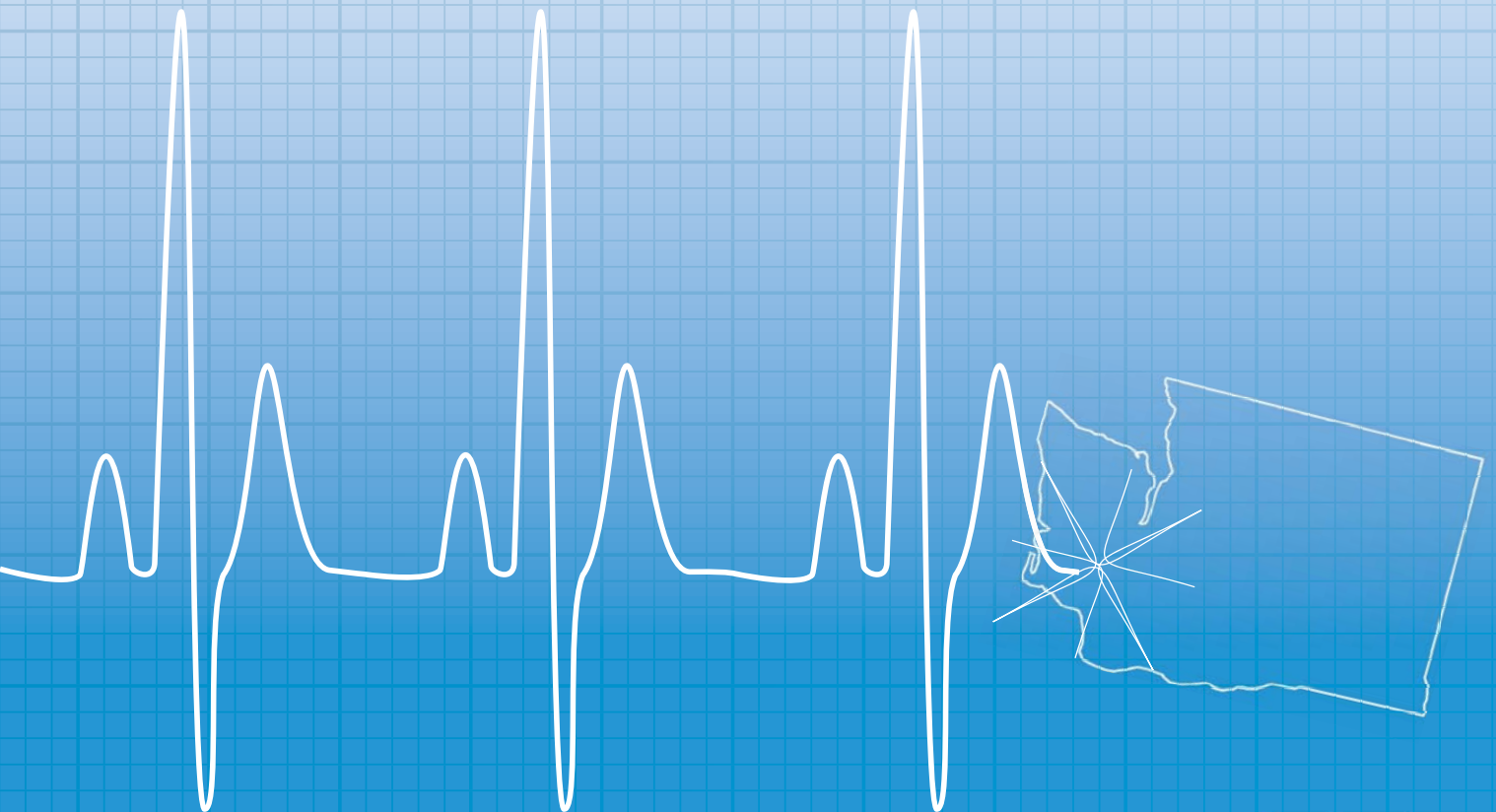




# Emergency Room Use

*Developed by WSHA's Health Information Program*

*October 2010*



# Acknowledgements

This look at Emergency Room use in Washington State would not have been possible without the participation of these hospitals:

Cascade Valley Hospital & Clinics	Providence Regional Medical Center Everett
Central Washington Hospital	Providence Sacred Heart Medical Center & Children's Hospital
Dayton General Hospital	Providence St. Mary Medical Center
Enumclaw Regional Hospital	Providence St. Peter Hospital
Evergreen Hospital Medical Center	Pullman Regional Hospital
Harborview Medical Center	St. Anthony Hospital
Harrison Medical Center	St. Clare Hospital
Island Hospital	St. Francis Hospital
Kadlec Medical Center	St. Joseph Medical Center
Kennewick General Hospital	St. Joseph's Hospital - Chewelah
Lake Chelan Community Hospital	Seattle Children's
Legacy Salmon Creek Hospital	Skagit Valley Hospital
Lincoln Hospital	Southwest Washington Medical Center
Mason General Hospital	Stevens Hospital
Mid-Valley Hospital	Sunnyside Community Hospital
MultiCare Allenmore Hospital	Swedish Medical Center - Ballard
MultiCare Good Samaritan Hospital	Swedish Medical Center - Cherry Hill
MultiCare Mary Bridge Children's Hospital & Health Center	Swedish Medical Center - First Hill
MultiCare Tacoma General Hospital	Swedish Medical Center - Issaquah
Newport Hospital & Health Services	Tri-State Memorial Hospital
Northwest Hospital & Medical Center	University of Washington Medical Center
Othello Community Hospital	Valley General Hospital, Monroe
Overlake Hospital Medical Center	Walla Walla General Hospital
PeaceHealth St. John Medical Center	Whitman Hospital & Medical Center
PeaceHealth St. Joseph Hospital	Yakima Valley Memorial Hospital
Providence Centralia Hospital	
Providence Holy Family Hospital	
Providence Mount Carmel Hospital	

# Washington State Hospital Association Emergency Room Use

*Developed by WSHA's Health Information Program*

For more information contact:

Jim Cannon, Executive Director, Health Information Program  
jimc@wsaha.org or (206) 216-2551

Jane Feldman, Director Analytic Services, Health Information Program  
janef@wsaha.org or (206) 216-2505

October 2010

Emergency room (ER) use is a topic of increasing interest for policy makers and health care regulators. This is especially true in an era of shrinking budgets and an increasing desire to control health care costs.

