Supplement Digital Table 1

Multivariate Linear Regression Model for Emergency Department Length of Stay for Patient Visits to the Maine Medical Center Emergency Department, January 1, 2005 Through December 31, 2009*

Variable	Estimate	*SE*	*t*
(Constant)	5.003	0.007	697.257[†]
ESI	-0.059	0.002	-37.029[†]
Quarter	-0.010	0.001	-10.931[†]
Lab	0.468	0.003	184.724[†]
X-ray	0.263	0.002	115.926[†]
Age	0.003	0.000	57.643[†]
Sex	-0.045	0.002	-21.402[†]
Race	0.003	0.001	1.777
Trainee	0.096	0.002	40.306[†]

* Omnibus *F*-test for the model: $F = 15955.952$, $P < .001$. Dependent variable: emergency department length of stay. ESI indicates Emergency Severity Index; quarter, calendar year quarter; lab, laboratory study performed; x-ray, radiographic study performed; age, patient age; sex, patient sex; race, patient race; trainee, seen by medical student or resident under supervision of an attending physician.

[†] Finding is statistically significant ($P < .05$)

Supplemental Digital Table 2

Multivariate Linear Regression Model for Door to Medical Provider Time for Patient Visits to the Maine Medical Center Emergency Department, January 1, 2005 Through December 31, 2009*

Variable	Estimate	SE	t
(Constant)	2.955	0.014	209.007[†]
ESI	0.330	0.003	104.548[†]
Quarter	0.039	0.002	21.592[†]
Lab	0.046	0.005	9.360[†]
X-ray	-0.038	0.004	-8.722[†]
Age	0.0001	0.000	1.248
Sex	-0.085	0.004	-20.811[†]
Race	0.011	0.003	3.967[†]
Trainee	-0.208	0.005	-44.226[†]

* Omnibus F-test for the model: $F = 3035.508$, $P < .001$. Dependent variable: door to medical provider time. ESI indicates Emergency Severity Index; quarter, calendar year quarter; lab, laboratory test performed; x-ray, radiographic imaging performed; age, patient age; sex, patient sex; race, patient race; trainee, seen by medical student or resident under supervision of an attending physician.

[†] Finding is statistically significant ($P < .05$)

Supplemental Digital Table 3

Multivariate Linear Regression Model for Door to Disposition Time for Patient Visits to the Maine Medical Center Emergency Department, January 1, 2005 Through December 31, 2009*

Variable	Estimate	SE	t
(Constant)	4.445	0.010	424.151[†]
ESI	0.078	0.002	33.082[†]
Quarter	-0.008	0.001	-5.776[†]
Lab	0.335	0.004	90.196[†]
X-ray	0.191	0.003	57.914[†]
Age	0.0005	0.000	7.419[†]
Sex	-0.088	0.003	-28.783[†]
Race	0.009	0.002	4.477[†]
Trainee	0.139	0.004	39.226[†]

* Omnibus F-test for the model: $F = 2643.176$, $P < .001$. Dependent variable: door to disposition decision time. ESI indicates Emergency Severity Index; quarter, calendar year quarter; lab, laboratory test performed; x-ray, radiographic imaging performed; age, patient age; sex, patient sex; race, patient race; trainee, seen by medical student or resident under supervision of an attending physician.

[†] Finding is statistically significant ($P < .05$).

Supplemental Digital Figure 1
Selection of Study Sample From All Visits to the Maine Medical Center Emergency Department, January 2005–December 2009

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            ┌─────────────────────────────────┐
            │  All visits during study period, │
            │     1/1/2005–12/31/2009:         │
            │        283,076 visits            │
            └─────────────────────────────────┘
                          │
            ┌─────────────────────────────────┐
            │       −15,114 visits             │
            │   psychiatric chief complaint    │
            └─────────────────────────────────┘
                          │
            ┌─────────────────────────────────┐
            │       −8,625 visits              │
            │    left without being seen,      │
            │    before evaluation was         │
            │  complete, or seen privately     │
            │   by primary care provider       │
            └─────────────────────────────────┘
                          │
            ┌─────────────────────────────────┐
            │       −9,347 visits              │
            │  length of stay < 1 minute or    │
            │          > 12 hours              │
            └─────────────────────────────────┘
                          │
            ┌─────────────────────────────────┐
            │       −3,848 visits              │
            │   missing all provider names     │
            └─────────────────────────────────┘
                          │
            ┌─────────────────────────────────┐
            │        Study sample              │
            │        246,142 visits            │
            └─────────────────────────────────┘
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40,331 visits
attendings only
(attending group)

13,949 visits
medical student + attending
(student–attending group)

153,703 visits
resident + attending
(resident–attending group)

37,540 visits
PA/NP + attending
(midlevel provider group)

619 visits
other combination of providers