

A Comparison of Patient and Dental Condition Characteristics Presenting to a Pediatric Hospital
Emergency Department Versus Urgent Care with Non-Emergency Dental Complaints

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A thesis

submitted in partial fulfillment of the
requirements for the degrees of

Master of Science in Dentistry and Master of Public Health

University of Washington

2017

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Programs Authorized to Offer Degree:

Pediatric Dentistry and Public Health

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Abstract

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Background: Utilization of hospital emergency departments (EDs) for dental complaints is increasing. Approximately 79% of dental-related ED visits are for non-emergency conditions. Most visits are avoidable, and directing them to alternative settings could result in substantial savings to the United States health care system.

Methods: This retrospective cohort study assessed patient and dental condition characteristics associated with presentation to a pediatric hospital ED versus urgent care (UC) for after-hours non-emergency complaints from 2014 to 2016. Data were collected from the electronic medical records at Seattle Children's Hospital from patients presenting from 5:00 pm to 10:30 pm Monday through Friday and 11:00 am to 8:00 pm on weekends and holidays. Logistic regression

was performed to estimate adjusted odds ratios with 95% confidence intervals (CI) to assess the association of characteristics such as age, sex, dental home, and triage acuity with presentation to the ED versus UC. Differences in types of medical and dental services in the ED versus UC were compared using Chi-squared testing.

Results: A total of 266 visits were assessed, 189 (71.0%) visits occurred in the ED, and 77 (29.0%) occurred in the UC. Children with a community clinic dental home had a 4.05-fold increased odds of presenting to the ED compared to those with private practice dental homes (95% CI 1.06 - 15.52). For every unit decrease in triage acuity there was a 91% lower odds of presenting to the ED (95% CI 0.04 – 0.19). More children in the ED received at least one medication (60% versus 26%, $p<0.001$), non-narcotic analgesics (36% and 20%, $p=0.01$), at least one prescription for medication (31% versus 15%, $p=0.004$), prescription for non-narcotic analgesics (10% and 2%, $p=0.03$), primary tooth extraction (37% versus 24%, $p=0.04$), and interim tooth restoration (12% versus 2%, $p=0.01$). Fewer children seen in the ED received definitive tooth restoration (0% versus 9%, $p<0.001$).

Conclusions: Future strategies to reduce non-emergency dental-related ED visits should focus on patient and provider education, especially at community clinic dental offices, to triage and direct patients to low acuity venues such as UCs with dental services.

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ACKNOWLEDGEMENTS

I would like to extend my deepest gratitude to Dr. Melissa Schiff and Dr. Barbara Sheller for their expertise, guidance, and support throughout this entire process. It has been an honor and a pleasure to work with them. I would also like to thank Sophia Cohanim for her help with data collection and William Tressel for his assistance with statistical analysis. Lastly, I would like to acknowledge funding for this work from the U.S. Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau (Title V, Social Security Act), grant # T76MC00011.

DEDICATION

For my parents who taught me the value of education and my wife who has supported me in every way.

INTRODUCTION

Hospital emergency departments (EDs) are a critical component of the United States health care system. Although their primary role is to provide emergency services, they also provide non-emergency and primary care as part of the safety net. Despite being an expensive and inefficient setting for dental visits,^{1,2} utilization of EDs for dental complaints is increasing.³ During the period 1998 to 2008, dental-related ED visits doubled to 2.2 million visits per year³ with the majority occurring during after-hours periods.⁴

Approximately 79% of dental-related ED visits are for non-emergency conditions and are avoidable. Identifying patients with non-emergency dental complaints and directing them away from EDs to more appropriate facilities can save the health care system up to \$1.7 billion annually.⁴ Although pediatric patients account for 11% all dental-related ED visits,⁵ there are no published studies assessing patient or dental condition characteristics associated with pediatric non-emergency dental-related ED visits versus an alternative setting such as an urgent care (UC). Among the pediatric Medicaid population however, patients using EDs for non-emergency medical conditions are more likely to be at age extremes (0-2 years and 13-18 years) and male, while patients in UCs are more likely to be Hispanic.⁶