Anecdotally it is believed that people use emergency departments inappropriately for care that would be better delivered in another setting. A study featured in the September 2010 issue of *Health Affairs* found that many people seek care in the emergency room for ailments that are not emergencies. The report showed more than a quarter (28 percent) of visits for acute care—treatment for a new complaint such as stomach pain, fever, chest pain, or cough or for a flare-up of a chronic condition—are made to emergency rooms. The authors suggest that inappropriate ER use could be attributed, in part, to a lack of access to primary care services.



In Washington State, there has been a void of information on ER use. This information is critical to develop true understanding and ensure that new policies around emergency services are grounded in reality rather than perception. To provide this vital information, the Washington State Hospital Association (WSHA) asked its members to share visit-level data on emergency room use to provide information for public policy advocacy and hospital planning. Member response was excellent, with data submitted for 53 emergency facilities in all urban and many rural areas of the state.

This report is the first look at the data, and the first significant analysis of Washington State emergency department usage.

In this report, three key questions are addressed:

- Who comes to the emergency room for care?
- What care is provided in the emergency room?
- When is demand for emergency care higher or lower?

A second report focused on inappropriate use of ER services will be released later this fall. WSHA intends to continue and expand its data collection and produce a series of reports as new data become available.

## Where did the ER data come from?

The analysis in this report is based on data supplied voluntarily by 53 hospitals. As the map shows, participating hospitals represent a broad spectrum of both rural and urban communities. (For a list of participating hospitals, see the inside front cover.) The data are robust, with 2.6 million visit records collected for 18 months (January 2008 – June 2009) — representing about two-thirds of all ER visits in the state for this period. Hospitals were asked to submit data on patient age, gender, time and date of service, diagnosis code, payer, and charges. Data on ER costs or payment are not readily available.

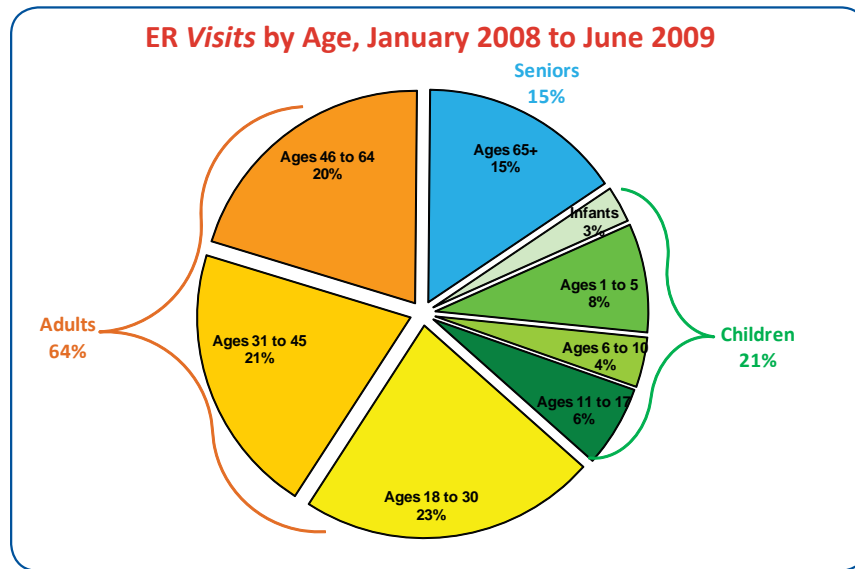


Although a large number of hospitals participated in this study, the data set has some limitations. First, because of the missing hospitals, the data may contain some biases. Second, this was also the first time hospitals prepared record extracts for emergency services for a standard analysis. Some data elements are missing for the hospitals that chose to participate. For example, some hospitals do not record time of visit. Third, the data set is abstracted from initial billing records. Payer status often changes over time, especially for ER services, as hospitals obtain more accurate information. As explained in more detail in the report, data on self pay and charity care may be particularly problematic.

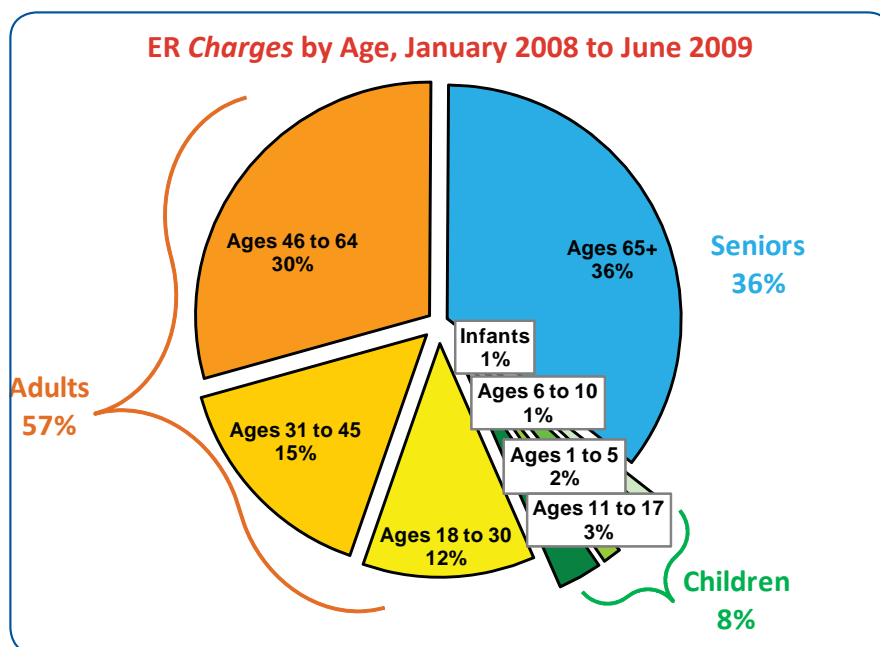
We believe the data are sufficient for certain basic analysis of patient characteristics. Because of the absence of some facilities, however, accurate calculations of utilization rates by payer cannot be made.

