VDH VIRGINIA DEPARTMENT OF HEALTH

EMERGENCY DEPARTMENT VISITS FOR OVERDOSE BY OPIOID, UNSPECIFIED SUBSTANCE AND HEROIN AMONG VIRGINIA RESIDENTS

November 2016

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Please direct questions or comments to the Division of Surveillance and Investigation, Enhanced Surveillance Team: syndromic@vdh.virginia.gov

Background

The Virginia Department of Health (VDH) receives data on visits to 82 acute care hospital emergency departments (EDs) and 13 free-standing EDs in Virginia for purposes of public health surveillance. The purpose of this report is to characterize ED visit trends for acute unintentional overdose by opioids and heroin among Virginia residents.

Chief complaints and discharge diagnoses of ED visits are analyzed by VDH to identify and monitor issues of public health concern across Virginia. The chief complaint is a free-text field that captures the patient's primary reason for seeking medical care as interpreted by the ED registration staff. The discharge diagnosis is a coded field that uses standardized values outlined by the International Classification of Diseases (ICD) 9th and 10th Revision code sets.

Methodology

ED visits that are identified as **unintentional overdose by opioid or unspecified substance** include those with medical and non-medical use of a prescription opioid or where the substance is not specified, given evidence that the majority of fatal overdoses are opioid-related.[1] These visits must meet the following inclusion and exclusion criteria:

- Inclusion terms from Chief Complaint or Discharge Diagnosis: *overdose, OD, sobredosis, opioid, opiate, opium, narcotic, Narcan, naloxone, E850.1, E850.2, 965.00, 965.02, 965.09, 977.9, T40.0X1, T40.0X4, T40.2X1, T40.2X4, T40.3X1, T40.3X4, T40.4X1, T40.4X4, T40.601, T40.604, T40.691, T40.694, T50.901, T50.904*
- Exclusions terms from Chief Complaint or Discharge Diagnosis: *suicide, alcohol overdose alone, withdrawal, detoxification, rehab, addiction, dependency, mental health or psychological evaluation, allergies, constipation, chronic pain, refill requests, and any specified non-opioid drug or medication*

ED visits that are identified as **unintentional overdose by heroin** must meet the following inclusion and exclusion criteria:

- Inclusion terms from Chief Complaint or Discharge Diagnosis: *heroin, herion, 965.01, E850.0, T40.1X1A, T40.1X4A*
- Exclusions terms from Chief Complaint or Discharge Diagnosis: *suicide, withdrawal, detoxification, rehab, and addiction*

These criteria were revised in September 2016 in order to improve specificity in the identification of ED visits for unintentional drug overdose. Readers are strongly encouraged to review syndromic surveillance data limitations when interpreting this report.

ED visits for unintentional overdose by opioid or unspecified substance and heroin are presented by count or rate per 100,000 population. Rates are calculated using U.S. Census Bureau 2015 population estimates. To protect confidentiality and maintain accurate rate calculations, ED visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed in this report. Counts of 0 are included.

The geographic location is assigned based on the patient's residential zip code provided. A single zip code may span multiple city and county localities in Virginia. If a patient resides in such a zip code, the visit is assigned to the locality where the majority of the population resides. Places where the Virginia city and county populations have been combined to calculate a rate per 100,000 population due to zip codes spanning multiple localities can be found in Appendix 1.

Highlights for November 2016

Statewide ED visits for overdose by opioid or unspecified substance among Virginia residents decreased by 62 visits (8%) in November compared to October 2016.

- Among the 5 VDH health planning regions, visits for overdose by opioid or unspecified substance decreased or remained constant in all five regions. The largest decrease was observed in the Northern Region with 20 fewer visits (12% decrease).
- By sex, visits for overdose by opioid or unspecified substance decreased among both males and females by 10% and 6%, respectively.
- By age group, visits for overdose by opioid or unspecified substance increased among those aged 0-14 years,45-54 years, and 65 years and older. The greatest increase was observed among the 0-14 age group with 13 additional visits (24%).
- Among the 35 VDH health districts, the largest increases in visits for overdose by opioid or unspecified substance were observed in Southside (125%) and Central Shenandoah (50%). The VDH health district with the highest visit rate per 100,000 population, however, was Roanoke for the third consecutive month.

Statewide ED visits for overdose by heroin among Virginia residents decreased by 21 visits (16%) in November compared to October 2016.

- Among the 5 VDH health planning regions, visits for overdose by heroin increased in the Central and Northern Regions by 6 (33%) and 5 (19%). Visits in the Eastern, Northwest, and Southwest Regions decreased.
- By sex, visits for overdose by heroin increased among females by 1 visit (3%) and decreased among males by 22 visits (22%).
- By age group, visits for overdose by heroin increased among those aged 15-24 years with 2 additional visits (9%) while decreasing in all other age groups. The largest proportion of visits, however, remained among those aged 25-34 years representing 41% of visits over the previous 12 months as well as the highest visit rate per 100,000 population.
- Among the 35 VDH health districts, the largest increases in visits for overdose by heroin were observed in Thomas Jefferson (300%), Henrico (200%), and Prince William (150%) between October and November 2016. The VDH health district with the highest visit rate per 100,000 population, however, was Rappahannock-Rapidan for the third consecutive month.

Emergency Department Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents

Figure 1A. Count of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month, 2015 and 2016