In 2011, Seattle Children's Hospital (SCH) opened an UC to provide an after-hours alternative to the ED. This gave patients the choice of an ED and an UC, both located on the same hospital campus. Given this, we sought to identify patient and dental condition characteristics associated with presentation to a pediatric hospital ED versus UC for after-hours non-emergency dental visits and to describe differences in services in each setting. We hypothesized patients in the ED were more likely to be younger, male, uninsured, and without a dental home and would

present with conditions associated with higher acuity, more pain, and a shorter duration of symptoms.

METHODS

We performed a retrospective cohort study, with approval from the SCH Institutional Review Board, to assess patient and dental condition characteristics associated with presentation to SCH for after-hours non-emergent dental visits between January 1, 2014 and June 30, 2016. SCH is a tertiary-care pediatric teaching and research hospital in Seattle, Washington that provides after-hours dental care to patients 0 to 21 years of age in both an ED and UC.

Patients included in our study were identified via the SCH Emergency Tracking Log. The log contained patient and visit information for every after-hours dental visit involving patients 21 years and younger and an on-call dentist. We included all patient visits that: (1) occurred between January 1, 2014 and June 30, 2016 between the UC hours of operation 5:00 pm to 10:30 pm Monday through Friday and 11:00 am to 8:00 pm on weekends and holidays, and (2) were not emergent. We defined emergency dental conditions as those associated with visits that included: (1) medical imaging, (2) laboratory services, (3) intravenous or intramuscular medications excluding sedatives, (4) hospital admission, or (5) consultation with another hospital service. This definition of emergency conditions was intended to identify and exclude all visits that were appropriately cared for in a hospital setting. Since the ED hours of operation were 24 hours per day, 365 days per year, we limited our study to the UC hours of operation so that upon arrival to the hospital, both the ED and UC were available to patients with dental complaints. All patients that presented to the hospital, whether referred or not, had the choice of both the ED and UC for treatment. We used a stepwise algorithm to exclude patient visits that: (1) occurred outside the UC hours of operation, (2) involved medical imaging, (3) involved laboratory services, (4) involved

intravenous or intramuscular medications excluding sedatives, (5) resulted in hospital admission, or (6) involved consultation with another hospital service.

We abstracted patient and visit data from SCH's electronic medical record system, Clinic Information System (CIS). Study data were collected and managed using REDCap (Research Electronic Data Capture) electronic data capture tools hosted at the University of Washington.⁷ REDCap is a secure, web-based application designed to support data capture for research studies, providing, (1) an intuitive interface for validated data entry, (2) audit trails for tracking data manipulation and export procedures, (3) automated export procedures for seamless data downloads to common statistical packages and (4) procedures for importing data from external sources. For the primary aim, the exposures of interest were patient demographic and dental condition characteristics. Demographic variables included age, gender, race, insurance, and dental home. We calculated age by subtracting date of service from date of birth and categorized it as 0-2, 3-5, 6-12, and 13-20 years of age. Gender was categorized as male and female. Race was categorized as White, Black, Asian, Other, and multiple race. The Other category included races with small numbers of patients, patients that did not indicate their race, and those that self-identified as 'other'. Insurance was grouped into categories as Medicaid, private, and self-pay. Dental home status was categorized as private practice, University of Washington/Seattle Children's Hospital (UW/SCH), community clinic, and no dental home. We were interested in dental home because it is likely that patients consulted with their dentist to help decide where to go for treatment. Dental condition variables included first dental visit, referral source, triage acuity score, pain score, duration of symptoms, and dental condition type. First dental visit indicated whether this was the patient's first encounter with a dentist. Referral source was categorized as self, another ED, another UC, and dentist or primary care physician. A triage nurse assigned the Emergency Severity Index (ESI)