# Who Comes For Care?

The data set used for this report includes patient populations by age and payer type – the kind of insurance coverage ER patients have (or do not have). The data for ER population by age shows more than one out of five visits (21 percent) are for children (infants through age 17). Adults (ages 18 to 64) comprise 64 percent of visit volume, and seniors (age 65 and older) make up the remaining 15 percent.



Charges for emergency room care are a rough indicator of the seriousness of a condition and the need for emergent care. It is not surprising that while children account for 21 percent of the visits, charges for their care are less than eight percent. Charges for seniors, who are likely to have far more serious conditions, account for 36 percent of ER business, but only 15 percent of visits.



For every age group except seniors, the share of charges generated from the ER is smaller than the corresponding share of ER volume. Given the general difference in health status between the youngest and the oldest in society, the fact that, on average, one senior visit is equivalent in cost to five pediatric visits is interesting, but not unexpected.

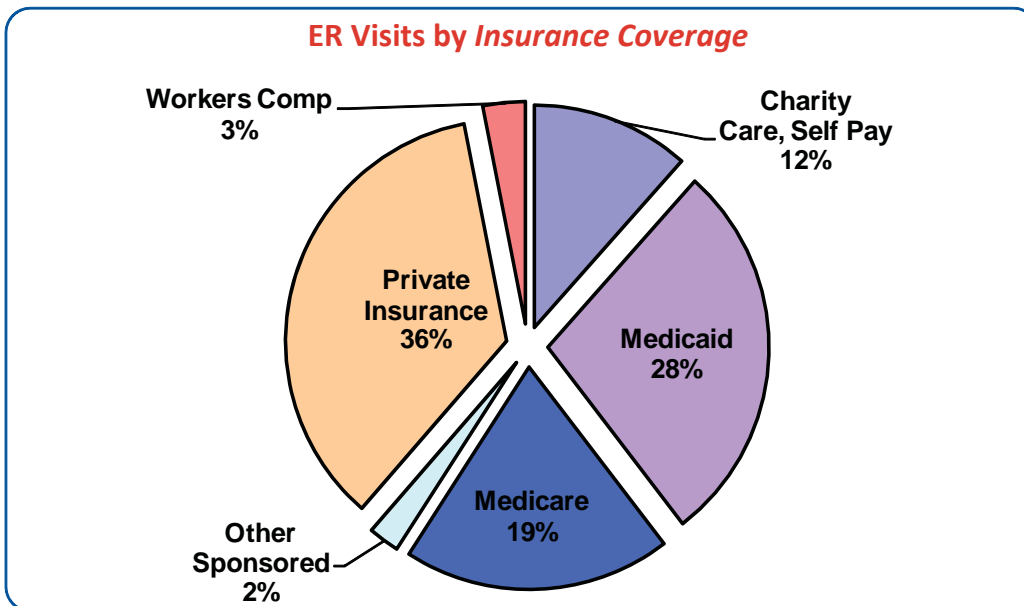
ER Visits by Age Group and Charges					
Age group	Visits	Total Charges	Average Charge	Share by Visits	Share by Charges
Infants	72,615	\$171,469,154	\$2,366	2.8%	1.3%
Ages 1 to 5	217,569	\$318,877,384	\$1,468	8.3%	2.3%
Ages 6 to 10	99,623	\$172,407,019	\$1,733	3.8%	1.3%
Ages 11 to 17	163,247	\$406,824,160	\$2,496	6.2%	3.0%
Group average			\$1,934	21.1%	7.9%
Ages 18 to 30	593,487	\$1,611,240,046	\$2,718	22.6%	11.9%
Ages 31 to 45	541,540	\$2,082,137,061	\$3,849	20.6%	15.4%
Ages 46 to 64	537,304	\$3,990,032,627	\$7,435	20.4%	29.2%
Group average			\$4,594	63.6%	56.5%
Ages 65+	405,686	\$4,810,746,477	\$11,874	15.0%	35.5%
<b>Total</b>	<b>2,631,071</b>	<b>\$13,563,733,927</b>	<b>\$5,155</b>	<b>100.0%</b>	<b>100.0%</b>

There are many theories in the policy debate about how ER facilities are used. Is ER overcrowding a result of lack of insurance, lack of incentives to seek care in other settings, limited access to physician care for Medicaid and Medicare patients, or a lack of access to routine health care? How do patients without insurance use the ER compared to patients with Medicaid, Medicare, or private insurance?

The hospital data allow mapping of the insurance status of ER patients, using the same payer type categories found in Washington State's inpatient data set (CHARS). Payer data are missing for 6.3 percent of the visit records collected; percentages for payer categories were calculated only for those records with usable payer codes.

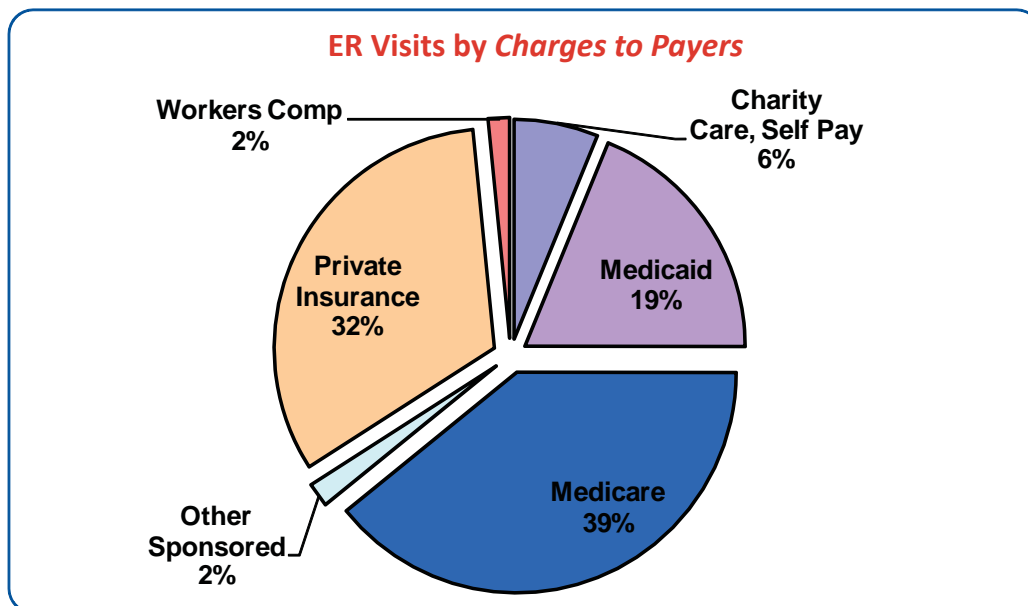
The data for this study were extracted from the initial billing records, and final determinations of primary payer may change by the end of the billing process. Charity care is about 1.2 percent of all visits in the data set. The final percentage will likely be much higher after bills are received, people apply for charity care, and reported insurance is verified. In some charity care cases, patients have insurance but cannot meet their part of the charges, including deductibles or co-payments. The "self-pay" category accounts for 10.3 percent of all visits, and while some may in fact pay for their care on their own, most of these cases will likely be designated charity care. In our analysis, we have combined charity care and self-pay categories to create estimates of "the un(under)insured."





