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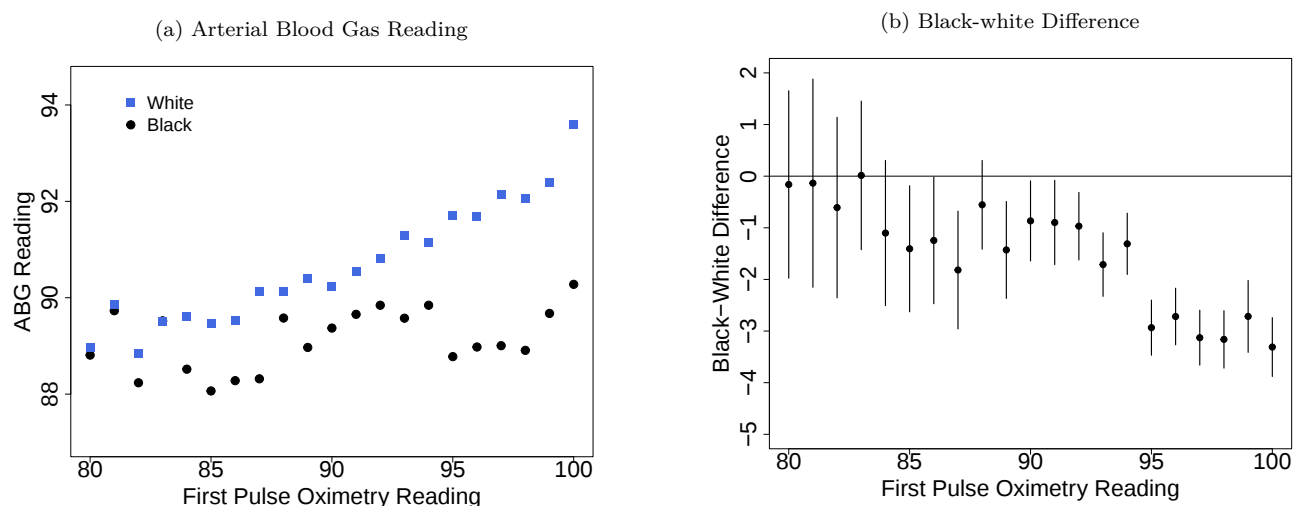
2 **Supporting Information for** 3 **Clinician Behavior When Skin-Tone Affects Test Results**