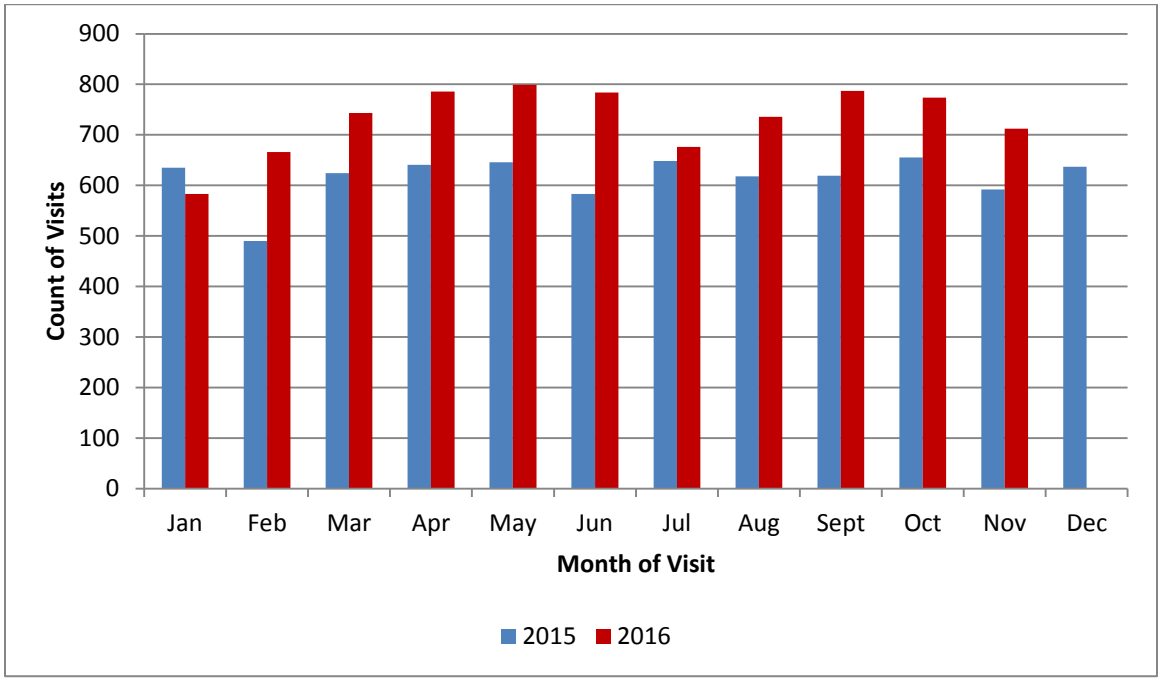

Figure 1B. Rate of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and Health Region, Previous 12 Months

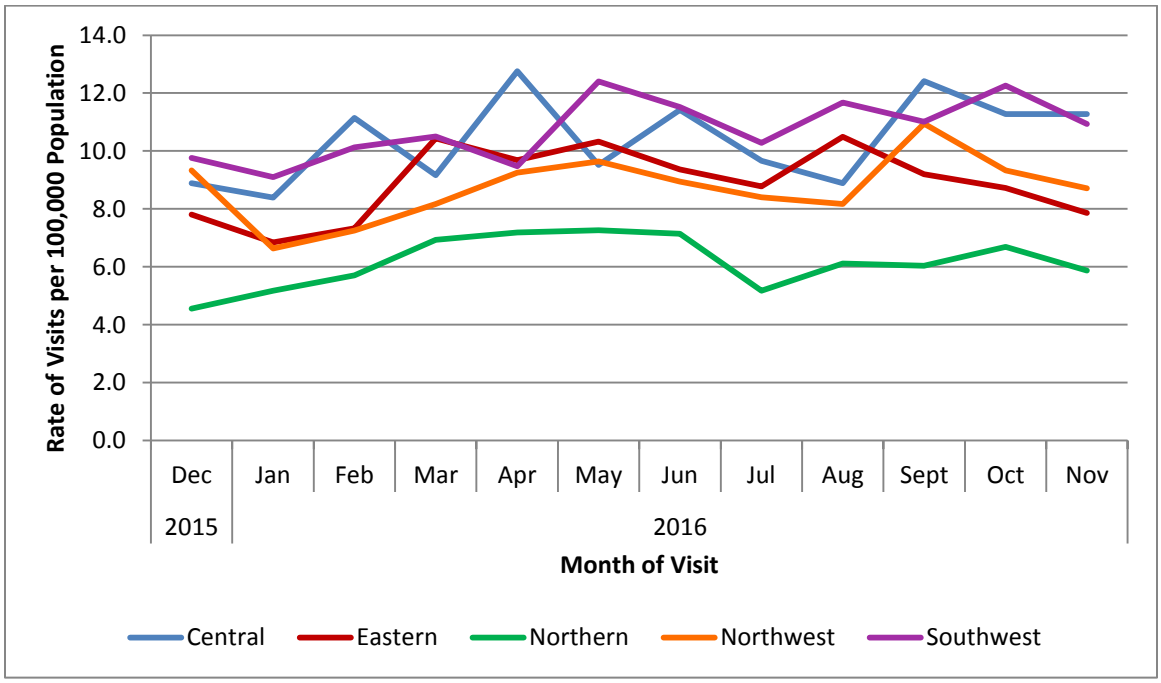

Figure 1C. Rate of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and Sex, Previous 12 Months

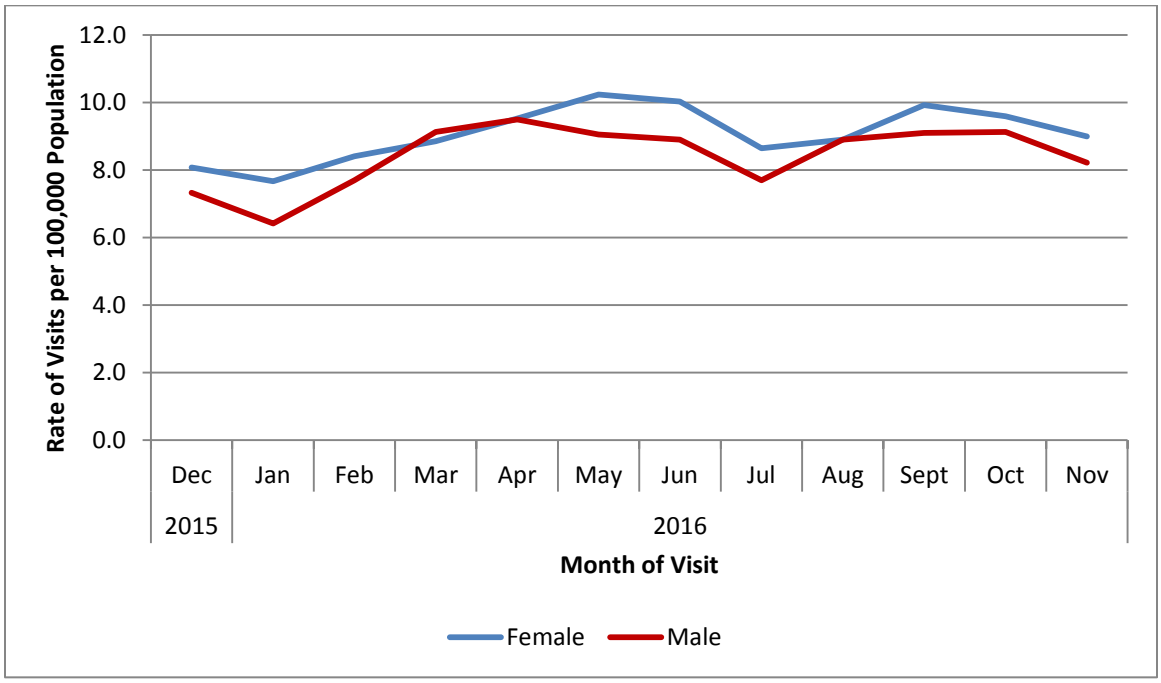

Figure 1D. Rate of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and Age Group (Years), Previous 12 Months