While private payer visits are the largest single category, they comprise only 36 percent of ER cases, Medicaid and Medicare combined represent a larger share. The picture shifts dramatically when billed charges are examined.

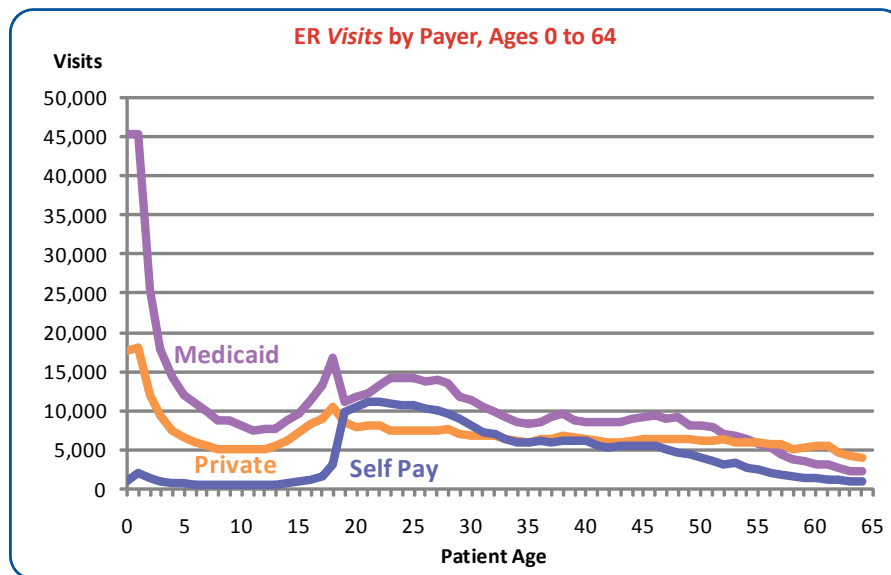
Private insurers still account for a large share of ER charges (32 percent), but Medicare patients account for nearly two out of every five dollars of ER billed charges (39 percent), reflecting again the more serious and complex nature of the conditions they present. The dollar impact of the Medicaid segment is 19 percent, and the self-pay/charity share is also smaller, at six percent.



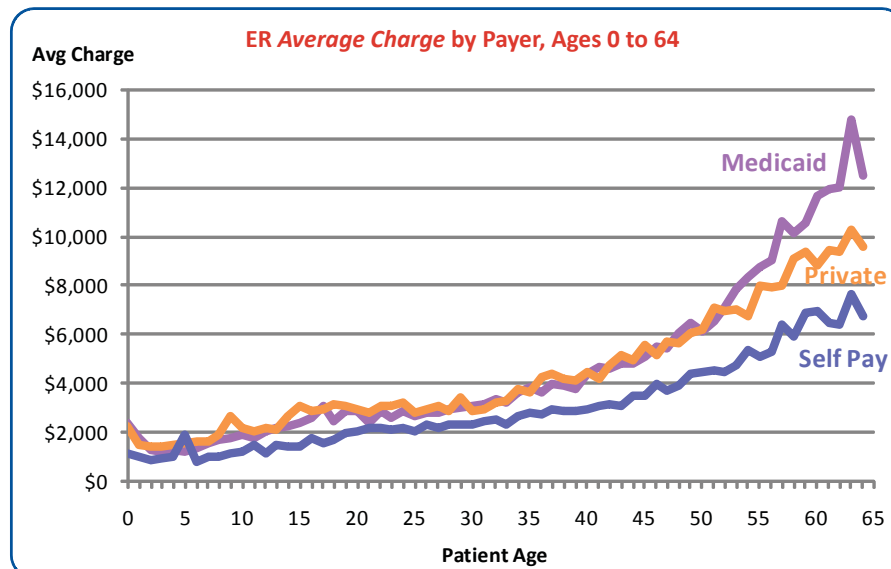


When the ER patient population is analyzed by both age and payer, seven age/payer segments account for 85 percent of visits. The largest segment is composed of adults between the ages of 18 and 64 with private insurance. They, however, make up only 23 percent of all visits. The data indicate there is not one group of patients that dominates emergency room use.

Another way to look at these patient populations is to construct a year-by-year life cycle of ER patients. The next two graphs do not include Medicare or seniors over 65, allowing the earliest part of the cycle to be seen more clearly. Individuals in their first two years of life make the most number of visits to the ER and have close to universal coverage, primarily through Medicaid. ER activity drops sharply as children grow up, until about the late teens, when it bumps up again through roughly age 30. The 18- to 30-year old segment is the largest uninsured (self-pay) group. Over the next 30 years of life, visits to the ER gradually become less frequent.



As the visit frequency diminishes, the cost of each visit gradually increases year-to-year until age 55, when the average visit charge moves up sharply. The increase is steepest for the Medicaid group.



# What Care is Provided in the Emergency Room?

The ten primary diagnoses most frequently encountered in emergency rooms are common ailments. Defined by discrete ICD-9 codes, in descending order of frequency:

- Acute upper respiratory infection
- Chest pain
- Headache
- Urinary tract infection
- Fever
- Ear infection
- Neck sprain
- Abdominal pain
- Pneumonia
- Lumbar sprain



As a group, these diagnosis account for 15 percent of all the ER visits, and just under 10 percent of all billed charges. Much of the current policy discussion about ER use turns on whether certain conditions “should” be treated in the ER, whether they require emergent care or primary care settings, and how to disincentivize “unnecessary” ER care. The problem, of course, is in defining criteria for what is “appropriate” or “inappropriate” care in an emergent setting.

