

## Suicide Trends Report

### An In-Depth Analysis

Date Completed: 12/18/2018

This data report provides a summary of suicide deaths and suicide related emergency room (ER) visits that occurred from 2013 to 2017 in Medina County with the exception of the graph in Figure 1. Figure 1 below displays suicide deaths from 1999-2016. Medina County was below the Ohio rate for suicides every year except recently where the number of suicides doubled in 2014-2016 compared to 2011-2013. Between 2014-2016, Ohio's age adjusted suicide rate was 13.5 suicides per 100,000 people while Medina County's age adjusted suicide rate was 14.7 suicides per 100,000 people.

During the years 2013-2017, Medina County saw a total of 124 suicide deaths and 2,016 suicide related ER visits. In 2017, there were 28 suicide deaths with an overall age adjusted rate of 16.6 suicide deaths per 100,000 people in the county and 571 suicide related ER visits with an overall age adjusted rate of 322.2 suicide related ER visits per 100,000 people in the county. There was a +100.0% increase in suicide deaths and a +56.9% increase in suicide related ER visits from 2013 to 2017. Compared to the historic 5 year average, 2017 was +12.9% above the historic average for suicide deaths and +41.7% above the historic average for suicide related ER visits.

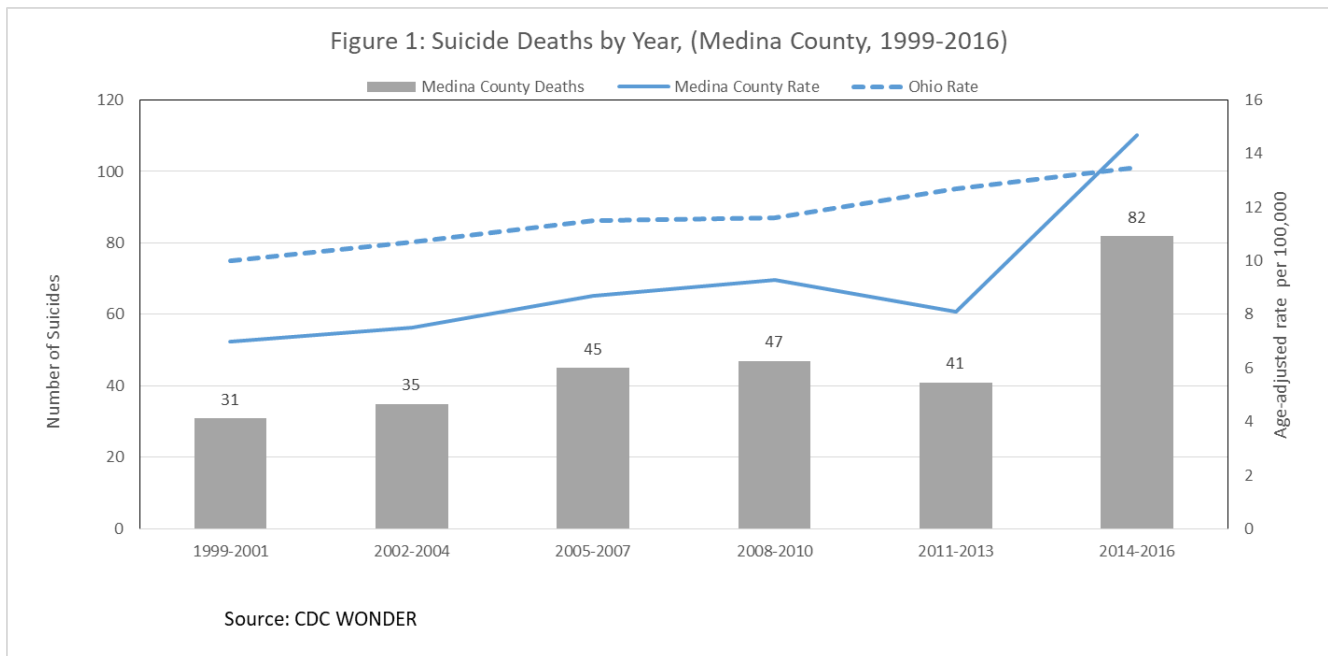


Figure 1 displays the number of suicide deaths by year groupings. 2014-2016 had the highest number of suicide deaths (82) and 1999-2001 had the lowest number of suicide deaths (31). There was a +100% increase in suicide deaths comparing 2011-2013 to 2014-2016.

