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Title

ACS Children's Surgery Center Verification Improves Efficiency and Decreases Narcotic Administration in Treating Pediatric Trauma Patients

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Authors

White, Carter
Leshikar, Holly
White, Spencer
[et al.](#)

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The data associated with this publication are not available for this reason: N/A

Does ACS CSC verification reduce duration of hospital stays and narcotics administration?

Carter White, MS2
University of California, Davis

Introduction

The ACS created the CSC verification in 2015 to improve the efficiency and performance of care in American Children’s Hospitals. The effect of this designation has previously not been evaluated.

Hypothesis

ACS CSC verification will not decrease duration of hospital stays nor reduce narcotic administration.

Methods

Inclusion: <18yo, billed with specific CPT codes

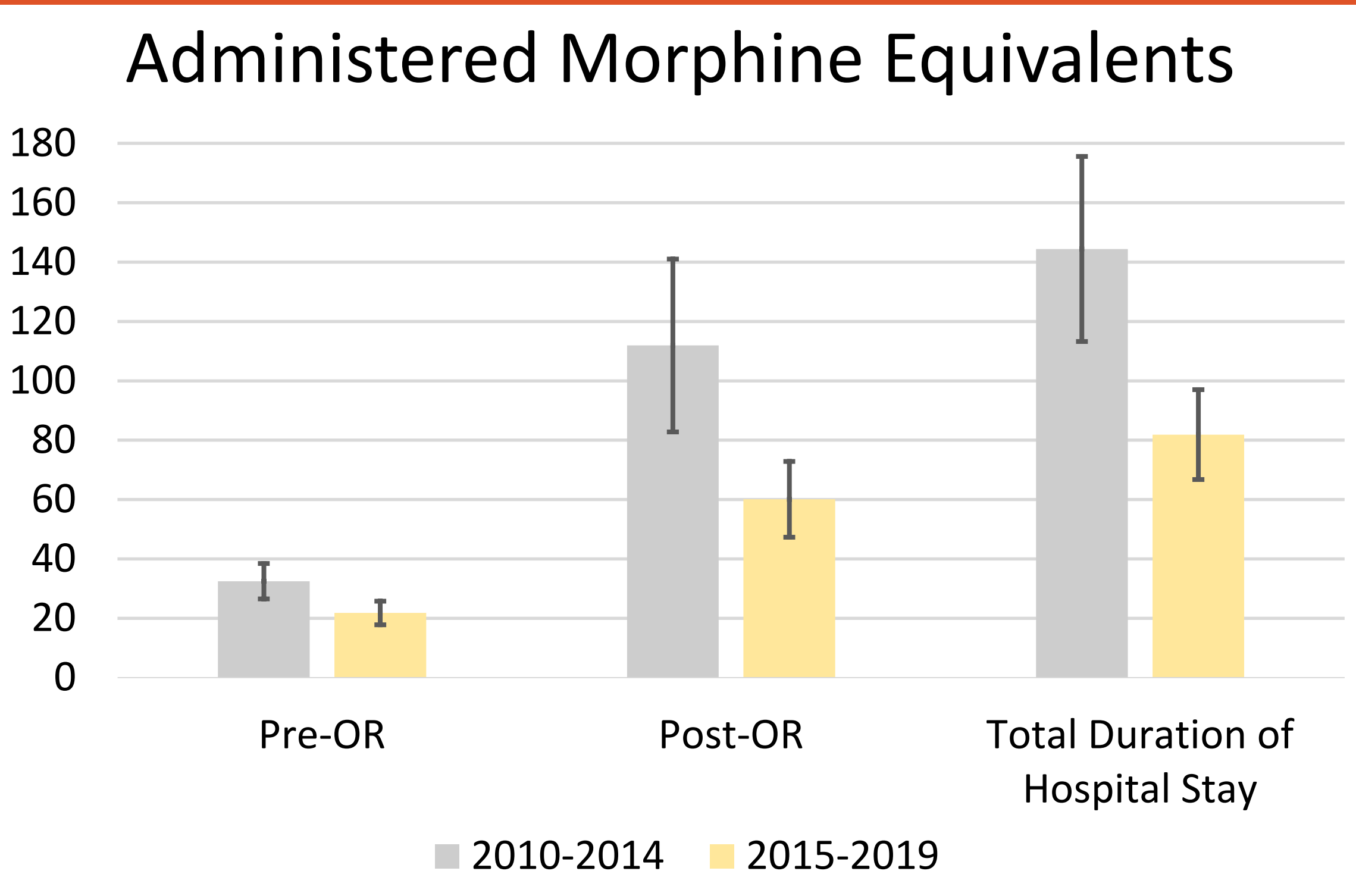
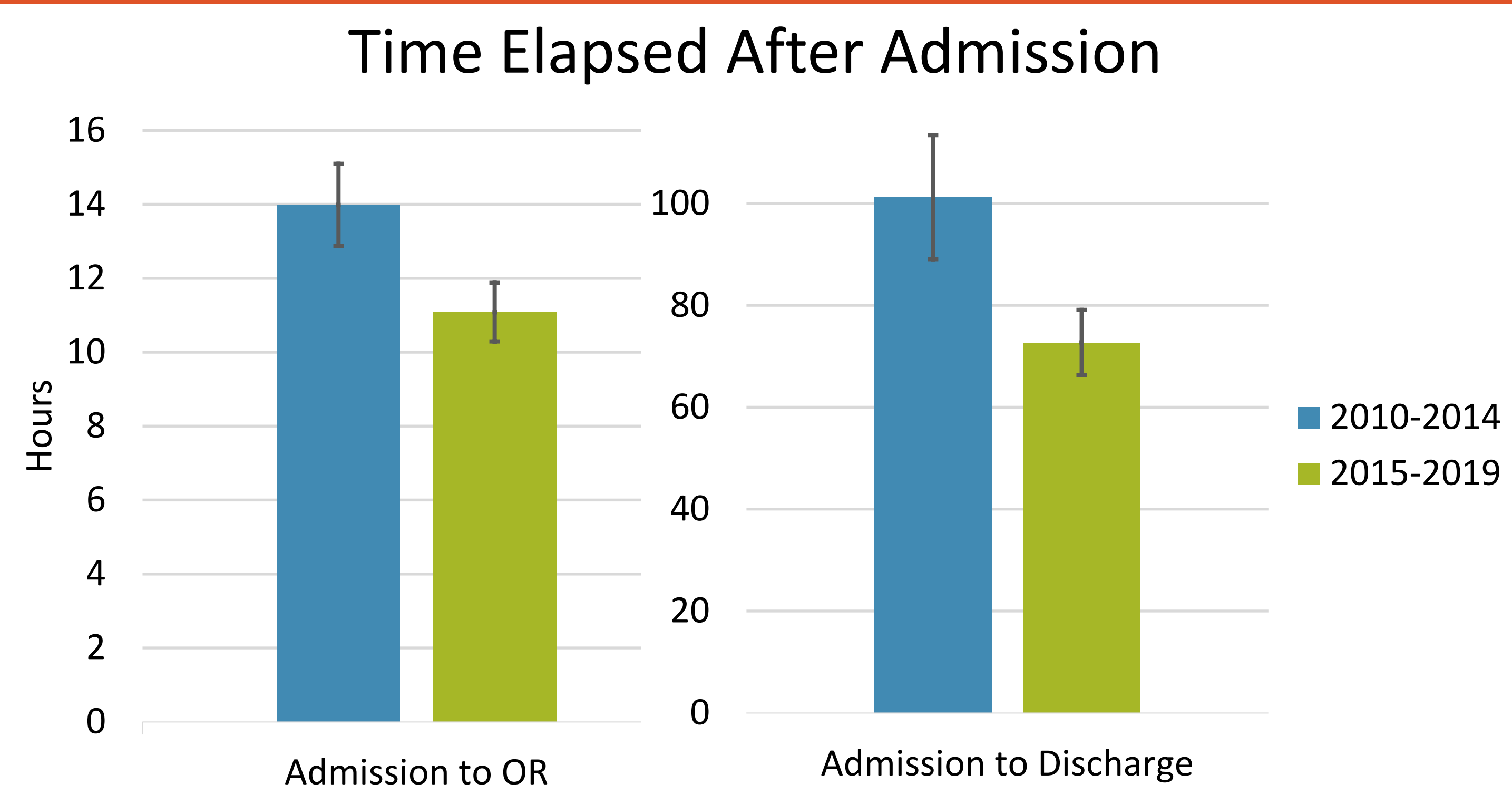
Exclusion: >18yo, non-isolated femur fracture