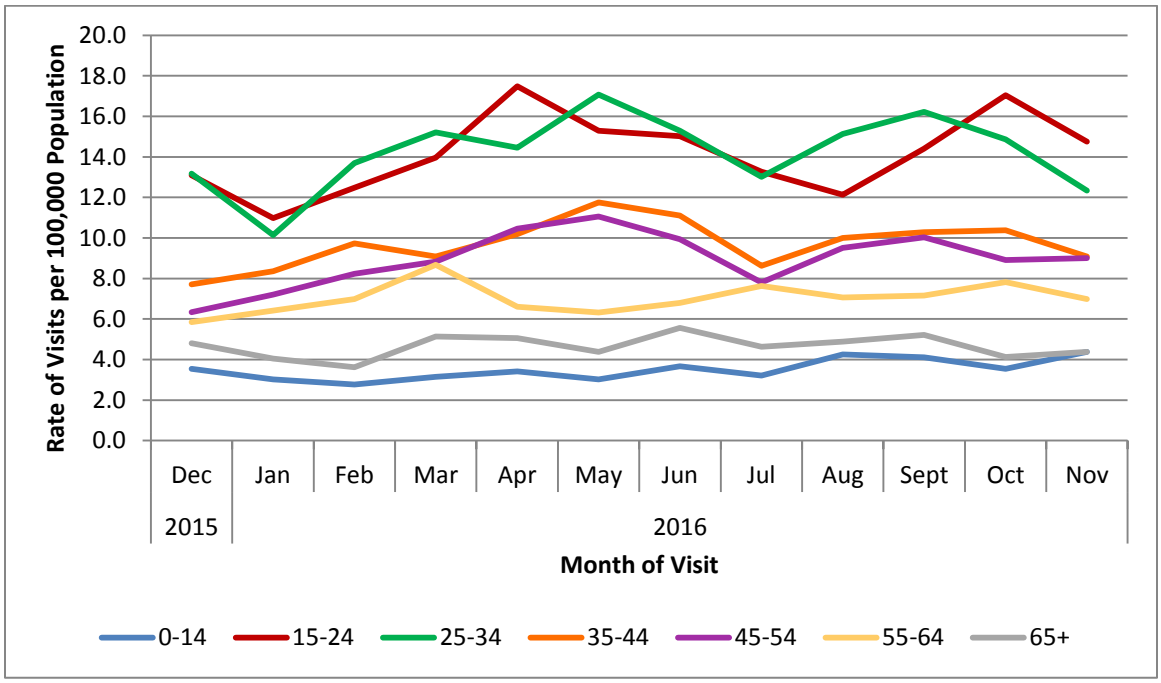

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Table 1A. Count and Rate per 100,000 Population of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and Health District, Previous 6 Months[†*]

Health District	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Alexandria	159,571	10	6.3	8	5.0	13	8.1	*	*	12	7.5	5	3.1
Alleghany	179,604	20	11.1	21	11.7	16	8.9	21	11.7	25	13.9	21	11.7
Arlington	234,678	10	4.3	11	4.7	13	5.5	14	6.0	12	5.1	11	4.7
Central Shenandoah	297,621	19	6.4	19	6.4	9	3.0	13	4.4	10	3.4	15	5.0
Central Virginia	259,900	28	10.8	15	5.8	21	8.1	32	12.3	19	7.3	21	8.1
Chesapeake	238,283	30	12.6	25	10.5	25	10.5	30	12.6	17	7.1	21	8.8
Chesterfield	379,107	40	10.6	36	9.5	23	6.1	35	9.2	36	9.5	28	7.4
Chickahominy	154,089	19	12.3	5	3.2	15	9.7	13	8.4	14	9.1	17	11.0
Crater	157,517	10	6.3	*	*	14	8.9	16	10.2	14	8.9	7	4.4
Cumberland Plateau	110,381	14	12.7	5	4.5	16	14.5	11	10.0	14	12.7	12	10.9
Eastern Shore	45,692	*	*	*	*	*	*	*	*	*	*	*	*
Fairfax	1,166,706	99	8.5	69	5.9	69	5.9	81	6.9	73	6.3	77	6.6
Hampton	138,626	13	9.4	15	10.8	20	14.4	10	7.2	14	10.1	11	7.9
Henrico	320,717	39	12.2	43	13.4	37	11.5	45	14.0	49	15.3	52	16.2
Lenowisco	91,830	21	22.9	15	16.3	16	17.4	10	10.9	14	15.2	10	10.9
Lord Fairfax	229,120	25	10.9	17	7.4	21	9.2	33	14.4	29	12.7	27	11.8
Loudoun	374,451	23	6.1	25	6.7	24	6.4	15	4.0	26	6.9	19	5.1
Mount Rogers	191,012	12	6.3	15	7.9	17	8.9	17	8.9	14	7.3	14	7.3
New River	182,991	9	4.9	22	12.0	10	5.5	10	5.5	17	9.3	17	9.3
Norfolk	247,189	25	10.1	21	8.5	24	9.7	18	7.3	19	7.7	20	8.1
Peninsula	353,464	37	10.5	29	8.2	46	13.0	41	11.6	39	11.0	34	9.6
Piedmont	104,667	9	8.6	11	10.5	7	6.7	12	11.5	9	8.6	9	8.6
Pittsylvania-Danville	105,799	11	10.4	5	4.7	16	15.1	14	13.2	7	6.6	10	9.5
Portsmouth	96,874	16	16.5	16	16.5	28	28.9	12	12.4	16	16.5	12	12.4
Prince William	500,740	32	6.4	13	2.6	30	6.0	34	6.8	40	8.0	31	6.2
Rappahannock	350,535	26	7.4	31	8.8	34	9.7	46	13.1	36	10.3	27	7.7
Rappahannock-Rapidan	171,228	21	12.3	18	10.5	21	12.3	23	13.4	21	12.3	22	12.8
Richmond City	217,938	42	19.3	30	13.8	19	8.7	44	20.2	34	15.6	38	17.4
Roanoke	99,681	23	23.1	20	20.1	23	23.1	21	21.1	31	31.1	25	25.1
Southside	84,304	*	*	8	9.5	11	13.0	11	13.0	*	*	9	10.7
Thomas Jefferson	248,500	25	10.1	24	9.7	21	8.5	26	10.5	25	10.1	22	8.9
Three Rivers	141,609	15	10.6	14	9.9	13	9.2	12	8.5	14	9.9	12	8.5
Virginia Beach	453,500	29	6.4	28	6.2	30	6.6	29	6.4	26	5.7	29	6.4
West Piedmont	141,119	19	13.5	22	15.6	24	17.0	14	9.9	26	18.4	19	13.5
Western Tidewater	153,950	6	3.9	14	9.1	7	4.5	16	10.4	16	10.4	6	3.9
VIRGINIA TOTAL	8,382,993	784	9.4	676	8.1	736	8.8	785	9.4	774	9.2	712	8.5

† Rate per 100,000 population based on 2015 U.S. Census estimates available at www.census.gov/popest/

* Visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed to maintain confidentiality and accurate rate calculations.