triage score, a validated 5-level triage system based on patient acuity and anticipated resource utilization. Level 1 and 2 scores represented high acuity patients that either required immediate life-saving intervention or should not wait to be seen by a physician. Levels 3, 4, and 5 represented low acuity patients and were distinguished by predicted resource utilization. Level 3 required at least 2 resources, level 4 required 1 resource, and level 5 required no resources.⁸ The triage score is lower for high acuity conditions and higher for low acuity conditions. ESI triage score was treated as a continuous variable. Throughout the remainder of this paper we will refer to triage acuity, not the triage acuity score. Pain level was obtained and scored using three standardized scales of 0 through 10. For children 3 years and younger, the Face Legs Activity Cry Consolability (FLACC) pain scale was used. Providers assigned a FLACC score based on patient observation. Children 4 years and older, yet unable to comprehend a Likert scale, reported their pain level using the Faces Pain Scale. All patients able to comprehend a Likert scale reported their own pain level 0 - 10. Pain score was categorized as no pain (0), mild pain (1-3), moderate pain (4-6), and severe pain (7-10). Duration of symptoms was categorized as less than 1 day, 1-3 days, and greater than 3 days. Dental condition type was categorized as traumatic dental condition (TDC), caries related infection (CRI), and other. TDCs were those resulting from traumatic events affecting the dentoalveolar complex. Caries related infections were orofacial infections from caries. 'Other' included all conditions not the result of TDCs and CRIs, such as exfoliating teeth, oral soft tissue problems, orthodontic conditions, and natal teeth.

The primary aim outcome of interest was presentation to the ED versus UC. Both facilities are located on SCH's main campus, but in different buildings. Patients self-selected, or were referred, to either the ED or UC. Registration clerks did not assist in this decision. Pediatric dental residents and attendings provided the same after-hours dental care in both venues.

We evaluated medical and dental service data as well. Medical service variables included medications administered and prescriptions provided by the medical team. We assessed for use of the following medications: antibiotic, non-narcotic analgesic, narcotic analgesic, sedative, and other. We also assessed for the following prescriptions: antibiotic, non-narcotic analgesic, narcotic analgesic, chlorhexidine, and other. Dental services variables included radiograph, primary tooth extraction, permanent tooth extraction, reposition tooth, splint tooth, interim restoration, definitive restoration, pulp therapy, intraoral sutures, incision and drainage, orthodontic emergency treatment, and other. Medical and dental services were not mutually exclusive and some patients received multiple medications, prescriptions, and dental services.

For analysis, we compared patient and dental condition characteristics between the ED and UC. Age group, gender, race, dental home, first dental visit, referral source, pain score, duration of symptoms, and dental condition were compared for ED and UC patients using chi-squared testing. Insurance was compared using Fisher's exact test due to expected cell counts less than 5. Mean triage acuity score and standard deviation (SD) was compared using two sample T-testing. Univariate logistic regression was performed for each patient and dental condition characteristic to estimate unadjusted odds ratios (OR) with 95% confidence intervals (CI) to assess the association between each characteristic and presentation to the ED. Multivariate logistic regression was performed to evaluate all patient and dental characteristics that were significantly associated in the univariate models with presentation to the ED. Patient visits missing data for those variables initially included in the multivariate analysis model were excluded. Only those characteristics that remained significant in the multivariate model were included in the final model. Insurance status was adjusted for as a confounder. We also compared differences in medical and dental services

between the ED and UC with chi-squared and Fisher's exact tests. All analyses were performed using Stata statistical software V.13 (StataCorp, College Station, TX).

