

State of
Ohio

2014

EMS Incident Reporting System
Annual Data Report

Published: June 2015

Contents

Appendices.....	4
Introduction.....	5
Limitations of the Data	6
Preamble from Dr. Cunningham	7
Service Descriptors	8
2014 State of Ohio EMSIRS Daily Run Volume.....	9
10-Year EMSIRS Annual Record Volume Trend.....	10
Location Type	11
Incident/Patient Disposition.....	12
2014 State of Ohio EMS Runs per County Map.....	13
Average Elapsed Time Segments by Population Density.....	14
Patient Descriptors	15
Patient Sex	16
Patient Age.....	17
Patient Age by Sex	18
Top 10 Pediatric Primary Impressions	19
Top 10 Adult Primary Impressions	20
Top 10 Geriatric Primary Impressions	21
Quantitative Analysis	22
Percentage of Chest Pain Runs Using 12-lead ECG	23
Percentage of 12-lead ECGs That Were Transmitted.....	24
Percentage of Chest Pain Calls Given Aspirin.....	25
Percentage of chest pain runs using 12-lead ECG, transmitted, and given aspirin	26

Stroke Calls in Which Blood Glucose Was Tested.....27

Stroke Calls in Which a Complete GCS Was Recorded.....28

Definitive Airway Management Usage.....29

Burn Patient Pain Management.....30

Blood Glucose Analysis Administered in Diabetic Calls31

Oxygen Administration in Calls Presenting with Breathing Problems32

Oxygen Administration in Calls Presenting with Respiratory Distress.....33

Oxygen Administration in Calls Presenting with Respiratory Arrest34

Appendices

Appendix A: Data Flow Schematic.....	35
Appendix B: Counties by Population Density Designation.....	36
Appendix C: Participating Agencies for 2014 by County.....	37
Appendix D: County per Capita Run Rate.....	47

Introduction

The 2014 EMS Incident Reporting System Annual Data Report is the first report to utilize data from Ohio's EMS Incident Reporting System (EMSIRS) to provide both descriptive statistics and benchmarks for EMS performance improvement.

EMSIRS is operated and maintained by the Ohio Department of Public Safety, Division of Emergency Medical Services. The Ohio State Board of Emergency Medical, Fire and Transportation Services has statutory authority over EMSIRS and supervises its operations.

This report was created by the Division of Emergency Medical Services' Office of Research and Analysis. It is divided into two parts. The first part is the descriptive section. It gives a picture of EMS incidents across the state. The second part is the performance measures section. It provides benchmarks for care.

The performance measures section is new for EMS, not just in Ohio, but nationwide. While it is new, it is *the reason* data is collected in EMSIRS. Peter Drucker, considered the 'founder of modern management' said, "What gets measured gets improved." With these measurements each EMS agency will be able to compare their performance against the rest of the state, allowing improvement of care and sharing of best practices.

As with the 'first' anything, the 2014 EMS Incident Reporting System Annual Data Report is simply the starting point for EMS performance measures. Currently, a federally-funded effort, the EMS Compass Initiative, is underway to create national standard EMS performance measures (www.emscompass.org). When that project is completed in 2016 those measures will be incorporated into this report. Until that time, we welcome suggestions for improving and expanding this report. Your suggestions can be sent to the EMS Office of Research and Analysis at EMSdata@dps.ohio.gov.

Data Source

The EMS Incident Reporting System (EMSIRS) is the source of information for this Annual Data Report. Submission of data to EMSIRS is required in law (Revised Code §4765.06) for all emergency medical service organizations. Since the system began collecting emergency run data on January 1, 2002, EMSIRS has collected over 12 million records. See Appendix A for a data flow schematic and Appendix C for a list of EMS agencies submitting 2014 EMSIRS data.

Limitations of the Data

Accuracy: The accuracy of data received by EMSIRS, and therefore in this report, is limited by the number of individual EMS agencies submitting data to EMSIRS and the accuracy of these submissions. No external validation of the data has been performed. Every effort is made to ensure the accuracy of the received data through automatic error checks on the data as it is submitted. Checks are made for validity (e.g., only specified codes allowed; no future dates) and for logic (e.g., negative age; pregnant male). Records with errors in validity or logic are not accepted into the database. The submitter receives a message with a list of rejected records and the type of error for each. While the submitter is supposed to correct and resubmit the rejected records, there is no way within the scope of our operations to verify this is being done.

EMSIRS Participation: Submission of data to EMSIRS by all emergency medical service organizations is required in law (Revised Code §4765.06). A list of EMS agencies that submitted data used in this report can be found in Appendix C.

Incident dates: Dates of incidents as used in this report are based on the date the EMS unit was notified by dispatch. The date/time of the call to dispatch is not uniformly available, whereas the date/time of EMS unit notification is.

Rounding: Because of rounding, percentages displayed in graphs and tables may not always total 100%.

Preamble

Emergency medical services (EMS) have evolved significantly since its inception. Concurrently, the capabilities and expectations of EMS have escalated, and quality data and research have been the drivers of change. In 1998, the Ohio Department of Public Safety, Division of EMS embarked on a mission to transition from the collection of handwritten prehospital patient care reports mailed by Ohio EMS agencies and stored in boxes to a system where essential elements of information could be extracted from these reports and entered into an electronic data repository. The EMS Board appointed a System Management Committee to determine the data elements to be collected and the framework under which this information would be submitted, secured, and analyzed. The EMS Board also prioritized grant funds to support Ohio EMS agencies in their acquisition of computers with a basic platform capable of collection and submission of the desired data. Following years of dedicated work and networking with EMS partners and stakeholders, the Ohio EMS Incident Reporting System (EMSIRS) was commenced on January 1, 2002.

Patient care measures in our healthcare system, including for EMS, are increasingly based upon demonstrated patient outcomes and evidence-based medicine supported by quality data and research. Thankfully, media-fueled popularity for products or fancy sales pitches from vendors as a primary impetus for change are quickly fading into the horizon. The depth and breadth of knowledge required for the Ohio EMS scope of practice has been advanced over the years. For our medical directors, the formal recognition of EMS by the American Board of Medical Specialties as a practice of medicine on September 23, 2010 was a historic milestone. The progression of the profession of EMS is accompanied with a greater duty and responsibility to seek and embrace the best modes of treatment for our patients. With the benefit of data acquisition and analysis and quality EMS research, the former image of EMS as a cursory patient transport mechanism will continue to be replaced by that of an invaluable profession that is an essential and critically vital sector of our nation's healthcare system.

I am honored to present the inaugural State of Ohio EMS Incident Reporting System annual report. Under the esteemed leadership and expertise of Section Chief Tim Erskine and EMS & Trauma Data Program Manager Sue Morris, this report was compiled by an incredible team from the Office of Research and Analysis of the Ohio Department of Public Safety, Division of EMS. Although the report has been approved by the Emergency Medical, Fire, and Transportation Services Board, the true authors are the dedicated Ohio EMS providers and agencies who acquired, electronically recorded, and submitted their data to EMSIRS and the Ohio EMS medical directors who provided the written protocols and quality assurance processes essential to patient care.

Knowledge is powerful. Data provides us with great understanding. Data provides us with the knowledge of our current status and guides us down the path of appropriate change. The contents of the State of Ohio EMSIRS annual report is your data working for you. I encourage all of Ohio's EMS agencies, providers, and medical directors to use this product of your labor as a resource tool for introspective organizational assessment, benchmarking, and a catalyst for heightened goals for patient care in the future. As eloquently stated by Atul J. Butte, M.D., Ph.D., "Hiding within those mounds of data is knowledge that could change the life of a patient, or change the world."

Carol A. Cunningham, M.D., FAAEM, FACEP
State Medical Director
Ohio Department of Public Safety, Division of EMS

Service Descriptors

2014 - State of Ohio EMSIRS Daily Run Volume

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	3,286	2,881	2,690	3,040	2,753	3,023	3,162	2,979	2,861	2,855	2,824	3,079	35,433
2	*3,723	2,928	3,011	2,942	2,747	3,156	2,780	2,746	3,341	3,043	2,813	3,016	36,246
3	3,276	2,921	2,994	2,888	2,558	3,202	3,014	†2,550	3,183	3,103	2,937	3,023	35,649
4	3,117	2,807	2,980	3,029	2,619	2,898	2,971	2,868	3,314	2,973	2,833	3,164	35,573
5	2,688	3,070	2,968	2,764	2,905	3,028	2,938	2,696	3,519	2,885	3,004	2,941	35,406
6	3,203	2,948	3,028	2,897	3,192	3,090	2,768	2,806	2,782	3,339	3,054	2,635	35,742
7	3,379	2,870	3,282	2,883	3,148	3,120	3,087	2,988	2,789	3,159	2,934	2,816	36,455
8	*3,615	2,771	3,014	2,757	3,296	2,853	2,981	2,959	3,315	2,908	2,735	3,211	36,415
9	3,444	2,879	2,721	3,077	3,221	2,850	3,158	2,908	3,240	2,941	2,736	2,834	36,009
10	3,461	3,315	3,219	3,100	3,011	2,737	2,969	2,954	3,285	3,179	3,142	2,933	37,305
11	2,964	3,072	3,177	3,104	2,964	3,064	3,084	3,039	2,926	3,010	3,060	3,060	36,524
12	2,784	3,074	3,054	3,063	3,344	3,198	2,964	3,003	3,118	3,002	2,783	3,217	36,604
13	3,397	3,261	3,098	3,213	2,955	3,171	2,887	3,036	3,028	3,302	3,060	3,025	37,433
14	3,279	3,192	3,179	3,132	3,054	3,139	3,250	3,117	3,003	3,369	2,906	2,659	37,279
15	2,938	2,876	2,747	2,944	2,997	3,057	3,130	3,166	3,195	3,341	2,739	3,392	36,522
16	3,434	2,955	†2,474	3,021	2,770	3,411	2,731	3,119	2,997	3,169	2,732	3,310	36,123
17	3,073	3,132	2,955	3,019	2,815	3,190	2,824	3,046	3,166	3,351	3,259	2,835	36,665
18	2,779	3,444	3,116	2,903	2,961	3,170	2,945	3,238	3,056	3,003	3,012	3,019	36,646
19	2,708	3,181	2,939	2,800	3,105	2,961	2,676	3,240	3,382	2,885	3,003	3,277	36,157
20	2,938	3,346	2,878	2,843	3,063	2,871	2,902	3,282	3,343	3,216	2,867	2,992	36,541
21	2,933	3,245	3,162	3,144	3,074	3,104	3,104	3,012	3,047	2,966	3,020	3,032	36,843
22	2,778	2,989	2,711	3,014	3,197	3,050	3,120	3,348	3,163	3,027	*3,635	3,349	37,381
23	3,248	2,822	2,640	2,986	3,173	3,224	2,721	3,154	3,206	3,137	2,946	3,539	36,796
24	3,242	3,117	2,951	3,034	3,026	3,197	2,742	2,974	3,250	2,935	3,384	3,311	37,163
25	3,400	3,233	2,901	2,947	3,115	3,169	2,927	3,197	3,180	3,182	2,961	2,686	36,898
26	3,157	2,913	2,829	2,931	3,043	3,252	2,686	3,008	3,299	3,095	2,742	3,151	36,106
27	3,166	2,938	2,801	2,833	3,473	3,257	2,601	3,301	3,230	3,321	2,619	2,940	36,480
28	2,893	2,781	2,811	2,699	3,287	2,822	2,610	3,130	2,957	3,124	2,838	3,232	35,184
29	3,084		2,860	2,817	3,116	2,976	†2,524	3,258	3,385	2,937	2,992	3,414	33,363
30	3,002		2,752	2,972	3,247	3,193	2,667	3,201	2,941	2,900	2,894	3,088	32,857
31	3,024		3,092		3,210		2,696	2,918		3,073		2,948	20,961
Total	97,413	84,961	91,034	88,796	94,439	92,433	89,619	94,241	94,501	95,730	88,464	95,128	1,106,759

** Data represents all records uploaded as of 4/14/2015

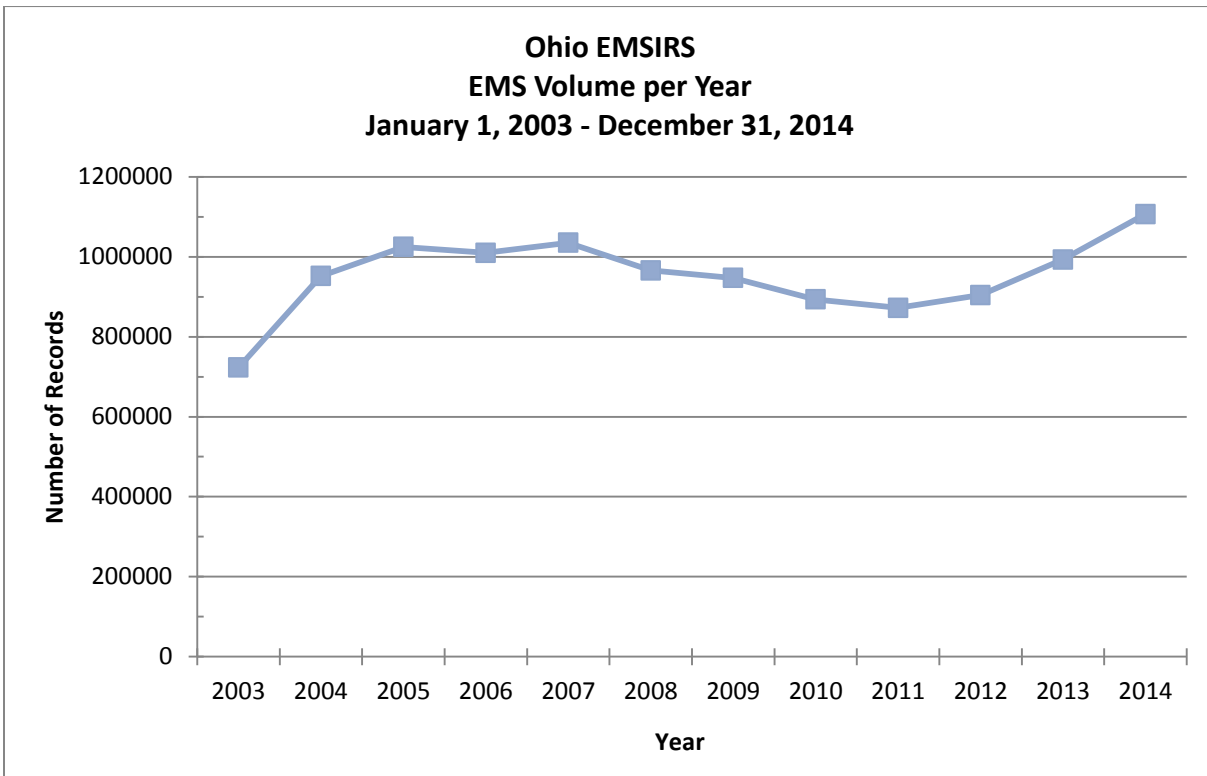
*Top 3 Busiest Days by Volume

†Top 3 Slowest Days by Volume

2014 State of Ohio EMSIRS Run Volume

In 2014, EMSIRS has been uploaded with 1,106,759 records, presented above as a crosstab of number of runs for each day of each month. For 2014, this is a daily average of 3,032 runs.