A group in California called the Emergency Room Collaborative is working to address soaring Medi-Cal costs. The collaborative recently developed a set of ICD-9 diagnosis codes identifying “avoidable” conditions they believe can be kept out of emergency rooms by timely primary care. Four of the ten diagnoses above appear on this list of ER-avoidable codes: acute upper respiratory infection, headache, urinary tract infection, and ear infection.

The following table presents the fifty most frequent primary diagnosis codes in our study, for the entire eighteen month period. Of these fifty diagnoses, eight are deemed avoidable by the California collaborative, and seven of these are among the top twenty in frequency. Together, these eight avoidable diagnoses account for 9.5 percent of all ER visits in the study, but have a relatively small dollar impact accounting for only three percent of all ER charges.

There is also particular concern about the incidence of ER patients who have acute dental, psychiatric, and/or substance abuse care. This study shows two specific diagnosis codes relating to these in the top 50 list: dental disorder is eighteenth in the ranking, and depressive disorder is thirty-third.

Dental emergencies are likely to be the result of not having regular dental care or dental insurance. The psychiatric and substance abuse encounters are often the acute episodes of chronic disorders that are not otherwise being addressed. Like the California coalition’s “avoidable” situations, these are indicators of lack of access to care. A more detailed look at ER dental and mental health care issues will be presented in a second report on this study.

Top 50 Primary Diagnoses in Emergency Rooms January 2008 - June 2009 Visits				
Diagnosis Code	Diagnosis Description	ER Visits	Total Charges	Average Charge
4659	Acute upper respiratory infection NOS	50,091	\$39,975,054	\$799
78650	Chest pain NOS	44,401	\$212,989,887	\$4,802
7840	Headache	42,816	\$106,284,960	\$2,485
78900	Abdominal pain, unspecified site	87,217	\$319,274,847	\$3,661
78659	Chest pain NEC	39,927	\$253,986,582	\$6,364
5990	Urinary tract infection NOS	35,558	\$136,378,844	\$3,840
78060	Fever NOS	34,399	\$52,736,989	\$1,535
3829	Otitis media NOS (middle ear inflammation)	32,486	\$17,420,009	\$537
8470	Sprain of neck	31,083	\$58,709,134	\$1,891
78909	Abdominal pain, other specified site	30,201	\$110,084,224	\$3,647
4860	Pneumonia, organism NOS	29,892	\$286,873,855	\$9,607
8472	Sprain lumbar region	29,570	\$30,200,502	\$1,022
	sum	487,641	\$1,624,914,888	
	percent of all ER visits	18.53%	11.98%	
8830	Open wound of finger	28,546	\$26,438,330	\$927
7242	Lower back pain	26,613	\$38,740,641	\$1,457
462	Acute throat inflammation	25,702	\$20,092,101	\$782
78703	Vomiting alone	24,685	\$37,647,309	\$1,529
4660	Acute bronchitis	24,248	\$36,411,982	\$1,503
5259	Dental disorder NOS	23,459	\$12,474,190	\$532
78020	Fainting	22,804	\$108,582,113	\$4,766
34690	Migraine, unspecified	22,605	\$39,014,422	\$1,727
5589	Noninfectious gastroenteritis NEC	22,299	\$64,738,261	\$2,908
7295	Pain in limb	21,521	\$31,058,006	\$1,444
920	Contusion face/scalp/neck	19,505	\$37,668,557	\$1,933
95901	Head injury NOS	19,257	\$51,298,571	\$2,666
6826	Cellulitis of leg (acute skin infection)	19,208	\$90,621,732	\$4,723
	cumulative sum	788,093	\$2,219,701,101	
	cumulative percent	29.95%	16.36%	
49392	Asthma NOS with acute exacerbation	16,417	\$47,926,881	\$2,921
7804	Dizziness and giddiness	16,193	\$52,250,608	\$3,230
64893	Conditions complicating pregnancy/childbirth	15,726	\$32,614,995	\$2,079
7862	Cough	14,895	\$16,532,378	\$1,111
78701	Nausea with vomiting	14,593	\$41,875,008	\$2,874
490	Bronchitis NOS	14,148	\$20,016,002	\$1,417
78906	Abdominal pain, epigastric	13,959	\$48,198,517	\$3,459
311	Depressive disorder NEC	13,944	\$30,120,601	\$2,161
87342	Open wound of forehead	13,766	\$22,890,396	\$1,665
5225	Tooth root abscess	12,998	\$10,501,808	\$809
	cumulative sum	934,732	\$2,542,628,295	
	cumulative percent	35.53%	18.75%	

<b>Top 50 Primary Diagnoses in Emergency Rooms January 2008 - June 2009 Visits</b>				
<b>Diagnosis Code</b>	<b>Diagnosis Description</b>	<b>ER Visits</b>	<b>Total Charges</b>	<b>Average Charge</b>
84500	Sprain of ankle NOS	12,758	\$13,988,400	\$1,099
5921	Kidney stone, ureter	12,751	\$71,761,215	\$5,634
49121	Acute obstructive chronic bronchitis	12,707	\$145,103,480	\$11,432
78652	Painful respiration	12,426	\$36,809,149	\$2,965
8449	Sprain of knee & leg NOS	12,115	\$12,779,847	\$1,056
78903	Abdominal pain, right lower quadrant	11,574	\$54,837,939	\$4,740
9221	Contusion of chest wall	11,475	\$23,803,190	\$2,076
8730	Open wound of scalp	11,427	\$21,337,127	\$1,869
27651	Dehydration	11,239	\$54,450,741	\$4,847
42731	Atrial fibrillation	11,230	\$112,842,559	\$10,062
8820	Open wound of hand	11,177	\$11,863,868	\$1,063
7245	Backache NOS	11,067	\$21,616,287	\$1,955
78039	Convulsions NEC	10,993	\$45,793,428	\$4,169
78791	Diarrhea	10,556	\$23,842,938	\$2,262
6823	Cellulitis of arm (acute skin infection)	10,326	\$27,432,490	\$2,660
	<b>Totals for Top 50 Primary Dx</b>	<b>1,108,553</b>	<b>\$3,220,890,955</b>	<b>\$2,905</b>
	<b>cumulative percent of total</b>	<b>42.13%</b>	<b>23.75%</b>	
	<b>Total for all visits in study</b>	<b>2,631,071</b>	<b>\$13,563,733,927</b>	<b>\$5,155</b>
<i>Notes: 1. NOS = Not Otherwise Specified 2. NEC = Not Elsewhere Classified</i>				