RESULTS

We assessed all 464 dental-related visits which involved an on-call dentist and occurred between January 1, 2014 and June 30, 2016. Of those, 266 visits involving 261 unique patients met study criteria and 198 visits were excluded. Most visits were excluded because they occurred outside the UC hours of operation (145 visits, 73%), followed by medical imaging (21 visits, 11%), medical laboratory services (16 visits, 8%), intravenous or intramuscular medications (9 visits, 4.5%), consultation with another hospital service (6 visits, 3%) and hospital admission (1 visit, 0.5%). There were 189 (71%) visits in the ED and 77 (29%) visits in the UC. Significantly more females (46.0% versus 31.2%, $p=0.02$) presented to the ED compared to the UC (Table 1). Fewer patients with private practice dental homes (39.6% versus 50.0%) and more patients with community clinic dental homes (18.6% versus 5.6%) presented to the ED compared to the UC ($p=0.04$). The triage acuity was higher in the ED compared to the UC (3.25 ± 0.5 SD and 3.9 ± 0.5 SD, $p<0.001$). Age group, race, insurance, first dental visit, referral source, pain score, duration of symptoms, and dental condition type were similar for the ED and UC.

After including all patient and dental condition characteristics that were significantly associated in the univariate models and adjusting for insurance status as a confounder, we found children with a community clinic dental home had a 4.05-fold increased odds (OR = 4.05; 95% CI 1.06, 15.52) of presenting to the ED compared to those with private practice dental homes (Table 2). We found a suggestion of increased odds of presenting to the ED for children with a UW/SCH dental home (OR = 1.74; 95% CI 0.68, 4.45) and no dental home (OR = 1.26; 95% CI = 0.51, 3.07) compared to those with private practice dental homes. These two categories however did not reach

statistical significance, possibly due to small sample size. We also found that for every unit decrease in triage acuity there was a 91% lower odds of presenting to the ED (OR = 0.09; 95% CI 0.04, 0.19).

When we compared medications administered in the ED and UC, we found they were similar with regard to antibiotics, narcotic analgesics, sedatives, and other (Table 3). More children in the ED received at least one medication (60.3% and 26.0%, $p<0.001$) and non-narcotic analgesics (36.0% and 20.8%, $p=0.01$). More children treated in the ED received at least one prescription for medication upon discharge (31.2% and 14.3%, $p=0.004$) and non-narcotic analgesics (10.6% and 2.6%, $p=0.03$). More children in the ED received primary tooth extraction (37.6% and 24.7%, $p=0.04$) and interim tooth restoration (12.2% and 2.6%, $p=0.01$) which included all restorations that required a subsequent dental visit for definitive restoration. Fewer children treated in the ED received definitive tooth restorations (0.0% and 9.1%, $p<0.001$).

DISCUSSION

Our study assessed the association between patient and dental condition characteristics and presentation to a pediatric hospital ED versus UC for after-hours non-emergency dental visits from 2014 to 2016. Key findings included: the majority of patients presented to the ED instead of the UC, children with a community clinic dental home had increased odds of presenting to the ED, and as the acuity of a dental condition decreased so did the odds of presenting to the ED. In addition, medications administered, prescriptions provided, and dental services provided differed between the ED and UC.

The majority (71%) of patients included in our study presented to the ED instead of the UC. Although patients with lower acuity conditions were at greater odds of presenting to the UC, visits to the UC represented only 29% of non-emergency dental visits. The UC was the more

appropriate treatment facility for all visits included in our study and it was underutilized. This suggests that simply providing an alternative low-acuity facility is not sufficient to direct patients away from the ED, even when the facilities are located within the same hospital campus. It is possible that patients and referring providers were not aware that SCH had an UC or that the UC had the capability to treat non-emergency dental issues. A prior study that found 65.6% of patients presenting to a hospital ED for non-emergency conditions were not aware of alternative facilities.⁹ Educating patients and providers about the availability, and dental treatment capabilities of alternative facilities, would likely increase their utilization and decrease ED utilization. Active triage by ED staff may be another solution. An example of this was a successful pilot program in Virginia.¹⁰ Patients presenting to the hospital ED with low-acuity dental complaints were identified and offered the opportunity to contact the hospital's urgent care dental clinic. Once in the urgent care dental clinic, patients were evaluated by on-call dentists and either treated at the time of the visit or provided an appointment to return for treatment. It is important to note that policies and programs aimed at actively triaging patients away from an ED to another facility must comply with the Emergency Medical Treatment and Active Labor Act (EMTALA).¹¹ EMTALA mandates that patients presenting to an ED must be provided a medical screening examination regardless of ability to pay and cannot be discharged or referred out of an ED based on triage status alone.

