

## Jordan Hospital Service Area

Includes: Bourne, Carver, Duxbury, Halifax, Kingston, Marshfield, Middleborough, Pembroke, Plymouth, Plympton, Sandwich, and Wareham

Population: 231,613

### Demographics compared to the state of Massachusetts as a whole:

- Larger White population (94.4% of residents)
- Smaller population of foreign-born residents (3.7% of residents)
- Larger percentage of the population who speak English at home (94.9% of residents)
- Smaller percentage of the population with graduate/advanced degrees (12.3% of residents age 25+)
- Higher median household income (\$75,014)
- Equal unemployment rate (6.5% of the workforce)



## Health Concerns

The top three causes of death are: 1) circulatory system diseases, 2) lung cancer, and 3) Chronic Lower Respiratory Disease. The top three causes of hospitalization are related to: 1) COPD, 2) diabetes, and 3) circulatory system diseases.

Service area residents experience the following health concerns at rates 10% or higher than residents of the state of Massachusetts as a whole:

### Cancer Incidence & Mortality:

- Breast cancer incidence and mortality
- Ovarian cancer incidence
- Prostate cancer incidence and mortality
- Colorectal cancer mortality
- Lung cancer incidence and mortality

### Cardiovascular Health:

- Major cardiovascular disease ED visits, hospitalizations, and mortality
- Cerebrovascular disease ED visits and hospitalizations
- Acute myocardial infarction ED visits

### Injuries and Poisonings:

- Injury and poisoning ED visits, hospitalizations, and mortality

### Respiratory Health

- Bacterial pneumonia and COPD-related hospitalizations

### Diabetes

- Diabetes-related hospitalizations

### Health of older adults (age 65+):

- Alcohol/substance-related hospitalizations
- Cerebrovascular disease hospitalizations and ED visits
- Major cardiovascular disease hospitalizations and ED visits
- Acute myocardial infarction ED visits
- Diabetes-related hospitalizations
- Injury and poisoning hospitalizations and ED visits
- Mental disorder-related hospitalizations
- Bacterial pneumonia-related hospitalizations and ED visits
- COPD hospitalizations-related hospitalizations

### Health of youth age 15-19:

- Alcohol/substance abuse-related hospitalizations and ED visits
- Diabetes-related hospitalizations
- Injury and poisoning hospitalizations and ED visits
- Opioid-related hospitalizations and ED visits
- Mental disorder-related ED visits

**For more detailed information on health indicators and for references, please see the data tables that follow.**

Prepared by the Institute for Community Health, based on publicly available secondary data sources



## SERVICE AREA HEALTH INDICATORS DATA TABLE

Note: *Bolding and arrows are used to highlight areas of concern where the percent difference between the service area and the state is 10% or more, and to show the direction (upward (^) or downward (^)) of the difference. For demographics and public school enrollment characteristics, only those indicators that differ from the state by a 10% difference or more in the higher direction are flagged. "N/A" designates data that is inapplicable (i.e. not reported because the count is too low). A dash designates data that is unavailable (i.e. does not exist).*

INDICATOR	SERVICE AREA		MA
	#	%/Rate	%/Rate
<b>Total population</b>	231,613	--	6,477,096
<b>Demographics<sup>1</sup></b>			
<b>Female</b>	118,576	51.2%	51.6%
<b>Age</b>			
Under 5 years old	13,057	5.6%	5.7%
Under 18 years old	56,005	24.2%	22.1%
Over 65 years old	32,727	14.1%	13.5%
Over 85 years old	4,457	1.9%	2.1%
<b>Race/ethnicity<sup>2</sup></b>			
Asian (non Hispanic)	2,168	0.9%	5.2%
Black/African-American (non Hispanic)	2,715	1.2%	6.0%
Hispanic	3,308	1.4%	9.0%
Some other race (non Hispanic) <sup>3</sup>	2,004	0.9%	0.8%
White (non Hispanic)	218,713	<b>94.4%^</b>	77.4%
<b>Foreign-born residents</b>	8,472	3.7%	14.6%
<b>Continent of origin of foreign-born residents</b>			
Africa	482	5.7%	7.8%
Americas	2,862	33.8%	38.6%
Asia	1,601	18.9%	28.3%
Europe	3,507	<b>41.4%^</b>	25.0%
<b>Top 5 languages spoken at home<sup>4</sup></b>			
English	207,456	<b>94.9%^</b>	79.0%
Spanish or Spanish Creole	2,780	1.3%	7.5%
Portuguese or Portuguese Creole	2,593	1.2%	3.0%
French (incl. Patois, Cajun)	1,079	0.5%	1.2%
Italian	501	0.2%	0.7%
<b>Social and economic characteristics<sup>5</sup></b>			
<b>Housing units that are renter-occupied</b>	13,515	15.6%	36.0%

<sup>1</sup> US Census Bureau, American Community Survey (ACS) 2006 to 2010 (5-Year Estimates) (SE)

<sup>2</sup> Excludes "Two or more races"

<sup>3</sup> "Some other race (non-Hispanic)" includes: American Indian and Alaska Native Alone; Native Hawaiian and Other Pacific Islander Alone; and Some Other Race Alone.

