.95974)	0.98873(0.95693,1.02158)
Sex: Male (Female baseline)	1.01504(0.99237,1.03822)	0.98208(0.94677,1.0187)	1.02693*(1.00045,1.05412)
ESI3(ESI 2 as baseline)	12.51965***(11.83131,13.24804)	1609.05093***(681.05641,3801.51311)	9.37039***(8.84482,9.92719)
ESI4(ESI 2 as baseline)	22.16517***(20.58492,23.86672)	27615.26897***(11169.12522,68277.7805)	1.45206***(1.34126,1.57202)
Transfer In: Yes	1.03526(0.98085,1.09268)	1.15685*(1.02916,1.30037)	0.98314(0.93189,1.0372)

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Race-Ethnicity: Black non-Hispanic (White non-Hispanic as baseline)	0.93821***(0.9075,0.96997)	0.97252(0.92637,1.02098)	0.92436***(0.88996,0.96008)
Race-Ethnicity: Hispanic or Latino (White non-Hispanic as baseline)	0.86658***(0.82605,0.9091)	0.93433*(0.87698,0.99544)	0.83937***(0.79355,0.88784)
Race-Ethnicity: Others (White non-Hispanic as baseline)	0.96189(0.89834,1.02994)	0.93399(0.83583,1.04368)	0.98442(0.91396,1.06032)
Insurance: Medicaid (private insurance as baseline)	0.80721***(0.77068,0.84548)	0.8653***(0.80966,0.92477)	0.76268***(0.72091,0.80687)
Insurance: Medicare (private insurance as baseline)	0.91668***(0.87576,0.95952)	0.91924*(0.85377,0.98973)	0.88373***(0.8385,0.9314)
Insurance: Other (private insurance as baseline)	0.86221***(0.81158,0.916)	0.94088(0.87195,1.01526)	0.84884***(0.79142,0.91042)
Language: Other (English as baseline)	1.01636(0.9362,1.10339)	1.00208(0.87629,1.14592)	0.98749(0.90344,1.07935)
Language: Spanish (English as baseline)	0.99119(0.94422,1.04049)	0.90142*(0.82948,0.97959)	1.02899(0.97176,1.0896)
ED Level Controls:	YES	YES	YES
Staffing Level Control	YES	YES	YES
Patient mixture Control	YES	YES	YES
Day of Week Control (factor)	YES	YES	YES
Time of Day Control (hour, factor)	YES	YES	YES
Year Control (year, factor)	YES	YES	YES
Patient Residential Zipcode Control (factor)	YES	YES	YES
Patient Chief Complaint Control (factor)	YES	YES	YES
Constant	0.06005***(0.03851,0.09365)	0.00063***(0.00021,0.00184)	0.02358***(0.01359,0.0409)
Observations	314,763	314,763	314,763
Log Likelihood	-114,360.90000	-47,827.58000	-95,157.11000
Akaike Inf. Crit.	228,963.90000	95,897.15000	190,556.20000

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001

** Other Race-Ethnicity:*
American Indian or Alaska Native, Asian, Native Hawaiian, Native Hawaiian or Other Pacific Islander and Not Listed

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eTable 6. Regression Results Showing the Association Between UQJ Exposure and ED Care Outcomes

The first column shows the regression result for UQJ exposure on the likelihood of hallway placement, the second column shows the regression result for UQJ exposure on the likelihood of early ED departure (AMA, Eloped, LWBS), the third column shows the regression result for UQJ exposure on the probability of 72-hour revisit, and the fourth column shows the relationship between UQJ exposure and the likelihood of ED escalation. Coefficients presented are odds ratios where values below 1.0 represent a decrease in the odds, and values above 1.0 represent an increase in the odds.