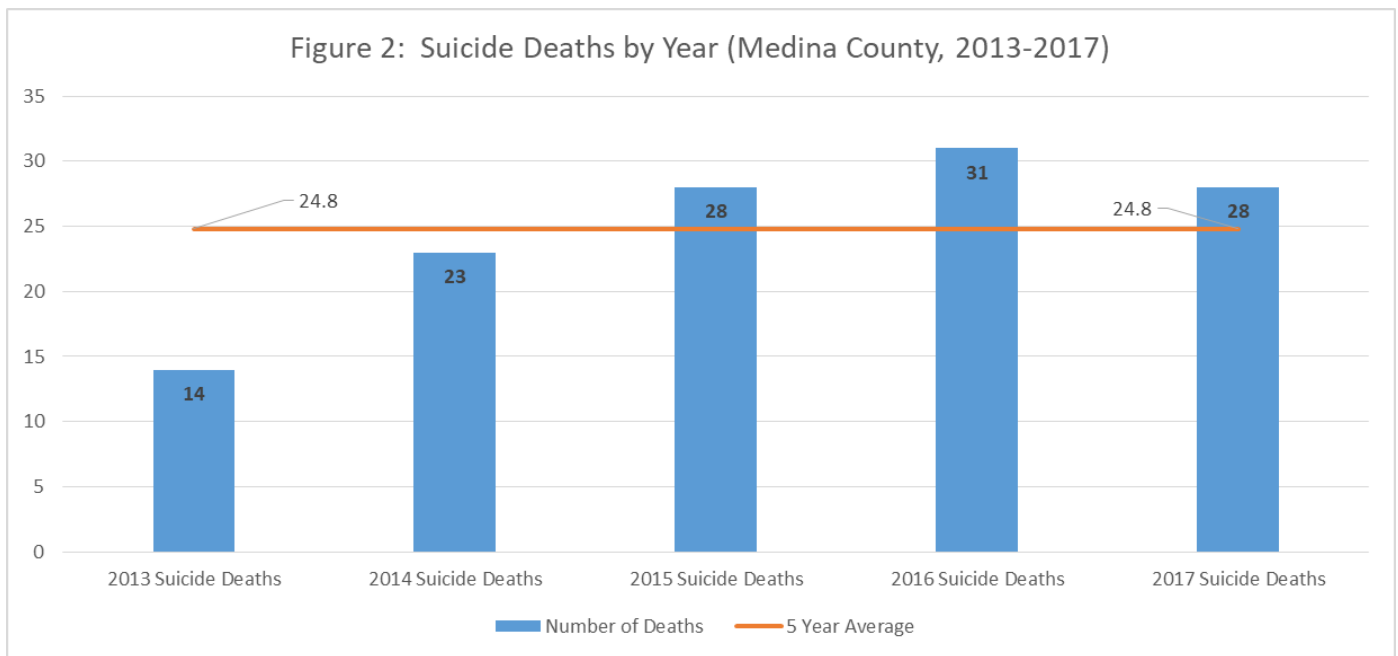


Figure 2 displays the number of suicide deaths by year. 2016 had the highest number of suicide deaths (31) and 2013 had the lowest number of suicide deaths (14). 2015, 2016 and 2017 were all above the historic 5 year average of 24.8 deaths.

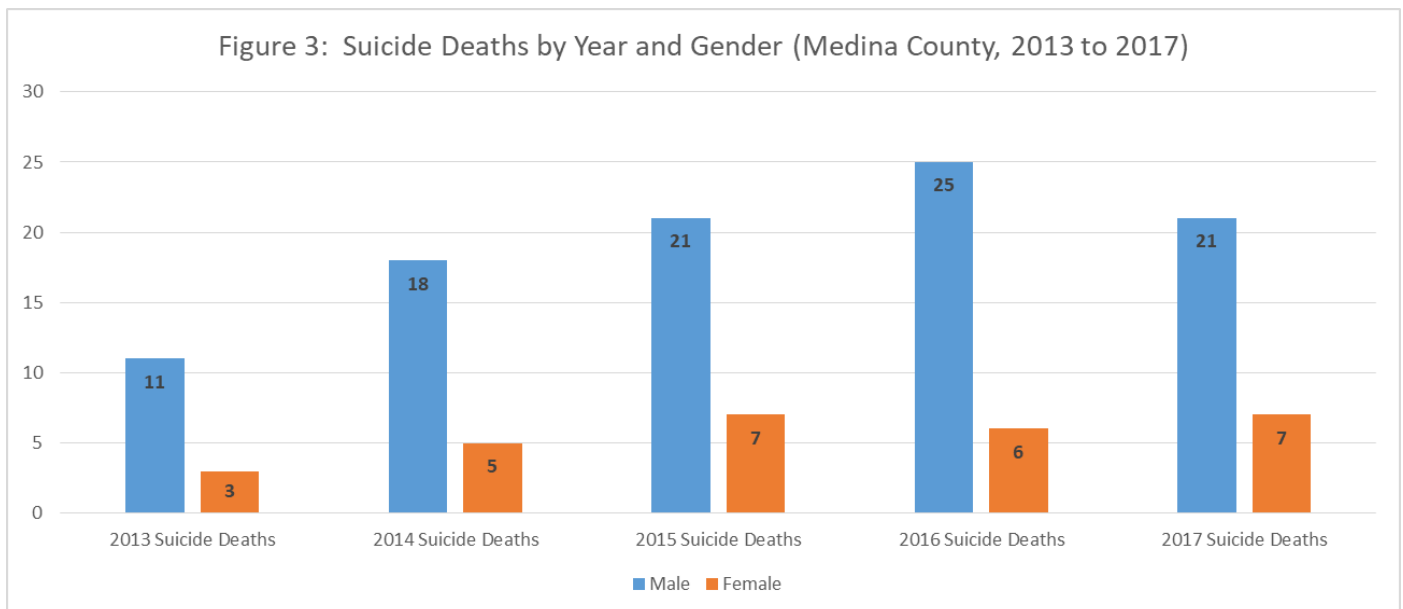


Figure 3 displays suicide deaths by gender and year of death. 2016 had the highest number of suicide deaths for males (25) and 2015 and 2017 had the highest number of suicide deaths for females (7). Males accounted for 77.1% of all suicide deaths compared to 22.9% for females.