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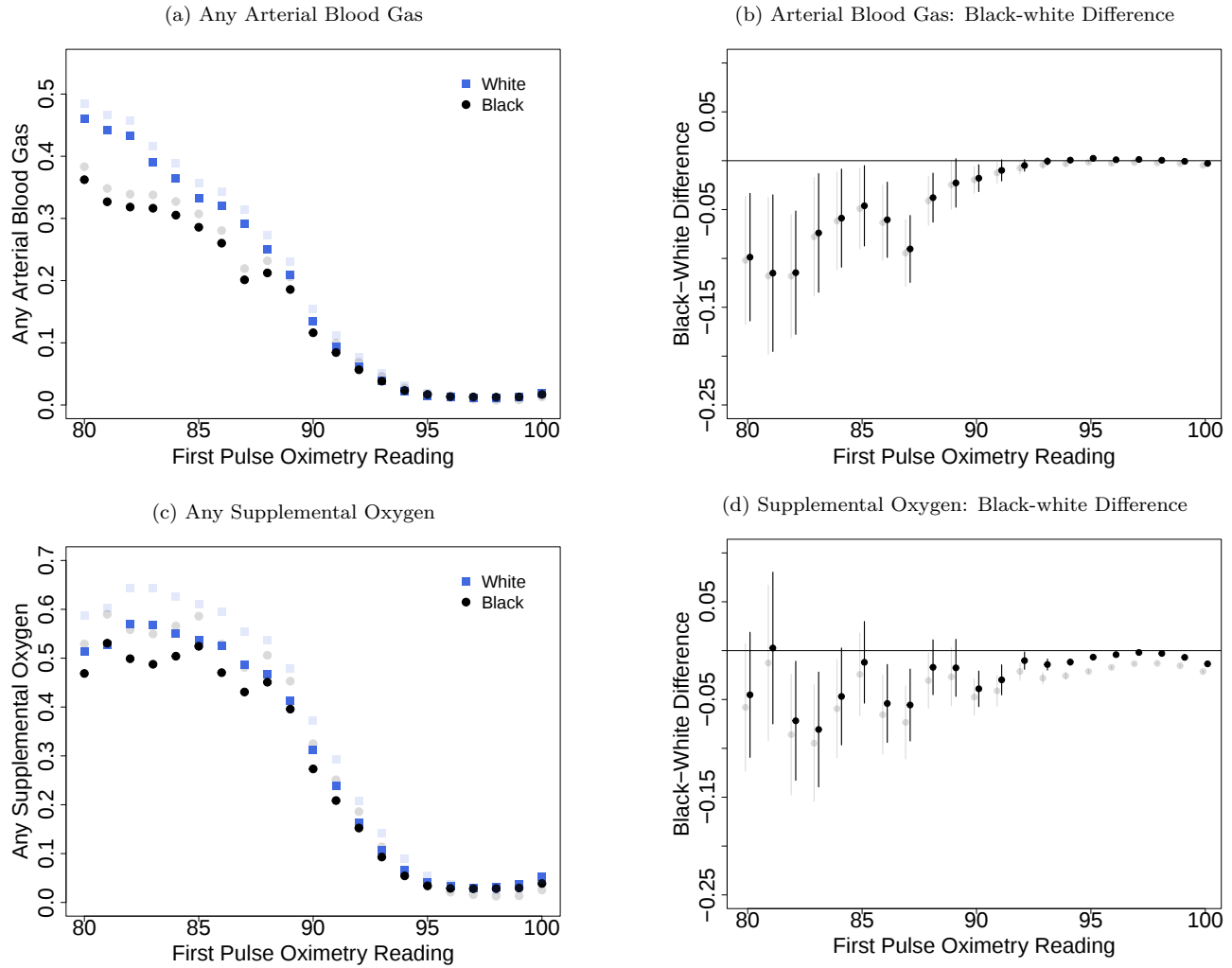
7 **This PDF file includes:**