<sup>4</sup> These are the top 5 languages spoken at home in the service area. The top 5 languages spoken at home in the state of Massachusetts as a whole are: 1) Only English, 2) Spanish or Spanish Creole, 3) Portuguese or Portuguese Creole, 4) Chinese, 5) French (incl. Patois, Cajun).

<sup>5</sup> US Census Bureau, American Community Survey (ACS) 2006 to 2010; US Department of Labor, Bureau of Labor and Statistics, local area unemployment statistics 2012

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## Community Data Profile 2013

INDICATOR	SERVICE AREA		MA
	#	%/Rate	%/Rate
<b>Highest educational attainment</b>			
Less than high school graduate	9,712	6.1%	11.3%
High school graduate	46,555	29.4%	26.7%
Bachelor's degree	36,446	23.0%	21.9%
Graduate/advanced degree	19,444	12.3%	16.3%
<b>Income</b>			
Median household income	\$75,014	--	\$64,509
Median per capita income	\$34,306	--	\$33,966
<b>Poverty status</b>			
Children under 18 living in poverty	3,244	6.0%	13.2%
Families living in poverty	2,473	4.0%	7.5%
Population 65 and older living in poverty	2,467	8.0%	9.3%
<b>Unemployment rate<sup>6</sup></b>	--	6.5%	6.5%
<b>Public school district enrollment characteristics<sup>7</sup></b>			
<b>Race/ethnicity</b>			
African-American	664	1.9%	8.3%
Asian	387	1.1%	5.7%
Hispanic	702	2.0%	16.1%
White	31,994	<b>92.2%<sup>^</sup></b>	67.0%
Multi-race (non Hispanic)	842	2.4%	2.5%
<b>Special populations</b>			
Special education enrollment	5,829	16.8%	17.0%
First language not English	223	0.6%	16.7%
Limited English proficient	126	0.4%	7.3%
Qualified for free or reduced lunch	7,165	20.6%	35.2%
<b>Public school district graduation and drop-out rates<sup>7</sup></b>			
Students graduating (4-year)	2,162	90.4%	83.4%
Students dropping out	101	4.2%	7.2%
Graduates attending college/university	1,715	75.0%	74.7%
<b>Youth outcomes: high school health survey data<sup>8</sup></b>			
<b>Substance use</b>			
Alcohol, ever used	--	--	68.0%
Alcohol, used in last 30 days	--	--	40.0%
Tobacco, ever used	--	--	39.0%
Tobacco, used in last 30 days	--	--	14.0%
Marijuana, ever used	--	--	43.0%
Marijuana, used in last 30 days	--	--	28.0%

<sup>6</sup> This is the percent of the workforce that is unemployed. The 2012 unemployment rate is an estimate based on the average of Jan to Oct monthly rates.

<sup>7</sup> Massachusetts Department of Elementary and Secondary Education (DESE), School and District Profiles 2011-2012

<sup>8</sup> MA DPH. 2011 Health and Risk Behaviors of MA Youth. Accessed: July 2, 2012.

