



# MASSACHUSETTS MEDICAL SOCIETY

*Every physician matters, each patient counts.*



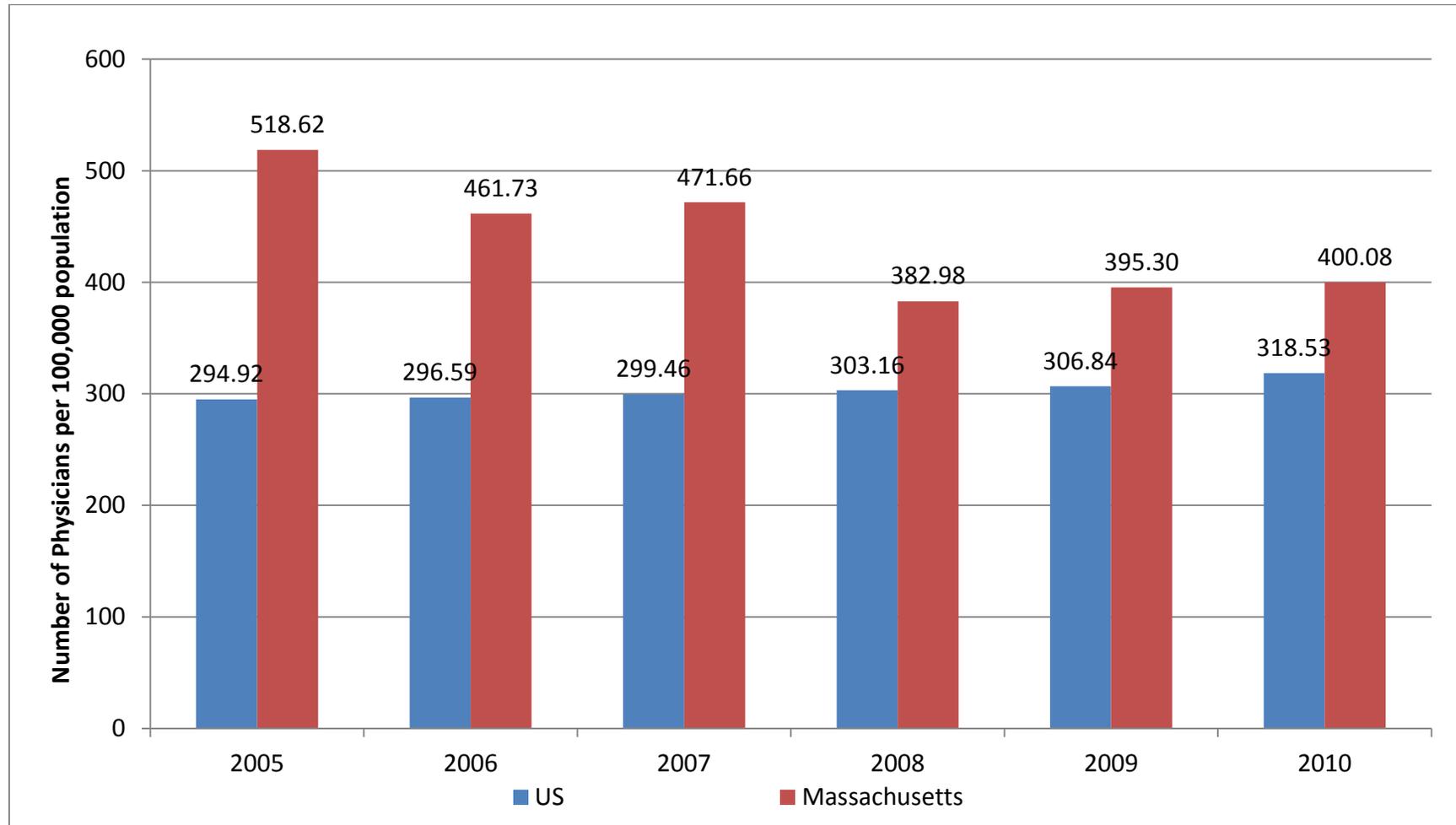
## **Physician Fact Book** **(Massachusetts vs. United States)** **2012**