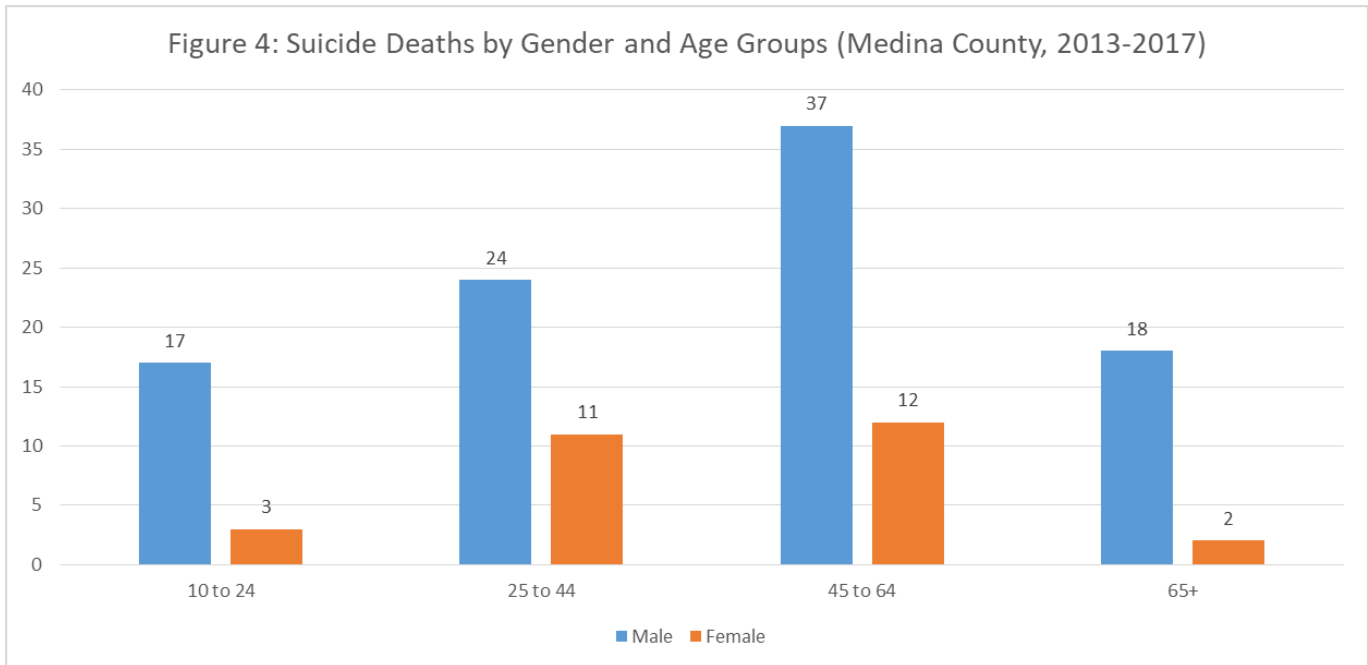


Figure 4 displays suicide deaths by gender and age groups. The 45 to 64 age group had the highest number of deaths for both males (37) and females (12). The 10 to 24 age group had the lowest number of deaths for males (17) and the 65+ age group had the lowest number of deaths for females (2). The average age of death for males was 46.1 and the average age of death for females was 44.5.

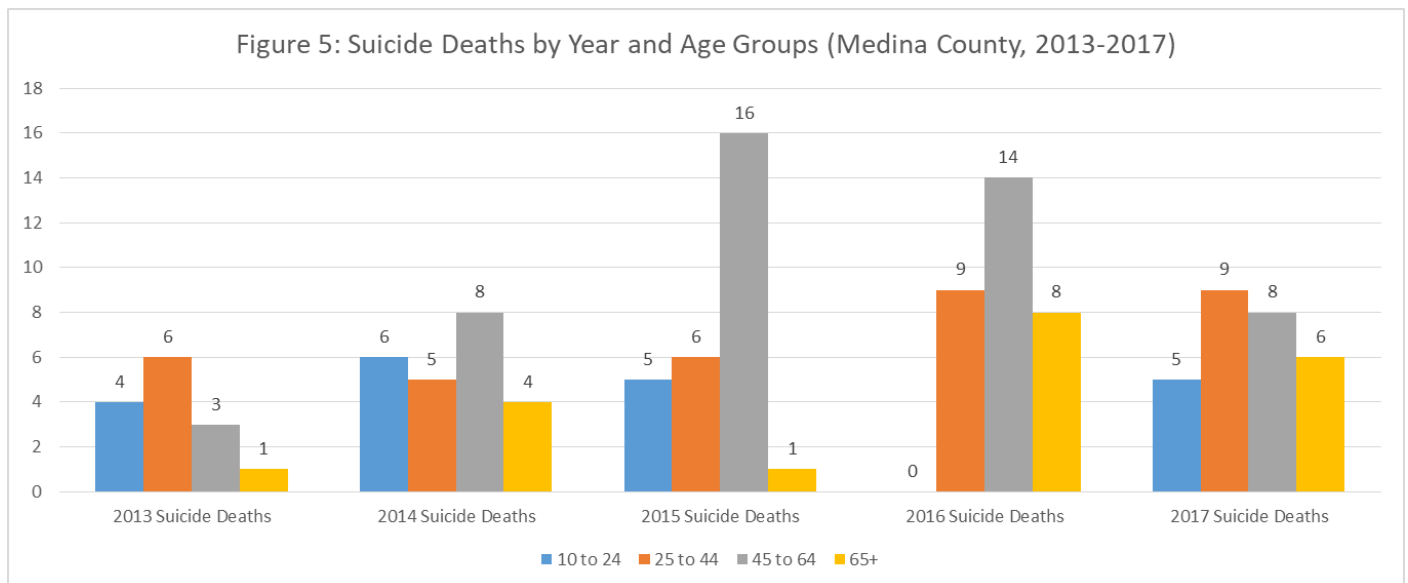


Figure 5 displays the number of suicide deaths by age groups and year. The 45-64 age group had the highest number of suicide deaths every year except in 2013 and 2017. Overall, the 45-64 age group had the highest overall number of suicide deaths with 49 deaths (39.5%). The 0-24 and 65+ age groups overall had the lowest with 20 deaths each (16.1%). The average age of a suicide death was 45.7 years and the deaths ranged from ages 13 to 84 years.

Table 1: Suicides Deaths by Zip Codes and Areas (Medina County, 2013-2017)				
Zip Codes	Area	Total Suicide Deaths	Percentage of Suicide Deaths	Suicide Death Rates per 100,000
44212	Brunswick	32	25.8%	14.5
44215	Chippewa Lake	***	***	8.8
44233	Hinckley	5	4.0%	12.8
44235	Homerville	***	***	21.9
44253	Litchfield	***	***	24.4
44254	Lodi	8	6.5%	33.1
44256	Medina	41	33.1%	13.1
44270	Rittman	***	***	2.3
44273	Seville	5	4.0%	14.4
44275	Spencer	***	***	12.5
44280	Valley City	***	***	17.8
44281	Wadsworth	17	13.7%	11.2
Unknown	Unknown	2	1.6%	Not Applicable
	<b>Totals</b>	<b>124</b>		

Table 1 displays the number of suicide deaths by zip codes and area for 2013-2017. The zip codes and areas with the highest number of suicide deaths were the following: 44256 (41 deaths (33.1%), Medina), 44212 (32 deaths (25.8%), Brunswick), and 44281 (17 deaths (13.7%), Wadsworth). From 2013-2017, Lodi had the highest suicide rate at 33.1 suicides per 100,000 population. \*\*\*Zip Codes with suicide deaths that were less than 5 were not provided to protect the identity of the individuals. Rates are not age-adjusted. Rates are used to help identify zip codes with the highest potential for suicide based on the population for that particular zip code and percentages are used to show which zip codes have the highest proportion of total suicides among suicide deaths, but does not take the population of the zip code into account.