<http://www.doe.mass.edu/cnp/hprograms/yrbs/2011Report.pdf>

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INDICATOR	SERVICE AREA		MA
	#	%/Rate	%/Rate
<b>Health outcomes<sup>9</sup></b>			
<b>Cancer incidence (age-adjusted rates per 100,000)<sup>10</sup></b>			
All cancers (invasive)	4,660	<b>626.6<sup>^</sup></b>	519.0
Breast cancer	647	<b>158.0<sup>^</sup></b>	135.7
Ovarian cancer	75	<b>18.4<sup>^</sup></b>	12.5
Prostate cancer	755	<b>221.8<sup>^</sup></b>	165.7
Colorectal cancer	365	49.1	46.3
Lung cancer	636	<b>87.6<sup>^</sup></b>	71.4
<b>Cancer mortality (age-adjusted rates per 100,000)<sup>11</sup></b>			
All cancers	1,574	<b>212.8<sup>^</sup></b>	176.6
Breast cancer	101	<b>24.2<sup>^</sup></b>	21.1
Ovarian cancer	36	8.3	7.8
Prostate cancer	83	<b>27.9<sup>^</sup></b>	22.5
Colorectal cancer	135	<b>17.7<sup>^</sup></b>	15.5
Lung cancer	455	<b>63.4<sup>^</sup></b>	49.6
<b>Cardiovascular health</b>			
Cardiovascular-related hospitalizations (age-adjusted rate per 100,000) <sup>12</sup>			
Major cardiovascular disease hospitalizations	13,111	<b>1,762.1<sup>^</sup></b>	1,438.8
Cerebrovascular disease (stroke) hospitalizations	2,092	<b>280.7<sup>^</sup></b>	234.7
Cardiovascular-related emergency department visits (age-adjusted rate per 100,000)			
Major cardiovascular disease ED visits	3,574	<b>486.6<sup>^</sup></b>	385.7
Cerebrovascular disease (stroke) ED visits	773	<b>104.2<sup>^</sup></b>	49.2
Acute Myocardial Infarction ED visits	292	<b>38.0<sup>^</sup></b>	22.1
Cardiovascular mortality (age-adjusted rate per 100,000) <sup>13</sup>			
Major cardiovascular disease mortality	1,818	<b>232.3<sup>^</sup></b>	208.0
Cerebrovascular disease (stroke) mortality	285	36.4	33.3
Acute Myocardial Infarction mortality	247	32.1	31.0
<b>Diabetes (age-adjusted rates per 100,000)<sup>14</sup></b>			
Diabetes-related hospitalizations	16,082	<b>2,182.7<sup>^</sup></b>	1,982.3
Diabetes mortality	98	13.1	14.7
<b>Infectious disease (crude rates per 100,000)<sup>15</sup></b>			
HIV/AIDS prevalence	N/A	N/A	261.0
HIV/AIDS incidence	N/A	N/A	8.6

<sup>9</sup> Health outcomes pulled from MADPH MassCHIP database: <http://www.mass.gov/eohhs/researcher/community-health/masschip/>.

<sup>10</sup> Age-adjusted cancer incidence rates per 100,000 from MADPH Massachusetts Cancer Registry, grouped for 2006-2008.

<sup>11</sup> Age-adjusted cancer mortality rates per 100,000 from MADPH Registry of Vital Records, grouped for 2007-2009.

<sup>12</sup> Age-adjusted cardiovascular hospitalization and emergency department visit rates per 100,000 from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS), grouped for 2007-2009.

<sup>13</sup> Age-adjusted cardiovascular mortality rates per 100,000 from MADPH Registry of Vital Records, grouped for 2007-2009.

<sup>14</sup> Diabetes-related age-adjusted hospitalization rate per 100,000 from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). Diabetes mortality from MADPH Registry of Vital Records. All grouped for 2007-2009.

<sup>15</sup> 12 town aggregates unavailable through MassCHIP for infectious disease.

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INDICATOR	SERVICE AREA		MA
	#	%/Rate	%/Rate
Hepatitis C incidence	N/A	N/A	68.0
Chlamydia incidence	N/A	N/A	322.1
<b>Injuries (age-adjusted rates per 100,000)<sup>16</sup></b>			
All injury and poisoning ED visits	89,524	<b>13,331.8<sup>^</sup></b>	10,996.6
All injury and poisoning hospitalizations	7,176	<b>986.7<sup>^</sup></b>	891.1
All injury and poisoning mortality	355	<b>49.7<sup>^</sup></b>	41.4
<b>Mental health (age-adjusted rates per 100,000)<sup>17</sup></b>			
Mental disorder-related ED visits	27,986	4,154.6	4,347.5
Mental disorder-related hospitalizations	29,338	3,995.8	3,866.3
Mental disorder-related mortality	254	31.6	39.9
<b>Mother &amp; infant health<sup>18</sup></b>			
Birth rates, by age (age-specific rate per 1000)			
Ages 30-44	4,147	52.8	58.4
Ages 20-29	2,748	77.7	68.3
Teens (ages 15-19)	319	14.9	19.6
Adequate prenatal care (percent of)	6,367	87.9%	82.3%
Low birth weight (percent of births)	438	6.1%	7.8%
Infant mortality (rate per 1000)	25	3.5	4.9
<b>Premature mortality (age-adjusted rate per 100,000)<sup>19</sup></b>	2,205	327.6	286.6
<b>Respiratory health (age-adjusted rates per 100,000)<sup>20</sup></b>			
Asthma-related hospitalizations	5,655	790.4	913.2
Childhood asthma ED visits (age-specific rate per 100,000 for ages 14 and under)	1,021	739.2	1,702.4
Bacterial pneumonia-related hospitalizations	5,804	<b>787.0<sup>^</sup></b>	681.9
COPD-Related Hospitalizations	16,939	<b>2,320.6<sup>^</sup></b>	2,092.9
<b>Substance abuse (age-adjusted rates per 100,000)<sup>21</sup></b>			
Alcohol/substance-related ED visits	3,787	568.3	758.5
Alcohol/substance-related hospitalizations	1,950	281.3	333.8
Opioid-related ED visits	1,210	196.9	213.9
Opioid-related hospitalizations	1,282	198.6	284.3
Opioid-related mortality	63	9.0	9.3