Association Between UQJs and ED Outcome Measures

	Dependent variable:			
	Hallway Placement	AMA / Eloped / LWBS	72-Hr Revisit	ED Escalation
	OR (95%CI LB,UB)	OR (95%CI LB,UB)	OR (95%CI LB,UB)	OR (95%CI LB,UB)
	(1)	(2)	(3)	(4)
Passed over(s) by lower acuity patients	1.005(0.995,1.016)	1.029*(1.002,1.057)	0.956(0.904,1.01)	1.003(0.928,1.084)
Passed over(s) by same acuity patients	1.01**(1.004,1.016)	1.024**(1.006,1.042)	1.013(0.975,1.052)	0.938(0.867,1.015)
Received care ahead of higher acuity patients	0.865***(0.827,0.904)	0.907(0.805,1.021)	0.984(0.789,1.229)	0.916(0.648,1.295)
Received care ahead of same acuity patients	1.09***(1.056,1.124)	0.868**(0.782,0.963)	0.974(0.841,1.129)	1.063(0.925,1.221)
Age	1(0.999,1)	0.985***(0.982,0.989)	1.005**(1.001,1.01)	0.996+(0.992,1)
Arrival Method: Walk-In (ambulance as baseline)	0.883***(0.857,0.909)	1.164***(1.065,1.272)	0.647***(0.551,0.761)	0.636***(0.536,0.754)
High Utilizer	1.174***(1.136,1.212)	1.651***(1.493,1.825)	12.114***(9.791,14.989)	0.89(0.771,1.027)
Sex: Male (Female baseline)	1.096***(1.07,1.122)	1.229***(1.136,1.329)	1.948***(1.643,2.309)	1.066(0.968,1.173)
ESI3(ESI 2 as baseline)	1.031*(1.003,1.059)	1.298***(1.158,1.455)	0.816*(0.679,0.981)	0.457***(0.364,0.574)
ESI4(ESI 2 as baseline)	1.372***(1.299,1.449)	1.279***(1.102,1.484)	0.865(0.689,1.087)	0.223***(0.077,0.642)
Transfer In: Yes	0.868***(0.823,0.915)	0.419***(0.289,0.608)	0.289***(0.132,0.632)	1.054(0.914,1.216)
Race-Ethnicity: Black non-Hispanic (White non-Hispanic as baseline)	0.992(0.969,1.015)	0.887***(0.819,0.961)	0.946(0.852,1.052)	0.917(0.801,1.05)
Race-Ethnicity: Hispanic or Latino (White non-Hispanic as baseline)	0.987(0.958,1.016)	0.8***(0.714,0.896)	0.403***(0.304,0.534)	0.913(0.739,1.128)
Race-Ethnicity: Others (White non-Hispanic as baseline)	1.022(0.968,1.078)	0.67***(0.522,0.861)	0.755(0.488,1.168)	0.769(0.534,1.109)
Insurance: Medicaid (private insurance as baseline)	1.04**(1.01,1.071)	2.318***(1.952,2.752)	2.485***(1.616,3.821)	0.853(0.697,1.044)
Insurance: Medicare (private insurance as baseline)	0.979(0.948,1.012)	1.419***(1.203,1.673)	1.806**(1.192,2.738)	1.002(0.863,1.164)
Insurance: Other (private insurance as baseline)	1.077***(1.032,1.124)	1.718***(1.406,2.101)	1.384(0.892,2.146)	0.813(0.56,1.178)
Language: Other (English as baseline)	0.956(0.893,1.023)	0.58***(0.412,0.818)	0.614(0.283,1.333)	1.455*(1.023,2.067)
Language: Spanish (English as baseline)	0.984(0.947,1.022)	0.674***(0.566,0.802)	1.475**(1.093,1.99)	1.044(0.805,1.353)
ED Level Controls:	YES	YES	YES	YES

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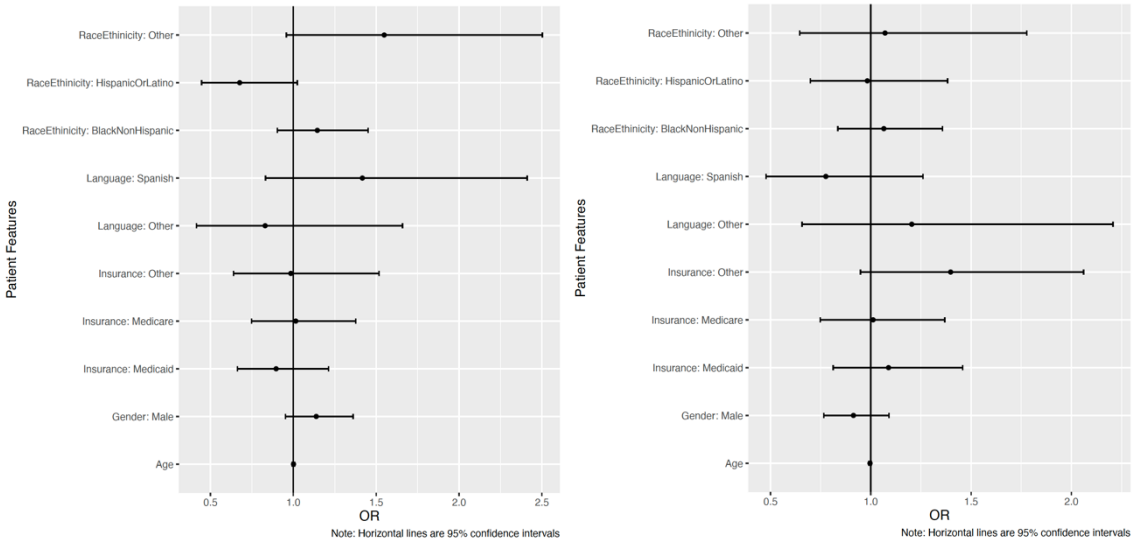
Staffing Level Control	YES	YES	YES	YES
Patient mixture Control	YES	YES	YES	YES
Day of Week Control (factor)	YES	YES	YES	YES
Time of Day Control (hour, factor)	YES	YES	YES	YES
Year Control (year, factor)	YES	YES	YES	YES
Patient Residential Zipcode Control (factor)	YES	YES	YES	YES
Patient Chief Complaint Control (factor)	YES	YES	YES	YES
Constant	0.041***(0.027,0.062)	0.007***(0.002,0.02)	0.002***(0,0.014)	0.027***(0.004,0.19)
Observations	314,392	314,392	213,668	93,850
Log Likelihood	-165,933.100	-30,912.620	-9,773.983	-11,127.070
Akaike Inf. Crit.	332,116.200	62,079.230	19,805.970	22,510.140