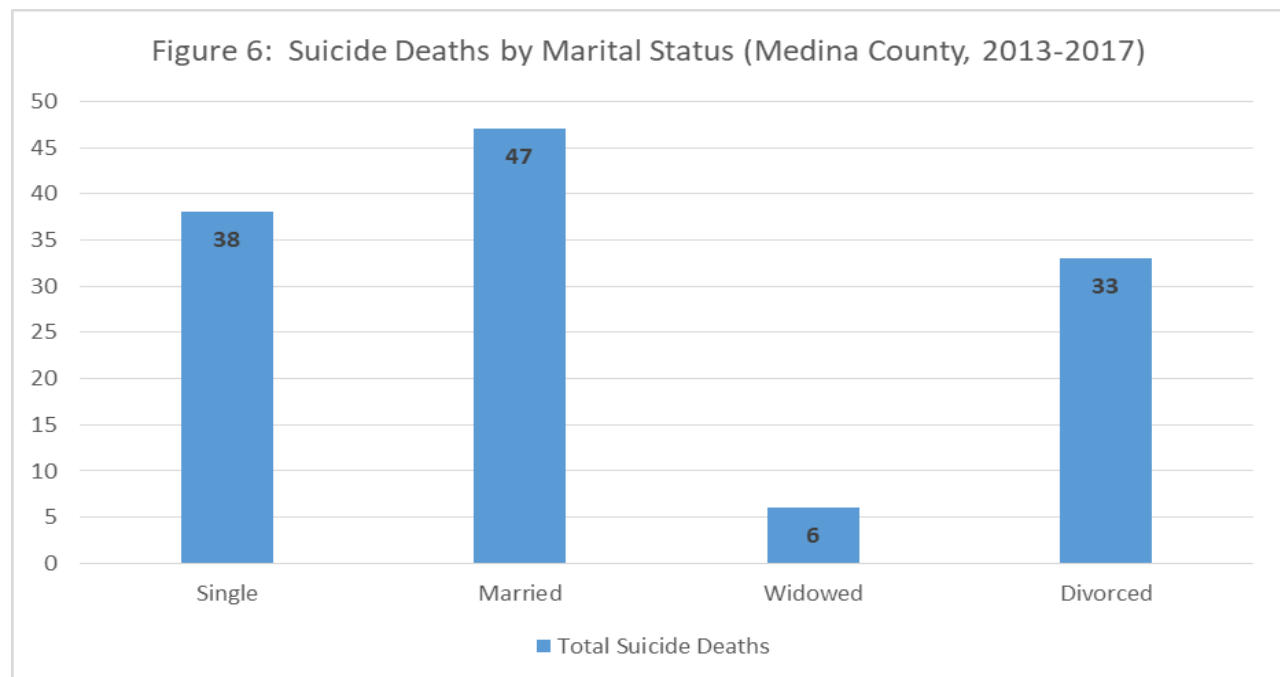


Figure 4 displays the number of suicide deaths by marital status. Those who were married had the highest number of suicides with 47 (37.9%) and those who were widowed had the lowest number of suicides with 6 (4.8%). Females (10) and males (37) both had the highest number of suicides among those who were married.

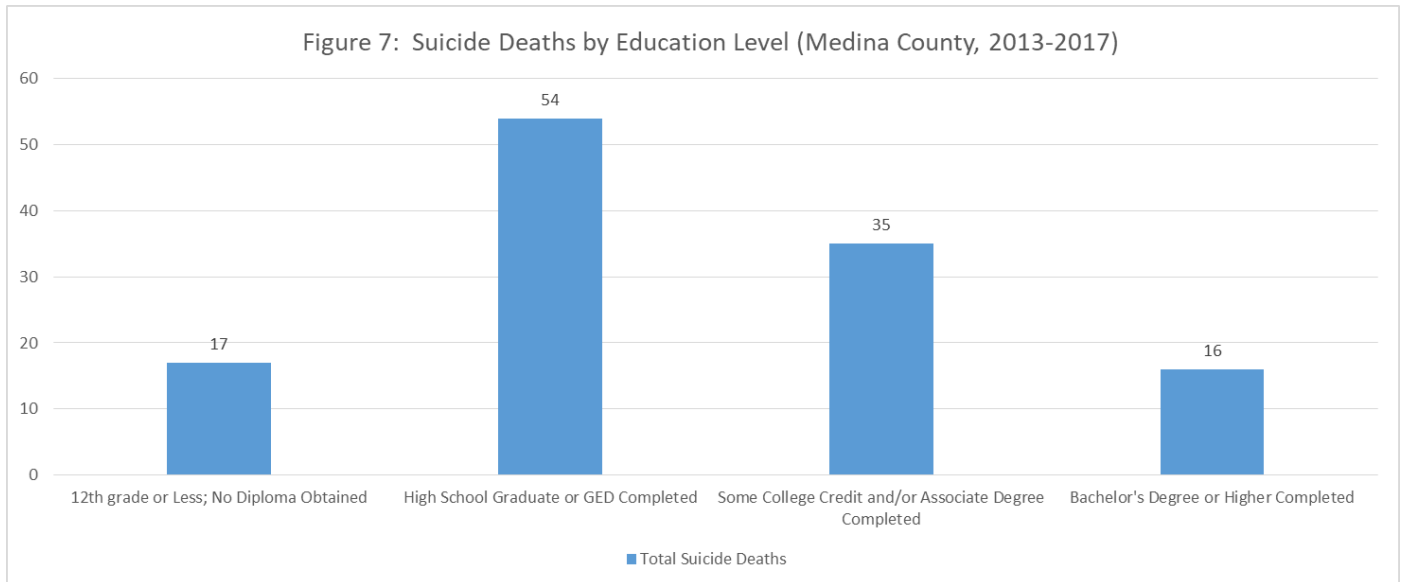


Figure 7 displays the number of suicide deaths by education level. High school graduate or GED completed had the highest number of suicide deaths with 54 (43.5%) and Bachelors Degree or higher completed had the lowest with 16 (13.1%). The suicide deaths among those with a High School diploma or GED completed or less accounted for 58.2% of all suicides compared to 24.2% for those who obtained an Associate's degree or higher education level (Unknown education level accounted for 1.6% of suicides and is not displayed). Overall, those who did not obtain a college degree (some college or less) accounted for 74.2% of all deaths. Females (11) and males (43) both had the highest number of suicide deaths among those who had an education level of high school graduate or GED.