10-Year EMSIRS Annual Record Volume Trend

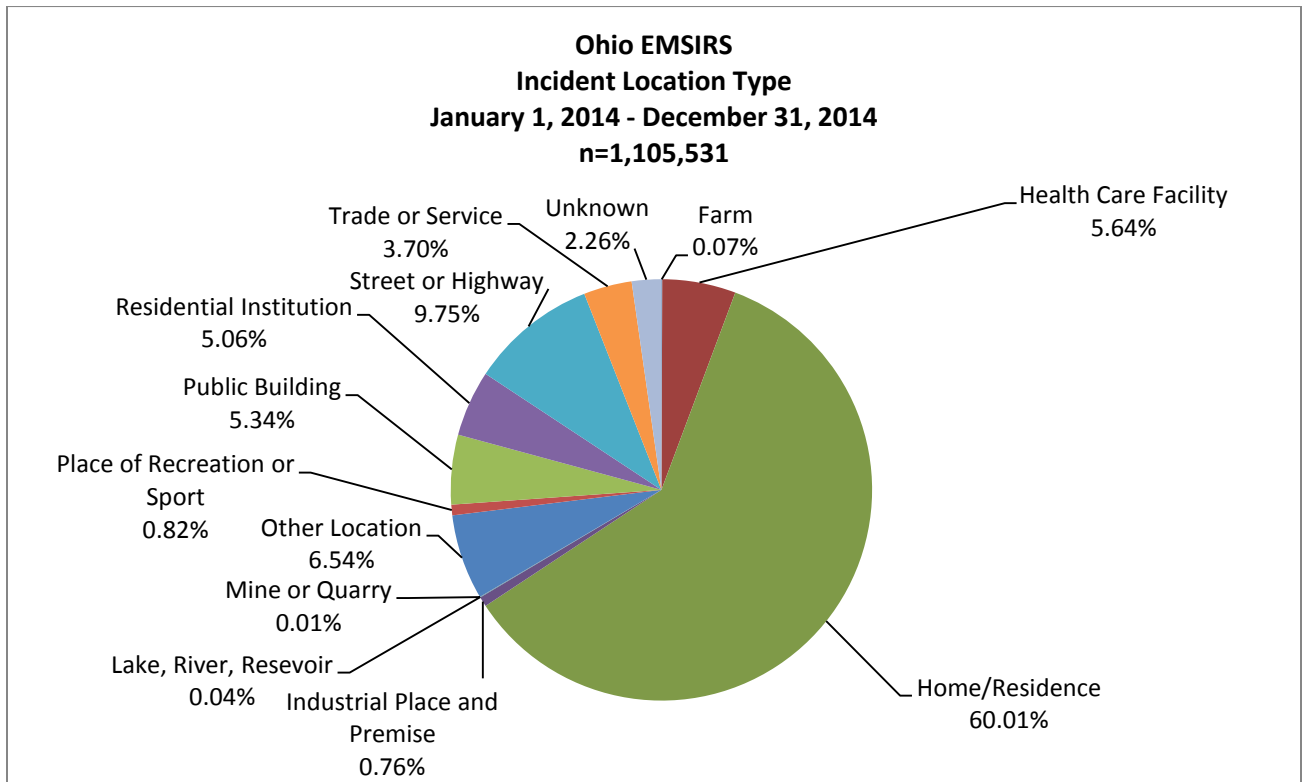


	Records												
	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	Total
Jan	59,803	76,551	87,843	83,447	86,479	81,884	82,603	77,356	76,814	80,018	78,023	97,413	967,054
Feb	51,364	68,359	83,500	76,450	82,904	82,351	72,723	73,542	71,959	74,980	68,355	84,961	890,150
Mar	55,601	75,850	91,106	87,083	87,139	83,859	81,626	77,086	74,134	76,318	77,058	91,034	956,231
Apr	55,428	77,566	85,676	83,852	82,824	78,311	79,784	70,530	72,164	70,547	78,341	88,796	922,688
May	59,048	82,041	86,005	88,219	91,359	80,533	80,100	77,810	76,499	75,835	84,123	94,439	973,873
Jun	58,203	80,755	85,590	83,705	88,175	81,236	80,787	75,887	73,579	73,338	83,499	92,433	953,284
July	60,214	82,438	87,867	87,554	86,161	81,041	81,577	74,624	75,608	76,969	87,137	89,618	965,668
Aug	63,646	81,105	87,800	85,963	90,411	80,801	80,372	77,559	77,426	72,983	89,703	94,241	973,419
Sep	62,820	84,049	85,233	83,952	86,857	80,481	77,417	71,731	71,407	72,393	85,834	94,489	946,729
Oct	64,983	84,087	84,067	84,906	87,174	77,287	79,931	73,502	71,983	80,576	88,326	95,721	955,486
Nov	62,158	76,798	77,431	80,349	81,833	76,577	73,471	70,160	63,019	72,780	82,928	88,427	885,464
Dec	69,755	82,422	82,776	84,486	83,814	81,539	76,678	73,691	67,824	77,395	89,690	95,091	907,497
Total	723,023	952,021	1,024,894	1,009,966	1,035,130	965,900	947,069	893,478	872,416	904,132	993,017	1,106,663	1,129,7543

10-Year EMSIRS Volume Trend

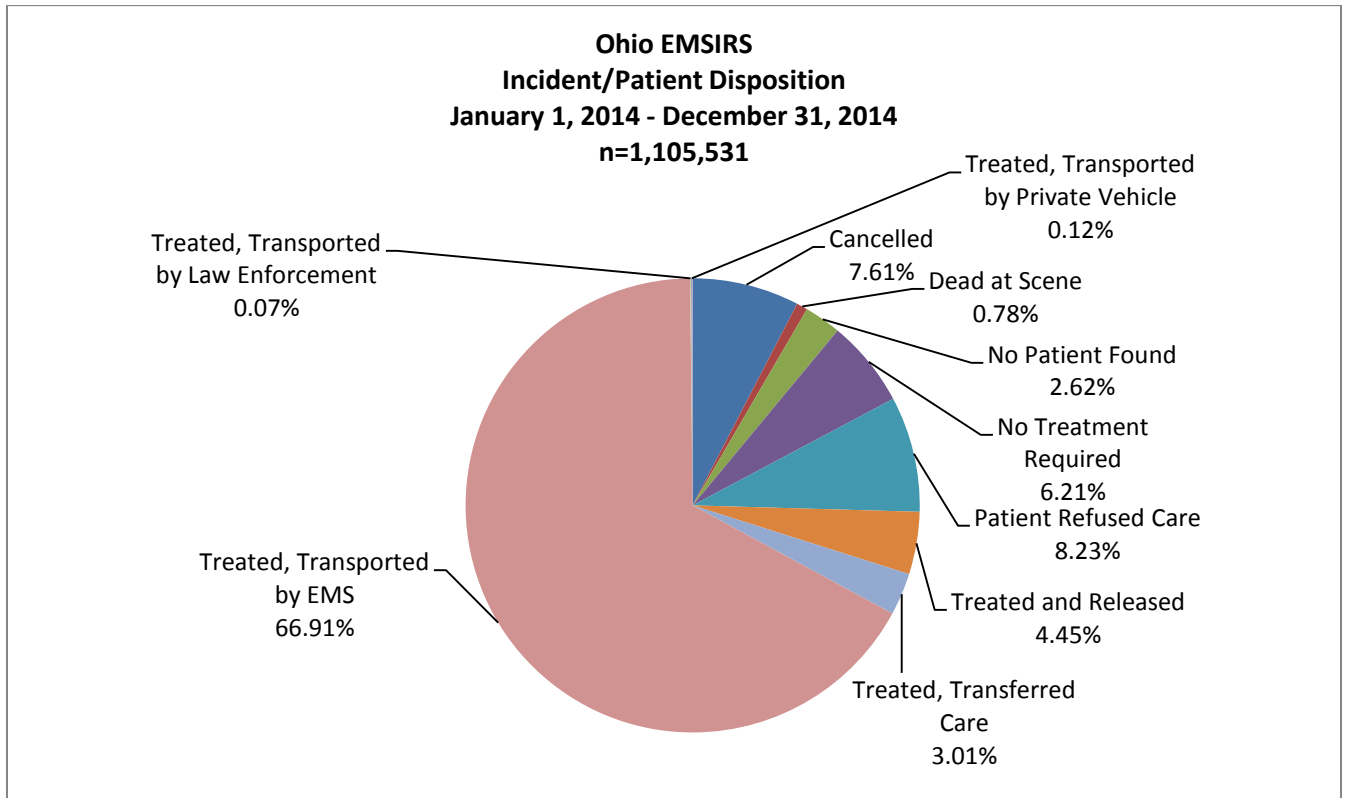
In 2014, there were 1,106,663 records uploaded to EMSIRS in the State of Ohio as of April 14, 2015.

Location Type



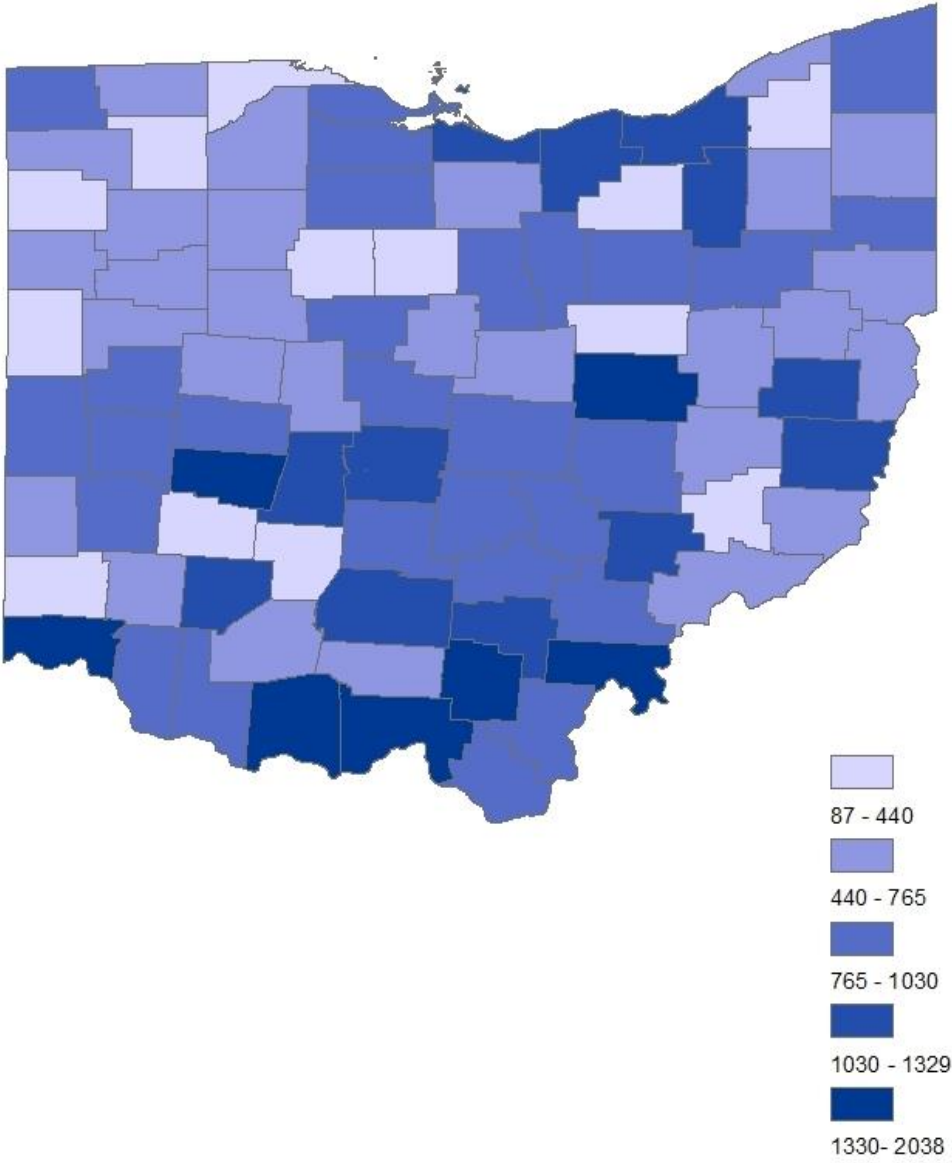
2014		
Primary Impression	# of Records	% of Records
Farm	743	.06%
Health Care Facility	62,319	5.64%
Home/Residence	663,455	60.01%
Industrial Place	8,358	0.76%
Lake, River, Reservoir	417	0.04%
Mine or Quarry	149	0.01%
Other Location	72,328	6.54%
Place of Rec. or Sport	9,023	0.82%
Public Building	59,033	5.34%
Residential Institution	55,940	5.06%
Street or Highway	107,833	9.76%
Trade or Service	40,921	3.70%
Unknown	25,012	2.26%
Total	1,105,531	100.0%

Incident/Patient Disposition



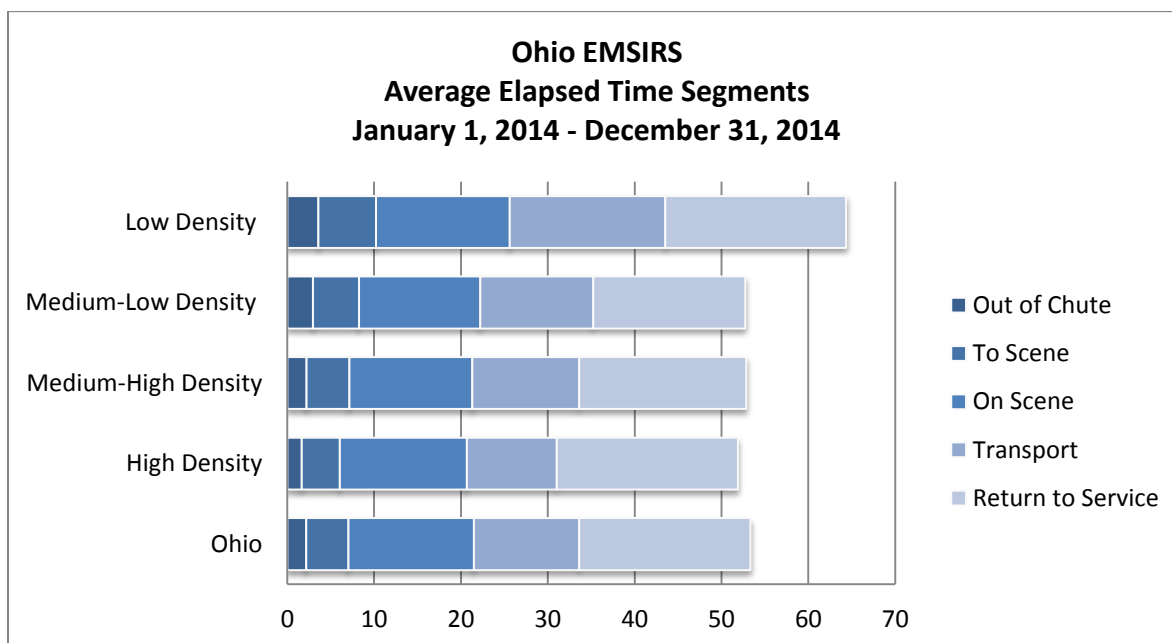
2014		
Primary Impression	# of Records	% of Records
Cancelled	84,169	7.61%
Dead at Scene	8,640	0.78%
No Patient Found	28,993	2.62%
No Treatment Required	68,614	6.21%
Patient Refused Care	90,939	8.23%
Treated and Released	49,145	4.44%
Treated, Transferred Care	33,230	3.01%
Treated, Transported by EMS	739,759	66.91%
Treated, Transported by Law Enforcement	757	0.068%
Treated, Transported by Private Vehicle	1,285	0.12%
Total	1,105,531	100.0%