The study data allow comparisons of the kinds of emergency care sought by patient populations that are set apart by their type (or lack) of insurance coverage. The following tables list the 25 most frequent primary diagnosis codes for patients who have Medicaid insurance, have private insurance, and the uninsured. There is a high level of commonality among the lists. Most of the diagnoses found in one table are found in the other two, though in different rank positions.

<b>Medicaid -- Top 25 Primary Diagnosis</b>				
<b>Diagnosis Code</b>	<b>Diagnosis Description</b>	<b>ER Visits</b>	<b>Total Charges</b>	<b>Average Charge</b>
4659	Acute upper respiratory infection NOS	27,373	\$19,631,373	\$717
3829	Otitis media NOS (middle ear inflammation)	17,099	\$9,121,660	\$533
78060	Fever NOS	16,506	\$19,043,380	\$1,154
7840	Headache	11,614	\$24,236,385	\$2,087
78703	Vomiting alone	10,225	\$11,921,009	\$1,166
5259	Dental disorder NOS	9,538	\$4,856,392	\$509
462	Acute throat inflammation	9,530	\$6,584,374	\$691
78900	Abdominal pain, unspecified site	9,134	\$23,880,687	\$2,614
64893	Conditions complicating pregnancy/childbirth	9,021	\$17,798,705	\$1,973
5990	Urinary tract infection NOS	8,281	\$20,737,982	\$2,504
78909	Abdominal pain, other specified site	7,745	\$25,595,069	\$3,305
4860	Pneumonia, organism NOS	7,725	\$49,929,569	\$6,463
4660	Acute bronchitis	7,682	\$8,946,436	\$1,165
5589	Noninfectious gastroenteritis NEC	7,444	\$13,244,491	\$1,779
8472	Sprain lumbar region	7,419	\$6,235,758	\$841
7242	Lower back pain	7,403	\$8,702,808	\$1,176
78650	Chest pain NOS	6,952	\$29,959,702	\$4,310
34690	Migraine, unspecified	6,104	\$9,319,832	\$1,527
7862	Cough	6,071	\$5,528,061	\$911
78659	Chest pain NEC	5,950	\$36,726,920	\$6,173
49392	Asthma NOS with acute exacerbation	5,716	\$15,192,236	\$2,658
7295	Pain in limb	5,541	\$6,680,302	\$1,206
7999	Viral infection NOS	5,386	\$5,327,511	\$989
920	Contusion face/scalp/neck	5,143	\$7,277,500	\$1,415
8470	Sprain of neck	4,983	\$8,388,203	\$1,683
	<b>Totals for Top 25 Diagnoses</b>	<b>225,585</b>	<b>\$394,866,347</b>	<b>\$1,750</b>
	<b>Medicaid Total</b>	<b>692,124</b>	<b>\$2,467,389,265</b>	<b>\$3,565</b>

The similarity in the kinds of care sought is strongest between the Medicaid and private payer populations. The presence of the same number of “avoidable” conditions between the two groups raises some questions about access to primary/preventative care. Those with private insurance – most likely from group coverage through an employer – have sizable co-pays for using an emergency room, typically \$75 to \$100.

<b>Private Payers -- Top 25 Primary Diagnosis Codes</b>				
<b>Diagnosis Code</b>	<b>Diagnosis Description</b>	<b>ER Visits</b>	<b>Total Charges</b>	<b>Average Charge</b>
78650	Chest pain NOS	17,294	\$84,776,398	\$4,902
78659	Chest pain NEC	17,218	\$107,716,000	\$6,256
7840	Headache	16,123	\$44,325,474	\$2,749
8470	Sprain of neck	14,761	\$28,192,507	\$1,910
4659	Acute upper respiratory infection NOS	14,565	\$11,866,327	\$815
78060	Fever NOS	12,538	\$19,949,321	\$1,591
8830	Open wound of finger	11,472	\$10,572,889	\$922
78909	Abdominal pain, other specified site	11,024	\$41,250,365	\$3,742
78900	Abdominal pain, unspecified site	10,780	\$33,033,040	\$3,064
3829	Otitis media NOS (middle ear inflammation)	10,733	\$5,646,055	\$526
5990	Urinary tract infection NOS	10,444	\$29,484,774	\$2,823
34690	Migraine, unspecified	9,186	\$17,689,769	\$1,926
462	Acute throat inflammation	9,114	\$7,635,516	\$838
78020	Fainting	9,005	\$36,408,556	\$4,043
78703	Vomiting alone	8,996	\$14,037,357	\$1,560
5589	Noninfectious gastroenteritis NEC	8,790	\$27,139,102	\$3,087
4860	Pneumonia, organism NOS	8,591	\$67,830,574	\$7,896
8472	Sprain lumbar region	8,198	\$9,517,569	\$1,161
95901	Head injury NOS	7,844	\$18,604,751	\$2,372
5921	Kidney stone, ureter	7,421	\$40,685,275	\$5,482
920	Contusion face/scalp/neck	7,216	\$12,228,793	\$1,695
4660	Acute bronchitis	7,151	\$10,610,147	\$1,484
7242	Lower back pain	6,763	\$10,848,752	\$1,604
7295	Pain in limb	6,423	\$9,988,123	\$1,555
87342	Open wound of forehead	6,243	\$8,800,409	\$1,410
	<b>Totals for Top 25 Diagnoses</b>	<b>257,893</b>	<b>\$708,837,842</b>	<b>\$2,749</b>
	<b>Private Payers Total</b>	<b>876,134</b>	<b>\$4,258,132,471</b>	<b>\$4,860</b>