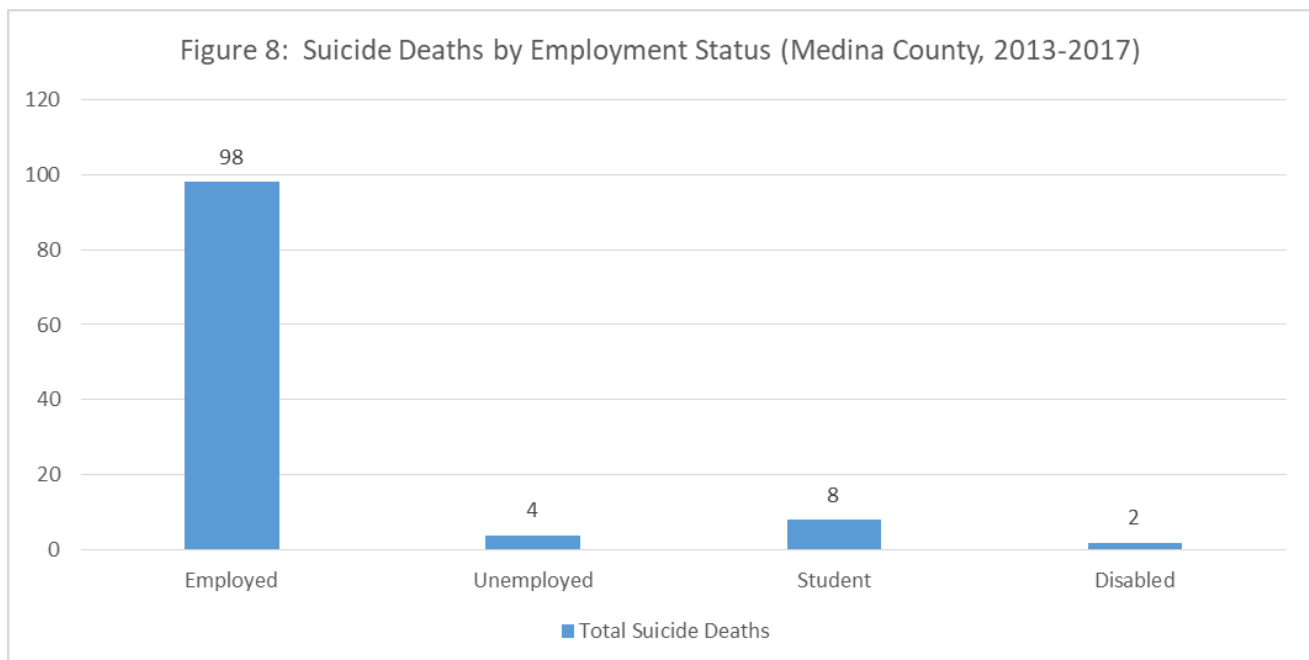


Figure 8 displays the number of suicide deaths by employment status. Those who were employed had the highest number of suicide deaths with 98 (79.0%) and those who were disabled had the lowest number of suicide deaths with 2 (1.6%). Unknown employment status accounted for 12 deaths (9.7%) and is not displayed.

Figure 9: Percentage of Suicide Deaths by Month of Death (Medina County, 2013-2017)