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Table 1B. Count and Rate per 100,000 Population of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and City/County Locality, Previous 6 Months[†‡*]

Locality	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Accomack County	32,973	*	*	*	*	*	*	*	*	*	*	*	*
Albemarle County[‡]	152,300	13	8.5	17	11.2	9	5.9	19	12.5	12	7.9	11	7.2
Alleghany County[‡]	21,335	*	*	*	*	5	23.4	*	*	*	*	*	*
Amelia County	12,903	*	*	0	0	0	0	*	*	0	0	0	0
Amherst County	31,914	*	*	*	*	*	*	*	*	*	*	*	*
Appomattox County	15,414	*	*	0	0	*	*	*	*	*	*	*	*
Arlington County	229,164	10	4.4	11	4.8	13	5.7	14	6.1	12	5.2	11	4.8
Augusta County[‡]	120,221	*	*	*	*	*	*	*	*	*	*	*	*
Bath County	4,470	0	0	0	0	0	0	0	0	0	0	0	0
Bedford County	77,724	10	12.9	*	*	7	9.0	7	9.0	6	7.7	*	*
Bland County	6,561	0	0	0	0	0	0	0	0	0	0	0	0
Botetourt County	33,347	*	*	5	15.0	*	*	*	*	*	*	5	15.0
Brunswick County	16,698	0	0	*	*	*	*	*	*	0	0	*	*
Buchanan County	22,776	*	*	0	0	0	0	*	*	*	*	6	26.3
Buckingham County	17,032	*	*	*	*	0	0	*	*	*	*	*	*
Campbell County	55,086	*	*	*	*	*	*	5	9.1	*	*	*	*
Caroline County	29,984	*	*	*	*	5	16.7	8	26.7	*	*	*	*
Carroll County	29,724	*	*	*	*	*	*	*	*	*	*	*	*
Charles City County	7,040	*	*	0	0	*	*	0	0	0	0	0	0
Charlotte County	12,201	*	*	*	*	*	*	*	*	0	0	*	*
Chesterfield County[‡]	353,507	37	10.5	30	8.5	21	5.9	32	9.1	35	9.9	26	7.4
Clarke County	14,363	0	0	*	*	0	0	0	0	*	*	0	0
Craig County	5,211	*	*	0	0	0	0	*	*	*	*	0	0
Culpeper County	49,432	13	26.3	*	*	8	16.2	6	12.1	9	18.2	*	*
Cumberland County	9,719	*	*	0	0	*	*	*	*	0	0	*	*
Dickenson County	15,115	*	*	*	*	5	33.1	*	*	*	*	0	0
Dinwiddie County	27,852	*	*	0	0	0	0	0	0	0	0	*	*
Essex County	11,130	*	*	*	*	*	*	*	*	0	0	0	0
Fairfax County[‡]	1,180,139	99	8.4	69	5.8	69	5.8	81	6.9	73	6.2	77	6.5
Fauquier County	68,782	*	*	6	8.7	6	8.7	9	13.1	8	11.6	10	14.5
Floyd County	15,651	0	0	*	*	*	*	*	*	*	*	0	0
Fluvanna County	26,235	*	*	*	*	*	*	0	0	*	*	*	*
Franklin County	56,264	6	10.7	7	12.4	5	8.9	7	12.4	8	14.2	6	10.7
Frederick County[‡]	110,483	11	10.0	*	*	11	10.0	17	15.4	11	10.0	11	10.0
Giles County	16,708	*	*	*	*	*	*	0	0	*	*	*	*
Gloucester County	37,143	*	*	*	*	*	*	*	*	*	*	*	*
Goochland County	22,253	0	0	0	0	*	*	0	0	*	*	*	*

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Locality	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Grayson County‡	22,926	5	21.8	*	*	6	26.2	*	*	6	26.2	7	30.5
Greene County	19,162	*	*	*	*	*	*	*	*	6	31.3	5	26.1
Greensville County‡	17,381	*	*	0	0	*	*	*	*	*	*	*	*
Halifax County	35,125	0	0	*	*	5	14.2	*	*	*	*	*	*
Hanover County	103,227	17	16.5	5	4.8	9	8.7	11	10.7	9	8.7	12	11.6
Henrico County	325,155	39	12.0	43	13.2	37	11.4	45	13.8	49	15.1	52	16.0
Henry County‡	65,526	13	19.8	14	21.4	18	27.5	7	10.7	17	25.9	13	19.8
Highland County	2,214	0	0	0	0	0	0	0	0	0	0	0	0
Isle of Wight County	36,314	0	0	*	*	*	*	*	*	*	*	*	*
James City County	73,147	7	9.6	*	*	5	6.8	10	13.7	*	*	11	15.0
King and Queen County	7,158	0	0	*	*	*	*	0	0	0	0	0	0
King George County	25,515	*	*	*	*	*	*	*	*	*	*	*	*
King William County	16,269	0	0	*	*	*	*	*	*	*	*	*	*
Lancaster County	10,965	5	45.6	*	*	0	0	*	*	*	*	*	*
Lee County	24,742	*	*	*	*	*	*	*	*	*	*	*	*
Loudoun County	375,629	23	6.1	25	6.7	24	6.4	15	4.0	26	6.9	19	5.1
Louisa County	34,602	6	17.3	*	*	6	17.3	6	17.3	6	17.3	*	*
Lunenburg County	12,299	*	*	0	0	*	*	*	*	0	0	0	0
Madison County	13,134	0	0	0	0	*	*	*	*	*	*	*	*
Mathews County	8,862	*	*	*	*	*	*	*	*	*	*	0	0
Mecklenburg County	31,081	*	*	*	*	*	*	5	16.1	*	*	6	19.3
Middlesex County	10,606	0	0	0	0	*	*	0	0	*	*	0	0
Montgomery County‡	115,056	6	5.2	10	8.7	5	4.3	5	4.3	11	9.6	8	7.0
Nelson County	14,785	*	*	*	*	*	*	0	0	0	0	*	*
New Kent County	20,392	*	*	0	0	*	*	*	*	*	*	*	*
Northampton County	12,155	*	*	0	0	*	*	*	*	*	*	*	*
Northumberland County	12,232	*	*	0	0	0	0	*	*	*	*	*	*
Nottoway County	15,673	*	*	*	*	*	*	*	*	0	0	*	*
Orange County	35,385	*	*	10	28.3	6	17.0	*	*	*	*	6	17.0
Page County	23,726	*	*	*	*	*	*	*	*	*	*	*	*
Patrick County	18,045	0	0	*	*	*	*	0	0	*	*	0	0
Pittsylvania County‡	104,276	11	10.5	5	4.8	16	15.3	14	13.4	7	6.7	10	9.6
Powhatan County	28,031	*	*	6	21.4	*	*	*	*	*	*	*	*
Prince Edward County	22,952	*	*	5	21.8	*	*	*	*	5	21.8	*	*
Prince George County	92,717	6	6.5	*	*	10	10.8	12	12.9	10	10.8	5	5.4
Prince William County‡	509,211	32	6.3	13	2.6	30	5.9	34	6.7	40	7.9	31	6.1
Pulaski County	34,332	*	*	*	*	*	*	*	*	0	0	5	14.6
Rappahannock County	7,378	0	0	0	0	0	0	0	0	0	0	*	*
Richmond County	8,908	*	*	0	0	*	*	0	0	*	*	0	0
Roanoke County‡	94,409	34	15.5	33	15.0	33	15.0	34	15.5	48	21.8	38	17.3