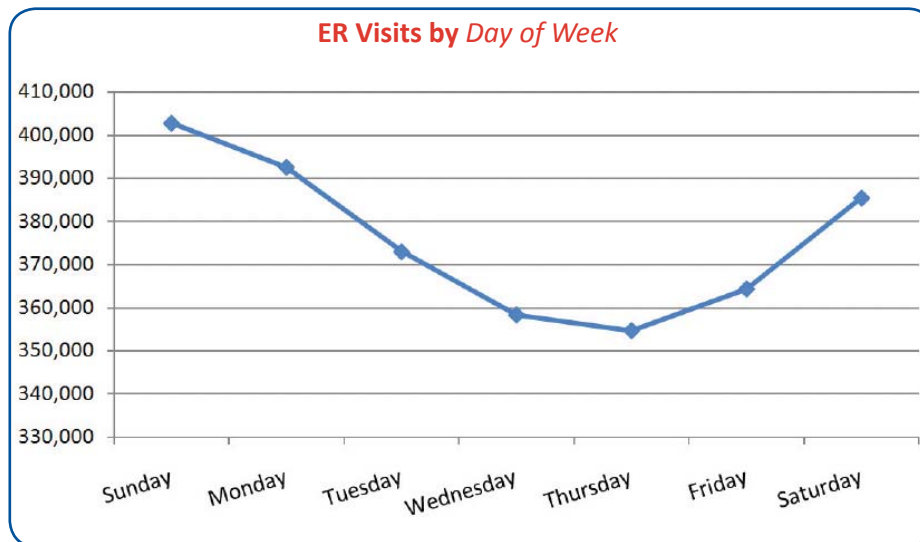
One notable difference among the three populations is the presence or absence of dental or mental health diagnoses. The pattern reinforces these as indicators of lack of access to routine care. In the Medicaid group, dental disorder ranks sixth; but in the private payer group, no dental or mental health codes appear in the Top 25 list. For the uninsured group (self-pay/charity), dental disorder tops the list, and two psychiatric codes – depressive disorder and alcohol abuse – appear as numbers 22 and 23 on the list.

<b>Self-Pay/Uninsured/Charity -- Top 25 Primary Diagnosis Codes</b>				
<b>Diagnosis Code</b>	<b>Diagnosis Description</b>	<b>ER Visits</b>	<b>Total Charges</b>	<b>Average Charges</b>
5259	Dental disorder NOS	6,204	\$3,036,288	\$489
7840	Headache	5,352	\$11,596,118	\$2,167
8472	Sprain lumbar region	4,639	\$3,948,159	\$851
78650	Chest pain NOS	4,136	\$15,027,440	\$3,633
5225	Tooth root abscess	4,110	\$2,937,300	\$715
78900	Abdominal pain, unspecified site	4,007	\$11,162,963	\$2,786
8470	Sprain of neck	3,947	\$6,801,038	\$1,723
4660	Acute bronchitis	3,752	\$3,875,092	\$1,033
462	Acute throat inflammation	3,724	\$2,819,902	\$757
7242	Lower back pain	3,706	\$4,236,250	\$1,143
78909	Abdominal pain, other specified site	3,546	\$11,811,227	\$3,331
6826	Cellulitis of leg (acute skin infection)	3,398	\$9,983,413	\$2,938
78659	Chest pain NEC	3,323	\$15,112,947	\$4,548
4659	Acute upper respiratory infection NOS	3,190	\$2,605,706	\$817
7295	Pain in limb	2,998	\$3,652,175	\$1,218
5990	Urinary tract infection NOS	2,880	\$4,626,707	\$1,606
8830	Open wound of finger	2,659	\$2,476,264	\$931
6823	Cellulitis of arm (acute skin infection)	2,463	\$5,259,163	\$2,135
34690	Migraine, unspecified	2,423	\$3,517,753	\$1,452
7862	Cough	2,296	\$2,430,498	\$1,059
49392	Asthma NOS with acute exacerbation	2,076	\$4,214,557	\$2,030
311	Depressive disorder NEC	2,011	\$3,465,164	\$1,723
30500	Alcohol abuse-unspecified	1,998	\$3,986,186	\$1,995
3829	Otitis media NOS (middle ear inflammation)	1,972	\$997,252	\$506
78906	Abdominal pain, epigastric	1,873	\$5,135,169	\$2,742
	<b>Totals for Top 25 Diagnoses</b>	<b>82,683</b>	<b>\$144,714,728</b>	<b>\$1,750</b>
	<b>Self Pay/Charity Total</b>	<b>284,339</b>	<b>\$811,693,909</b>	<b>\$2,855</b>
	<b>Missing Total</b>	<b>165,548</b>	<b>\$457,181,454</b>	
	<b>Grand Total</b>	<b>2,631,071</b>	<b>\$13,563,733,927</b>	
Notes: 1. NOS = Not Otherwise Specified 2. NEC = Not Elsewhere Classified				

