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THE IMPACT OF CONVERSION FROM AN URGENT CARE CENTER TO A FREESTANDING EMERGENCY DEPARTMENT ON PATIENT POPULATION, CONDITIONS MANAGED, AND REIMBURSEMENT

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☐ **Abstract—Background: Freestanding emergency departments (FSEDs), EDs not attached to acute care hospitals, are expanding. One key question is whether FSEDs are more similar to higher-cost hospital-based EDs or to lower-cost urgent care centers (UCCs). Objective: Our aim was to determine whether there was a change in patient population, conditions managed, and reimbursement among three facilities that converted from a UCC to an FSED. Methods: Using insurance claims from Blue Cross Blue Shield of Texas, we compared outcomes of interest for three facilities that converted from a UCC to an FSED for 1 year before and after conversion. Results: There was no significant change in age, sex, and comorbidities among patients treated after conversion. Conditions were similar after conversion, though there was a small increase in visits for potentially more severe conditions. For example, the most common diagnoses before and after conversion were upper respiratory infections (42.8% of UCC visits, 26.0% of FSED visits), while chest pain increased from rank 30 to 10 (0.5% of UCC visits, 2.3% of FSED visits). Yearly number of visits decreased after conversion, while median reimbursement per visit increased (facility A: $148 to $2,153; facility B: $137 to $1,466; and facility C: $131 to $1,925) and total revenue increased (facility A: $1,389,590 to $1,486,203; facility B: $896,591 to $4,294,636; and facility C: $637,585 to $8,429,828). Conclusions: After three UCCs converted to FSEDs, patient volume decreased and reimbursement per visit increased, despite no change in patient characteristics and little change in conditions managed. These case studies suggest that some FSEDs are similar to UCCs in patient mix and conditions treated.** © 2018 Elsevier Inc. All rights reserved.

☐ **Keywords—freestanding emergency department; access; cost; value**

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INTRODUCTION

Emergency departments (EDs) serve a critical function in the U.S. health care system, as they provide one-quarter of all acute care and are responsible for half of all hospital admissions (1). Freestanding EDs (FSEDs), EDs not attached to acute care hospitals, are growing rapidly in several states. Regulation of FSEDs varies by state, ranging from defined requirements in states such as Texas and Colorado, to a functional ban in California (2,3). For example, FSEDs in Texas are not required to have a certificate of need or to be affiliated with a hospital, but they are required to have a license, be open 24/7, receive ambulances, and have a

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physician on site (2,3). In addition, independent FSEDs that are not affiliated with a hospital cannot bill Medicare with emergency medicine codes (3).

Prior literature has shown that FSEDs typically locate in areas with a better payer mix, and there is controversy regarding FSED costs (4,5). Compared to hospital-based EDs, prices at FSEDs are comparable, with some overlap in diagnoses (5). One key question is whether FSEDs' patient populations are more similar to higher-cost hospital-based EDs or to lower-cost urgent care centers (UCCs). To help answer this question, we examined a unique situation where three facilities in Texas converted from a UCC to an independent FSED, remaining in the same building and keeping the same address. We assessed the changes in patient population, clinical conditions treated, and reimbursement after these facilities converted from a UCC to an FSED.

METHODS

We analyzed insurance claims from Blue Cross Blue Shield of Texas (BCBSTX) from January 2012 through March 2017. UCCs and FSEDs were identified using a provider-type code available in the claims data that identified the type of facility making the claim. There were several provider-type codes that indicated a facility was a UCC, and one specific provider-type code that classified FSEDs. To identify facilities that converted from a UCC to an FSED, we searched for UCCs and FSEDs that shared the same address, and confirmed conversion using both recent and archived street-level imagery available on Google Maps Street View (Figure 1).

For each facility, we analyzed claims 1 year before and after conversion, which was determined based on the volume and patterns of claims. For example, UCC claims for facility A declined in early 2015 with the first FSED claim occurring in December 2015, so we chose the calendar years 2014 and 2016 as the 1-year pre- and post-conversion periods for comparison. The periods of analysis for facilities B and C were similarly chosen.