We observed children with a community clinic dental home had higher odds of presenting to the ED for after-hours non-emergency visits. To the best of our knowledge, there are no prior studies in the dental literature evaluating this association. These findings may be explained by the after-hours care policies of community clinics in the area served by SCH. Current regulations allow community clinics, and all dental practices, to determine the details of their own after-hours policies. The Washington State Dental Board does not have specific written guidelines regarding

after-hours dental care, but rather re-states the American Dental Association's (ADA) after-hours policy. The ADA policy specifies that dentists "are obliged to make reasonable arrangement for the emergency care of their patients of record".¹² In addition to the state dental board, community clinics are regulated by the Health Resources & Services Administration's (HRSA) Bureau of Primary Health Care (BPHC). The BPHC's after-hours program requirement states clinics must provide "professional coverage for medical emergencies" during after-hour periods.¹³ These policy statements are non-specific and leave much open to interpretation ranging from in-office after-hours care provided by a dentist to an answering machine directing all patients to a local ED. These findings are important because they can be used to inform the after-hours care policies on local, state, and national levels. After-hours policies should define minimal requirements for after-hours care, such as being able to speak with a dentist on the phone. Additionally, if these policies are going to include the term "emergency", they should define what constitutes a dental emergency and expand themselves to define and include urgent or non-emergency conditions.

It is also possible that patients with community clinic dental homes are different from those with other dental homes and those with no dental home. According to BPHC data, community clinic patients differ from the total US population and the US low-income population. Community clinic patients are poorer, more racially and ethnically diverse, and more likely to be uninsured.¹⁴ For this reason, we adjusted for type of insurance as a confounder in our final analysis. These findings further demonstrate the need for community and provider education, especially among community clinic populations, regarding the availability of alternatives to EDs for after-hours non-emergency dental care.

We found as the acuity of dental conditions decreased, so did the odds of presenting to the ED. This finding is consistent with another study that found when compared to UCs, the acuity of

medical conditions in the ED are higher.⁶ These both suggest that patients and parents, along with referring providers, are triaging to appropriate settings based on the acuity of conditions.

More visits in the ED compared to those in the UC resulted in at least one medication administered, non-narcotic analgesics administered, and at least one prescription provided. This is consistent with the higher acuity conditions evaluated and treated in the ED. Additionally, more prescriptions for non-narcotic analgesics were given in the ED. It may be that these analgesics were given for post-operative pain since more visits in the ED resulted in primary tooth extractions and interim restorations.

The following limitations should be considered when interpreting our results. Since our data were collected from electronic medical records, some records were incomplete and others may have been inaccurate, both of which could introduce non-differential information bias. For example, we were unable to evaluate referral source as a factor in multivariate analysis due to a large amount of missing data. We attempted to mitigate the issue of missing data by searching for data in multiple locations within a patient's electronic medical record. Additionally, SCH has data quality control programs in place to minimize missing and inaccurate patient data. Our results may have been explained by residual confounding factors that were not measured in the electronic medical records and were not adjusted for. Potential confounders included patients' and caregivers' previous dental, ED, and UC experiences. For example, if a family previously experienced difficulty accessing after-hours care with their dental home, they may be more likely to present to the ED for subsequent non-emergency issues. The external validity of this study may be limited since our study was based at a children's hospital in Seattle. Seattle is different from other cities in terms of patient, dental provider, and medical provider characteristics. SCH is unique in that it has an ED and UC located on the same hospital campus, both with after-hours dental

services. SCH is a children's hospital which provides different services to a different patient population compared to general hospitals. Our study was underpowered to detect statistically significant differences in patient and condition characteristics such as age and insurance status. A priori power calculations determined we would need a minimum of 100 patient visits per setting, however our data included only 77 visits in the UC.

