

# Quantifying Racial and Ethnic Disparities Amongst Emergency Department Users: A look at Volusia County



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# Introduction

- ▶ Racial and ethnic disparities are a major Healthy People 2020 (HP2020) foundation health measure and according to HP2020, if “a health outcome is seen to a greater or lesser extent between populations, there is disparity.” Disparities exist amongst geographic distributions as well as by race/ethnicity and have been both documented and studied for several decades (Alter et al., 1999).

# A National Problem

- ▶ Nationally, trends of persons who identify as Black alone or Hispanic have disproportionately utilized emergency departments because of a lack of a primary care physician or adequate health insurance coverage (Pines et al., 2009, Pines et al. 2008).

# Volusia County

- ▶ According to the 2014, 5-year American Community Survey (ACS2014), Volusia County's racial and ethnic distribution consists of 74.4% White alone, 10.3% Black alone, and 11.6% Hispanic Alone.

# Methodology

- ▶ Descriptive Volusia County population demographics compared with the utilization records of Volusia County Emergency Department Data
- ▶ Then Age-adjust ED Utilizations records with Race/Ethnicity and compare to identify disparities

# Findings- Black Alone

Year	Population Black Alone	Total Population	Percent Black Alone Population	Black Alone ED Visits	Total ED Visits	Percent Black Alone ED Visits	Percentage Difference
2010	49,842	494,617	10.1%	42,174	234,174	18.0%	-7.9%
2011	50,668	495,758	10.2%	42,393	230,658	18.4%	-8.2%
2012	50,875	496,832	10.2%	44,678	240,776	18.6%	-8.4%
2013	51,480	500,343	10.3%	44,563	237,552	18.8%	-8.5%
2014	51,853	503,179	10.3%	46,885	256,299	18.4%	-8.1%
5 Year Average	50,944	498,146	10.2%	44,139	239,892	18.4%	-8.2%

# Findings-Hispanic Alone

Year	Population Hispanic Alone	Total Population	Percent Hispanic Alone Population	Hispanic Alone ED Visits	Total ED Visits	Percent White Alone ED Visits	Percentage Difference
2010	55,519	494,617	11.2%	22,499	234,174	9.6%	1.6%
2011	56,842	495,758	11.5%	21,989	230,658	9.5%	2.0%
2012	57,060	496,832	11.5%	24,137	240,776	10.0%	1.5%
2013	58,476	500,343	11.7%	24,761	237,552	10.4%	1.3%
2014	60,533	503,179	12.0%	28,120	256,299	11.0%	1.0%
5 Year Average	57,686	498,146	11.6%	24,301	239,892	10.1%	1.5%