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Locality	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Rockbridge County‡	36,234	*	*	*	*	*	*	*	*	*	*	*	*
Rockingham County‡	131,131	14	10.7	12	9.2	5	3.8	8	6.1	7	5.3	12	9.2
Russell County	27,891	6	21.5	*	*	5	17.9	*	*	*	*	*	*
Scott County	22,126	0	0	0	0	0	0	0	0	*	*	0	0
Shenandoah County	43,190	5	11.6	*	*	*	*	9	20.8	9	20.8	5	11.6
Smyth County	31,470	*	*	7	22.2	7	22.2	8	25.4	6	19.1	5	15.9
Southampton County‡	26,599	*	*	*	*	*	*	*	*	*	*	*	*
Spotsylvania County	130,475	5	3.8	12	9.2	12	9.2	16	12.3	10	7.7	12	9.2
Stafford County	142,003	11	7.7	11	7.7	11	7.7	15	10.6	15	10.6	8	5.6
Surry County	6,709	0	0	0	0	*	*	*	*	0	0	0	0
Sussex County	11,715	*	*	*	*	*	*	*	*	*	*	0	0
Tazewell County	42,899	*	*	*	*	6	14.0	*	*	*	*	*	*
Warren County	39,083	8	20.5	6	15.4	5	12.8	6	15.4	*	*	8	20.5
Washington County‡	71,732	*	*	*	*	*	*	*	*	0	0	*	*
Westmoreland County	17,629	*	*	0	0	*	*	*	*	*	*	*	*
Wise County‡	43,657	19	43.5	14	32.1	14	32.1	7	16.0	10	22.9	8	18.3
Wythe County	29,119	*	*	0	0	0	0	0	0	0	0	0	0
York County	67,837	8	11.8	8	11.8	6	8.8	6	8.8	5	7.4	*	*
Alexandria City	153,511	10	6.5	8	5.2	13	8.5	*	*	12	7.8	5	3.3
Bristol City‡	71,732	*	*	*	*	*	*	*	*	0	0	*	*
Buena Vista City‡	36,234	*	*	*	*	*	*	*	*	*	*	*	*
Charlottesville City‡	152,300	13	8.5	17	11.2	9	5.9	19	12.5	12	7.9	11	7.2
Chesapeake City	235,429	30	12.7	25	10.6	25	10.6	30	12.7	17	7.2	21	8.9
Colonial Heights City‡	353,507	37	10.5	30	8.5	21	5.9	32	9.1	35	9.9	26	7.4
Covington City‡	21,335	*	*	*	*	5	23.4	*	*	*	*	*	*
Danville City‡	104,276	11	10.5	5	4.8	16	15.3	14	13.4	7	6.7	10	9.6
Emporia City‡	17,381	*	*	0	0	*	*	*	*	*	*	*	*
Fairfax City‡	1,180,139	99	8.4	69	5.8	69	5.8	81	6.9	73	6.2	77	6.5
Falls Church City‡	1,180,139	99	8.4	69	5.8	69	5.8	81	6.9	73	6.2	77	6.5
Franklin City‡	26,599	*	*	*	*	*	*	*	*	*	*	*	*
Fredericksburg City	28,118	*	*	*	*	*	*	*	*	*	*	*	*
Galax City‡	22,926	5	21.8	*	*	6	26.2	*	*	6	26.2	7	30.5
Hampton City	136,454	13	9.5	15	11.0	20	14.7	10	7.3	14	10.3	11	8.1
Harrisonburg City‡	131,131	14	10.7	12	9.2	5	3.8	8	6.1	7	5.3	12	9.2
Hopewell City‡	92,717	6	6.5	*	*	10	10.8	12	12.9	10	10.8	5	5.4
Lexington City‡	36,234	*	*	*	*	*	*	*	*	*	*	*	*
Lynchburg City	79,812	12	15.0	8	10.0	7	8.8	14	17.5	6	7.5	9	11.3
Manassas City‡	509,211	32	6.3	13	2.6	30	5.9	34	6.7	40	7.9	31	6.1
Manassas Park City‡	509,211	32	6.3	13	2.6	30	5.9	34	6.7	40	7.9	31	6.1
Martinsville City‡	65,526	13	19.8	14	21.4	18	27.5	7	10.7	17	25.9	13	19.8