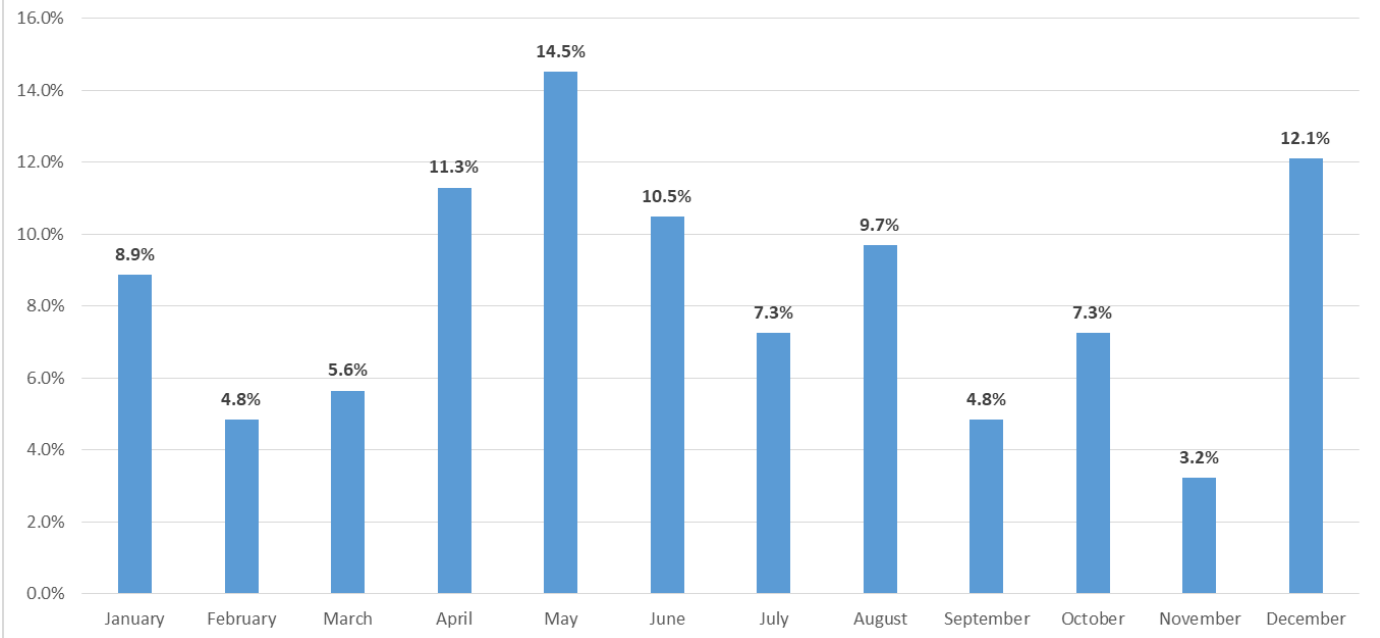


Figure 9 displays the number of suicide deaths by month of death. May had the highest percentage of suicide deaths at 14.5% (18) while November had the lowest percentage of suicide deaths at 3.2% (4). May had the highest number of suicide deaths for males (15.6%, 15 deaths) and December had the highest number of suicide deaths for females (25%, 8 deaths).

Table 2: Suicide Deaths by ICD-10 Codes/Causes of Death

ICD 10 Code	Cause of Death	Total Suicide Deaths	Percentage of Suicide Deaths
R99 and Y87	Ill-Defined and Unknown Cause of Mortality	7	5.6%
X61, X62, X64, X67	Intentional Self-Poisoning	16	12.9%
X70 and X71	Intentional Self-Harm by Hanging/Suffocation or Drowning	42	33.9%
X73, X74, X78	Intentional Self-harm by Firearm or Sharp Object	59	47.6%
<b>Totals</b>		<b>124</b>	

Table 2 displays the number of suicide deaths by International Classification of Disease (ICD-10 codes) (causes of death). Intentional self-harm by firearm or sharp object had the highest number of suicide deaths with 59 (47.6%) and ill-defined and unknown cause of mortality had the lowest number of suicide deaths with 7 (5.6%). Overall, 45.9% of all suicides involved a firearm and 46.8% involved self-poisoning or some form of hanging, strangulation, suffocation or drowning. The primary cause of death for males was with a firearm (51.0% of male suicides) and the primary cause of death for females was by hanging, strangulation, suffocation or drowning (39.3% of female suicides).

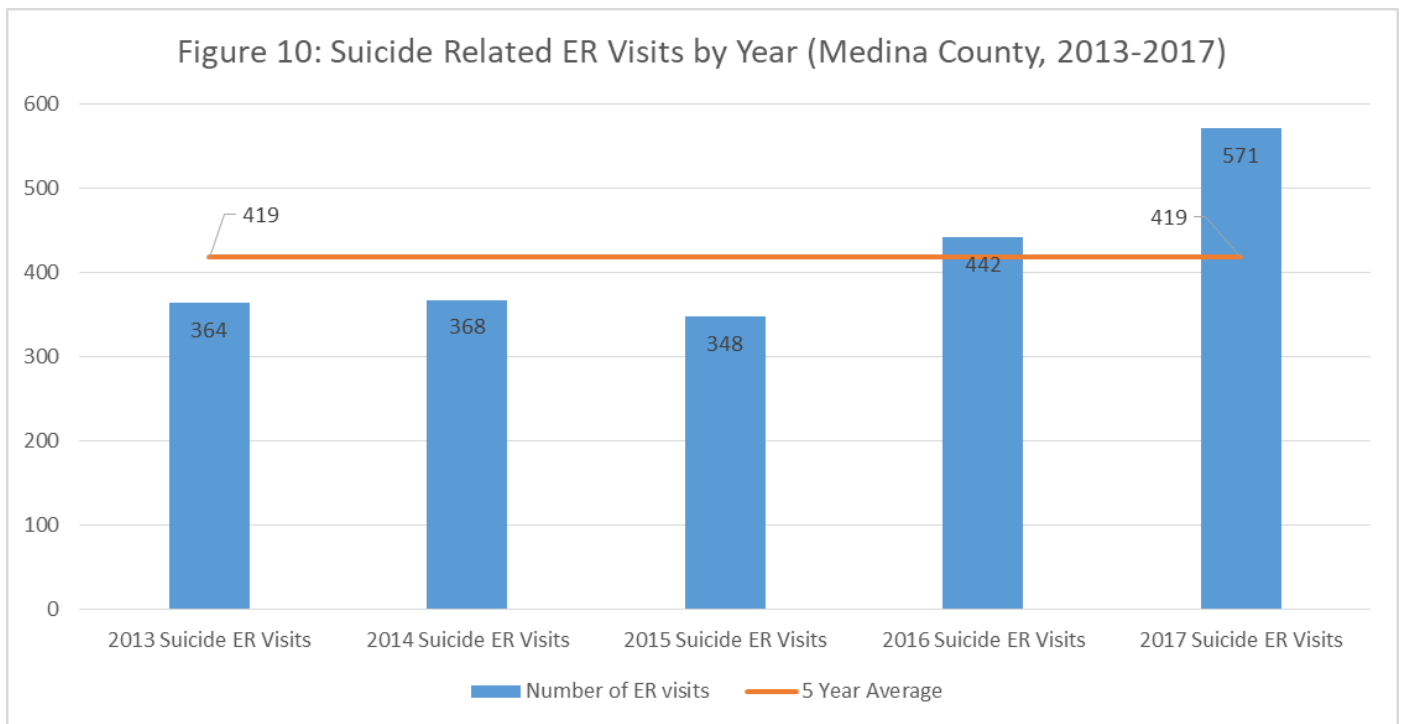


Figure 10 displays suicide related ER visits by year. The highest number of ER visits occurred in 2017 (571) and the lowest number of ER visits occurred in 2015 (348). 2016 and 2017 were both above the 5 year historic average (419).