We compared patient characteristics, including the numbers of patients and visits, age, sex, and Charlson Comorbidity Index. To compare diagnoses, we grouped International Classification of Diseases, 9th and 10th Revisions, Clinical Modification codes using single-level Clinical Classifications Software (CCS), single-level diagnosis categories, and grouped similar CCS categories into clusters (6). We compared median total reimbursement, and also examined the breakdown by fee charged (facility vs. professional) and payer (health plan vs. out-of-pocket cost to the patient). Finally, we compared total revenue from this health plan. All statistical analyses were performed in SAS software (version 9.4, SAS Institute, Cary, NC).

RESULTS

We identified three facilities that converted from a UCC to an FSED. There was no significant change in age, sex, and comorbidity after conversion (Table 1; p = 0.12–0.99). Upper respiratory infections were the most common diagnoses for all facilities before and after conversion, though the proportion was higher before conversion (UCC 42.8% vs. FSED 26.0%; $p < 0.001$) (Figure 2). Although there was substantial overlap in visits for many conditions after conversion (i.e., injuries, ear disorders, skin infection, eye disorders, and back problems), there was a small increase in visits for potentially more severe conditions. For example, upper respiratory infections comprised the most common diagnoses before and after conversion (42.8% of UCC visits, 26.0% of FSED visits), while chest pain increased from rank 30 to 10 (0.5% of UCC visits, 2.3% of FSED visits).

At all three facilities, yearly number of visits decreased after UCC to FSED conversion (facility A: 8,820 to 463 visits, a 94.8% decrease; facility B: 6,086 to 2209 visits, a 63.7% decrease; and facility C: 4,725 to 3,331 visits, a 29.5% decrease), while median reimbursement per visit increased more than 10-fold (Table 1; facility A: $148 to $2,153, a 1,355% increase; facility B: $137 to $1,466, a 970% increase; facility C: $131 to $1,925, a 1,369% increase). After conversion, total revenue increased at all three facilities (facility A: $1,389,590 to $1,486,203, a 7.0% increase; facility B: $896,591 to $4,294,636, a 379% increase; and facility C: $637,585 to $8,429,828, a 1,222% increase). The ED facility fee was the highest fee category for each FSED, accounting for between 42% and 51% of total charges (FSED A: $1,042 ED facility fee out of $2,153 total reimbursement per visit, FSED B: $747 ED facility fee out of $1,466 total reimbursement, FSED C: $804 ED facility fee out of $1,925 total reimbursement). There was a substantial increase in member out-of-pocket costs after UCC to FSED conversion (facility A: $45 to $568, a 1,162% increase; facility B: $50 to $637, a 1,174% increase; and facility C: $40 to $570, a 1,325% increase).

DISCUSSION

Among three facilities that converted from a UCC to an FSED, we found no significant change in patient population and only small changes in the distribution of conditions managed. Although visits for potentially more severe conditions increased, the increase was by a very small amount of 1.8–4.9%. In contrast, after conversion, we found that patient volume decreased and reimbursement per patient visit increased substantially, resulting in an increase in total revenue for each facility.

While there was a marked increase in all categories of costs, the primary driver of increased costs at FSEDs was

Figure 1. Three facilities that converted from an Urgent Care Center (UCC) (left) to a freestanding emergency department (FSED) (right).

the ED facility fee, which has traditionally been charged by hospitals to cover overhead proportional to the intensity of services required for treatment (7). The ED facility fee has previously been shown to vary widely, with concerns raised as to how the fee is set and whether it reflects real overhead required to maintain hospital solvency or whether it contributes toward maximizing profit (7,8). The justification of an ED facility fee to cover overhead for independent FSEDs as smaller, non-hospital–based facilities has been especially called into question (9,10). There was also a substantial increase in out-of-pocket costs for members after conversion. The increased cost for treatment that could be obtained in a lower-cost setting could adversely impact patients financially, especially given the rise of high-deductible health plans (11).