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Locality	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Newport News City	182,385	20	11.0	13	7.1	30	16.4	22	12.1	31	17.0	20	11.0
Norfolk City	246,393	25	10.1	21	8.5	24	9.7	18	7.3	19	7.7	20	8.1
Norton City‡	43,657	19	43.5	14	32.1	14	32.1	7	16.0	10	22.9	8	18.3
Petersburg City‡	92,717	6	6.5	*	*	10	10.8	12	12.9	10	10.8	5	5.4
Poquoson City	12,059	*	*	*	*	5	41.5	*	*	*	*	0	0
Portsmouth City	96,201	16	16.6	16	16.6	28	29.1	12	12.5	16	16.6	12	12.5
Radford City‡	115,056	6	5.2	10	8.7	5	4.3	5	4.3	11	9.6	8	7.0
Richmond City	220,289	42	19.1	30	13.6	19	8.6	44	20.0	34	15.4	38	17.3
Roanoke City‡	99,897	34	15.5	33	15.0	33	15.0	34	15.5	48	21.8	38	17.3
Salem City‡	25,432	34	15.5	33	15.0	33	15.0	34	15.5	48	21.8	38	17.3
Staunton City‡	120,221	*	*	*	*	*	*	*	*	*	*	*	*
Suffolk City	88,161	*	*	10	11.3	5	5.7	10	11.3	9	10.2	*	*
Virginia Beach City	452,745	29	6.4	28	6.2	30	6.6	29	6.4	26	5.7	29	6.4
Waynesboro City‡	120,221	*	*	*	*	*	*	*	*	*	*	*	*
Williamsburg City	15,052	0	0	0	0	0	0	0	0	0	0	0	0
Winchester City‡	110,483	11	10.0	*	*	11	10.0	17	15.4	11	10.0	11	10.0
VIRGINIA TOTAL	8,382,993	784	9.4	676	8.1	736	8.8	785	9.4	774	9.2	712	8.5

† Rate per 100,000 population based on 2015 U.S. Census estimates available at www.census.gov/popest/

‡ The rate per 100,000 population for each locality within a combined group is based on the aggregated total population of the combined group. Refer to Appendix 1 for the list of localities that are combined.

* Visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed to maintain confidentiality and accurate rate calculations.

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Table 1C. Count and Rate per 100,000 Population of ED Visits for Unintentional Overdose by Opioid or Unspecified Substance among Virginia Residents by Month and Virginia State Police Division, Previous 6 Months[†*§]

VSP Division	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Division 1	1,403,431	175	12.5	137	9.8	125	8.9	177	12.6	165	11.8	158	11.3
Division 2	836,683	80	9.6	74	8.8	73	8.7	99	11.8	85	10.2	85	10.2
Division 3	655,338	48	7.3	48	7.3	47	7.2	65	9.9	47	7.2	54	8.2
Division 4	441,778	50	11.3	43	9.7	53	12.0	41	9.3	46	10.4	45	10.2
Division 5	1,823,018	165	9.1	159	8.7	196	10.8	169	9.3	159	8.7	140	7.7
Division 6	775,091	92	11.9	89	11.5	93	12.0	88	11.4	109	14.1	87	11.2
Division 7	2,447,654	174	7.1	126	5.1	149	6.1	146	6.0	163	6.7	143	5.8
VIRGINIA TOTAL	8,382,993	784	9.4	676	8.1	736	8.8	785	9.4	774	9.2	712	8.5

† Rate per 100,000 population based on 2015 U.S. Census estimates available at www.census.gov/popest/

* Visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed to maintain confidentiality and accurate rate calculations.

§ Virginia State Police Divisions available at http://www.vsp.state.va.us/Office_Locations.shtm

Emergency Department Visits for Unintentional Overdose by Heroin among Virginia Residents

Figure 2A. Count of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month, 2015 and 2016

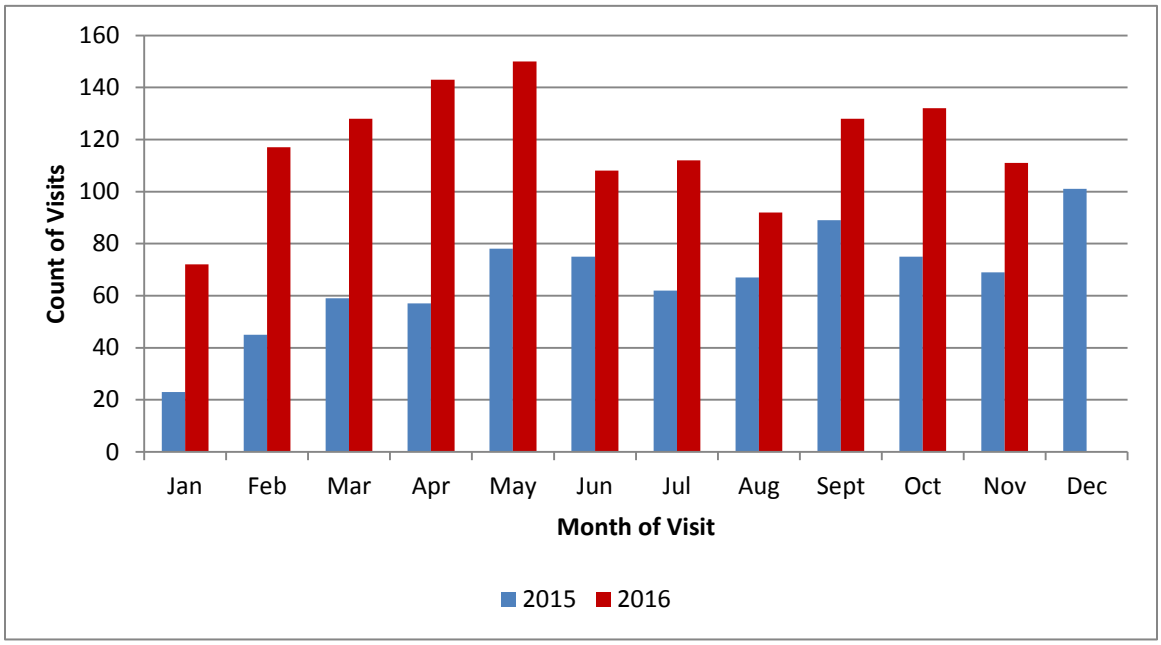


Figure 2B. Rate of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month and Health Region, Previous 12 Months