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001

** Other Race-Ethnicity:*
American Indian or Alaska Native, Asian, Native Hawaiian, Native Hawaiian or Other Pacific Islander and Not Listed

eFigure 3. Summary of Regression Results for Secondary Analysis on a Subset of High Acuity Patient Encounters Only.
Left panel: occurrence of being passed over by lower acuity patients for high acuity encounters. Right panel: occurrence of being passed over by same acuity patients for high acuity encounters. We did not examine receiving care ahead of higher acuity patients and receiving care ahead of same acuity patients in this subset because the former is not defined for ESI-1 visits, and the latter is a very rare event for ESI-1 visits.



eTable 7. Table of Regression Results for Secondary Analysis on a Subset of High Acuity Patient Encounters Only.

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The first column shows the regression coefficients for being passed over by lower acuity patients and the second column shows the regression coefficients for being passed over by same acuity patients.

Social Risk Factors for Being Passed Over
(Subset Analysis on Higher Acuity Encounters)

	Dependent variable:	
	Passed over by lower acuity patients	*Passed over by lower acuity patients*
	OR (95%CI LB,UB)	*OR (95%CI LB,UB)*
	(1)	*(2)*
Age	1.001 (0.994, 1.008)	0.996 (0.990, 1.003)
Arrival Method: Walk-In (ambulance as baseline)	1.130 (0.878, 1.455)	1.203 (0.952, 1.520)
High Utilizer	1.020 (0.780, 1.334)	0.918 (0.697, 1.209)
Sex: Male (Female baseline)	1.138 (0.952, 1.361)	0.914 (0.765, 1.090)
ESI2 (ESI 1 as baseline)	0.630*** (0.496, 0.798)	21.753*** (10.089, 46.901)
Transfer In: Yes	1.104 (0.846, 1.441)	0.974 (0.736, 1.290)
Race-Ethnicity: Black non-Hispanic (White non-Hispanic as baseline)	1.145 (0.903, 1.451)	1.065 (0.836, 1.357)
Race-Ethnicity: Hispanic or Latino (White non-Hispanic as baseline)	0.676+ (0.447, 1.024)	0.983 (0.698, 1.383)
Race-Ethnicity: Others (White non-Hispanic as baseline)	1.548+ (0.958, 2.503)	1.071 (0.646, 1.777)
Insurance: Medicaid (private insurance as baseline)	0.896 (0.662, 1.213)	1.088 (0.812, 1.458)
Insurance: Medicare (private insurance as baseline)	1.015 (0.748, 1.376)	1.011 (0.748, 1.368)
Insurance: Other (private insurance as baseline)	0.985 (0.639, 1.518)	1.398+ (0.948, 2.061)
Language: Other (English as baseline)	0.830 (0.415, 1.659)	1.204 (0.657, 2.208)
Language: Spanish (English as baseline)	1.417 (0.832, 2.411)	0.776 (0.478, 1.261)
ED Level Controls:	YES	YES
Staffing Level Control	YES	YES
Patient mixture Control	YES	YES
Day of Week Control (factor)	YES	YES
Time of Day Control (hour, factor)	YES	YES
Year Control (year, factor)	YES	YES
Patient Residential Zipcode Control (factor)	YES	YES
Patient Chief Complaint Control (factor)	YES	YES

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Constant	0.039* (0.002, 0.654)	0.060+ (0.002, 1.674)
Observations	10,634	10,634
Log Likelihood	-2,103.787	-2,078.351
Akaike Inf. Crit.	4,443.575	4,392.701

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001

** Other Race-Ethnicity:*
American Indian or Alaska Native, Asian, Native Hawaiian, Native Hawaiian or Other Pacific Islander and Not Listed

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