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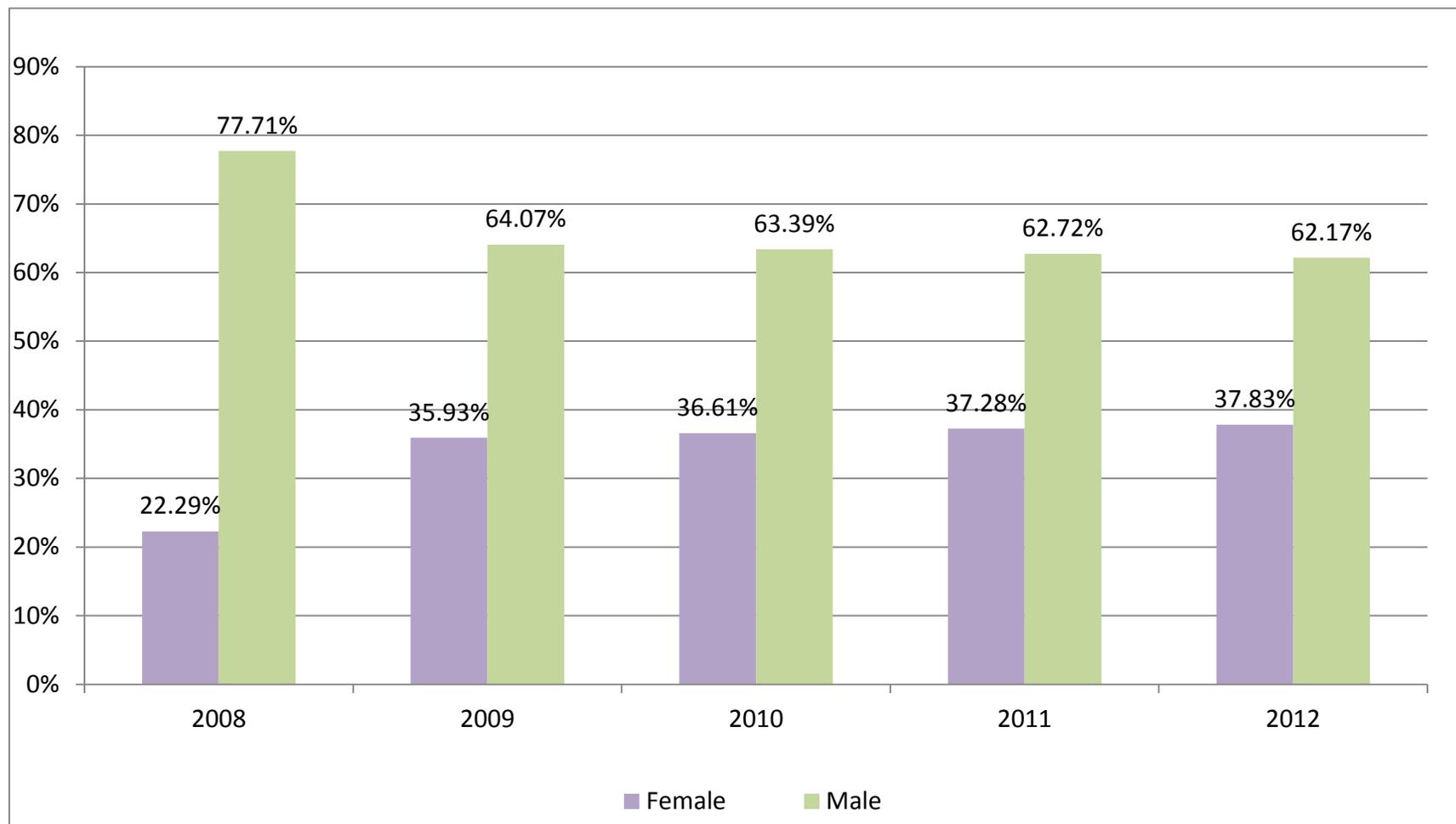
**Graph 1. Physicians per 100,000 Populations in U.S. and Massachusetts, 2005 - 2010**