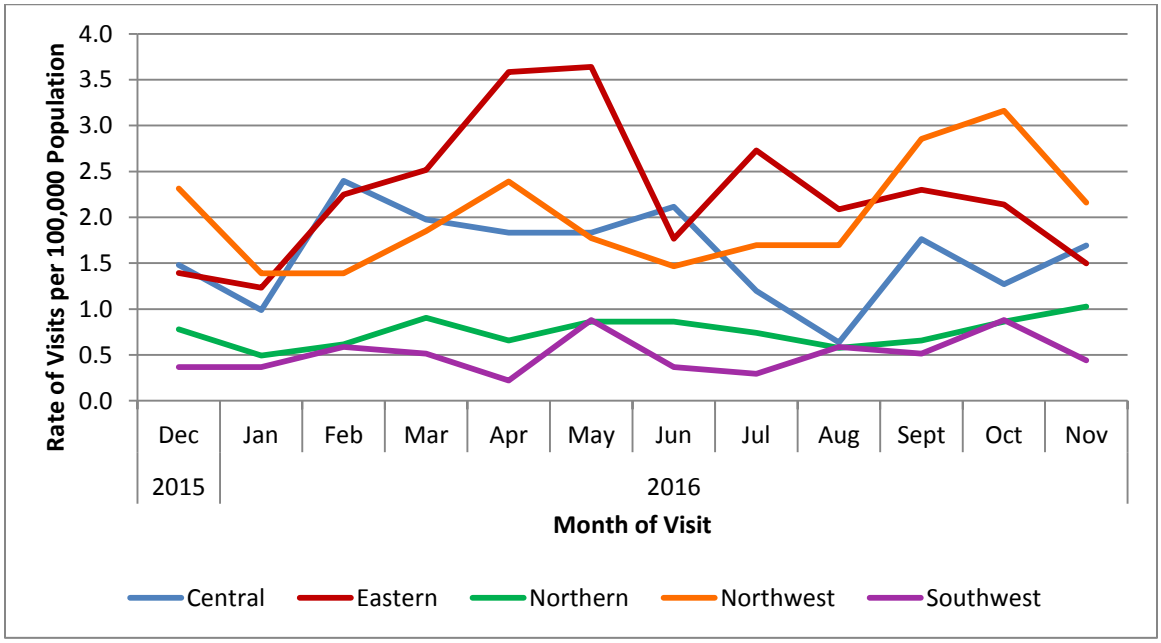


Figure 2C. Rate of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month and Sex, Previous 12 Months

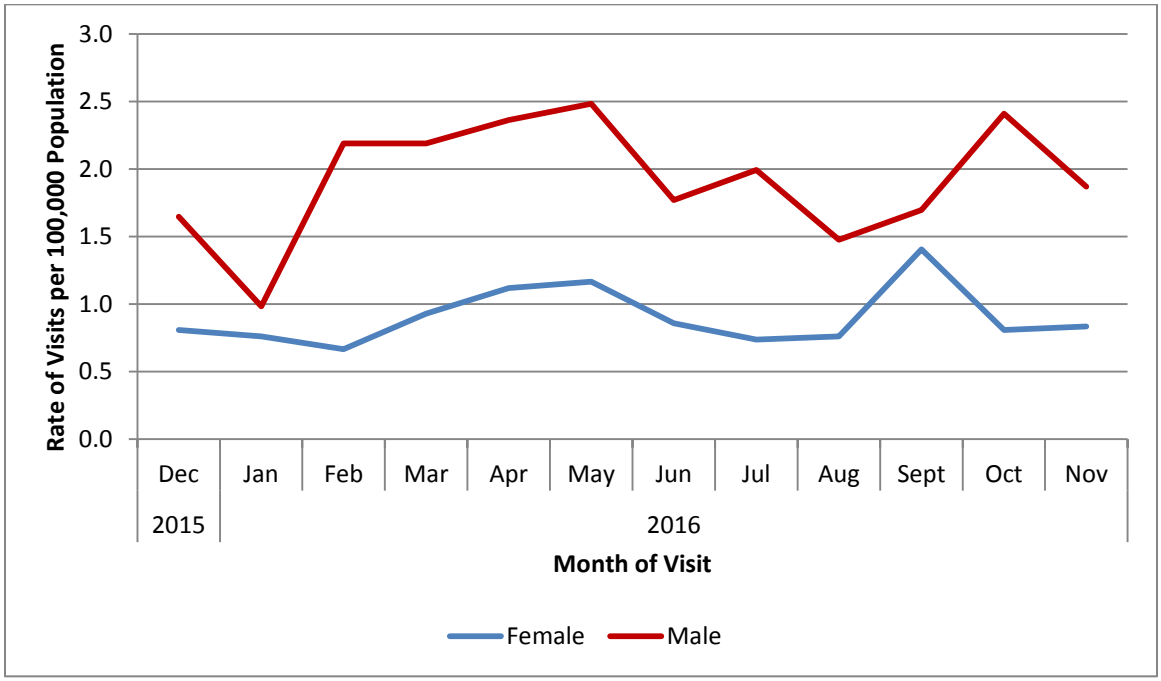
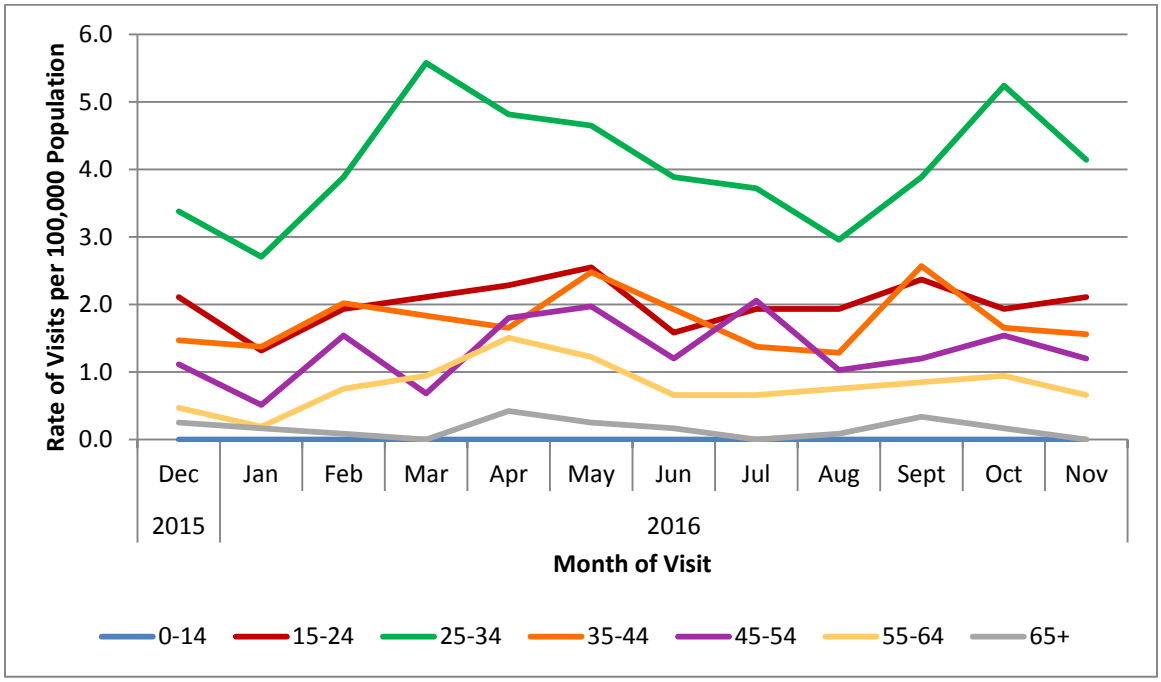