2014 State of Ohio EMS Runs per 10,000 Population by County



**A table of population, total runs, and rate per 10,000 population per county is available in Appendix D

Average Elapsed Time Segments by Population Density



2014						
	Out of Chute	To Scene	On Scene	Transport	Return to Service	Total Time
High Density	1.65	4.39	14.63	10.37	20.83	51.87
Medium-High Density	2.22	4.93	14.16	12.29	19.23	52.83
Medium-Low Density	2.95	5.29	13.99	12.98	17.52	52.73
Low Density	3.58	6.61	15.42	17.92	20.82	64.35
Ohio	2.18	4.87	14.44	12.10	19.74	53.33

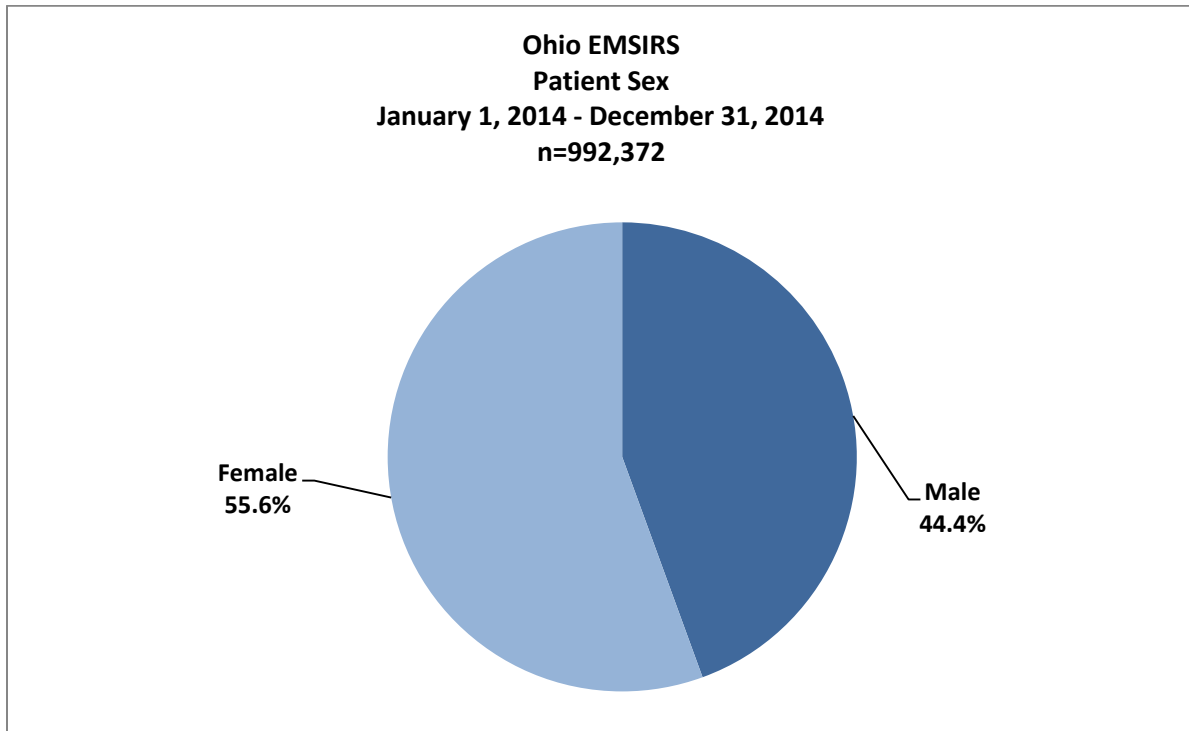
** See Appendix A for Population Density Breakdown

Average Elapsed Time Segments

In 2014, EMS calls that originated in high-density counties (see appendices attached) had the shortest total time from out of chute to return to service at 51.87 minutes. Low-density counties had the longest time to return to service, at 64.35 minutes.

Patient Descriptors

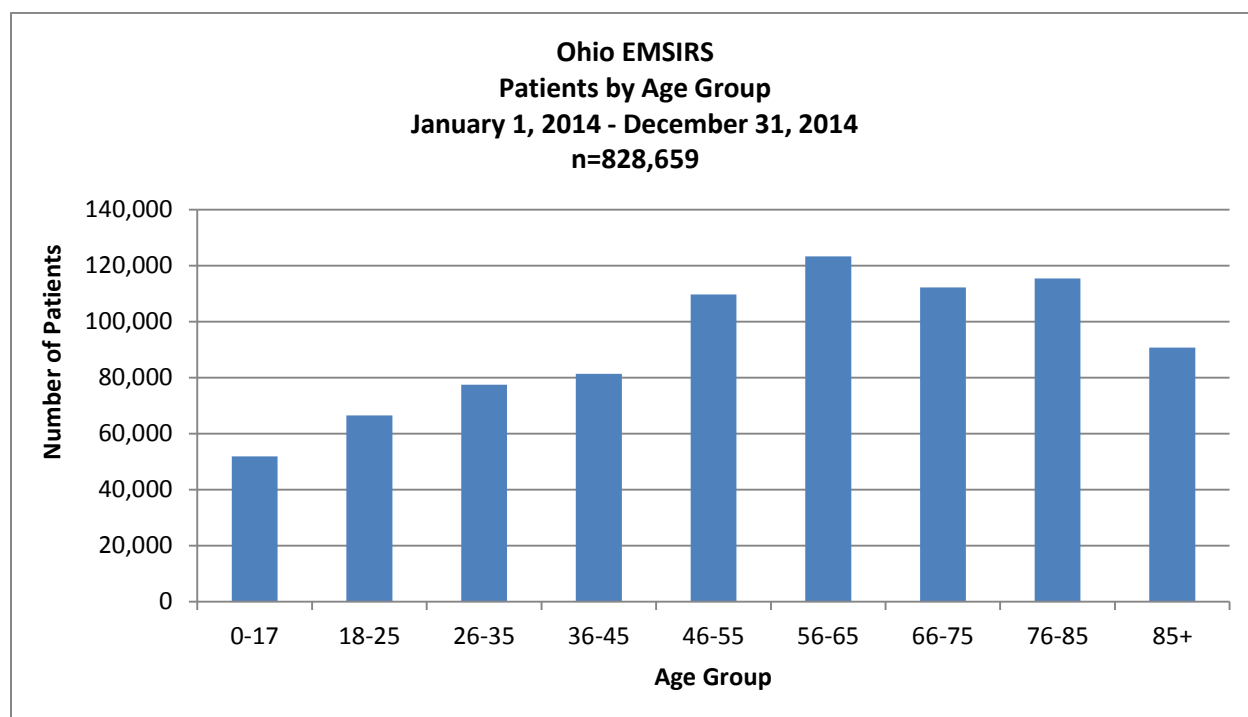
Patient Sex



*Data Element #74 (Incident/Patient Disposition) does not equal Cancelled (4815) or No Patient Found (4825).

2014		
	# of Records	% of Records
Male	440,926	44.4%
Female	551,446	55.6%
Total	992,372	100.0%

Patient Age

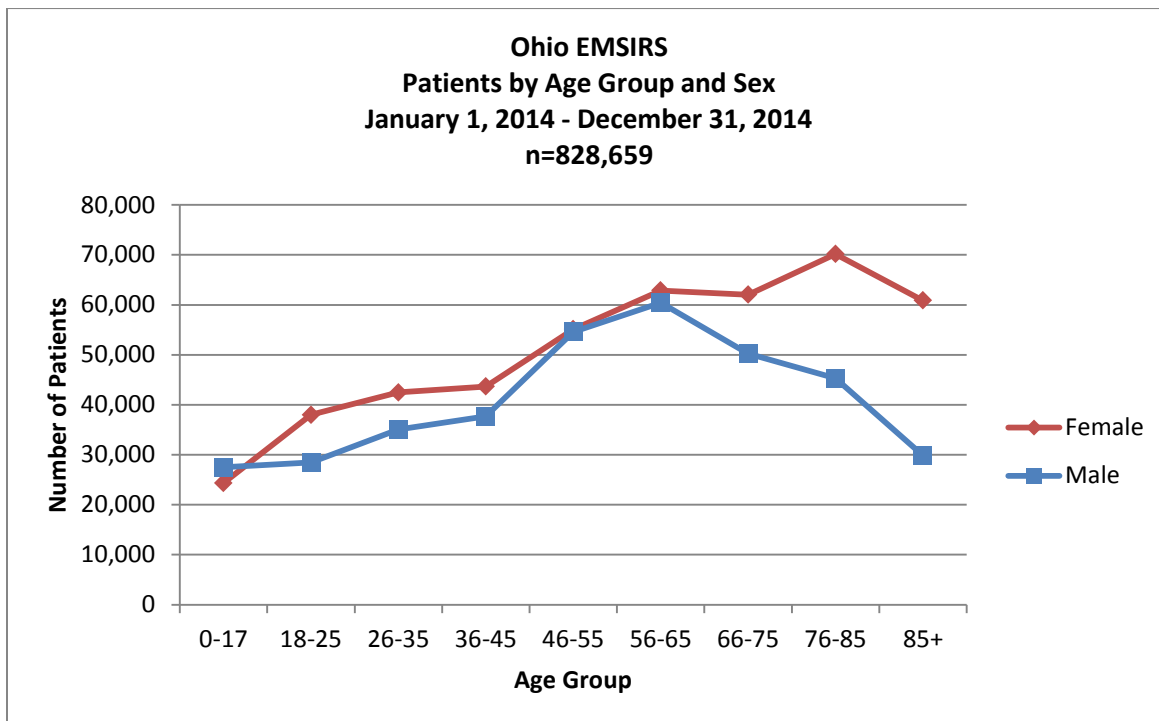


*Data Element #74 (Incident/Patient Disposition) does not equal Cancelled (4815), No Patient Found (4825), No Treatment Required (4830) or Patient Refused Care (4835).

**4,159 records excluded for having non-calculable or not documented age

2014		
Age	# of Patients	% of Patients
0-17	51,846	6.3%
18-25	66,475	8.0%
26-35	77,547	9.4%
36-45	81,327	9.8%
46-55	109,682	13.2%
56-65	123,294	14.9%
66-75	112,282	13.5%
76-85	115,472	13.9%
85+	90,734	11.0%
Total	828,659	100.0%

Patient Age by Sex



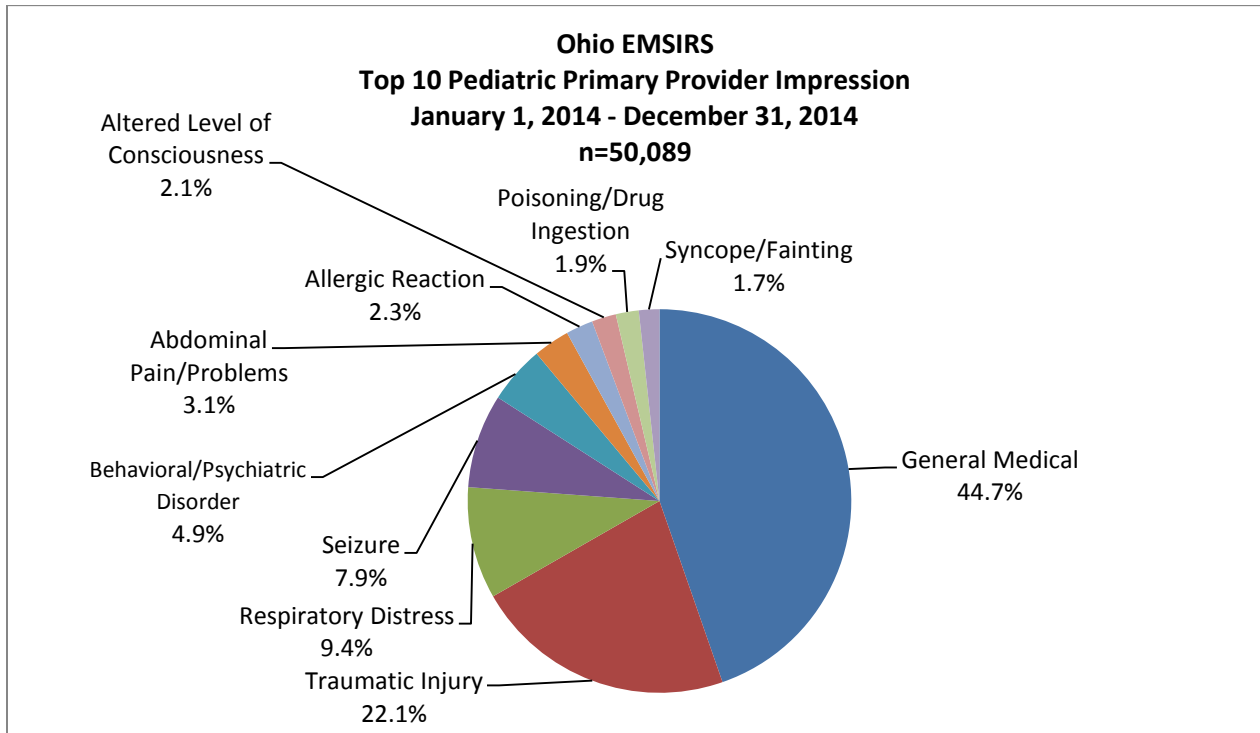
*Data Element #74 (Incident/Patient Disposition) does not equal Cancelled (4815), No Patient Found (4825), No Treatment Required (4830) or Patient Refused Care (4835)

**4,159 records excluded for having non-calculable or not documented age

2014

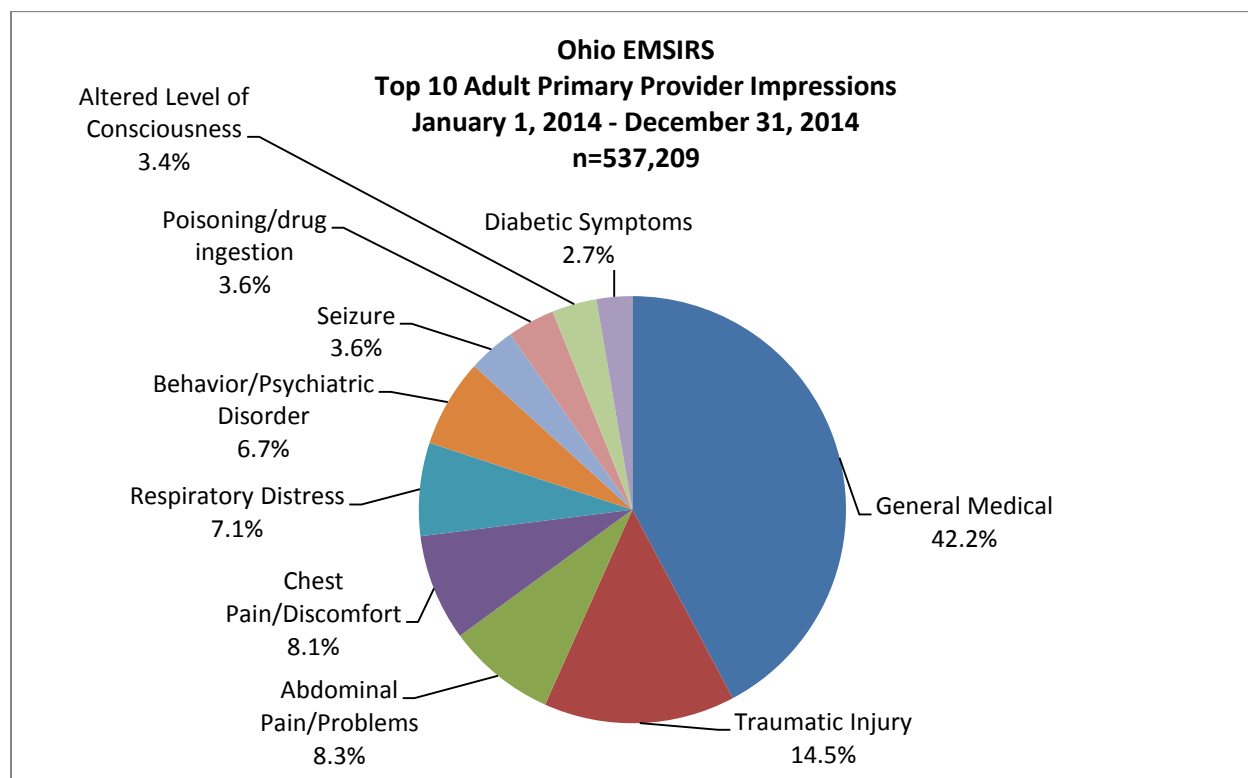
Age	Male	Female	Male %	Female %	Total # Patients
0-17	27,493	24,353	53.0%	47.0%	51,846
18-25	28,473	38,002	42.8%	57.2%	66,475
26-35	35,080	42,467	45.2%	54.8%	77,547
36-45	37,663	43,664	46.3%	53.7%	81,327
46-55	54,564	55,118	49.7%	50.3%	109,682
56-65	60,426	62,868	49.0%	51.0%	123,294
66-75	50,249	62,033	44.8%	55.2%	112,282
76-85	45,292	70,180	39.2%	60.8%	115,472
85+	29,845	60,889	32.9%	67.1%	90,374
Total	369,085	459,574	44.4%	55.6%	828,659