Graph 1 illustrates the trend in the total number of physicians per 100,000 population in both the United States (U.S.) and the state of Massachusetts from 2005 through 2010. While the number of physicians per 100,000 population declined since 2005 in Massachusetts, the number of physicians per 100,000 population in the U.S. remained stable.

Source: U.S. Census Bureau: Population Estimates; American Medical Association: Physician Characteristics and Distribution in the United States (U.S. physician count data); Massachusetts Board of Registration in Medicine data files (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

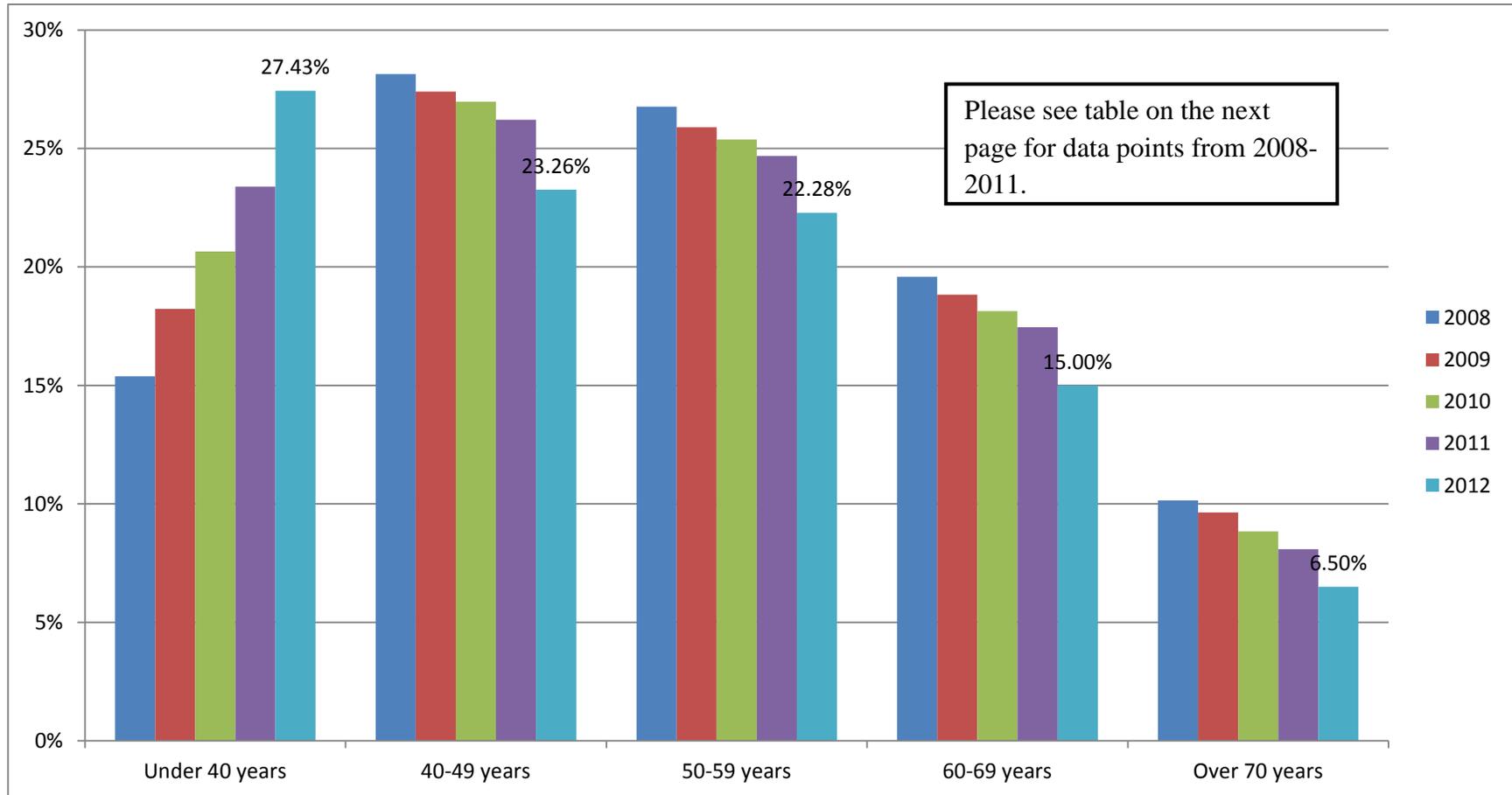
**Graph 2. Percentage of Massachusetts Physicians by Gender, 2008-2012**