CONCLUSIONS

We found only 29% of non-emergency complaints were seen in the UC. This provides evidence within the SCH system of overuse of the ED. Strategies at the local, state, and national levels should focus on patient and provider education, especially with community clinics, to direct patients away from EDs to low-acuity venues such as UCs with dental services. EDs with on-site access to lower acuity treatment facilities should also consider actively triaging patients to these locations. Health policies should define and specify the scope of after-hours care obligations for dental providers. Future research should continue to assess patient and dental condition characteristics as predictors for presentation to different treatment facilities for after-hours non-emergency dental care. Additionally, since cost savings drive health policies, research should assess cost and treatment times for after-hours dental complaints in EDs versus alternative facilities.

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Table 1. Comparison of patient demographic and dental condition characteristics by facility type at Seattle Children’s Hospital between January 1, 2014 and June 30, 2016

		Emergency Department (N=189) N (%)*	Urgent Care (N=77) N (%)*	Unadjusted OR (95% CI)
Age group (years)	0-2	36 (19.1)	13 (16.9)	1.0
	3-5	56 (29.6)	16 (20.8)	1.26 (0.54 – 2.93)
	6-12	80 (42.3)	38 (49.3)	0.76 (0.36 – 1.59)
	13-20	17 (9.0)	10 (13.0)	0.61 (0.22 – 1.67)
Gender	Male	102 (54.0)	53 (68.8)	1.0
	Female	87 (46.0)	24 (31.2)	0.53 (0.30 – 0.93)
Race ^a	White	91 (52.6)	41 (60.3)	1.0
	Black	20 (11.6)	3 (4.4)	3.00 (0.84 – 10.67)
	Asian	16 (9.3)	7 (10.3)	1.02 (0.39 – 2.69)
	Other	37 (21.4)	10 (14.7)	1.66 (0.75 – 3.67)
	Multiple	9 (5.1)	7 (10.3)	0.57 (0.20 -1.66)
Insurance	Private	92 (48.7)	46 (59.8)	1.0
	Medicaid	94 (49.8)	30 (38.9)	0.63 (0.37 – 1.09)
	Self-pay	3 (1.5)	1 (1.3)	0.95 (0.95 – 9.55)
Dental home ^b	Private practice	70 (39.6)	36 (50.0)	1.0
	UW/SCH	32 (18.1)	17 (23.6)	0.96 (0.37 – 1.09)
	Community clinic	33 (18.6)	4 (5.6)	4.24 (1.39 – 12.91)
	No dental home	42 (23.7)	15 (20.8)	1.44 (0.70 – 2.93)
First dental visit ^c	No	165 (93.2)	64 (88.9)	1.0
	Yes	12 (6.8)	8 (11.1)	0.58 (0.22 – 1.48)
Referral source ^d	Self	31 (36.4)	10 (28.5)	1.0
	Emergency department	15 (17.6)	2 (5.7)	2.41 (0.46 – 12.45)
	Urgent care	14 (16.4)	13 (37.1)	0.34 (0.12 – 0.98)
	Dentist or primary care physician	25 (29.4)	10 (28.5)	0.80 (0.29 – 2.2)
Triage acuity score ^e	Mean ± (SD)	3.25 ± (0.5)	3.9 ± (0.5)	0.11 (0.06 – 0.21)
Pain score ^f	No pain (0)	80 (44.9)	17 (40.5)	1.0
	Mild pain (1-3)	43 (24.2)	13 (30.9)	0.70 (0.31 – 1.58)
	Moderate pain (4-6)	37 (20.8)	6 (14.3)	1.31 (0.47 – 3.59)
	Severe pain (7-10)	18 (10.1)	6 (14.3)	0.63 (0.22 – 1.84)