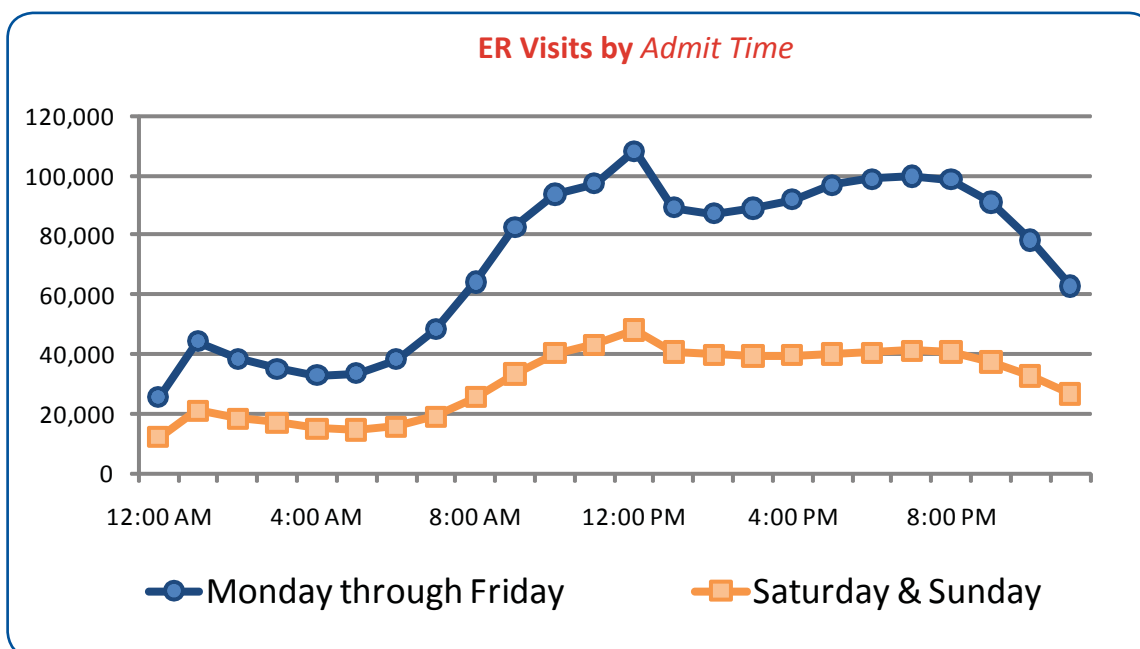


# When is Demand Highest for Emergency Services?

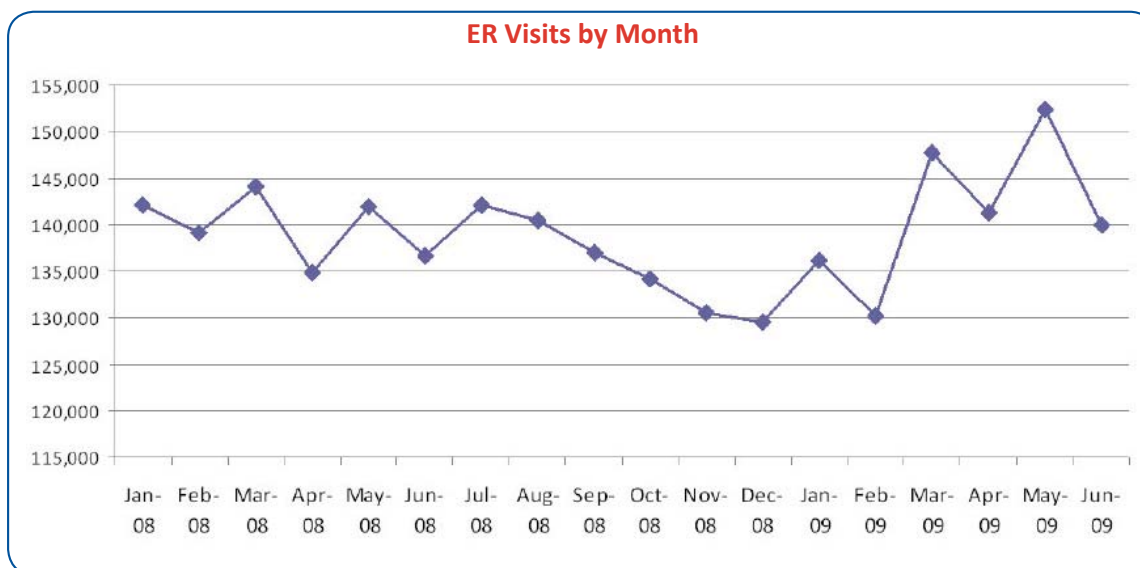
The 2.6 million visit records in our study confirm the conventional wisdom that emergency rooms are busier on the weekends. The graph below shows a neatly rolling cycle: Traffic picks up on Friday, peaks on Sunday, and starts dropping off on Monday. Demand is lowest on Wednesdays and Thursdays.



The popular impression that ER use increases at night does not hold up in the study data. The graph below shows volume starting up at 8:00 a.m., peaking at noon, and staying steady until 10:00 p.m. Midnight values (00:00 hour) are not included because when hospitals do not enter ER admission time, midnight is used as the default entry. The pattern of ER visits by admit time is similar for weekends and weekdays.



Tracking seasonality – month-to-month variation through the calendar year – is not as clear-cut. Some data from other sources show some hospitals in this study consistently underreported ER visits across many months, or underreported in several different months. These missing data records are perhaps the most serious limitation of this study. Nonetheless, the zigzag pattern of the late winter and spring, and the decline from the summer through the end-of-year holidays, is similar to patterns of inpatient admissions.



# Conclusion

WSHA's ER report provides a first look at the services provided and the patients served in hospital emergency settings across our state. From this report, a few findings stand out:

- People of all ages use the emergency room, but the cost of care for seniors in our emergency rooms is significantly higher than for other populations.
- All populations, regardless of insurance coverage, use the emergency room for so-called “unnecessary” care that could be better treated in a primary care setting.
- Patients with Medicaid insurance and without any insurance rely on the emergency room for dental care and mental health care due to lack of access to these services in the community.
- Emergency rooms are not busiest at night, contrary to popular belief.
- Deductibles do not appear to dissuade people from using the emergency room, even for “unnecessary” care.

A second report containing further analysis of the ER data will be released soon. This report will address the issue of “appropriate” or “unnecessary” care in more detail. It will include information on the disposition of ER patients – who were routinely discharged to home, who were admitted to acute care, who went to other facilities to receive more care. The report will also look at variation in patient populations and care among different size facilities and patterns in how far people travel for emergency care. WSHA intends to continue and expand its data collection and produce a series of reports as new data become available. We welcome your feedback on topics of interest. Please take a few moments to fill out a short survey at: <https://www.surveymonkey.com/s/eruse>.

Again, we thank those hospitals that participated in this report through submitting the data on the 2.6 million ER visits. We look forward to their and other hospitals' participation as the project moves forward.



**Jim Cannon**  
Executive Director, Health Information Program  
Washington State Hospital Association



**Jane Feldman**  
Director, Analytic Services, Health Information Program  
Washington State Hospital Association

*Special thanks to Thom Rees, Health Information Program data analyst, for the collection and compilation of the data set. For more detailed information on any of these topics and for citations, please contact the Health Information Program through Jim Cannon at [jimc@wsha.org](mailto:jimc@wsha.org) or (206) 216-2551 or Jane Feldman at [jane@wsha.org](mailto:jane@wsha.org) or (206) 216-2505 .*