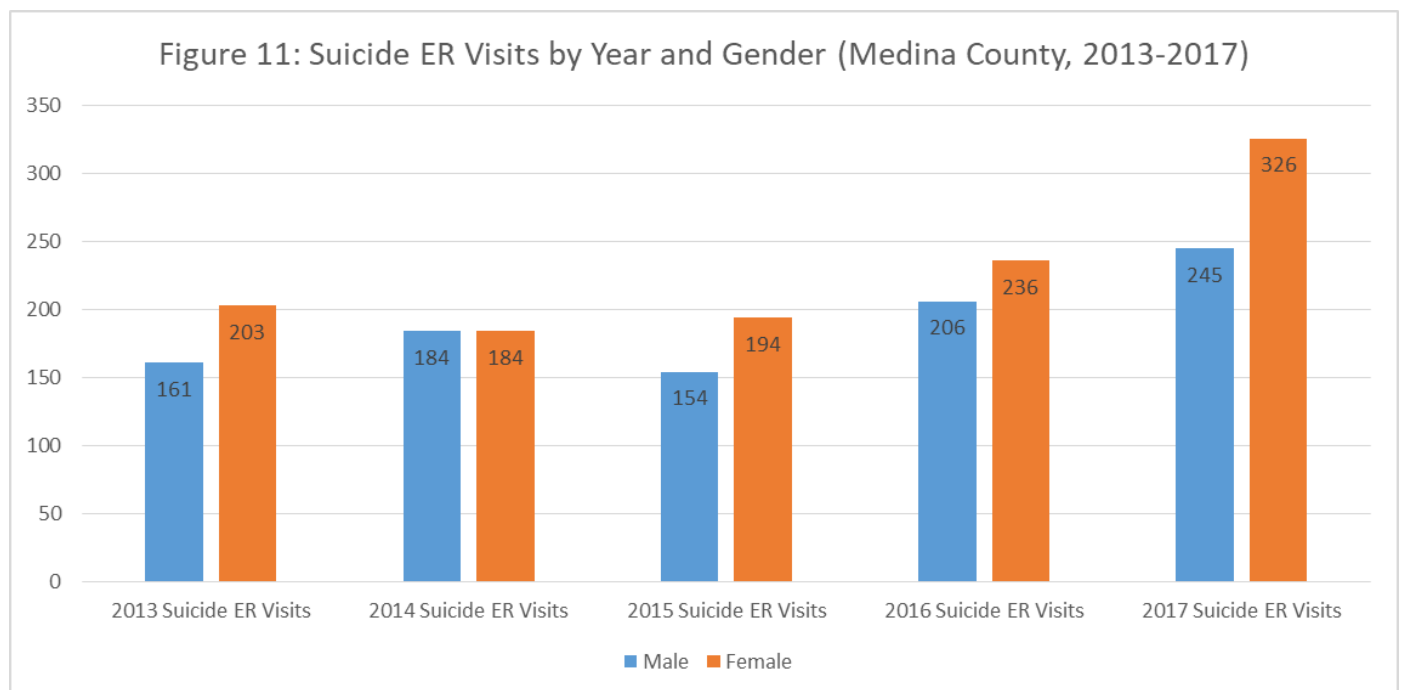


Figure 11 displays suicide related ER visits by year and gender. 2017 had the highest number of ER visits for both males (245) and females (326). Males accounted for 45% of all ER visits while females accounted for 55% from 2013-2017.

Figure 12: Suicide ER Visits by Gender and Age Groups (Medina County, 2013-2017)

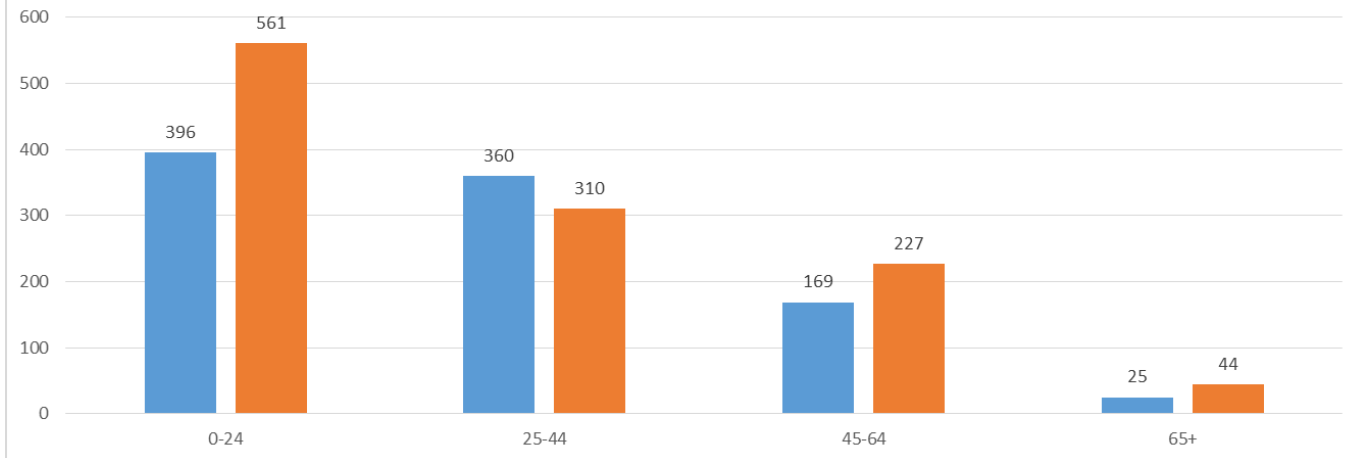


Figure 12 displays suicide related ER visits by gender and age groups. The highest number of ER visits occurred in the age group 0-24 with 957 ER visits (45.7%) and the lowest number of ER visits occurred in the age group 65+ with 69 ER visits (3.3%). The 0-24 age group had the highest number of ER visits for both males (396) and females (561). The average age of a suicide related ER visit for males was 31.9, females it was 31.2, and the overall average age was 31.5 years. The ER visits ranged from ages 6 to 95 years.