# Findings -White Alone

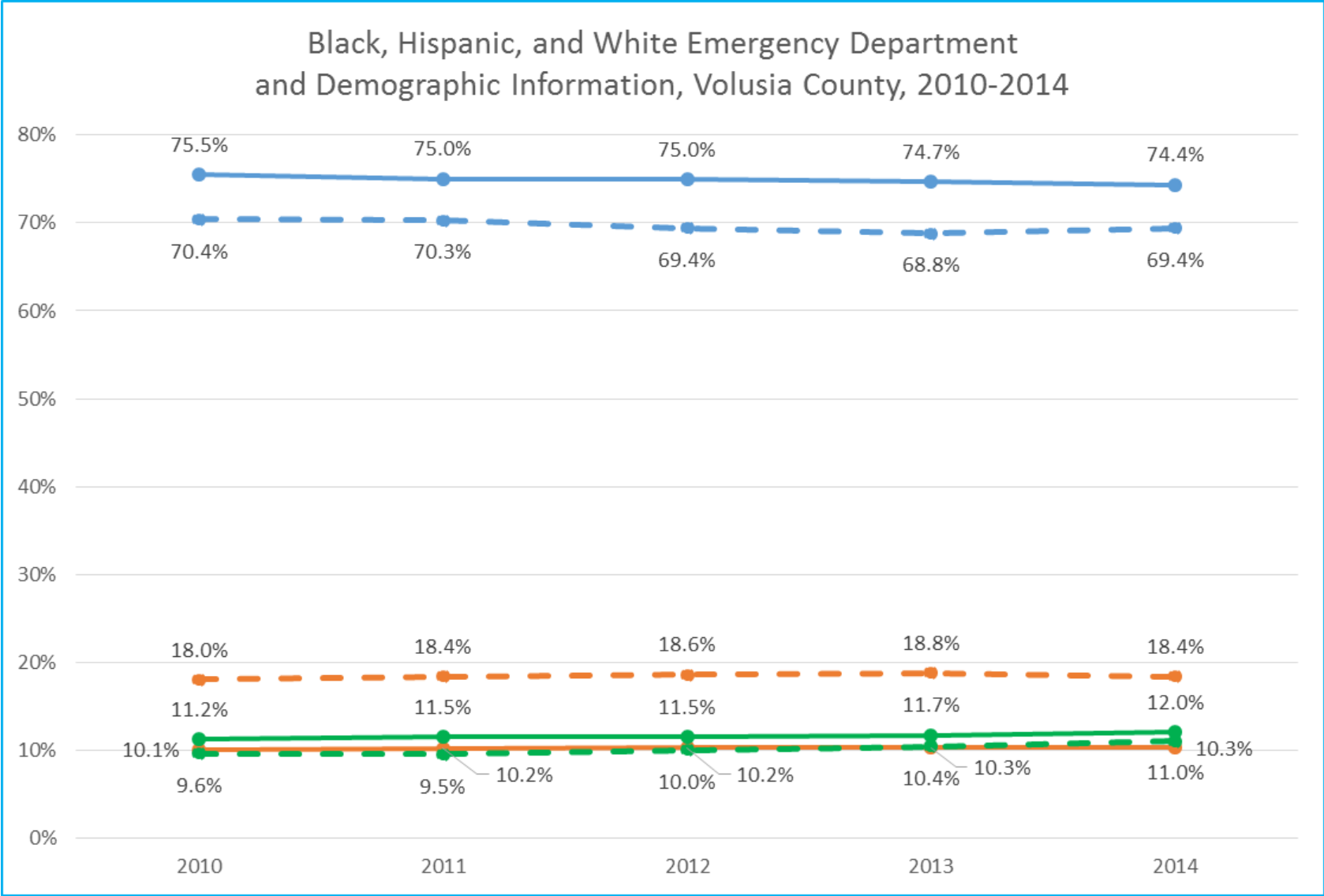
Year	Population White Alone	Total Population	Percent White Alone Population	White Alone ED Visits	Total ED Visits	Percent White Alone ED Visits	Percentage Difference
2010	373,348	494,617	75.5%	164,855	234,174	70.4%	5.1%
2011	371,919	495,758	75.0%	162,122	230,658	70.3%	4.7%
2012	372,525	496,832	75.0%	167,158	240,776	69.4%	5.6%
2013	373,787	500,343	74.7%	163,485	237,552	68.8%	5.9%
2014	374,201	503,179	74.4%	174,897	256,299	69.4%	5.0%
5 Year Average	373,156	498,146	74.9%	166,503	239,892	69.7%	5.3%



# Findings

Year	Race	Percent of Population	Percent of ED Visits	Percentage Difference
2010	Black	10.1%	18.0%	-7.9%
	Hispanic	11.2%	9.6%	1.6%
	White	75.5%	70.4%	5.1%
	Total	96.8%	98.0%	-1.2%
2011	Black	10.2%	18.4%	-8.2%
	Hispanic	11.5%	9.5%	2.0%
	White	75.0%	70.3%	4.7%
	Total	96.7%	98.2%	-1.5%
2012	Black	10.2%	18.6%	-8.4%
	Hispanic	11.5%	10.0%	1.5%
	White	75.0%	69.4%	5.6%
	Total	96.7%	98.0%	-1.3%
2013	Black	10.3%	18.8%	-8.5%
	Hispanic	11.7%	10.4%	1.3%
	White	10.3%	18.8%	-8.5%
	Total	32.3%	48.0%	-15.7%
2014	Black	10.3%	18.4%	-8.1%
	Hispanic	12.0%	11.0%	1.0%
	White	10.3%	18.4%	-8.1%
	Total	32.6%	47.8%	-15.2%