FSEDs have the potential to be innovators of care delivery and payment reform, for example, by improving the efficiency of emergency care outside the costly hospital setting, or by allowing some patients to avoid facility fees via hybrid UCC/FSEDs or separate pricing of minor and emergency conditions (9,12). However, the similar patient population and modest difference in conditions at these three facilities raise the question about the value some FSEDs provide in relation to the increase in reimbursement. In addition, by seeing fewer patients, the conversion resulted in a net decrease in access to acute unscheduled care for the community. These case studies illustrate that some FSEDs may be providing care similar to UCCs and taking advantage of existing payment structures to increase revenue.

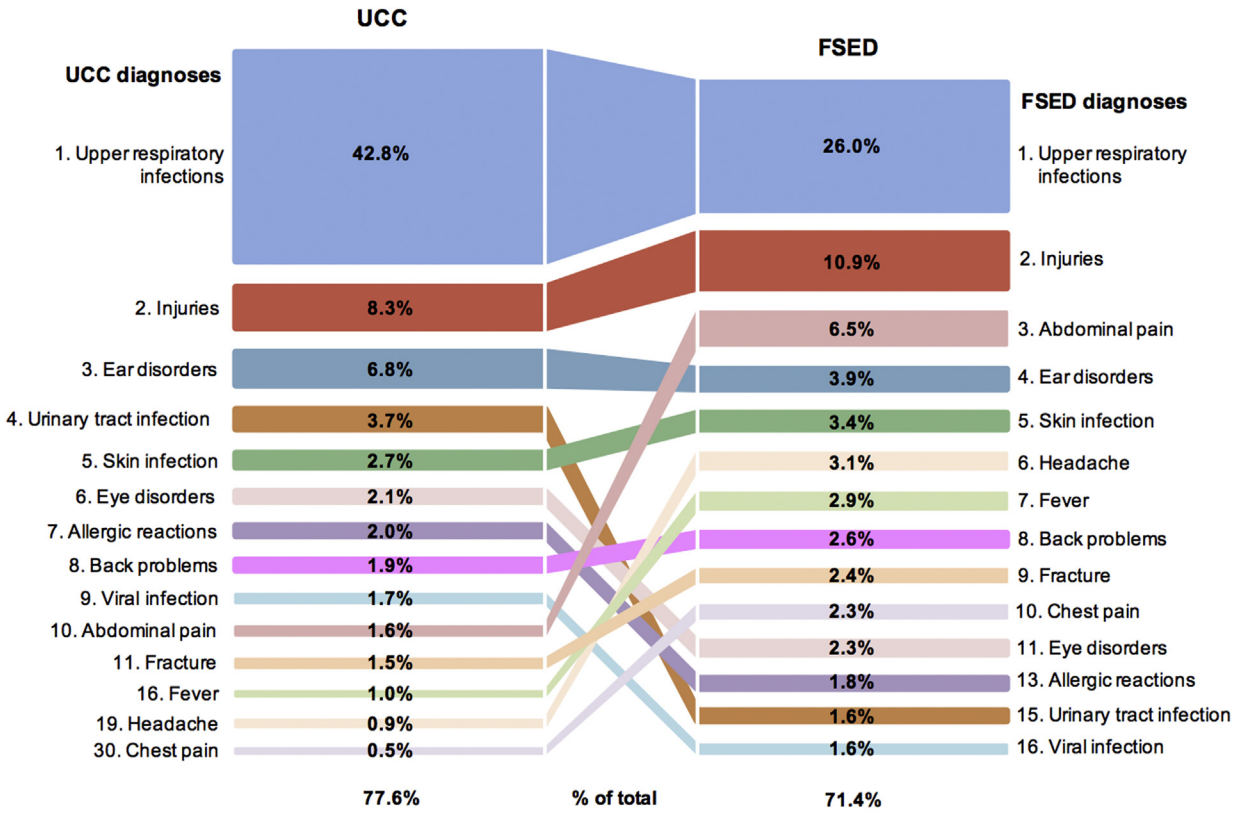
Limitations

Our study has several limitations. First, these three facilities are unique case studies, which illustrate the effect of FSEDs in specific locations, but are not generalizable to