Figure 2D. Rate of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month and Age Group (Years), Previous 12 Months



VDH VIRGINIA DEPARTMENT OF HEALTH

Table 2A. Count and Rate per 100,000 Population of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month and Health District, Previous 6 Months[†*]

Health District	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Alexandria	159,571	*	*	*	*	*	*	0	0	0	0	*	*
Alleghany	179,604	*	*	0	0	5	2.8	*	*	*	*	*	*
Arlington	234,678	*	*	0	0	0	0	*	*	*	*	0	0
Central Shenandoah	297,621	0	0	*	*	*	*	*	*	0	0	0	0
Central Virginia	259,900	0	0	0	0	0	0	*	*	0	0	*	*
Chesapeake	238,283	5	2.1	6	2.5	8	3.4	5	2.1	10	4.2	*	*
Chesterfield	379,107	9	2.4	*	*	0	0	*	*	8	2.1	*	*
Chickahominy	154,089	*	*	*	*	0	0	5	3.2	0	0	*	*
Crater	157,517	0	0	*	*	*	*	0	0	*	*	*	*
Cumberland Plateau	110,381	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Shore	45,692	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax	1,166,706	10	0.9	10	0.9	8	0.7	9	0.8	14	1.2	11	0.9
Hampton	138,626	*	*	6	4.3	*	*	*	*	0	0	*	*
Henrico	320,717	*	*	6	1.9	*	*	6	1.9	*	*	12	3.7
Lenowisco	91,830	0	0	0	0	0	0	0	0	0	0	0	0
Lord Fairfax	229,120	*	*	6	2.6	5	2.2	6	2.6	15	6.5	7	3.1
Loudoun	374,451	0	0	*	*	0	0	*	*	*	*	*	*
Mount Rogers	191,012	0	0	0	0	0	0	0	0	*	*	0	0
New River	182,991	0	0	0	0	0	0	*	*	0	0	*	*
Norfolk	247,189	7	2.8	7	2.8	12	4.9	12	4.9	5	2.0	6	2.4
Peninsula	353,464	*	*	7	2.0	*	*	7	2.0	6	1.7	*	*
Piedmont	104,667	*	*	0	0	0	0	0	0	0	0	0	0
Pittsylvania-Danville	105,799	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth	96,874	7	7.2	7	7.2	6	6.2	6	6.2	5	5.2	*	*
Prince William	500,740	8	1.6	*	*	5	1.0	*	*	*	*	10	2.0
Rappahannock	350,535	5	1.4	*	*	11	3.1	12	3.4	10	2.9	7	2.0
Rappahannock-Rapidan	171,228	5	2.9	7	4.1	*	*	11	6.4	15	8.8	10	5.8
Richmond City	217,938	12	5.5	6	2.8	*	*	9	4.1	*	*	7	3.2
Roanoke	99,681	*	*	*	*	*	*	*	*	7	7.0	*	*
Southside	84,304	0	0	0	0	0	0	*	*	0	0	0	0
Thomas Jefferson	248,500	5	2.0	*	*	*	*	7	2.8	*	*	*	*
Three Rivers	141,609	*	*	*	*	0	0	0	0	*	*	*	*
Virginia Beach	453,500	6	1.3	9	2.0	*	*	9	2.0	12	2.6	7	1.5
West Piedmont	141,119	0	0	*	*	*	*	0	0	*	*	0	0
Western Tidewater	153,950	*	*	5	3.2	5	3.2	*	*	0	0	*	*
VIRGINIA TOTAL	8,382,993	108	1.3	111	1.3	92	1.1	128	1.5	132	1.6	111	1.3

† Rate per 100,000 population based on 2015 U.S. Census estimates available at www.census.gov/popest/

* Visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed to maintain confidentiality and accurate rate calculations.

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Table 2B. Count and Rate per 100,000 Population of ED Visits for Unintentional Overdose by Heroin among Virginia Residents by Month and Virginia State Police Division, Previous 6 Months[†*§]

VSP Division	2015 Population Estimate	Jun 2016		Jul 2016		Aug 2016		Sept 2016		Oct 2016		Nov 2016	
		Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Division 1	1,403,431	30	2.1	20	1.4	11	0.8	25	1.8	20	1.4	26	1.9
Division 2	836,683	14	1.7	17	2.0	20	2.4	27	3.2	39	4.7	24	2.9
Division 3	655,338	5	0.8	*	*	0	0	9	1.4	*	*	*	*
Division 4	441,778	0	0	0	0	0	0	0	0	*	*	0	0
Division 5	1,823,018	33	1.8	50	2.7	39	2.1	43	2.4	39	2.1	28	1.5
Division 6	775,091	5	0.6	5	0.6	8	1.0	8	1.0	11	1.4	6	0.8
Division 7	2,447,654	21	0.9	17	0.7	14	0.6	16	0.7	21	0.9	25	1.0
VIRGINIA TOTAL	8,382,993	108	1.3	111	1.3	92	1.1	128	1.5	132	1.6	111	1.3

† Rate per 100,000 population based on 2015 U.S. Census estimates available at www.census.gov/popest/

* Visit counts of 1 to 4 and rates with numerators of 1 to 4 are suppressed to maintain confidentiality and accurate rate calculations.

§ Virginia State Police Divisions available at http://www.vsp.state.va.us/Office_Locations.shtm

Appendix 1

Virginia Localities that were Combined for the Purposes of Calculating Rate per 100,000 Population

- Alleghany County and Covington City
- Albemarle County and Charlottesville City
- Augusta County, Staunton City, and Waynesboro City
- Chesterfield County and Colonial Heights City
- Frederick County and Winchester City
- Fairfax County, Fairfax City, and Falls Church City
- Grayson County and Galax City
- Greensville County and Emporia City
- Henry County and Martinsville City
- Montgomery County and Radford City
- Pittsylvania County and Danville City
- Prince George County, Hopewell City, and Petersburg City
- Prince William County, Manassas City, and Manassas Park City
- Roanoke County, Roanoke City, and Salem City
- Rockingham County and Harrisonburg City
- Rockbridge County, Buena Vista City, and Lexington City
- Southampton County and Franklin City
- Washington County and Bristol City
- Wise County and Norton City