<sup>16</sup> Age-adjusted injury and poisoning hospitalization and emergency department visit rates per 100,000 for from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). Injury and poisoning mortality from MADPH Registry of Vital Records. All grouped for 2007-2009.

<sup>17</sup> Age-adjusted mental disorder hospitalization and emergency department visit rates per 100,000 from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). Mental disorder-related mortality from MADPH Registry of Vital Records. All grouped for 2007-2009.

<sup>18</sup> All mother and infant health data from MADPH Registry of Vital Records. Age-specific birth rates per 1000 and percent of adequate prenatal for 2009. Percent of low birth weight births (defined as <2500 grams) and infant mortality rate per 1000 grouped for 2007-2009.

<sup>19</sup> Age-adjusted premature mortality rates per 100,000 from MADPH Registry of Vital Records, grouped for 2007-2009. The premature mortality rate is the rate of deaths occurring among individuals less than 75 years of age.

<sup>20</sup> Asthma-related, pneumonia-related, and COPD-related age-adjusted hospitalization rates per 100,000 and childhood asthma age-specific ED visit rates from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). All grouped for 2007-2009.

<sup>21</sup> Age-adjusted alcohol/substance- and opioid-related hospitalization and emergency department visit rates per 100,000 from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). Opioid mortality from MADPH Registry of Vital Records. All grouped for 2007-2009.

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INDICATOR	SERVICE AREA		MA
	#	%/Rate	%/Rate
<b>Health outcomes for age groups of concern<sup>22</sup></b>			
<b>Health of older adults (age 65+)</b>			
Hospitalizations (age-specific rates per 100,000)			
Alcohol/substance-related hospitalizations	216	<b>250.1<sup>^</sup></b>	214.3
Cerebrovascular disease (stroke) hospitalizations	1,477	<b>1,710.5<sup>^</sup></b>	1,430.8
Major cardiovascular disease hospitalizations	8,824	<b>10,218.9<sup>^</sup></b>	8,291.0
Diabetes-related hospitalizations	9,970	<b>11,546.0<sup>^</sup></b>	9,911.5
All injury and poisoning hospitalizations	3,523	<b>4,079.9<sup>^</sup></b>	3,566.5
Hip fracture injury hospitalizations	645	747.0	706.6
Mental disorder-related hospitalizations	12,306	<b>14,251.3<sup>^</sup></b>	12,230.3
Bacterial pneumonia-related hospitalizations	3,718	<b>4,305.7<sup>^</sup></b>	3,561.7
COPD-related hospitalizations	10,042	<b>11,629.4<sup>^</sup></b>	9,143.9
Emergency department visits (age-specific rates per 100,000)			
Alcohol/substance-related ED visits	107	123.9	170.5
Cerebrovascular disease (stroke) ED visits	490	<b>567.5<sup>^</sup></b>	251.1
Major cardiovascular disease ED visits	1,769	<b>2,048.6<sup>^</sup></b>	1,501.3
Acute Myocardial Infarction ED visits	133	<b>154.0<sup>^</sup></b>	89.1
Diabetes-related ED visits	2,247	2,602.2	3,718.8
All injury and poisoning ED visits	9,610	<b>11,129.1<sup>^</sup></b>	8,276.1
Hip fracture injury ED visits	44	51.0	58.5
Mental disorder-related ED visits	2,315	2,681.0	2,879.2
Bacterial pneumonia-related ED visits	421	<b>487.6<sup>^</sup></b>	333.7
COPD-related ED visits	1,788	2,070.6	2,076.3
<b>Health of youth age 15-19</b>			
Hospitalizations (age-specific rates per 100,000)			
Alcohol/substance-related hospitalizations	75	<b>163.3<sup>^</sup></b>	121.5
Diabetes-related hospitalizations	60	<b>130.6<sup>^</sup></b>	98.8
All injury and poisoning hospitalizations	259	<b>563.9<sup>^</sup></b>	465.6
Opioid-related hospitalizations	71	<b>154.6<sup>^</sup></b>	106.0
Mental disorder-related hospitalizations	622	1,354.3	1,304.4
COPD-related hospitalizations	189	411.5	474.8
Emergency department visits (age-specific rates per 100,000)			
Alcohol/substance-related ED visits	431	<b>938.5<sup>^</sup></b>	851.1
Diabetes-related ED visits	71	154.6	228.6
All injury and poisoning ED visits	9,618	<b>20,941.9<sup>^</sup></b>	15,264.0
Opioid-related ED visits	113	<b>246.0<sup>^</sup></b>	148.9
Mental disorder-related ED visits	2,896	<b>6,305.7<sup>^</sup></b>	5,227.7
COPD-related ED visits	727	1,583.0	1,763.7