Table 1. Patient Characteristics and Reimbursement One Year Before and After Urgent Care Center (UCC) to Freestanding Emergency Department (FSED) Conversion

	UCC A 1/1/2014–12/31/2014	FSED A 1/1/2016–12/31/2016	*p* Value	UCC B 1/1/2015–12/31/2015	FSED B 3/1/2016–2/28/2017	*p* Value	UCC C 1/1/2013–12/31/2013	FSED C 1/1/2015–12/31/2015	*p* Value
Patient characteristics									
Number of patients	6638	370		4330	1774		2902	2394	
Age, mean (SD)	32 (17)	32 (18)	0.67	33 (18)	34 (19)	0.56	29 (17)	29 (17)	0.39
0–17, %	24	26	0.49	24	24	0.15	33	33	0.29
18–64, %	75	72	0.64	74	75	0.38	66	66	0.39
65+, %	1	2	0.69	2	2	0.58	1	1	0.18
Female, %	56	56	0.92	54	52	0.12	56	54	0.30
Charlson Comorbidity Index (CCI), mean (SD)	0.244 (0.707)	0.278 (0.871)	0.32	0.196 (0.721)	0.219 (0.818)	0.20	0.213 (0.646)	0.208 (0.694)	0.99
No CCI Conditions, %	83	83	0.37	88	87	0.27	85	86	0.63
Reimbursement*									
Number of visits	8820	463		6086	2209		4725	3331	
Total revenue†, $	1,389,590	1,486,203		896,591	4,294,636		637,585	8,429,828	
Reimbursement per visit‡, $, median (IQR)	148 (133–172)	2153 (1485–3397)		137 (111–170)	1466 (984–2226)		131 (98–161)	1925 (1501–2795)	
Distribution by fee									
Facility	0	1721 (1019–2528)		0	1075 (737–1525)		0	1295 (778–2074)	
ED facility fee	0	1042 (626–1389)		0	747 (547–1075)		0	804 (423–1075)	
Other§	0	610 (194–1531)		0	268 (0–692)		0	453 (200–1005)	
Professional	148 (133–172)	466 (174–677)		137 (111–170)	247 (95–850)		131 (98–161)	674 (188–862)	
Distribution by payer									
Insurer	102 (80–125)	1332 (683–2519)		81 (34–111)	637 (0–1428)		80 (51–115)	1270 (680–2077)	
Member out-of-pocket	45 (30–57)	568 (207–1210)		50 (30–97)	637 (278–1166)		40 (31–55)	570 (213–1106)	

* Subtotals do not add up to totals for prices as they are medians.
† Revenue refers to the amount the provider was owed by the insurer and member together in one year.
‡ Reimbursement refers to the amount the provider was owed by the insurer and member together.
§ Other includes laboratory studies, imaging, medications, nursing procedures (e.g. venipuncture).



The following Clinical Classifications Software (CCS) categories were combined:
- Upper respiratory infections = Other upper respiratory infection (CCS 126), acute bronchitis (CCS 125), influenza (CCS 123), other upper respiratory disease (CCS 134)
- Injuries = Sprains/strains (CCS 232), superficial injury/contusion (CCS 239), open wounds of extremities (CCS 236), open wounds of head/neck/trunk (CCS 235)
- Ear disorders = Otitis media (CCS 92), other ear and sense organ disorders (CCS 94)
- Fractures of limbs = Fracture of lower limb (CCS 230), fracture of upper limb (CCS 229)
- Eye disorders = Inflammation/infection of eye (except that caused by tuberculosis or sexually transmitted disease) (CCS 90), other eye disorders (CCS 91)

Figure 2. Most common UCC and FSED diagnoses.

all FSEDs, which are heterogeneous. Second, we classify visits by final diagnosis, which does not necessarily reflect overall acuity, and group diagnoses, such as "injuries," which may hide changes in severity. Third, we are not able to determine whether differences in diagnostic testing or therapeutic interventions contribute to differences in reimbursement, as UCCs bill a single fee that is not itemized. Finally, we report claims from a single insurer, which may not adequately capture the true impact of conversion of these facilities, although BCBSTX is the largest commercial insurer in Texas, with > 25% of the market share in 2017 (13).