Duration of symptoms ^g	<1 Day	135 (72.9)	48 (64.8)	1.0
	1-3 Days	35 (18.9)	18 (24.4)	0.69 (0.35 – 1.33)
	>3 Days	15 (8.2)	8 (10.8)	0.66 (0.26 – 1.67)
Dental condition type	Traumatic dental condition	121 (64.1)	39 (50.7)	1.0
	Caries related infection	41 (21.7)	20 (25.9)	0.66 (0.34 – 1.25)
	Other	27 (14.2)	18 (23.3)	0.48 (0.24 – 0.97)

* N (%) unless otherwise noted

^a Data was not documented for 16 visits in the ED and 9 in the UC

^b Data was not documented for 12 visits in the ED and 5 in the UC

^c Data was not documented for 12 visits in the ED and 5 in the UC

^d Data was not documented for 104 visits in the ED and 42 in the UC

^e Data was not documented for 12 visits in the ED and 5 in the UC

^f Data was not documented for 11 visits in the ED and 35 in the UC

^g Data was not documented for 4 visits in the ED and 3 in the UC

Table 2. Multivariate logistic regression results assessing the association between patient and dental conditions and presentation to the ED at Seattle Children’s Hospital between January 1, 2014 and June 30, 2016

		Adjusted* OR (95% CI)
Dental home	Private practice	1.0
	UW/SCH	1.74 (0.68 – 4.45)
	Community clinic	4.05 (1.06 – 15.52)
	No dental home	1.26 (0.51 – 3.07)
Triage acuity score		0.09 (0.04 – 0.19)

*Adjusted for gender, dental home, acuity, dental condition, and insurance

Table 3. Comparison of medications administered and prescriptions provided by the medical team stratified by facility type at Seattle Children’s Hospital between January 1, 2014 and June 30, 2016

	Emergency Department (N =187) ^a N (%)	Urgent Care (N=77) ^a N (%)	P-value
Medications administered			
At least one	112 (60.3)	20 (26.0)	<0.001
Antibiotic	13 (6.9)	3 (3.9)	0.35
Non-narcotic analgesic	68 (36.0)	16 (20.8)	0.01
Narcotic analgesic	18 (9.5)	3 (3.9)	0.12
Sedative	53 (28.0)	14 (18.8)	0.09
Other	11 (5.8)	2 (2.6)	0.35
Prescriptions provided			
At least one	57 (31.2)	11 (14.3)	0.004
Antibiotic	30 (15.9)	6 (7.8)	0.08
Non-narcotic analgesic	20 (10.6)	2 (2.6)	0.03
Narcotic analgesic	14 (7.4)	5 (6.5)	0.79
Chlorhexidine	10 (5.3)	2 (2.6)	0.51
Other	5 (2.7)	2 (2.6)	1.0

^a Columns do not add to totals due to multiple medications and prescriptions given to individual patients

Table 4. Comparison of dental treatments provided by facility type at Seattle Children’s Hospital between January 1, 2014 and June 30, 2016

	Emergency Department (N =189) ^a N (%)	Urgent Care (N =77) ^a N (%)	P-Value
Radiograph	145 (76.7)	52 (67.5)	0.12
Primary tooth extraction	71 (37.6)	19 (24.7)	0.04
Permanent tooth extraction	1 (0.53)	1 (1.3)	0.49
Reposition tooth	15 (7.9)	6 (7.79)	0.96
Splint tooth	18 (9.5)	5 (6.5)	0.42
Interim restoration of tooth	23 (12.2)	2 (2.6)	0.01
Definitive restoration of tooth	0 (0)	7 (9.1)	<0.001
Pulp therapy	9 (4.8)	7 (9.1)	0.17
Intraoral sutures	8 (4.2)	5 (6.5)	0.53
Incision and drainage	1 (0.53)	1 (1.3)	0.49
Orthodontic emergency treatment	6 (3.2)	7 (9.1)	0.058
Other	5 (2.7)	4 (5.2)	0.28

^a Columns do not add to totals due to individual patients receiving multiple treatments