Graph 2 illustrates the percentage of physicians in Massachusetts by gender from 2008 through 2012. The percentage of Massachusetts physicians that are female has been rising since 2008. Alternatively, the percentage of Massachusetts physicians that are male has decreased from 2008.

Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 3. Percentage of Massachusetts Physicians by Age Category, 2008-2012**



Graph 3 illustrates the percentage of physicians in Massachusetts by age category from 2008 to 2012. The percentage of Massachusetts physicians between 30 to 39 years of age has increased over the past five years, from 15.39% of the physician population in 2008 to 27.43% of the physician population in 2012. Please see Table 1 on the next page for data points from 2008 through 2011.

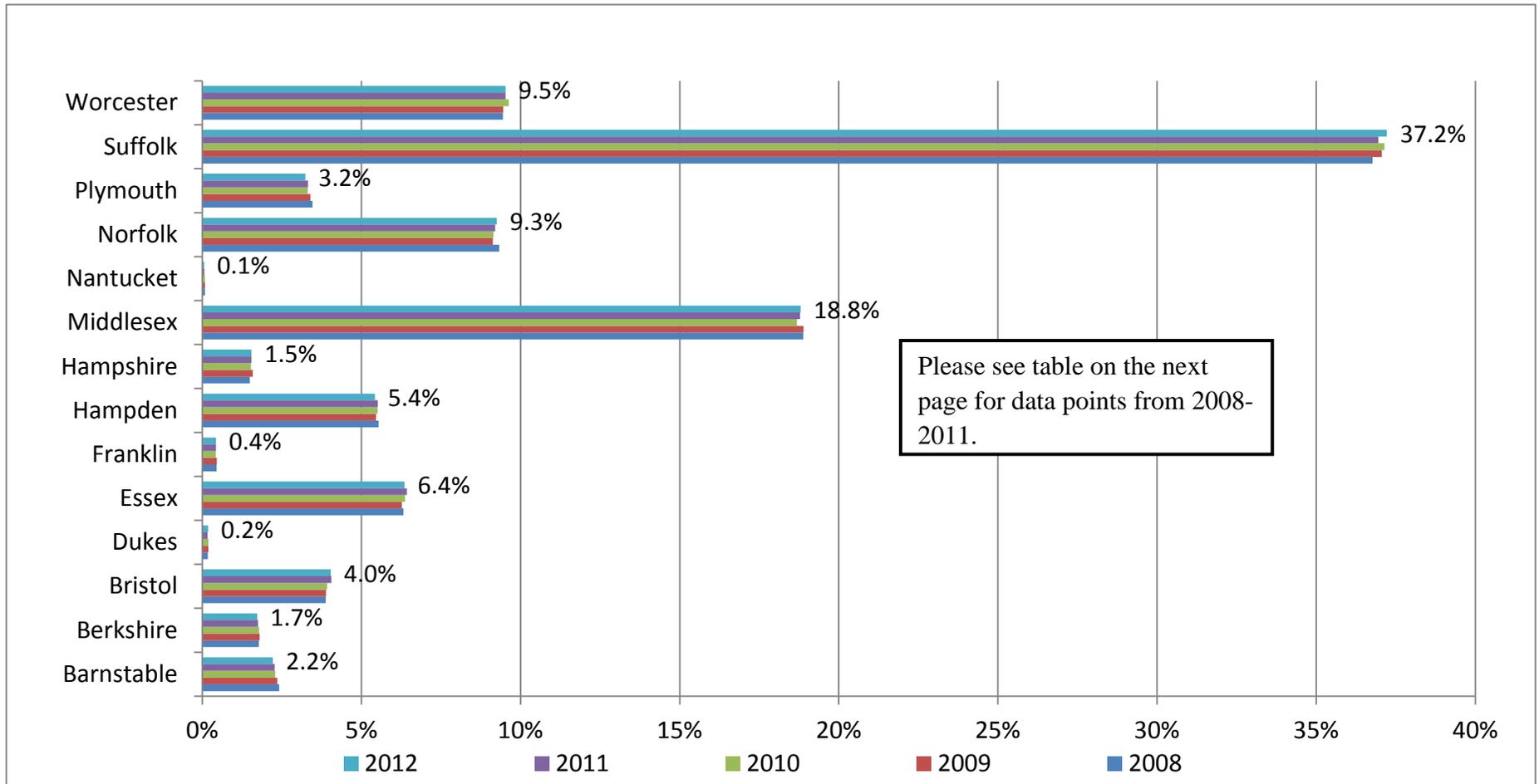
Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Table 1. Percentage of Massachusetts Physicians by Age Category, 2008-2012**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Under 40 years	15.39%	18.23%	20.65%	23.38%	27.43%
40-49 years	28.13%	27.40%	26.97%	26.21%	23.26%
50-59 years	26.76%	25.90%	25.38%	24.68%	22.28%
60-69 years	19.58%	18.83%	18.13%	17.46%	15.00%
Over 70 years	10.14%	9.64%	8.84%	8.09%	6.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 4. Percentage of Massachusetts Physicians by County, 2008-2012**



Graph 4 illustrates the percentage of Massachusetts physicians by county from 2008 through 2012. The majority of physicians in the state are found in the Eastern region of Massachusetts (Middlesex and Suffolk counties). Please see Table 2 on the next page for additional data points.