10 Most Frequent Primary Provider Impressions – Pediatric



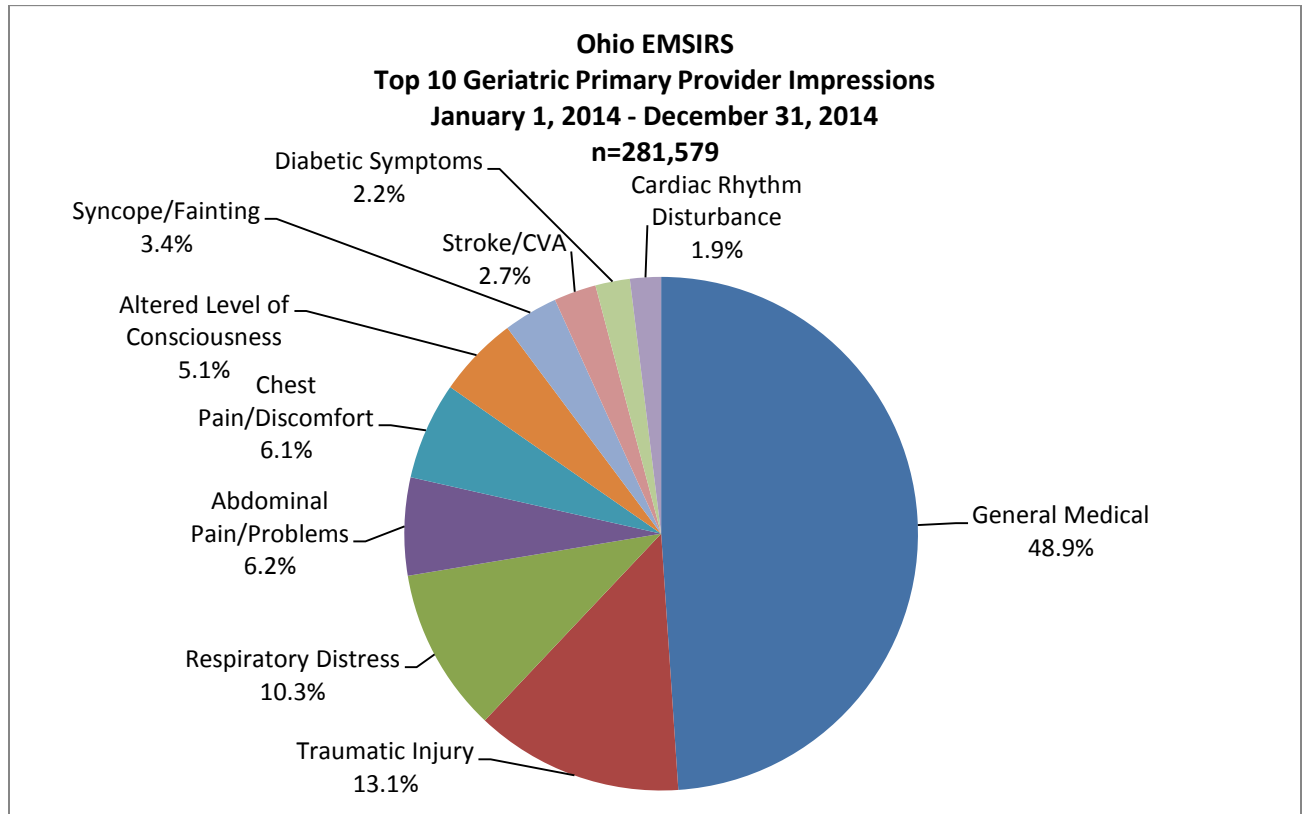
2014		
Primary Impression	# of Records	% of Records
General Medical	23,374	44.7%
Traumatic Injury	11,045	22.1%
Respiratory Distress	4,725	9.4%
Seizure	3,964	7.9%
Behavioral Disorder	2,439	4.9%
Abdominal Pain/Problems	1,535	3.1%
Allergic Reaction	1,146	2.3%
Altered LOC	1,028	2.0%
Poisoning/Drug Ingestion	968	1.9%
Syncope/Fainting	865	1.7%
Total	50,089	100.0%

10 Most Frequent Primary Provider Impressions – Adult



2014		
Primary Impression	# of Records	% of Records
General Medical	226,746	42.2%
Traumatic Injury	77,855	14.5%
Abdominal Pain/Problems	44,327	8.2%
Chest Pain/Discomfort	43,307	8.1%
Respiratory Distress	37,882	7.1%
Behavior/Psychiatric Disorder	35,818	6.6%
Seizure	19,311	3.6%
Poisoning/Drug Ingestion	19,205	3.6%
Altered LOC	18,248	3.4%
Diabetic Symptoms	14,510	2.7%
Total	537,209	100.0%

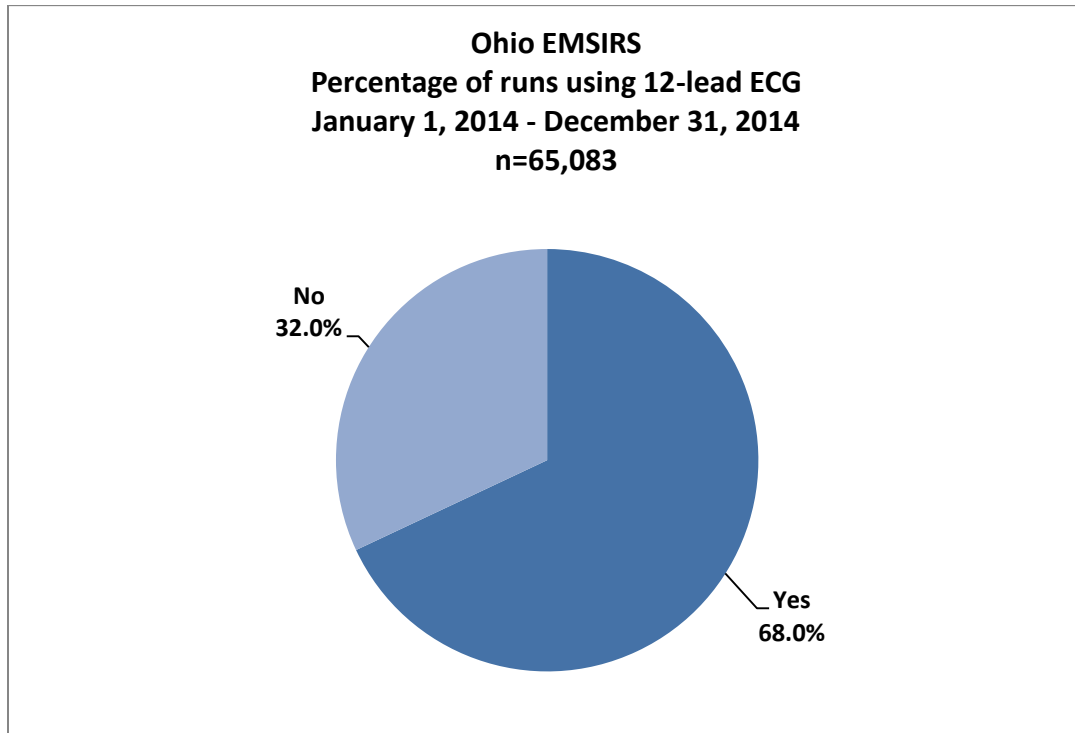
10 Most Frequent Primary Provider Impressions – Geriatric



2014		
Primary Impression	# of Records	% of Records
General Medical	137,786	48.9%
Traumatic Injury	36,913	13.1%
Respiratory Distress	29,094	10.3%
Abdominal Pain/Problems	17,336	6.2%
Chest Pain/Discomfort	17,277	6.1%
Altered LOC	14,416	5.2%
Syncope/Fainting	9,661	3.4%
Stroke/ CVS	7,499	2.7%
Diabetic Symptoms	6,115	2.2%
Cardiac Rhythm Disturbance	5,482	1.9%
Total	281,579	100.0%

Performance Measures

Percentage of Chest Pain Runs Using 12-lead ECG

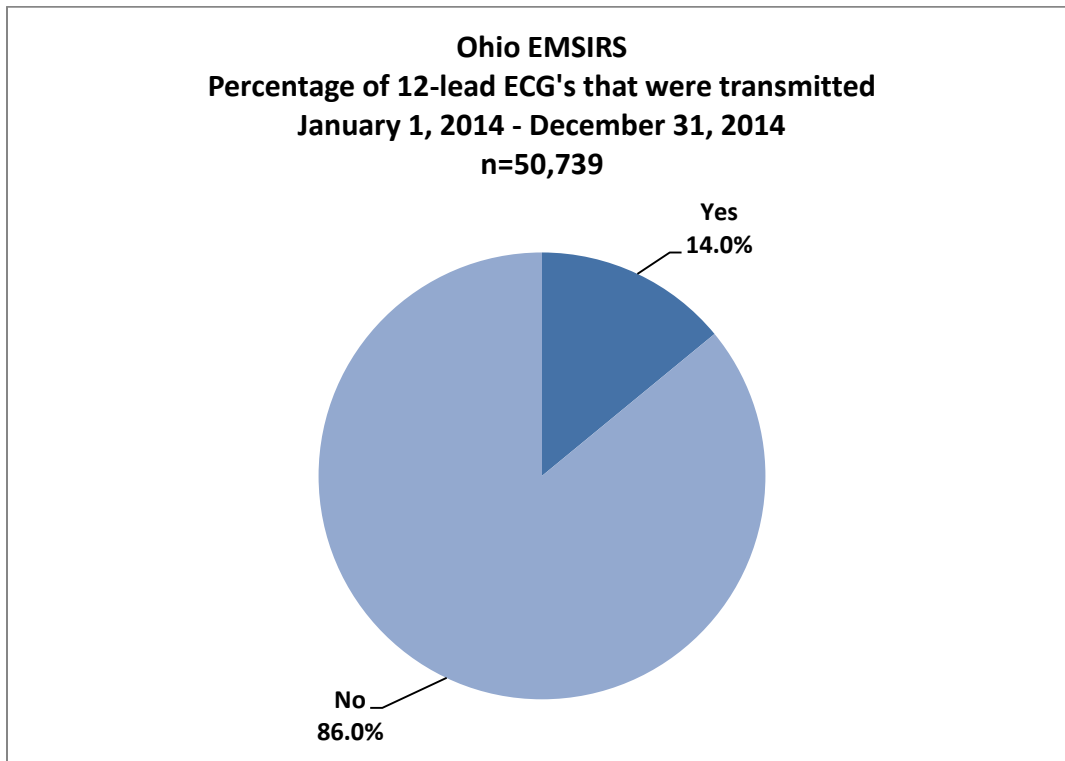


2014		
	# of Records	% of Records
Yes	44,261	68.0%
No	20,822	32.0%
Total	65,083	100.0%

Percentage of Chest Pain Runs Using 12-lead ECG

In 2014, 68.0% of EMS runs on chest pain calls (provider impression = 1645 or 1650) on patients 35 and older used a 12-lead ECG. Unique patients were identified using a distinct count of data ID, which revealed that 50,739 12-lead procedures were conducted on 44,261 patients, for an average of 1.14 12-lead ECG procedures per patient.

Percentage of 12-lead ECGs That Were Transmitted

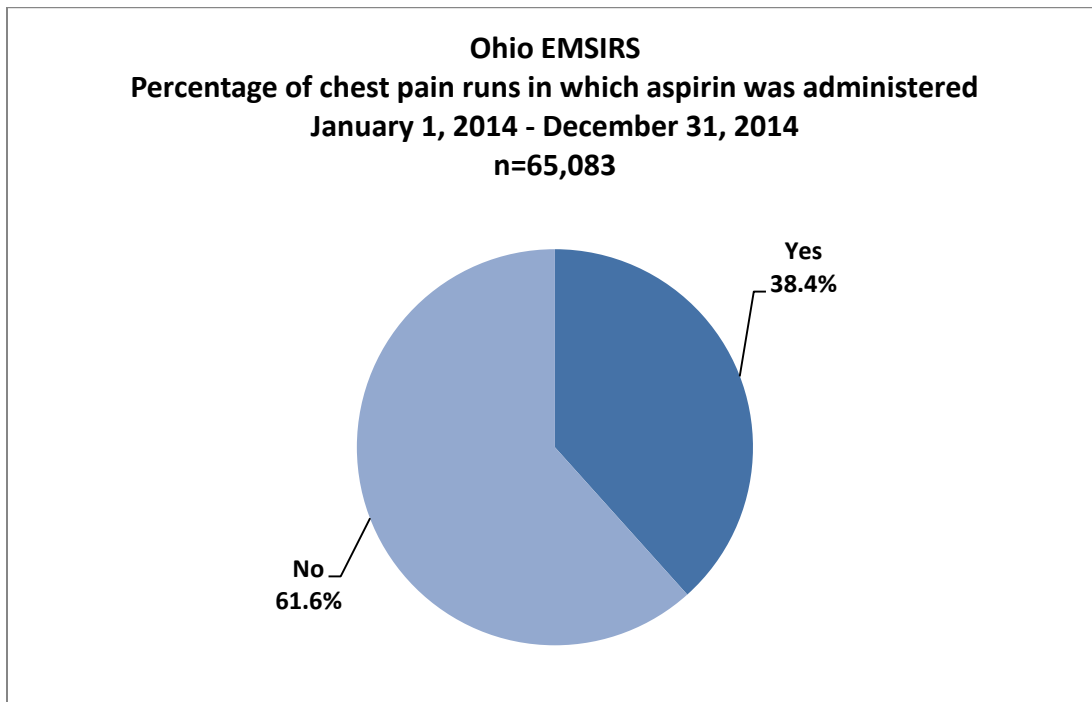


2014		
	# of Records	% of Records
Yes	7,126	13.7%
No	43,613	86.3%
Total	50,739	100.0%

Percentage of 12-lead ECGs That Were Transmitted

In 2014, 14.0% of all EMS runs on chest pain calls (provider impression = 1645 or 1650) on patients 35 and older that used 12-lead ECG were transmitted to a hospital (procedure = 89.821). In this instance, 7,337 12-lead transmissions were completed on 7,126 patients.