CONCLUSIONS

After three facilities converted from a UCC to an FSED, we found that patient volume decreased and reimbursement per visit increased, despite no change in patient characteristics and little change in conditions managed. There is significant potential for FSEDs to provide high-value care, but our findings suggest that some FSEDs may be increasing costs while decreasing access to acute unscheduled care.

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REFERENCES

1. Schuur JD, Venkatesh AK. The growing role of emergency departments in hospital admissions. N Engl J Med 2012;367:391–3.
2. Regulation of freestanding emergency medical care facilities. Available at: https://dshs.texas.gov/facilities/freestanding-emergency-rooms/default.aspx. Accessed October 16, 2018.
3. Gutierrez C, Lindor RA, Baker O, Cutler D, Schuur JD. State regulation of freestanding emergency departments varies widely, affecting location, growth, and services provided. Health Aff 2016;35:1857–66.
4. Schuur JD, Baker O, Freshman J, Wilson M, Cutler DM. Where do freestanding emergency departments choose to locate? A national inventory and geographic analysis in three states. Ann Emerg Med 2017;69:383–3925.

5. Ho V, Metcalfe L, Dark C, et al. Comparing utilization and costs of care in freestanding emergency departments, hospital emergency departments, and urgent care centers. Ann Emerg Med 2017;70:846–8573.
6. HCUP-US Tools & Software Page. Clinical Classifications Software (CCS) for ICD-9-CM. Available at: https://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp. Accessed August 10, 2017.
7. Hsia RY, Antwi YA. Variation in charges for emergency department visits across California. Ann Emerg Med 2014;64:120–1264.
8. Kliff S. Emergency rooms are monopolies. Patients pay the price. Vox. Available at: 2017. https://www.vox.com/health-care/2017/12/4/16679686/emergency-room-facility-fee-monopolies. Accessed October 16, 2018.
9. How freestanding emergency departments help patients. NEJM Catalyst. Available at: 2016. http://catalyst.nejm.org/how-the-freestanding-emergency-department-boom-can-help-patients/. Accessed August 3, 2017.
10. Freestanding emergency department growth creates backlash. Available at: 2013. https://amednews.com/article/20130429/business/130429966/4/. Accessed October 17, 2018.
11. Increases in cost-sharing payments have far outpaced wage growth. Peterson-Kaiser Health System Tracker. Available at: https://www.healthsystemtracker.org/brief/increases-in-cost-sharing-payments-have-far-outpaced-wage-growth/. Accessed November 23, 2017.
12. Understanding the hybrid ER & Urgent care model: how it works. Available at: https://www.legacyer.com/understanding-hybrid-er-urgent-care. Accessed August 7, 2017.
13. AIS Health. Enrollment Statistics and market share 2017. Available at: 2017. https://aishealth.com/sites/all/files/w3-nhpw-report-bcbs0717.pdf. Accessed November 21, 2017.

ARTICLE SUMMARY

1. Why is this topic important?

Freestanding emergency departments (FSEDs), EDs not attached to acute care hospitals, are expanding in several states. One key question is whether FSEDs are more similar to higher-cost hospital-based EDs or to lower-cost urgent care centers (UCCs).

2. What does this study attempt to show?

While FSEDs may expand access to emergency care, our study suggests that some FSEDs charge more to care for fewer patients that are similar to a UCC's patient population.

3. What are the key findings?

Among three facilities that converted from a UCC to an FSED, patient characteristics were similar and there was little change in conditions managed, while patient volume decreased between 29.5% and 94.8%, and reimbursement per visit increased between 970% and 1,369%.

4.How is patient care impacted?

While FSEDs can provide high-value care, these case studies suggest that some patients may be charged more by FSEDs, despite having similar characteristics and conditions managed as UCC patients.