Table 3: Suicide ER Visits by Zip Codes and Areas (2013-2017)

Zip Codes	Area	Total Suicide ER Visits	Percentage of Suicide ER Visits	Rate per 100,000
44212	Brunswick	662	34.6%	300
44215	Chippewa Lake	35	1.8%	309.6
44233	Hinckley	52	2.7%	133.3
44235	Homerville	***	***	109.6
44253	Litchfield	32	1.7%	194.9
44254	Lodi	46	2.4%	190.3
44256	Medina	706	36.9%	226.3
44273	Seville	55	2.9%	158.4
44275	Spencer	40	2.1%	250.2
44280	Valley City	38	2.0%	169.4
44281	Wadsworth	242	12.6%	158.8
	<b>Totals</b>	<b>1915</b>		

Table 3 displays the number of suicide related ER visits by zip codes and area. The zip codes and areas with the highest number of suicide related ER visits were the following: 44256 (706 ER visits (36.9%), Medina), 44212 (662 ER visits (34.6%), Brunswick), and 44281 (242 ER visits (12.6%), Wadsworth). Chippewa Lake had the highest rate of suicide ER visits with 309.6 ER visits per 100,000 population. \*\*\*Zip Codes with suicide ER visits that were less than 5 were not provided to protect the identity of the individuals. Rates are not age-adjusted. Rates are used to help identify zip codes with the highest potential for suicide based on the population for that particular zip code and percentages are used to show which zip codes have the highest proportion of total suicides among suicide ER visits, but does not take the population of the zip code into account.



Figure 13: Percentage of Suicide Related ER Visits by Month (Medina County, 2013-2017)

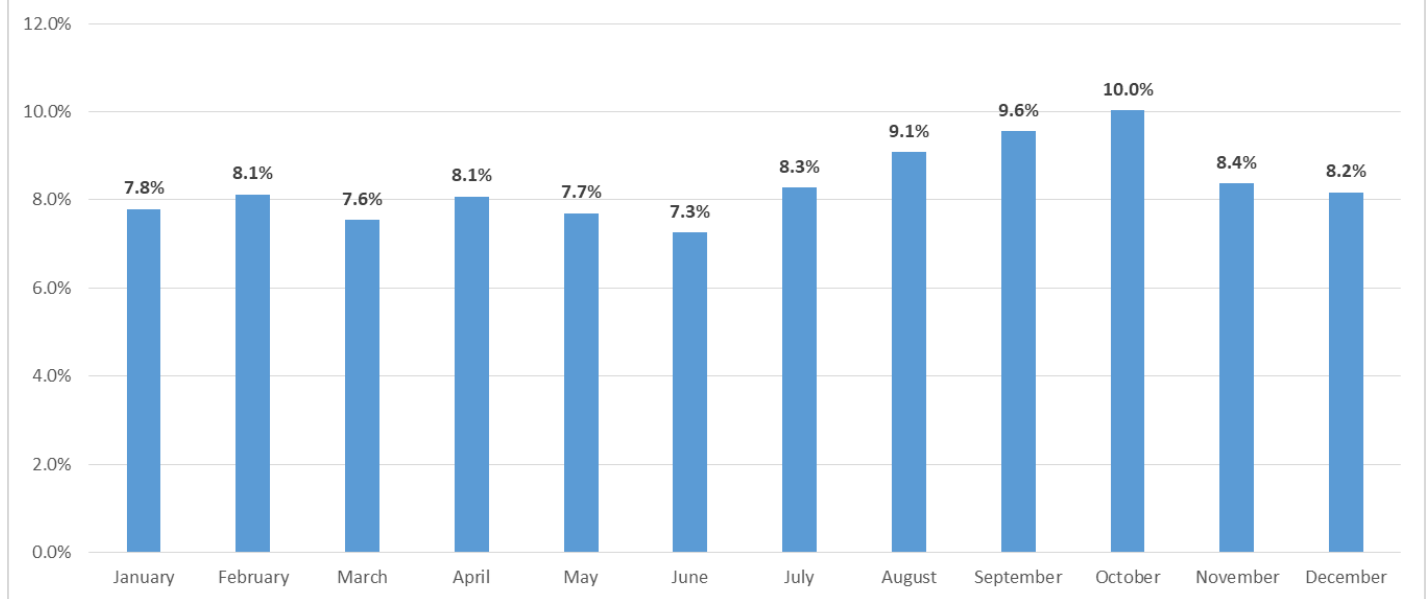


Figure 13 displays the percentage of suicide related ER visits by month. October had the highest percentage of suicide related ER visits with 10% (18) and June had the lowest percentage of suicide related ER visits with 7.3% (4). Females had the highest number of suicide related ER visits in October (125) and males had the highest number of suicide related ER visits in September (91).

### **Methods and Data Sources**

**Suicide Deaths:** The data source for suicide deaths was the Ohio Department of Health Data Warehouse, the Ohio Department of Health Bureau of Vital Statistics and the Center for Disease Control and Prevention (CDC) Wide-ranging Online Data for Epidemiologic Research (WONDER). The following International Classification of Disease (ICD-10 codes) were utilized to extract and analyze the causes of death: X61, X62, X64, X67, X70, X71, X72, X73, X74, X78, and Y87. Race was not analyzed due to the lack of disparity between races. Whites accounted for 98.5% of all suicide deaths in Medina County.

**Suicide ER Visits:** The data source for suicide related emergency room (ER) visits is the EpiCenter Syndromic Surveillance System. EpiCenter collects emergency room chief complaint data from hospitals and urgent care facilities across Ohio and classifies them into symptom and syndrome categories. The Medina County Health Department utilized the 'mental' classifier to pull mental health related ER visits. Among mental health ER visits, we narrowed our search down to suicide related ER visits by using the search terms 'Suicide Ideation', 'SI', 'Suicide Attempts', and 'Suicidal' in the reason for visit field as well as the International Classification of Disease (ICD-10) code of R45.851 provided in the discharge diagnosis field.

Questions about this report can be directed to the Medina County Health Department Epidemiologist, Brent Styer, by calling 330-723-9688, option 5 or via email at [bstyer@medinahealth.org](mailto:bstyer@medinahealth.org).

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