

Supplementary Table 1. Analgesics Guideline Used in Post-intervention Group

Pain severity	Recommendations ^a
Mild pain (WBPS \leq 4 or NRS \leq 5 points)	Ibuprofen (5-10 mg/kg/dose q 6-8 hr) PO Acetaminophen (10-15 mg/kg/dose q 4-6 hr) PO
Moderate to severe pain (WBPS \geq 6 or NRS \geq 6 points)	Fentanyl citrate (1-2 mcg/kg/dose) IV Morphine sulfate (100-200 mcg/kg/dose q 4 hr) IV

WBPS: Wong-Baker Pain Scale, NRS: Numeric Rating Scale, PO: per os, IV: intravenous.

^aClinicians may prescribe other analgesics depending on their medical decision.

Supplementary Table 2. Patients' Demographics and Clinical Characteristics before Propensity Score Matching

Variable	Total	Pre-intervention	Post-intervention	P value
Total	222	192 (86.5)	30 (13.5)	
Male	154 (69.4)	131 (68.2)	23 (76.7)	0.472
Age (yr)	9 (6-13)	9 (7-13)	9 (6-12)	0.272
ER LOS	195 (133-292)	209 (118-299)	156 (121-187)	0.002
Fractures	217 (97.7)	192 (100.0)	25 (83.3)	< 0.001
Injury mechanism				0.001
Bending, rotating, or compressive forces	34 (15.4)	23 (12.0)	11 (36.7)	
Traffic accident	41 (18.6)	39 (20.4)	2 (6.7)	
Tripped/slip down	60 (27.1)	49 (25.7)	11 (36.7)	
Fall from height	38 (17.2)	34 (17.8)	4 (13.3)	
Collision with a stationary object	48 (21.7)	46 (24.1)	2 (6.7)	
Unknown	0 (0.0)	0 (0.0)	0 (0.0)	
Diagnosis category				0.765
Rib & spine	4 (1.8)	4 (2.1)	0 (0.0)	
Upper extremity	160 (73.7)	139 (74.3)	21 (70.0)	
Lower extremity	47 (21.7)	39 (20.9)	8 (26.7)	
Unknown	6 (2.8)	5 (2.7)	1 (3.3)	

Values are presented as number (%) or median (interquartile range).

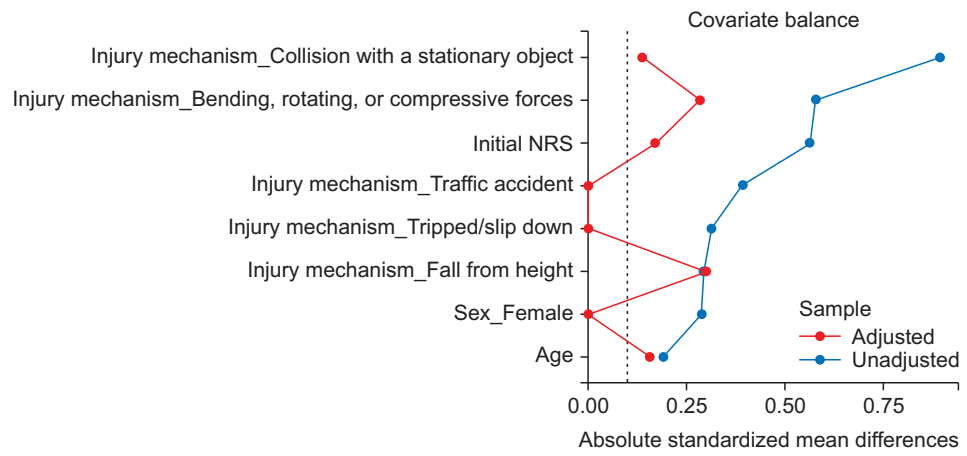
ER LOS: emergency room length of stay.

Supplementary Table 3. Patient's Pain Score and Analgesics Administration before Propensity Score Matching

Variable	Total	Pre-intervention	Post-intervention	P value
Total	222	192 (86.5)	30 (13.5)	
Initial pain score checked	128 (100.0)	99 (51.6)	29 (96.7)	< 0.001
Initial pain score	5 (4-7)	5 (4-6)	6 (5-8)	0.011
Analgesics given	62 (27.9)	37 (19.3)	25 (83.3)	< 0.001
Time to medication	72 (35-125)	94 (53-150)	24 (20-74)	0.015
Prescribed medication				0.015
Acetaminophen	1 (1.6)	1 (2.7)	0 (0.0)	
Pethidine	1 (1.6)	1 (2.7)	0 (0.0)	
Paracetamol	2 (3.2)	1 (2.7)	1 (4.0)	
Fentanyl	16 (25.8)	8 (21.6)	8 (32.0)	
Ibuprofen	14 (22.6)	3 (8.1)	11 (44.0)	
Ketorolac	3 (4.8)	3 (8.1)	0 (0.0)	
Morphine	22 (35.5)	17 (45.9)	5 (20.0)	
Tramadol	3 (4.8)	3 (8.1)	0 (0.0)	
Route of medication				0.017
IV	44 (71.0)	30 (81.1)	14 (56.0)	
PO	15 (24.2)	4 (10.8)	11 (44.0)	
Nebulizer	2 (3.2)	2 (5.4)	0 (0.0)	
IM	1 (1.6)	1 (2.7)	0 (0.0)	

Values are presented as number (%) or median (interquartile range).

IV: intravenous, PO: per os, IM: intramuscular injection.



Supplementary Fig. 1. Covariate balance before (unadjusted) and after (adjusted) propensity score matching. NRS: Numeric Rating Scale.