Percentage of Chest Pain Calls Given Aspirin

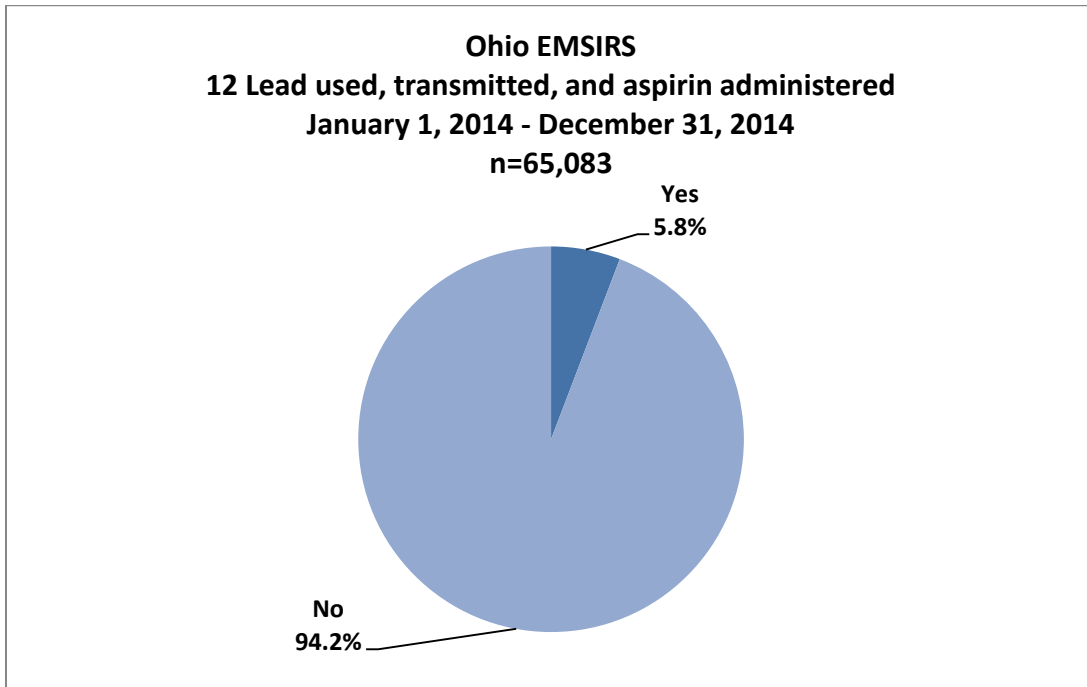


2014		
	# of Records	% of Records
Yes	24,960	38.4%
No	40,123	61.6%
Total	65,083	100.0%

Percentage of chest pain calls in which aspirin was administered

In 2014, 38.4% of EMS runs on chest pain calls (provider impression= 1645 or 1650) on patients 35 and older saw the administration of aspirin.

Percentage of chest pain runs using 12-lead ECG, transmitted, and given aspirin

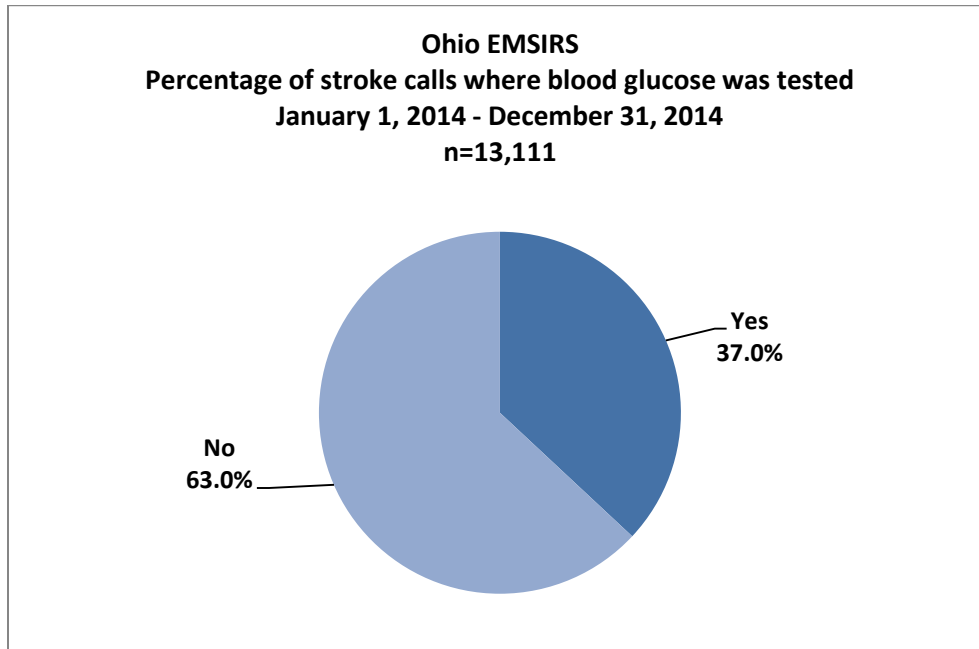


2014		
	# of Records	% of Records
Yes	3,776	5.8%
No	61,307	94.2%
Total	65,083	100.0%

Percentage of runs in which a 12-lead ECG was used, transmitted, and aspirin was administered

In 2014, 94.2% of all EMS runs did not use a 12-lead ECG, transmit it, and administer aspirin to the patient.

Stroke Calls in Which Blood Glucose Was Tested

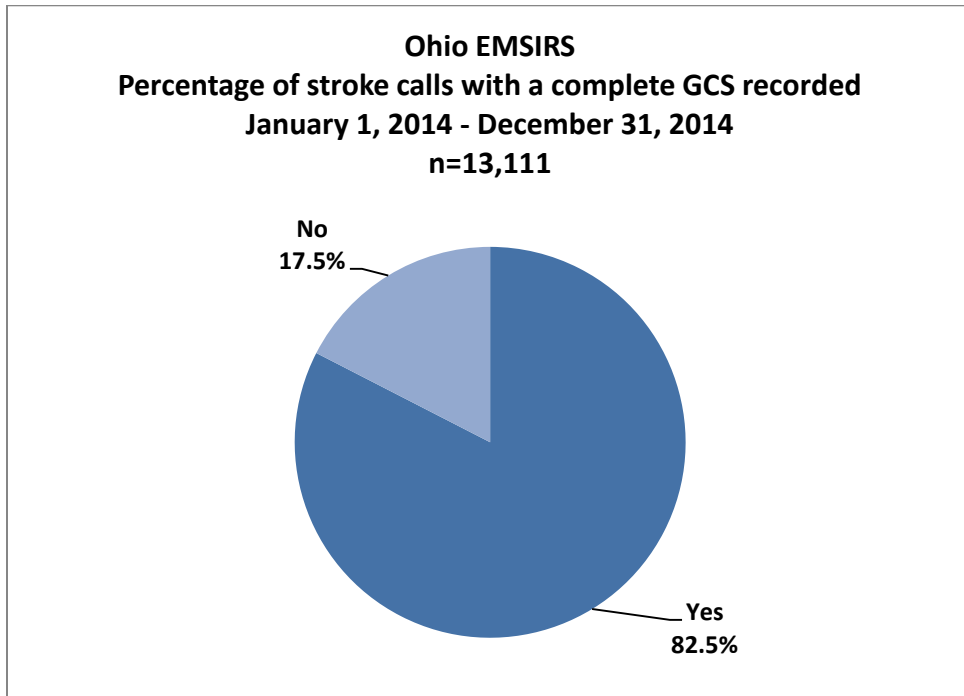


2014		
	# of Records	% of Records
Yes	4,845	37.0%
No	8,266	63.0%
Total	13,111	100.0%

Percentage of stroke calls in which blood glucose was tested

In 2014, 38.2% of stroke patients (provider impression = 1730) were tested for blood glucose.

Stroke Calls in Which a Complete GCS Was Recorded

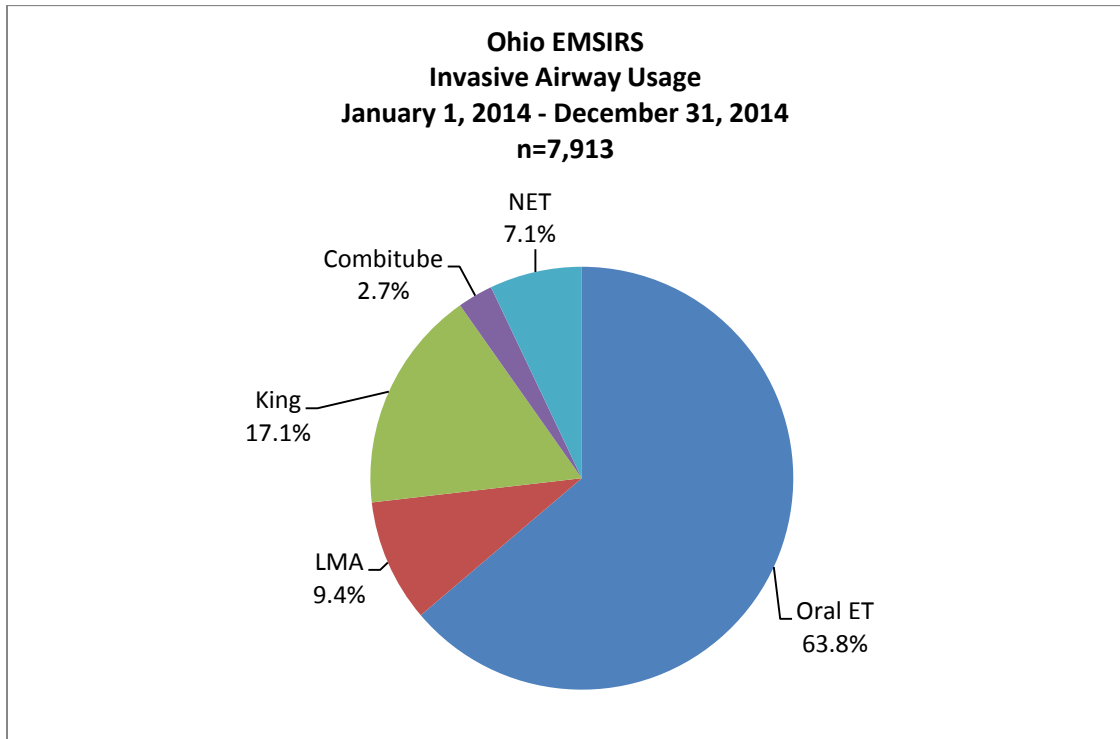


2014		
	# of Records	% of Records
Yes	10,823	82.5%
No	2,288	17.5%
Total	12,537	100.0%

Percentage of stroke calls in which a complete GCS was recorded

In 2014, 82.5% of EMS runs for strokes (provider impression = 1730) recorded a complete GCS.

Invasive Airway Usage

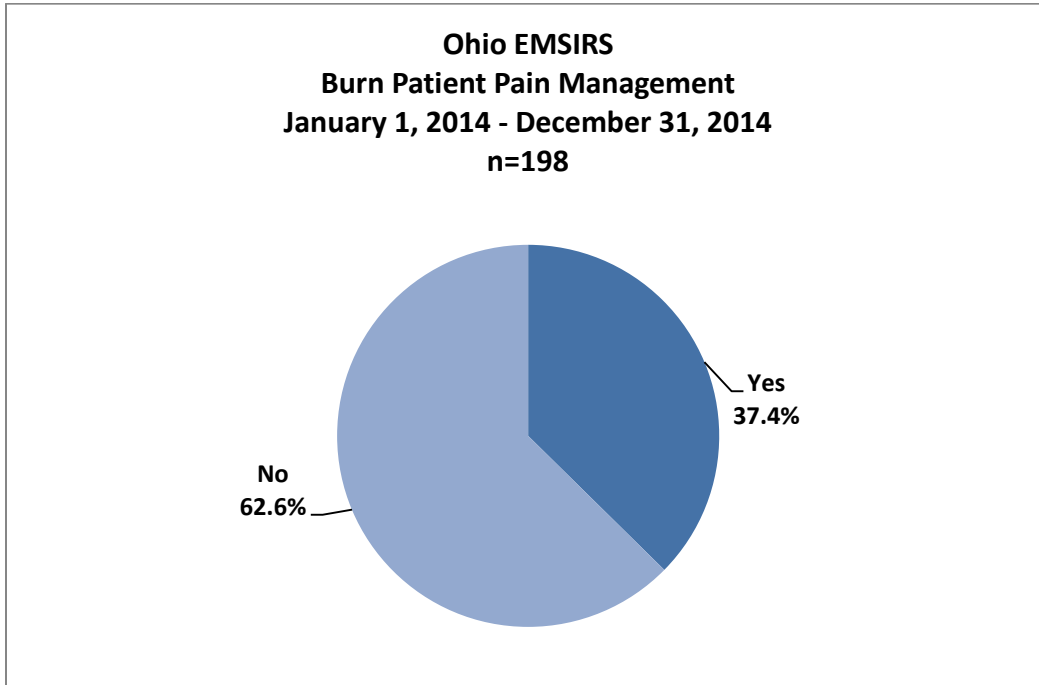


2014		
	# of Records	% of Records
Oral ET	5,047	63.8%
LMA	743	9.4%
King	1,350	17.1%
Combitube	214	2.7%
NET	559	7.1%
Total	7,913	100.0%

Invasive Airway Usage

In 2014 in patients receiving an invasive airway, Oral ET was the most common method, as it comprised 63.8% of all invasive airway procedures, followed by King with 17.1%. Using a distinct count on unique data ID, it's shown that in 2014, 7,913 invasive airway management procedures were completed on 6,408 patients.

Burn Patient Pain Management

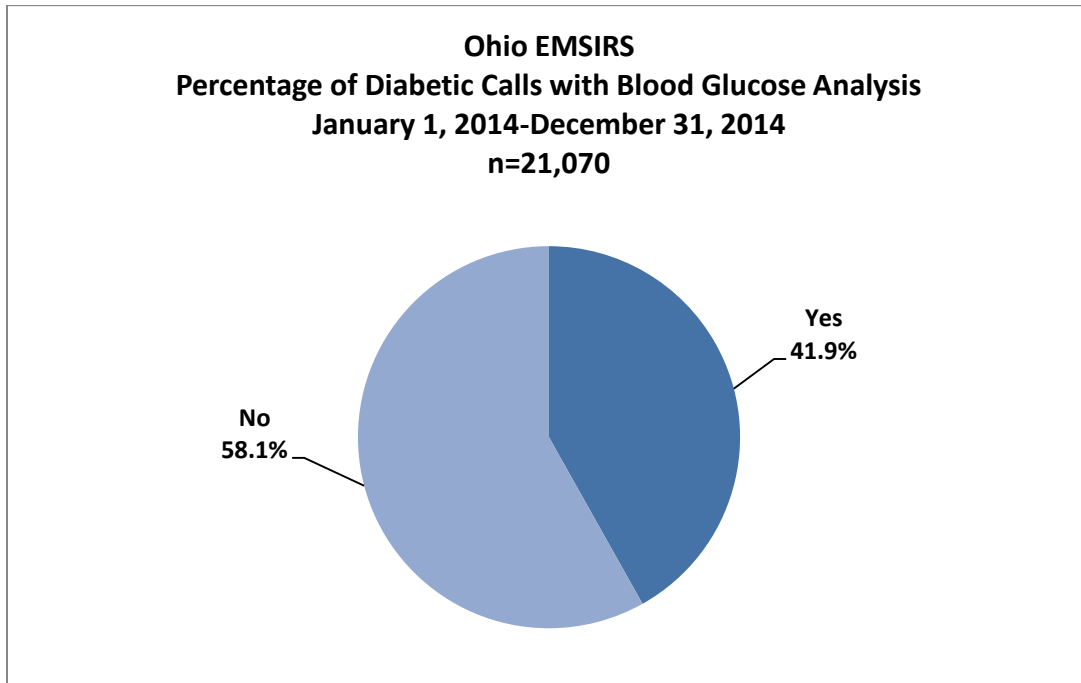


2014		
	# of Records	% of Records
Yes	74	37.4%
No	124	62.6%
Total	198	100.0%

Burn Patient Pain Management

In 2014, 37.4% of patients who met the criteria (Cause of injury = 9555 or Injury Type = 2040), transport time >10 minutes, vascular access procedure = 38.991, 38.992, 38.993, 38.994, 41.920, or 41.921, and GCS 13 or above) were given any pain medication.