8 Figs. S1 to S5
9 Table S1

Fig. S1. Racial Differences in ABG Reading, Conditional on an Arterial Blood Gas

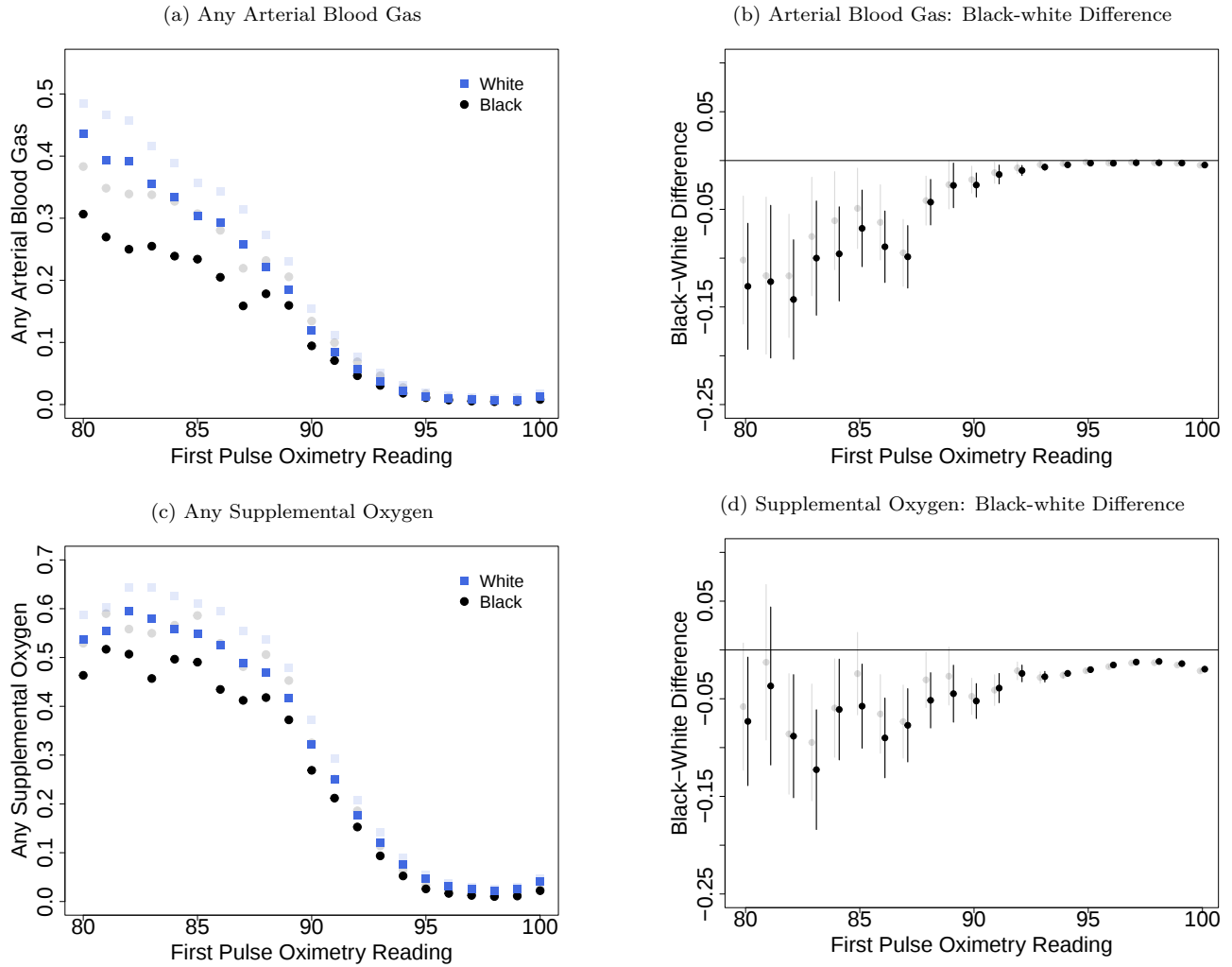
Notes: This figure plots the average arterial blood gas (ABG) reading conditional on receiving an ABG within 300 minutes of the first pulse oximetry measurement in the ED, by first pulse oximetry and by race. Panel (a) shows the mean ABG reading for white (non-Hispanic) patients (blue squares) and Black (non-Hispanic) patients (black circles). Panel (b) plots the average Black-white difference in ABG reading and the 95% confidence interval (calculated using heteroskedastic robust standard errors). The sample consists of 1,147,893 ED visits and 2,366,044 ED visits with pulse oximetry readings for Black and white patients, respectively.