<sup>22</sup> Age groups of concern were identified from interviews and focus groups with hospital and community stakeholders. Age-specific hospitalization and emergency department visit rates per 100,000 from MA Division of Health Care Finance and Policy Uniform Hospital Discharge Dataset System (UHDDS). All grouped for 2007-2009.

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TOP FIVE CAUSES OF DEATH <sup>23</sup> (2007-2009)					
SERVICE AREA (n=5,015)			MASSACHUSETTS (n=157,946)		
	#	% of Deaths		#	% of Deaths
1. Circulatory System Diseases: All <sup>24</sup>	1,831	31.4%	1. Circulatory System Diseases: All	49,331	31.2%
2. Cancer: Lung	455	7.8%	2. Cancer: Lung	10,721	6.8%
3. Chronic Lower Respiratory Disease	255	4.4%	3. Mental Disorders: All	9,898	6.3%
4. Mental Disorders: All <sup>25</sup>	254	4.4%	4. Chronic Lower Respiratory Disease	6,556	4.2%
5. Nervous System Diseases: Alzheimer's Disease	230	4.0%	5. Nervous System Diseases: Alzheimer's Disease	5,214	3.3%

<sup>23</sup> Leading causes of death from Registry of Vital Records and Statistics, Bureau of Health Statistics, Research and Evaluation, MDPH, pulled from MassCHIP. Analysis is for total deaths in years 2007, 2008, and 2009.

<sup>24</sup> Circulatory System Diseases: All includes: "major CVD", "heart disease", "coronary heart disease", "ischemic heart disease", "acute myocardial infarction", "cerebrovascular disease", "heart failure", "hypertensive heart disease", "hypertension", "atherosclerosis", and "rheumatic fever".

<sup>25</sup> Mental disorders include dementias.

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TOP FIVE CAUSES OF HOSPITALIZATION <sup>26</sup> (2007-2009)					
SERVICE AREA (n=128,892)			MASSACHUSETTS (n=2,409,215)		
	#	% of Hosp.		#	% of Hosp.
1. Respiratory: COPD, All Related	16,939	18.2%	1. Respiratory: COPD, All Related	444,403	18.5%
2. Endocrine: Diabetes Mellitus Related	16,082	17.3%	2. Endocrine: Diabetes Mellitus Related	429,888	17.8%
3. Circulatory System Diseases: All	13,913	15.0%	3. Circulatory System Diseases: All	339,156	14.1%
4. Digestive System Diseases: All <sup>27</sup>	9,840	10.6%	4. Digestive System Diseases: All	220,619	9.2%
5. Respiratory: Pneumonia and Influenza Related	6,505	7.0%	5. Respiratory: Asthma-Related	185,915	7.7%

<sup>26</sup> Leading causes of hospitalization from Uniform Hospital Discharge Data System, Massachusetts Division of Health Care Finance and Policy, MDPH, pulled from MassCHIP. Analysis is for discharge data for years 2007, 2008, and 2009. Note that childbirth category (Childbirth, Pregnancy, Puerperium: All) left out of leading causes of hospitalization; childbirths accounted for 10.0% of hospitalizations (239,818) in MA and 8.8% (2,096) in Medford during time period.

<sup>27</sup> Digestive System Diseases: All includes: diseases of the oral cavity, salivary glands and jaws; diseases of the esophagus, stomach and duodenum; appendicitis; hernia of the abdominal cavity; other diseases of the intestines and peritoneum; and diseases of the liver, gallbladder, and biliary tracts/bile ducts.

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