Blood Glucose Analysis Administered in Diabetic Calls

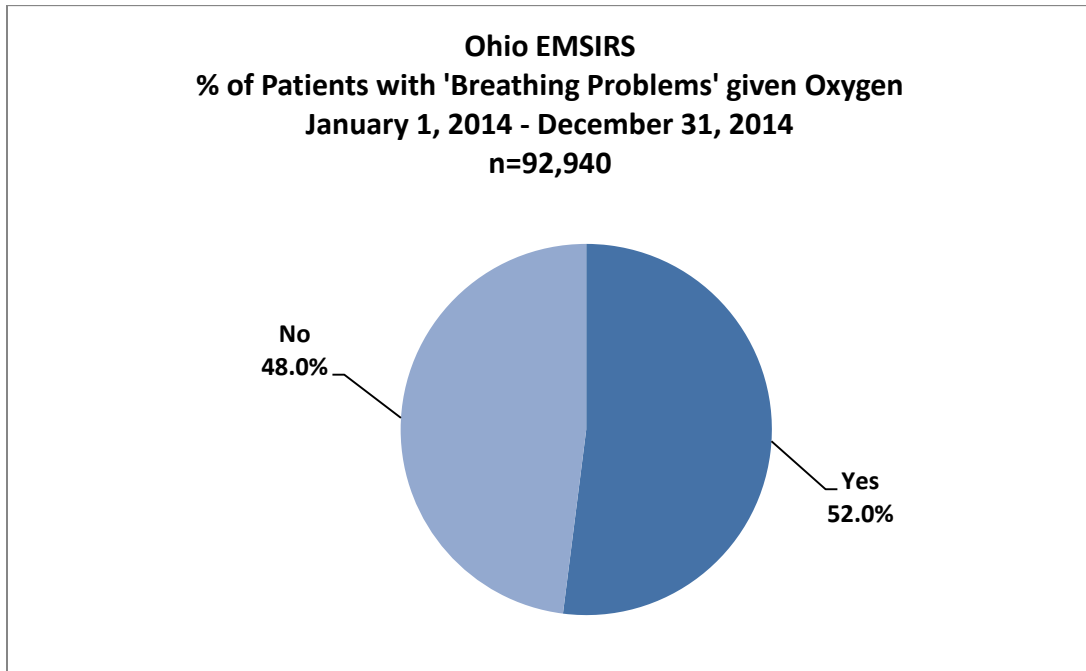


2014		
	# of Records	% of Records
Yes	8,819	41.9%
No	12,251	58.1%
Total	21,070	100.0%

Blood Glucose Analysis Administered

In 2014, 41.9% of patients with a primary impression of “diabetic symptoms” (primary impression = 1655) were administered at least one “blood glucose analysis” (procedure = 38,995). Overall, 13,813 blood glucose analyses were administered to 8,819 patients, for an average of 1.57 tests per patient.

Oxygen Administration in Calls Presenting with ‘Breathing Problems’

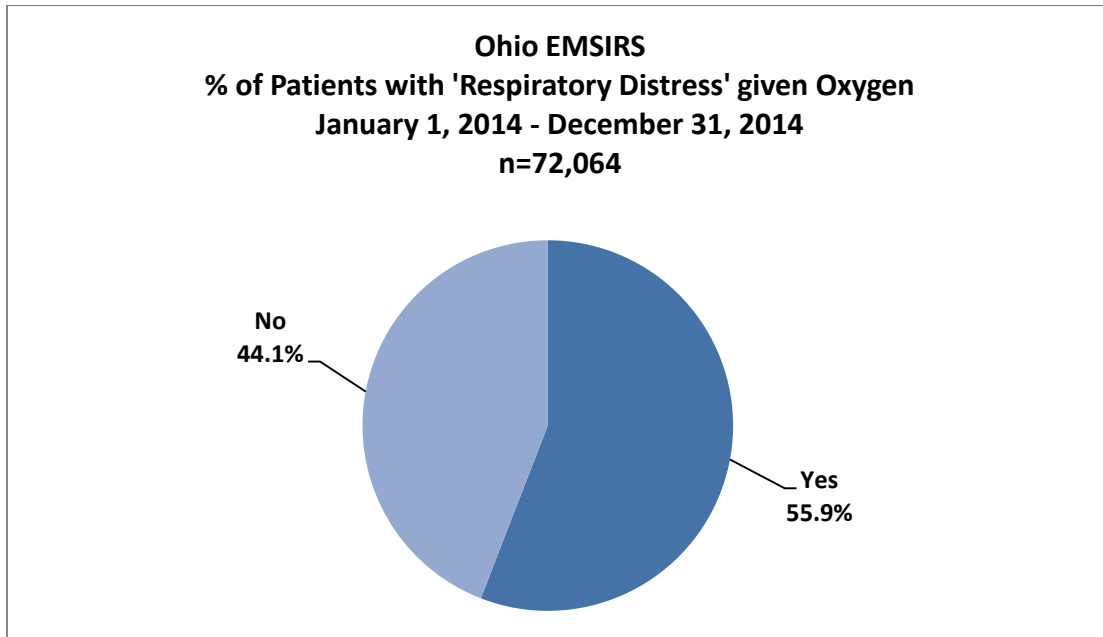


2014		
	# of Records	% of Records
Yes	48,333	52.0%
No	44,607	48.0%
Total	92,940	100.0%

Oxygen Administration in Calls Presenting with Breathing Problems

In 2014, 52.0% of patients with a primary symptom of ‘breathing problem’ (primary symptom = 1410) were administered oxygen (medication = 54115).

Oxygen Administration in Calls Presenting with 'Respiratory Distress'

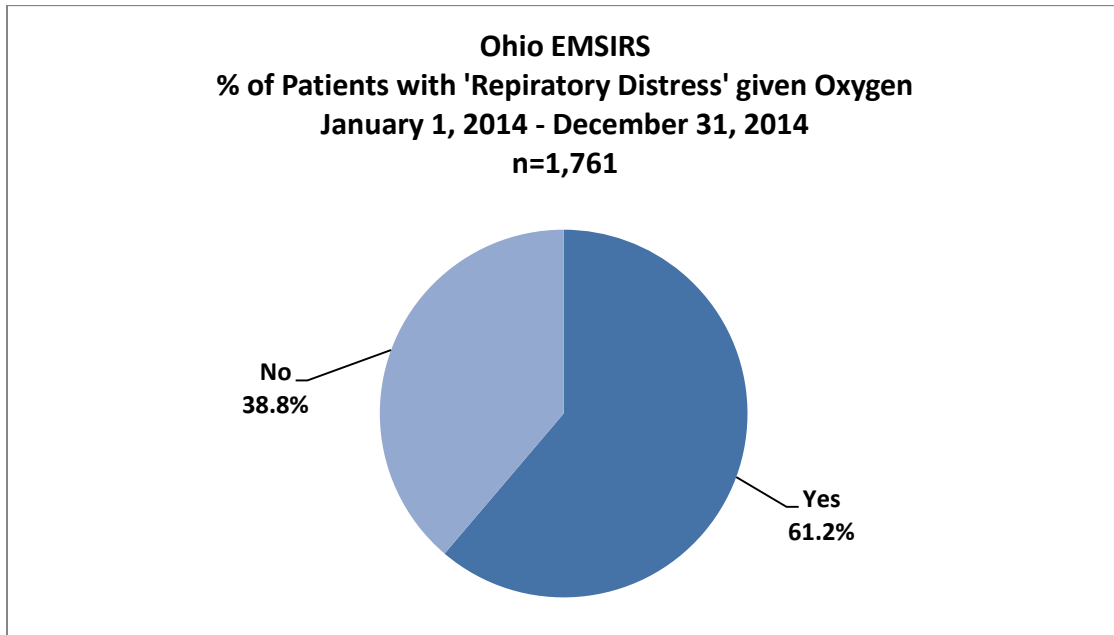


2014		
	# of Records	% of Records
Yes	40,273	55.9%
No	31,791	44.1%
Total	72,064	100.0%

Oxygen Administration in Calls Presenting with Respiratory Distress

In 2014, 55.9% of patients with a primary impression of 'respiratory distress' (primary impression = 1700) were administered oxygen (medication =54115).

Oxygen Administration in Calls Presenting with 'Respiratory Arrest'

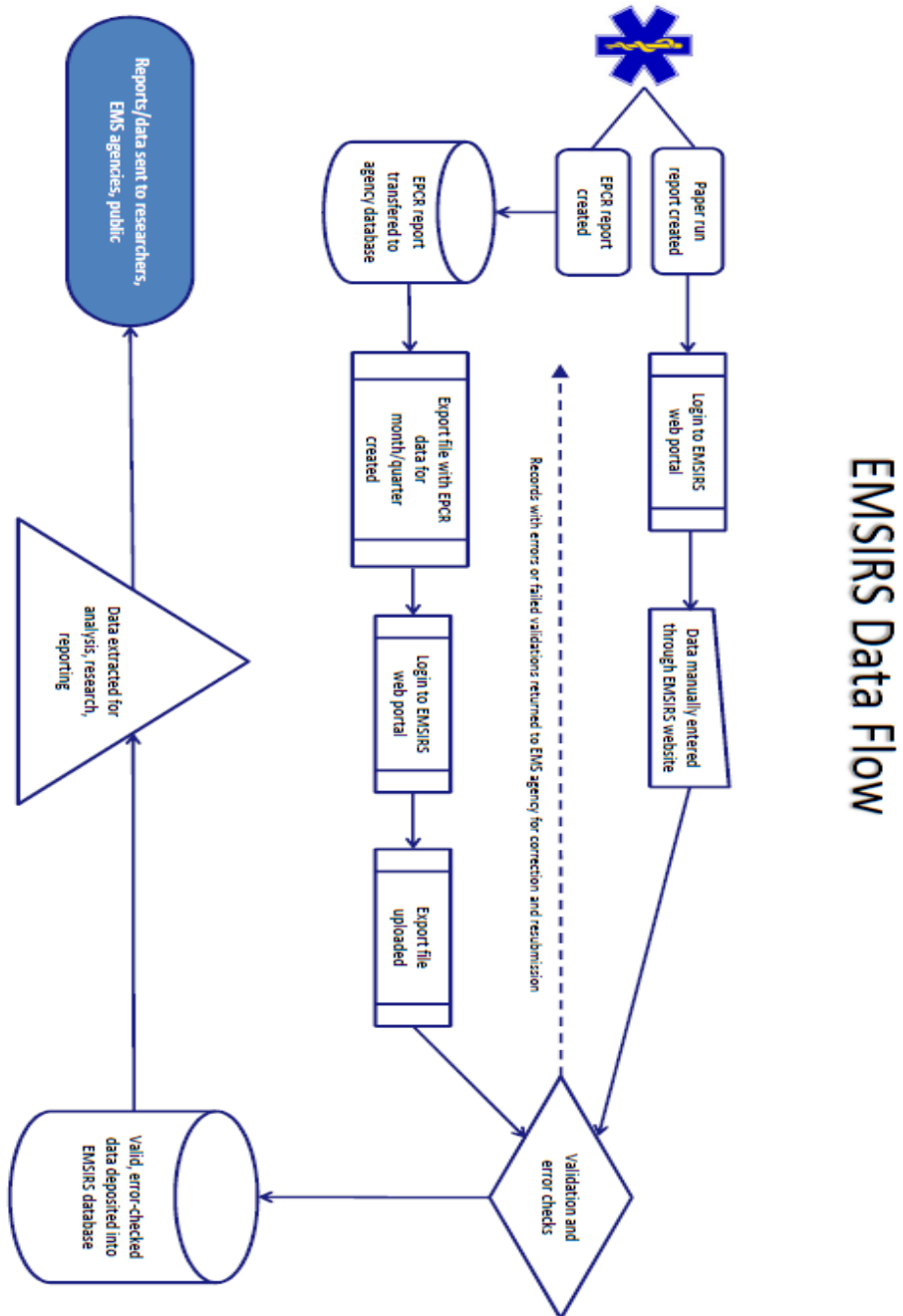


2014		
	# of Records	% of Records
Yes	1,078	61.2%
No	683	38.8%
Total	1,761	100.0%

Oxygen Administration in Calls Presenting with Respiratory Arrest

In 2014, 61.2% of patients with a primary impression of 'respiratory arrest' (primary impression = 1705) were administered oxygen (medication = 54115).