Fig. S2. Racial Differences in Follow-Up Care, Controlling for Observables



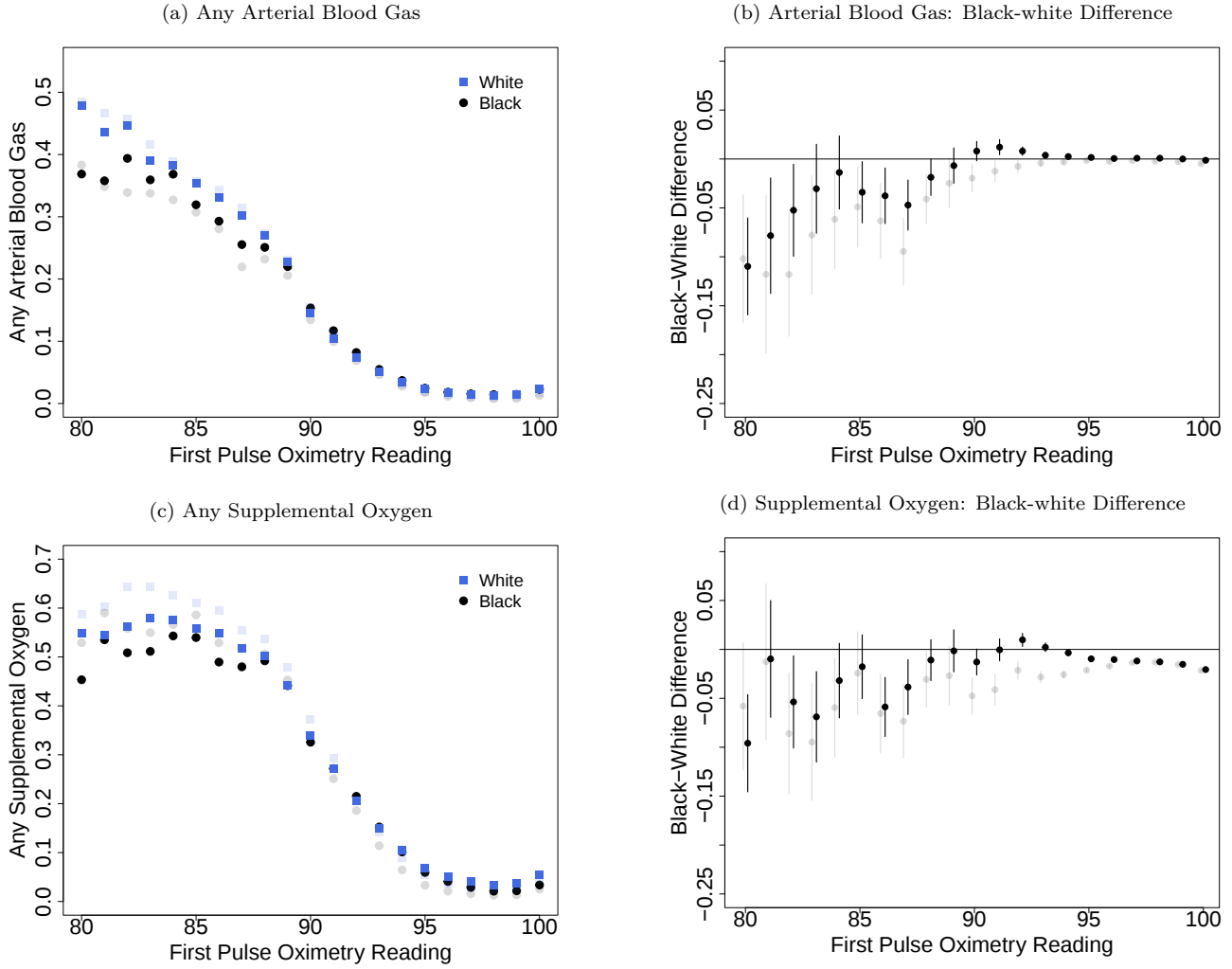
Notes: This figure reproduces our main analyses from Figure 2 after controlling flexibly for age, sex, and prior comorbidities. Specifically, each outcome (any arterial blood gas or any supplemental oxygen within 300 minutes of the first pulse oximetry measurement) is regressed on an indicator for female, age (each year) fixed effects, and indicators for each of the 29 Elixhauser comorbidities. Panels (a) and (c) shows the mean of the residualized outcome, after adding back the mean. Panels (b) and (d) shows the Black-white difference for each outcome. Across all panels, the lighter transparent points are non-corrected and are identical to Figure 2. The darker points are after controlling for age, sex, and prior comorbidities. Blue squares and black circles correspond to white and Black patients, respectively. The 95% confidence intervals are calculated using heteroskedastic robust standard errors. The sample consists of 1,147,893 ED visits and 2,366,044 ED visits with pulse oximetry readings for Black and white patients, respectively.