Efficiency parameters include:

- Time from admission to surgery
- Duration of surgery
- Time from wound closure to OR exit
- Duration of hospital stay
- Narcotic administration (pre-op and post-op)

Data were analyzed using Welch’s t-test

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Results

287 total traumatic femur fractures (94 before and 193 after ACS CSC verification)
34.5% increase in femur fractures treated
20.7% decrease in time elapsed from admission to OR
28% decrease in length of hospital stay
43.3% decrease in morphine equivalents administered throughout hospital stay

Discussion

ACS CSC verification is associated with improved efficiency and decreased narcotic administration.
Future studies will be aimed at investigating the specific impact of pediatric trained staff on similar and additional outcomes.

Time Period	2010-2014				2015-2019				p-value
	Mean (hours)	Standard Deviation	Standard Error	Confidence Interval	Mean (hours)	Standard Deviation	Standard Error	Confidence Interval	
Admission to OR	13.98	5.51	0.57	1.11	11.08	5.62	0.40	0.79	<0.01
Incision Start to Incision Close	1.80	0.99	0.10	0.20	2.10	1.46	0.10	0.21	<0.05
Incision Close to OR Exit	0.24	0.18	0.02	0.04	0.25	0.22	0.02	0.03	0.64
Total Duration of Hospital Stay	101.25	60.23	6.21	12.18	72.72	45.43	3.27	6.41	<0.01

Time Periods	2010-2014				2015-2019				p-value
	Morphine Equivalents	Standard Deviation	Standard Error	Confidence Interval	Morphine Equivalents	Standard Deviation	Standard Error	Confidence Interval	
Pre-OR	32.49	29.56	3.05	5.98	21.78	28.33	2.04	4.00	<0.01
Post-OR	111.91	143.97	14.85	29.10	60.08	90.54	6.52	12.77	<0.01
Total Duration of Hospital Stay	144.40	154.21	15.91	31.18	81.87	107.27	7.72	15.13	<0.01

QR code linking to full abstract



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