# Findings

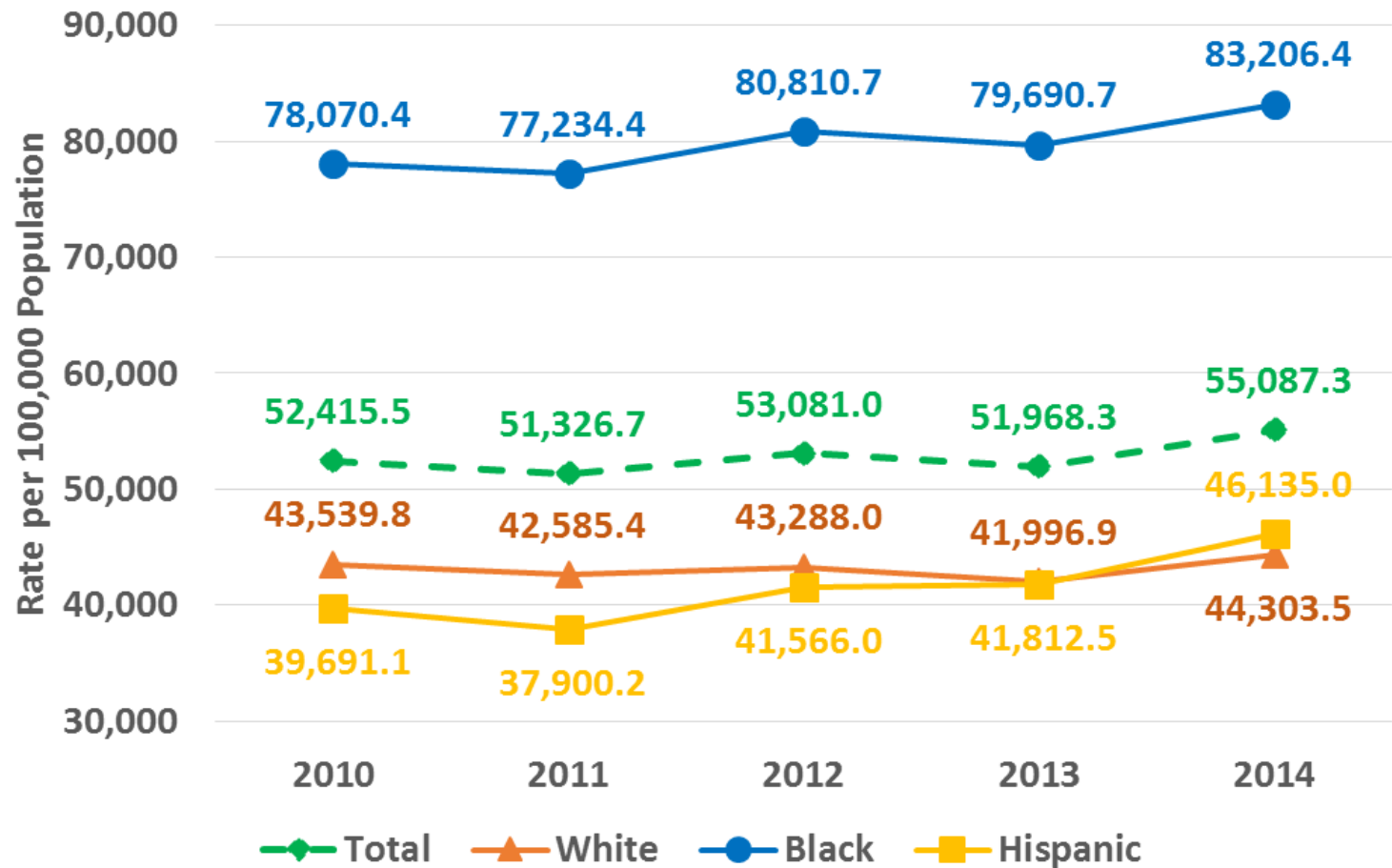


# Findings

Year	Total	Black	Hispanic	White
2010	52,415.5	78,070.4	39,691.1	43,539.8
2011	51,326.7	77,234.4	37,900.2	42,585.4
2012	53,081.0	80,810.7	41,566.0	43,288.0
2013	51,968.3	79,690.7	41,812.5	41,996.9
2014	55,087.3	83,206.4	46,135.0	44,303.5
5YR Change	2,671.8	5,135.9	6,443.9	763.7
Percent Change	5.1%	6.6%	16.2%	1.8%

# Findings

Age Adjusted Rate of Emergency Department Utilization  
by Race/Ethnicity in Volusia County 2010-2014



# Conclusions

- ▶ Emergency Department utilization has increased from 2010-2014 among all Volusia County Residents
- ▶ The proportion of Black Emergency Department users is not congruent with the proportion Black residents in Volusia County, thus a disparity exists
- ▶ The Age-adjusted rate of Emergency Department utilization among Black Residents of Volusia County has consistently been nearly double the rate of Hispanic and White Residents.

# Conclusions

- ▶ While the overall Age-adjusted rate of Emergency Department utilization in Volusia County has increased (5.1%) from 2010-2014, Hispanic utilization in the same time period has experienced the largest rise, more than tripling the county rate (16.2%)

# Sources

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- ▶ Pines, J. M. Russell, L. A. Hollander, J.E. Racial disparities in emergency department length of stay for admitted patients in the United States [published online ahead of print February 24, 2009]. *Acad Emerg Med* 2009; 16 (5) 403- 410
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