Fig. S3. Racial Differences in Follow-Up Care, 150 Minutes



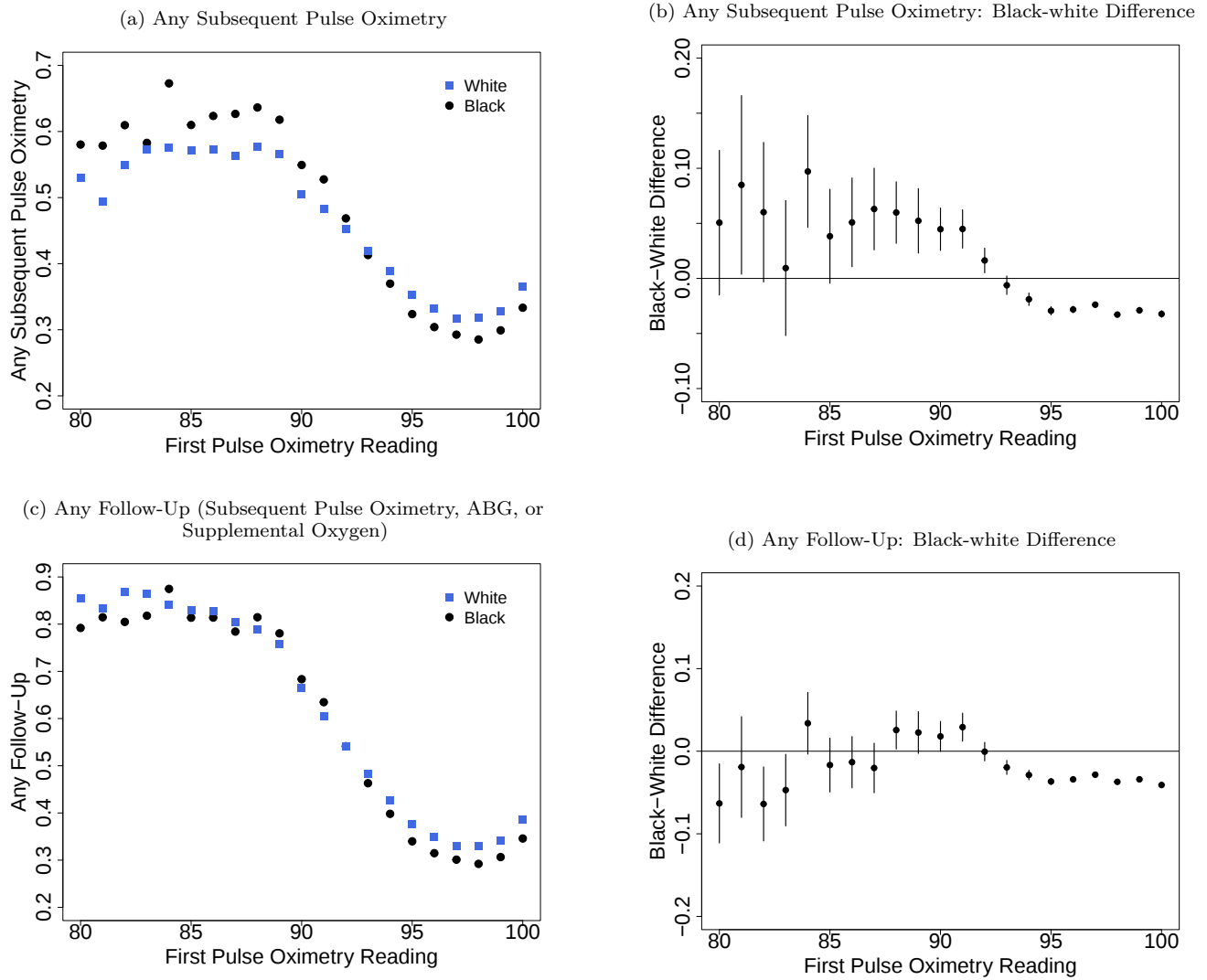
Notes: This figure reproduces our main analyses from Figure 2 after but measuring follow-up care over 150 minutes from the start of the ED visit, instead of 300 minutes. Across all panels, the lighter transparent points are for 300 minutes and are identical to Figure 2. The darker points are for 150 minutes. Blue squares and black circles correspond to white and Black patients, respectively. The 95% confidence intervals are calculated using heteroskedastic robust standard errors. The sample consists of 1,147,893 ED visits and 2,366,044 ED visits with pulse oximetry readings for Black and white patients, respectively.