Appendix A: EMSIRS Data Flow Schematic



Appendix B: Counties by Population Density Designation

High Density (>1000 people per square mile)	Medium-High Density (300-999 people per square mile)	Medium-Low Density (100-299 people per square mile)	Low Density (<100 people per square mile)
Franklin	Butler	Allen	Preble
Hamilton	Erie	Richland	Washington
Summit	Stark	Fairfield	Defiance
Montgomery	Mahoning	Miami	Williams
Cuyahoga	Warren	Geauga	Champaign
Lucas	Clermont	Licking	Darke
Lake	Medina	Columbiana	Mercer
	Greene	Wayne	Madison
	Delaware	Wood	Brown
	Clark	Jefferson	Perry
	Trumbull	Marion	Guernsey
	Lorain	Ottawa	Morrow
	Portage	Tuscarawas	Jackson
		Sandusky	Highland
		Ashtabula	Carroll
		Lawrence	Van Wert
		Hancock	Putnam
		Belmont	Henry
		Scioto	Fayette
		Muskingum	Hardin
		Ashland	Hocking
		Athens	Gallia
		Huron	Coshocton
		Shelby	Pike
		Crawford	Wyandot
		Auglaize	Meigs
		Ross	Paulding
		Seneca	Adams
		Pickaway	Harrison
		Knox	Morgan
		Fulton	Noble
		Logan	Monroe
		Clinton	Vinton
		Union	
		Holmes	

Population density data from the US Census Bureau, 2010 census
Density designations by the EMS Office of Research and Analysis

Appendix C: Participating Agencies for 2014

Adams
Adams County EMS
Manchester Fire Dept & Rescue Squad
West Union Vol Life Squad
Allen
American Twp. Fire Dept.
Bath Twp Fire Dept
Beaverdam Richland Fire Dept
Bluffton Emergency Medical Services
Cairo Monroe Fire Dept
Delphos Fire Rescue
Harrod Vol Fire Dept
Lafayette Jackson Twp Fire Dept
Lima Fire Dept
Perry Twp Vol Fire Dept
Shawnee Twp Fire Dept
Westminster Rural F D
Ashland
Ashland Division of Fire
Hayesville Vermillion Fire Dept
Jeromesville Fire Dept
Loudonville Fire Dept
Mifflin Community Vol Fire Dept
Orange Twp Vol Fire Dept
Perrysville Fire Dept
Polk Jackson Perry Fire Dept
Ruggles-Troy Twp Vol Fire Dept
Savannah Vol Fire Co
Sullivan Volunteer Fire Dept.
Ashtabula
Ashtabula Fire Dept
Ashtabula Twp Fire Dept
Conneaut Fire Dept
Geneva on the Lake Fire Dept
Jefferson Emergency Rescue District
Kingsville Vol Fire Dept
Northwest Ambulance District
Pierpont Fire Dept
Plymouth Vol Fire & Rescue Co
Saybrook Twp Fire Dept
Sheffield Twp Fire Dept
South Central Ambulance District
Windsor Fire Rescue

Athens
Athens County Emergency Medical Services
Auglaize
Cridersville Fire Dept
Minster Area Life Squad
New Bremen Emergency Squad, Inc.
St Johns Vol Fire & Rescue Dept
St Marys City Fire Dept
Uniopolis Vol Fire Dept
Wapakoneta Fire Dept
Wayne Twp Fire Dept
Belmont
Barnesville Emergency Squad
Barton Fire Dept
Belmont Vol Fire Dept
Bethesda Fire Dept
Bridgeport Fire Dept
Brookside Fire Dept
Colerain Vol Fire Co.
Cumberland Trail Fire Dist
Flushing Vol Fire Dept
Holloway Fire Dept
Lafferty Vol Fire Dept Inc
Martins Ferry Fire Dept
Neffs Vol Fire Dept
O.R. and W. Fire District
Powhatan Vol Fire Dept & E Squad
Smith Twp Vol Fire Dept
Somerton VFD
Spirit of 76 Vol Fire Dept
Sunset Heights Vol Fire Dept
Wolfhurst Vol Fire Dept
Brown
Aberdeen Huntington Twp FD
Fayetteville Fire Dept
Georgetown Vol Fire Dept
Georgetown Volunteer Life Squad
Hamersville Fire Dept
Higginsport Vol. Fire & EMS
Mt Orab Fire Dept
Ripley Life Squad
Sardinia Life Squad and Rescue Unit

Butler
Fairfield Fire Dept
Fairfield Twp Fire Dept
Hamilton Fire Dept
Hanover Twp Fire Dept
Madison Twp Fire Dept
Monroe Fire Division
Morgan Twp Vol Fire Dept
Oxford Fire Dept
Reily Twp Fire Dept
Ross Twp Fire Dept
Seven Mile Fire Dept
St Clair Twp & New Miami Life Sqd
Trenton Fire Dept.
Wayne Twp Fire Dept
West Chester Twp Fire Dept
Carroll
Emergency Medical Transport, Inc.
Sherrodsville Emergency Med Service
Champaign
Christiansburg Fire Co.,Inc
JSP Jt Fire District
Mechanicsburg Fire Department
N E Champaign Cnty Fire Dist
Urbana Fire Division
Clark
Bethel Twp Fire Dept
German Twp Fire Dept
Harmony Twp Fire Dept
Mad River Twp Fire and EMS
Madison Twp Fire & EMS
Med Trans Emergency Medical Service
Moorefield Twp Fire Dept
New Carlisle Fire Division (City of)
Pike Twp N Hampton Fire Dept
Pleasant Twp Fire Dept
Quality Care Transport
Springfield Fire Division
Springfield Twp FD Station 1
Clermont
Central Joint Fire-EMS District
Felicity-Franklin EMS
Goshen Twp Fire & EMS
Miami Twp Fire & Emergency Service
Milford Community Fire Dept
Monroe Twp. Fire & EMS

New Richmond Fire & EMS
Pierce Twp Fire Department & Life Squad
Stonelick Twp Fire & Rescue
Union Township Fire Dept
Washington Twp Emergency Services
Wayne Twp Fire & Rescue
Williamsburg Twp Emergency Services
Clinton
Blanchester Comm Service Assoc, Inc
Chester Twp New Burlington FD
Clark Township Life Squad
Clinton Highland Joint Fire Dist
Clinton-Warren Joint Fire Rescue Dist.
Port William Fire Dept
S R W W Joint Fire Dist 2
Wilmington Fire Dept
Columbiana
Columbiana Emergency Medical Serv.
East Palestine Fire Dept
KLG Mobile Intensive
Lifeteam E.M.S., Inc.
Maple-Cotton FH Ambulance Service
Negley Fire /EMS
New Waterford Fire Dept
Tri-County Ambulance Service
Village of Leetonia
Coshocton
Coshocton County EMS
Crawford
Crestline Fire Dept
Galion Fire Dept
Cuyahoga
Bay Village Fire Dept
Beachwood Fire Dept
Bedford Division of Fire
Bedford Heights Fire Dept
Berea Fire Dept
Brecksville Fire Dept
Broadview Heights Fire Dept
Brook Park Fire Dept
Brooklyn Fire Dept
Brooklyn Heights Fire Dept
Chagrin Falls Suburban Volunteer Fireman
Cleveland Airport System
Cleveland E.M.S.
Cleveland Heights Fire Dept

Cuyahoga Heights Fire Dept
East Cleveland Fire Dept
Euclid Fire Dept
Fairview Park Fire Dept
Garfield Heights Fire Dept
Highland Heights Fire Dept
Highland Hills Fire Dept
Independence Fire Dept
Lakewood Fire Dept
Lyndhurst Fire Dept
Maple Heights Fire Department
Mayfield Heights Fire Dept
Mayfield Village Fire Dept
Metro Life Flight
Middleburg Heights Fire Dept
Newburgh Heights Fire Dept
North Olmsted Fire Dept
North Randall Fire Dept
North Royalton Fire Dept
Olmsted Falls Fire Dept
Olmsted Twp Fire Dept
Orange Village Fire Dept
Parma Fire Dept
Parma Heights Fire Dept
Pepper Pike Fire Dept (City of)
Richmond Heights Fire Dept
Rocky River Fire Dept
Shaker Heights Fire Dept
Solon Fire Dept
South Euclid Fire Dept
Strongsville Fire & Emergency Serv
University Heights Fire Dept
Valley View Fire Dept
Warrensville Heights Fire Dept
Westlake Fire Dept
Darke
Ansonia Area Emergency Service, Inc
Gettysburg Rural Fire Dept
Greenville Twp. Rescue
Osgood Life Squad
Tri-Village Rescue Services, Inc.
Union City Fire Dept
Versailles EMS
Defiance
Defiance Fire Dept
Delaware Township Rescue

Hicksville Rescue Squad
Highland Twp Fire Dept
Jewell Fire Dept
Sherwood Village Fire Dept
South Richland Twp Fire Dept
Tiffin Twp Fire Dept
Delaware
Concord Twp Fire Dept
Delaware City Fire Dept
Delaware County E.M.S.
Genoa Twp Fire Dept
Harlem Twp Fire Dept
Liberty Twp Fire Dept
Orange Twp Fire Dept
Erie
Bay View Vol Fire Dept
Cedar Point
Huron Division of Fire
Margaretta Twp Fire Dept
North Central E.M.S.
Perkins Twp Fire Dept
Sandusky Fire Dept
Fairfield
Amanda Fire Dept
Basil Joint Fire Dist
Berne Twp Fire Dept
Bloom Township Fire Department
Bremen Rushcreek Twp Fire Dept
Clearcreek Twp Vol Fire Dept
Greenfield Twp Fire Dept
Hocking Township Fire Dept
Lancaster Fire Dept
Millersport Fire Department
Pleasant Twp Fire Dept
Richland Twp Fire Dept
Violet Twp Fire Dept – HQ
Franklin
AmeriKare Ambulance
Columbus Division of Fire
Franklin Twp Fire Dept
Grandview Heights Div of Fire
Hamilton Twp Fire Dept
Jackson Twp Fire Dept
Jefferson Twp Fire Dept
Madison Twp Fire Dept
Mifflin Twp Division of Fire-Station 131

Norwich Twp Fire Dept
Plain Twp Fire Dept
Pleasant Twp Fire Dept
Prairie Twp Fire Dept
Truro Township Fire Department
Upper Arlington Fire Div
Washington Twp Fire Dept; Administratio
Westerville Fire Dept
Whitehall Div of Fire
Worthington Fire Dept
Fulton
Arcanum Rescue Service
Fulton County E.M.S.
Gallia
Gallia County Emergency Med Service
Geauga
Auburn Vol Fire Dept Inc
Burton Vol Fire Dept
Hambden Vol Fire Dept
Montville Vol Fire Dept
Munson Fire Dept
Parkman Twp Vol Fire Dept
Russell Fire Dept
Thompson Fire Dept
Troy Twp Fire Dept
Greene
Bellbrook Fire Dept
Cedarville Twp Vol Fire Dept
Cedarville University EMS
Jefferson Twp Fire Dept
New Jasper Fire Dept
Silvercreek Twp FD
Spring Valley Twp. Fire Dept
Sugarcreek Twp Fire Dept
Xenia Township Fire Department
Guernsey
Antrim Comm Vol Fire Dept
Cumberland Vol Fire Dept
Old Washington Fire Dept
Quaker City Fire Dept
United Ambulance Service, Inc.
Hamilton
Anderson Twp Fire and Rescue Dept
Blue Ash Fire Dept
Cheviot Fire Dept
Cincinnati Fire Dept

Colerain Twp Fire Dept
Crosby Twp Fire Dept
Deer Park-Silverton Joint Fire Dist
Delhi Twp Fire Dept
Evendale Fire Dept
Forest Park Fire Department
Golf Manor Fire Dept
Green Township Fire & EMS
Greenhills Fire Dept
Harrison Fire Dept
Lincoln Heights Fire Dept.
Little Miami Joint Fire & Rescue Dist
Lockland Fire Dept
Loveland Symmes Fire Dept
Madeira Indian Hill J F D
Mariemont Fire Dept
Miami Twp FD
Montgomery Fire Div
Mt Healthy Fire Dept
North College Hill Fire Dept
Norwood Fire Dept
Reading Fire Dept
Sharonville Fire Department
Springdale Fire Dept
Springfield Twp Fire Dept
St Bernard Fire Dept
Sycamore Twp Fire Dept
Terrace Park EMS
Whitewater Twp Fire Dept
Woodlawn Fire Department
Wyoming Fire Department
Hancock
Appleseed Joint Ambulance District
Hanco Ambulance, Inc.
PMP Joint Ambulance District
Hardin
Ada-Liberty Joint Amb District
B-K-P Ambulance District
Blanchard Dunkirk Joint Amb
Jackson Forest Joint Amb Dist
Upper Scioto Valley Ambulance Dist
Harrison
Bowerston Fire Department
Cadiz EMS
Deersville Fire Dept
Freeport Volunteer Fire Dept

Harrison Community Hosp Emergency Svcs
Harrisville Emergency Squad
Jewett Vol Fire Dept
Moorefield Twp Fire Dept
New Athens Fire Dept
Scio E.M.S. Unit 103
Tappan Lake Vol Fire Dept
Washington Twp Vol Fire Dept Inc
Henry
Damascus Twp Fire Dept
Henry County South Joint Ambulance Dist
Liberty & Washington Fire & Rescue
Napoleon Fire Dept
Ridgeville Twp Vol Fire Dept
Highland
Brushcreek Life Squad, Inc.
Highland Co N Jt FIRE & AMBU. DIST
Lynchburg Jt Fire & Ambulance Dist
Paint Creek Joint EMS/Fire Dist.
Southern Highland Joint Fire Dist
Hocking
Hocking County Emerg Med Service
Holmes
Holmes Fire District #1
Killbuck Vol Fire Dept
Paint Twp Vol Fire Dept
Prairie Twp Vol Fire Dept
Western Holmes County Fire Dist
Huron
Citizens Ambulance Service, Inc.
Firelands Ambulance Service
Willard Fire Dept
Jackson
Jackson County EMS
Jefferson
Adena Vol Fire Company
Amsterdam VFD Inc
Brilliant Vol Fire Dept
Dillonvale Emergency Medical Serv.
East Springfield Vol Fire Dept
Hillindale Fire Dept
Mingo Junction Fire Dept
Pleasant Hill Vol Fire Dept
Richmond Vol Fire Dept
Saline Township E.M.S.
TEMS Joint Ambulance District

Tiltonsville Vol Fire Dept
Unionport Fire-Rescue
Yorkville Vol Fire Dept
Knox
Bladensburg Joint Fire District
Central Ohio Joint Fire Dist
College Twp Vol. F.D. - EMS Unit 41
Eastern Knox Co. Joint Fire Dist.
Fredericktown Joint Comm Amb Dist
Mount Vernon FD
Lake
Concord Twp Fire Dept
Eastlake Fire Dept
Fairport Harbor Fire Dept
Grand River Fire Dept
Kirtland Fire Department
Leroy Fire Dept
Madison Fire Dist.
Painesville City Fire Dept
Painesville Twp Fire Dept
Perry Joint Fire District
Wickliffe Fire Dept
Willoughby Fire Dept
Willoughby Hills Fire Dept
Willowick Fire Dept
Lawrence
Lawrence County EMS
Licking
Alexandria St Albans Twp Fire Dept
Buckeye Lake Village Fire Dept
Granville Twp. Fire Dept.
Hartford Vol Fire Dept
Heath Fire Dept
Hebron Fire Dept
Homer Vol Fire Dept Inc
Licking Twp Fire Company
Mary Ann Twp Vol Fire Dept
Monroe Township Fire Dept
National Trail Fire Dept
Newark Fire Dept Admin
Newark Twp Fire Dept
Newton Twp Fire Dept
Utica Emergency Squad
Utica Fire Department
West Licking Jt Fire Dist

Logan
B M R T Ambulance District
Bellefontaine Fire Dept
Bokescreek Twp Fire Dept
Huntsville Vol Fire Dept
Indian Lake Emergency Medical Serv
Macochee Joint Ambulance District
Perry Twp Vol Fire Dept
Quincy Miami Twp Fire Dept
Riverside Emergency Medical Service
Robinaugh EMS
Rushcreek Twp Fire Dept
Tri-Valley Fire District EMS
Lorain
Avon Fire Dept
Avon Lake Fire Dept
Central Lorain County Ambulance District
Columbia Twp Fire Dept
Elyria Fire Dept
Elyria Twp Fire Dept
Grafton Twp Fire Dept
Grafton Village Fire Dept
Lifecare Ambulance, INC.
Lorain Lifecare Ambulance Service, INC.
North Ridgeville Fire Dept
Oberlin Fire Dept
Sheffield Lake Fire Dept
Sheffield Twp Fire Dept
Sheffield Village Fire Dept
South Lorain Cty Ambulance District
Lucas
Jerusalem Twp Fire Dept
Kish/Brookside Ambulance Serv Inc
Maumee Fire Dept
Mobile Care EMS & Transport
Oregon Fire Dept
Providence Twp. Fire & Rescue Dept.
Spencer Township Fire Department
Springfield Twp. Fire Dept.
Sylvania Township Fire Department
Washington Twp Fire Dept
Waterville Fire Department
Whitehouse Vol. Fire Department
Madison
Jefferson Twp Fire Dept
Madison County Emer Med District

Sterling Joint Ambulance District
Mahoning
Beaver Twp Fire Dept
Beloit Fire Dept
Berlin Twp Fire Dept
Cardinal Jt Fire Dist
Clemente-McKay Ambulance Service
Craig Beach Vol Fire Dept
Damascus Vol. Fire Dept.
Green Twp Vol Fire Dept
Lane Life Corp.
Milton Township Fire Dept
Rural Metro-Youngstown
Sebring Fire Department
Springfield Twp Rescue Squad/ E.M.S.
Marion
Battle Run Fire Dist
First Consolidated Fire Dist
Fort Morrow Consolidated Fire Dept.
Marion City Fire Dept
Marion Twp Fire Dept
Pleasant Twp Fire Dept
Medina
Brunswick Hills Twp Fire Dept
Chatham Fire & Rescue Dept
Erhart/York Twp. Fire Dept
Granger Twp Fire Dept
Hinckley Fire Department
Lafayette Township Fire Department
Litchfield Fire & Rescue Dept
Lodi Fire Department
Medina Life Support Team
Seville-Guilford Fire & EMS
Sharon Twp Fire Dept
Spencer Community Fire Dist
Valley City/Liverpool Twp FD
Wadsworth Fire Dept
Westfield Fire Dept
Meigs
Meigs County EMS
Mercer
Mercer County E.M.S.
Miami
Bethel Twp Fire Dept
Bradford Fire & Rescue
Covington Rescue Squad, Inc.