Fig. S4. Racial Differences in Follow-Up Care, All VA Facilities



Notes: This figure repeats our main results from Figure 2 using observations from all 105 VA facilities for which we observe an initial pulse oximetry reading. There are 6,114,728 ED visits with pulse oximetry readings of at least 80; 1,922,503 (31.4%) are Black patients. Across all panels, the lighter transparent points are our baseline results (for the 39 facilities that have pulse oximetry measurement for over 90% of ED visits, with the sample consisting of 1,147,893 ED visits and 2,366,044 ED visits for Black and white patients, respectively) and are identical to Figure 2. The darker points are for all 105 facilities. Blue squares and black circles correspond to white and Black patients, respectively. The 95% confidence intervals are calculated using heteroskedastic robust standard errors.

Fig. S5. Racial Differences in Subsequent Pulse Oximetry and Follow-Up



Notes: This figure plots the likelihood of taking a subsequent pulse oximetry measurement within 300 minutes of the first reading or any follow-up action, by first pulse oximetry reading and by race. Specifically, if the patient has an ABG test within 300 minutes or receives supplemental oxygen, subsequent pulse oximetry is defined as a subsequent measure prior to that ABG test or supplemental oxygen. Panel (a) shows the mean fraction receiving any subsequent pulse oximetry for white patients (blue squares) and Black patients (black circles). Panel (b) plots the average Black-white difference in taking a subsequent pulse oximetry and the 95% confidence interval. Panel (c) shows the mean fraction receiving any follow-up, defined as subsequent pulse oximetry, arterial blood gas, or supplemental oxygen within 300 minutes, provided that pulse oximetry does not occur after ABG or supplemental oxygen. Panel (d) plots the average Black-white difference in any action and the 95% confidence intervals (calculated using heteroskedastic robust standard errors). The sample consists of 1,147,893 ED visits and 2,366,044 ED visits with pulse oximetry readings for Black and white patients, respectively.

Table S1. No Differences by Race in Rates of Observing Pulse Oximetry

	<i>Dependent variable:</i>			
	Any Pulse Oximetry?			
	All Facilities		High Pulse Ox Rate Facilities	
	(1)	(2)	(3)	(4)
Black Patient	0.023 (0.031)	0.026 (0.031)	−0.002 (0.003)	−0.001 (0.003)
Mean (White):	0.7	0.7	0.96	0.96
Controls:		Yes		Yes
Number of Facilities:	105	105	39	39
Observations	8,646,045	8,646,045	3,689,401	3,689,401

Notes: This table investigates whether there are differential rates by race in observing a pulse oximetry measure. For this analysis we remove the restriction that the pulse oximetry measure must be 80 or above. We regress an indicator variable for whether the ED visit has at least one pulse oximetry reading on an indicator for Black race, among all emergency department visits between 2014 and 2018 for Black non-Hispanic and white non-Hispanic patients. Columns (1) and (2) estimates this regression using all 105 VA facilities and columns (3) and (4) estimates it on our baseline sample of the 39 facilities that have pulse oximetry measurement for over 90% of encounters. Columns (2) and (4) include controls for sex, age fixed effects, and 3 digit ICD-10 diagnosis fixed effects. Robust standard errors are clustered at the facility level. *p<0.1; **p<0.05; ***p<0.01.