Elizabeth Twp. Fire Dept.
Piqua Fire Dept
Pleasant Hill Newton Twp J.F.D.
Tipp City EMS Division
Troy Fire Dept
Union Twp Life Squad, Inc.
Monroe
Antioch Emergency Squad
Beallsville E.M.S.
Bethel - Graysville EMS
Woodsfield EMS
Montgomery
Brookville Fire Dept
Butler Twp Fire Dept - Station 88
Clayton Fire Dept
Englewood Fire Dept
Farmersville Fire Dept
Germantown Fire Dept
Harrison Twp Fire Dept
Huber Heights Fire Division
Jefferson Twp Fire Dept
Kettering Fire Dept
Miami Valley Fire District
Moraine Fire Dept City of
New Lebanon Fire Dept
Oakwood Public Safety Dept
Phillipsburg Fire Dept
Riverside Fire Department
Trotwood Fire & Rescue
Union Fire Dept
Vandalia Fire Division
Washington Twp Fire
West Carrollton Fire Department
Morgan
Malta McConnelsville Vol Fire Dept
Morrow
Morrow County E.M.S.
Muskingum
Community Ambulance Service
Dresden Vol Fire Dept
Falls Twp Vol Fire Dept
Frazeyburg Vol Fire Dept Inc
Harrison Twp Vol Fire Department
Licking Twp EMS & Fire Dept Inc
New Concord Fire Dept
Newton Twp Fire Dept

Perry Twp Fire Dept
Roseville Vol Fire Dept
Ottawa
Allen-Clay Joint Fire Dist
Carroll Twp Ems & Fire Svc Inc
Danbury Township Fire Dept.
Erie Twp Vol Fire Dept
Harris-Elmore Fire Department
Mid County Med. Svc. Assoc.
Put-in-Bay EMS
Paulding
Antwerp EMS
Oakwood EMS
Payne Vol Fire Dept
Perry
Corning Vol. Fire Dept
Hopewell Twp Fire Dept
Junction City Vol Fire Dept
New Lexington Fire Dept
Somerset Emergency Medical Service
Thornville - Thorn Twp Fire Dept.
Pickaway
Circleville EMS
Harrison Twp Fire Dept
Pickaway Twp Fire Dept
Saltcreek Tarlton Vol Fire Dept
Scioto Twp Fire Dept
Williamsport & Deercreek Emer Squad
Pike
Fluor-B&W Portsmouth, LLC
Portage
Atwater Fire Dept
Aurora Fire Dept
Brimfield Fire Dept
Community EMS District
Deerfield Fire Dept
Edinburg Vol Fire Dept
Hiram Fire Dept
Mantua-Shalersville Fire Dist
Palmyra Twp. Vol. Fire Dept.
Paris Twp. Fire Department
Randolph Twp Vol Fire Dept
Ravenna City Fire Dept
Ravenna Twp Fire Dept
Rootstown Fire Dept
Streetsboro Fire Dept

Suffield Twp Fire Dept
WVFD Joint Fire District
Preble
Camden and Somers Twp Fire-Rescue
Eaton Emergency Squad
Gasper Township Fire Department
Gratis EMS
Lewisburg Fire Dept Emergency Unit
North Central Ambulance District
Northwest Fire & EMS
West Alexandria E.M.S.
Putnam
Putnam County E.M.S.
Richland
C B & S Joint Fire District
Franklin Twp Fire Dept
Jefferson Twp Bellville Fire Dept
Madison Twp Fire Dept
Mansfield Fire Department
Mifflin Twp Fire Dept
Monroe Twp Emergency Medical Serv.
Plymouth Fire Dept
Shelby Fire Dept
Springfield Twp Fire Dept
Troy Twp Fire Dept
Washington Twp Fire Dept
Worthington Twp Fire Dept
Ross
Chillicothe Fire Dept
Colerain Twp Fire Dept
Concord Twp Emergency Squad
Deerfield Township E.M.S.
Franklin Twp Fire & Rescue
Green Twp Fire Dept
Harrison Twp Fire Dept
Huntington Twp Fire Dept
Jefferson Twp Fire & Rescue
Liberty Twp Fire Dept
P.H. Glatfelter - Ambulance
Paxton Township Area Life Squad
Scioto Twp Fire Dept
Springfield Twp Fire Dept
Twin Twp Fire Dept
Union Twp Fire Dept
Sandusky
Sandusky County E.M.S.

Sandusky Twp Fire Dept
Scioto
ABLE Medical Transport
Clay Squad Eleven
Green Twp Fire Dept
HealthNet Aeromedical Service
Minford Emergency Amb. Service Inc.
Nile Township Squad 1
Porter Twp Emerg Rescue Association
Portsmouth Emergency Amb Ser, Inc.
Rarden Vol Fire Dept
Rosemount Vol Fire Dept
Scioto Ambulance District
South Webster Bloom Twp Jt F D
Valley Twp Vol Fire Dept
Vernon Twp Emerg. & Rescue
Washington Township E.M.S.
Seneca
Fostoria Fire Dept
Seneca County E.M.S.
Tiffin Fire/Rescue Division
Shelby
Anna Rescue Squad Inc.
Fort Loramie Rescue Squad
Houston Rescue Squad
Jackson Center Rescue Squad
Perry-Port-Salem Rescue Squad
Sidney Fire & Emergency Services-Station
Stark
Beach City Fire Dept
Bethlehem Twp Fire & Rescue Inc
Brewster Vol Fire Dept
Canal Fulton Fire Dept
Canton Fire Dept
Canton Twp Fire Dept
Greentown Fire Dept
Hartville Fire Dept Inc
Jackson Twp Fire Dept
Lawrence Twp Fire Dept
Louisville Fire Dept
Marlboro Vol Fire Co Inc
Massillon (City of) Fire Dept
Navarre Village Fire Dept
North Canton Fire & EMS
North Canton Fire Dept
North Lawrence Fire Dept

Osnaburg Twp Fire Dept
Perry Twp Fire Dept
Plain Township Fire Dept.
Quad Ambulance District
Sandy Creek Joint Fire Dist
Tri-Division Ambulance District
Uniontown Fire Dept
Wilmot Fire Department
Summit
Akron Fire Dept
American Medical Response
Barberton Fire Dept
Clinton Fire Dept
Copley Fire Dept
Coventry Twp Fire Dept
Cuyahoga Falls Fire Dept
Fairlawn Fire Dept
Green Fire Dept (City of)
Hudson EMS
Lakemore Fire Dept
Macedonia Fire Dept
Mogadore Fire Dept
Munroe Falls Fire Dept
New Franklin Fire Department
North East Ambulance Service
Northfield Ctr/Sagamore Hills Fire Dist
Northfield Village Fire Dept
Norton Fire Division
Reminderville Fire Dept
Richfield Fire Dept
Springfield Twp Fire Dept
Stow Fire Dept
Tallmadge Fire Dept
Twinsburg Fire Dept
Valley Fire District
Trumbull
Action Ambulance
Bazetta Fire Dept
Braceville Twp Fire Dept
Bristolville Fire Dept
Burghill-Vernon Vol. Fire Dept.
Champion Twp Fire Dept
Cortland Fire Dept
Farmington Twp Fire Dept
Fowler Volunteer Fire Department
Howland Fire Dept

Johnston Township Fire Department
Liberty Twp Fire Dept
Lordstown Village Fire Dept
McDonald Fire Dept
Mecca Vol. Fire Department
NF Joint Fire District
Southington Vol Fire Dept
Vienna Fire Dept
Warren Twp Fire Dept
Tuscarawas
Arrowhead Joint Fire District
Bolivar Vol Fire Dept Inc
Dover Fire Dept & E M S
Fairfield Twp. Fire Dept.
Midvale-Barnhill Brightwood F.D.
Mineral / Sandy Ambulance District
New Philadelphia Fire Dept
Smith Ambulance Service, Inc.
Swiss Valley Joint Ambulance Distr
Tri-County Joint Ambulance District
Wayne Twp Vol Fire Dept
Union
Allen Twp Fire Dept
Jerome Twp Division of Fire
Liberty Twp Fire Dept
Marysville Fire Dept
Northern Union Co. Fire & EMS Dist.
Pleasant Valley Joint Fire Dist
Van Wert
Brickner Funeral/Ambulance Service
Convoy Fire & EMS
Middle Point Fire Dept
Ohio City Vol Fire Dept
Scott Vol Fire Dept
Van Wert Fire Dept
Wren Fire Department
Vinton
Harrison Twp Fire Dept
Vinton County E.M.S.
Warren
Clearcreek Fire Dist
Deerfield Twp Fire Dept
Franklin Divison Of Fire
Hamilton Twp Fire Rescue
Harlan Twp Fire and Rescue
Lebanon Fire Division

Mason Fire Department
Massie Twp Fire Dept
Salem - Morrow Fire Dept
Turtlecreek Twp Fire Dept
Union Twp/South Lebanon Fire Dept
Wayne Twp. Fire Department
Washington
Barlow Fire Depart
Belpre Vol Fire Dept
Beverly-Waterford Twp Rescue Squad
Devola Vol Fire Company
L A Vol Fire Dept
Little Hocking Fire Dept
Marietta Fire Dept
Newport Vol Fire Dept Inc
Oak Grove Fire Dept
Reno Vol Fire Dept
Salem Twp Vol Fire Dept
Wesley Twp Vol Fire Dept Inc
Wayne
Apple Creek/East Union Twp. Fire Dept.
Auble EMS & Ambulance
Canaan Twp Fire Dept
Central Fire Dist. (Smithville FD)
Chippewa Twp Fire Dept
Clinton Twp Fire Department
Dalton Vol Fire Dept Inc
East Wayne Fire District
Kidron Vol Fire Dept
Marshallville Vol. Fire Department
New Pittsburg Fire Dept

Orrville (City of) Fire Dept
Paint Township Fire Department
Rittman E.M.S.
Samaritan Care, Inc.
South Central Fire Dist.
Sterling Fire Dist
Town & Country Fire District
Wooster Fire Division Station #1
Wooster Twp Fire Dept
Williams
Williams County EMS
Wood
Bloomdale Fire Dept
Bowling Green Fire Div. (City of)
Bradner Fire Dept
Lake Twp Fire Dept
Middleton Twp. EMS
North Baltimore E.M.S.
Northwood Fire Dept
Pemberville-Freedom Fire Dept
Perrysburg Fire Division
Perrysburg Township EMS
Perrysburg Twp Fire Department
Rossford Fire Dept
Troy Township E.M.S.
Weston EMS
Wyandot
Sycamore Fire Dept
Wyandot Co. E.M.S. Headquarters

Appendix D: 2014 County EMS Run Rates per 10,000 Population**

County	Population**	Runs	Rate/10,000 Pop.
Adams	28,129	5,159	1,834.1
Allen	105,040	8,037	765.1
Ashland	53,035	4,559	859.6
Ashtabula	99,175	9,453	953.2
Athens	64,713	5,761	890.2
Auglaize	45,841	3,249	708.8
Belmont	69,461	8,359	1,203.4
Brown	44,116	3,876	878.6
Butler	374,158	14,786	395.2
Carroll	28,187	1,957	694.3
Champaign	39,128	3,719	950.5
Clark	136,554	21,441	1,570.1
Clermont	201,560	19,262	955.6
Clinton	41,835	4,755	1,136.6
Columbiana	105,686	7,823	740.2
Coshocton	36,516	5,513	1,509.7
Crawford	42,480	1,749	411.7
Cuyahoga	1,259,828	158,166	1,255.5
Darke	52,196	5,380	1,030.7
Defiance	38,510	1,875	486.9
Delaware	189,113	1,7677	934.7
Erie	75,828	8,569	1,130.1
Fairfield	150,381	14,784	983.1
Fayette	28,800	251	87.2
Franklin	1,231,393	142,467	1,157.0
Fulton	42,580	2,552	599.3
Gallia	30,397	2,977	979.4
Geauga	94,295	2,655	281.6
Greene	163,820	2,655	162.1
Guernsey	39,590	2,028	512.3
Hamilton	806,631	124,148	1,539.1
Hancock	75,337	4,060	538.9
Hardin	31,796	2,205	693.5
Harrison	15,543	1,911	1,229.5
Henry	27,937	500	179.0
Highland	43,045	2,396	556.6
Hocking	28,725	2,693	937.5
Holmes	43,898	1,079	245.8

Huron	58,714	3,566	607.4
Jackson	32,748	6,674	2,038.0
Jefferson	67,694	3,325	491.2
Knox	61,167	4,304	703.6
Lake	229,230	16,091	702.0
Lawrence	61,623	6,282	1,019.4
Licking	169,390	13,998	826.4
Logan	45,507	2,608	573.1
Lorain	304,216	32,467	1,067.2
Lucas	435,286	10,452	240.1
Madison	43,918	5,800	1,320.6
Mahoning	233,204	23,202	994.9
Marion	65,720	5,369	817.0
Medina	176,029	7,751	440.3
Meigs	23,331	3,475	1,489.4
Mercer	40,831	1,703	417.1
Miami	103,900	8,033	773.1
Monroe	14,465	1,080	746.6
Montgomery	533,116	47,996	900.3
Morgan	14,843	1,744	1,175.0
Morrow	35,152	2,117	602.2
Muskingum	85,818	7,286	849.0
Noble	14,363	413	287.5
Ottawa	41,154	3,256	791.2
Paulding	18,989	670	352.8
Perry	35,812	3,172	885.7
Pickaway	56,876	5,174	909.7
Pike	28,256	1,667	590.0
Portage	161,882	10,092	623.4
Preble	41,586	3,127	751.9
Putnam	34,171	2,020	591.1
Richland	121,942	10,979	900.3
Ross	77,159	8,209	1,063.9
Sandusky	60,179	5,702	947.5
Scioto	77,258	14,571	1,886.0
Seneca	55,669	4,607	827.6
Shelby	48,951	3,870	790.6
Stark	375,736	38,057	1,012.9
Summit	541,943	72,043	1,329.3
Trumbull	205,175	15,583	759.5
Tuscarawas	92,788	6,686	720.6

Union	53,776	3,786	704.0
Van Wert	28,462	2,023	710.8
Vinton	13,234	1,657	1,252.1
Warren	221,659	12,914	582.6
Washington	61,213	3,848	628.6
Wayne	115,537	9,053	783.6
Williams	37,291	3,509	941.0
Wood	129,590	7,344	566.7
Wyandot	22,353	923	412.9

****2014 intercensal county population rates are yearly population estimates that occur in between census years. They are provided by the United States Census Bureau at <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>**