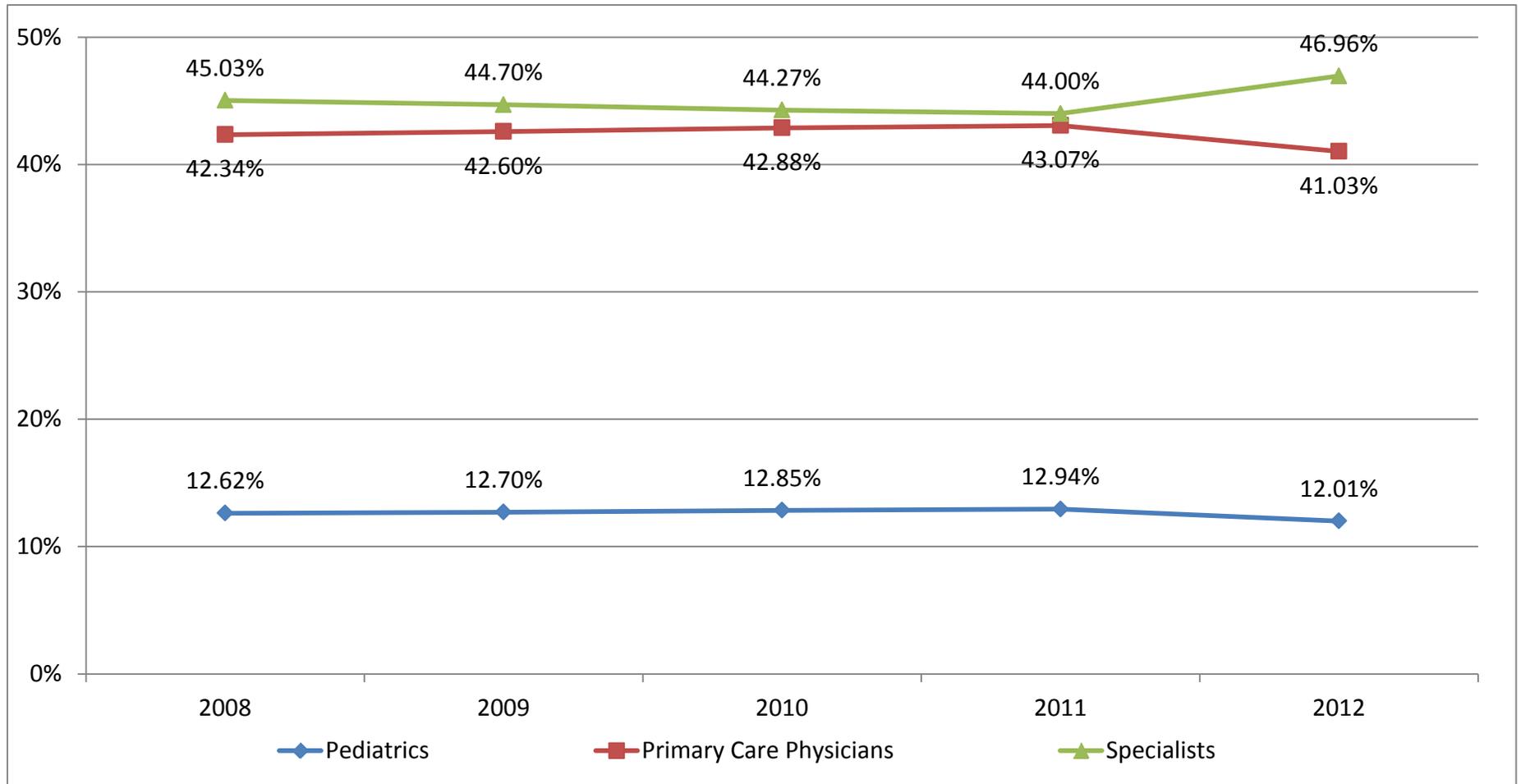
Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Table 2. Percentage of Massachusetts Physicians by County, 2008-2012**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Barnstable</b>	2.4%	2.4%	2.3%	2.3%	2.2%
<b>Berkshire</b>	1.8%	1.8%	1.8%	1.8%	1.7%
<b>Bristol</b>	3.9%	3.9%	3.9%	4.1%	4.0%
<b>Dukes</b>	0.2%	0.2%	0.2%	0.2%	0.2%
<b>Essex</b>	6.3%	6.3%	6.4%	6.4%	6.4%
<b>Franklin</b>	0.4%	0.5%	0.4%	0.4%	0.4%
<b>Hampden</b>	5.5%	5.5%	5.5%	5.5%	5.4%
<b>Hampshire</b>	1.5%	1.6%	1.5%	1.5%	1.5%
<b>Middlesex</b>	18.9%	18.9%	18.7%	18.8%	18.8%
<b>Nantucket</b>	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Norfolk</b>	9.3%	9.1%	9.1%	9.2%	9.3%
<b>Plymouth</b>	3.5%	3.4%	3.3%	3.3%	3.2%
<b>Suffolk</b>	36.8%	37.1%	37.1%	37.0%	37.2%
<b>Worcester</b>	9.4%	9.5%	9.6%	9.5%	9.5%

Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

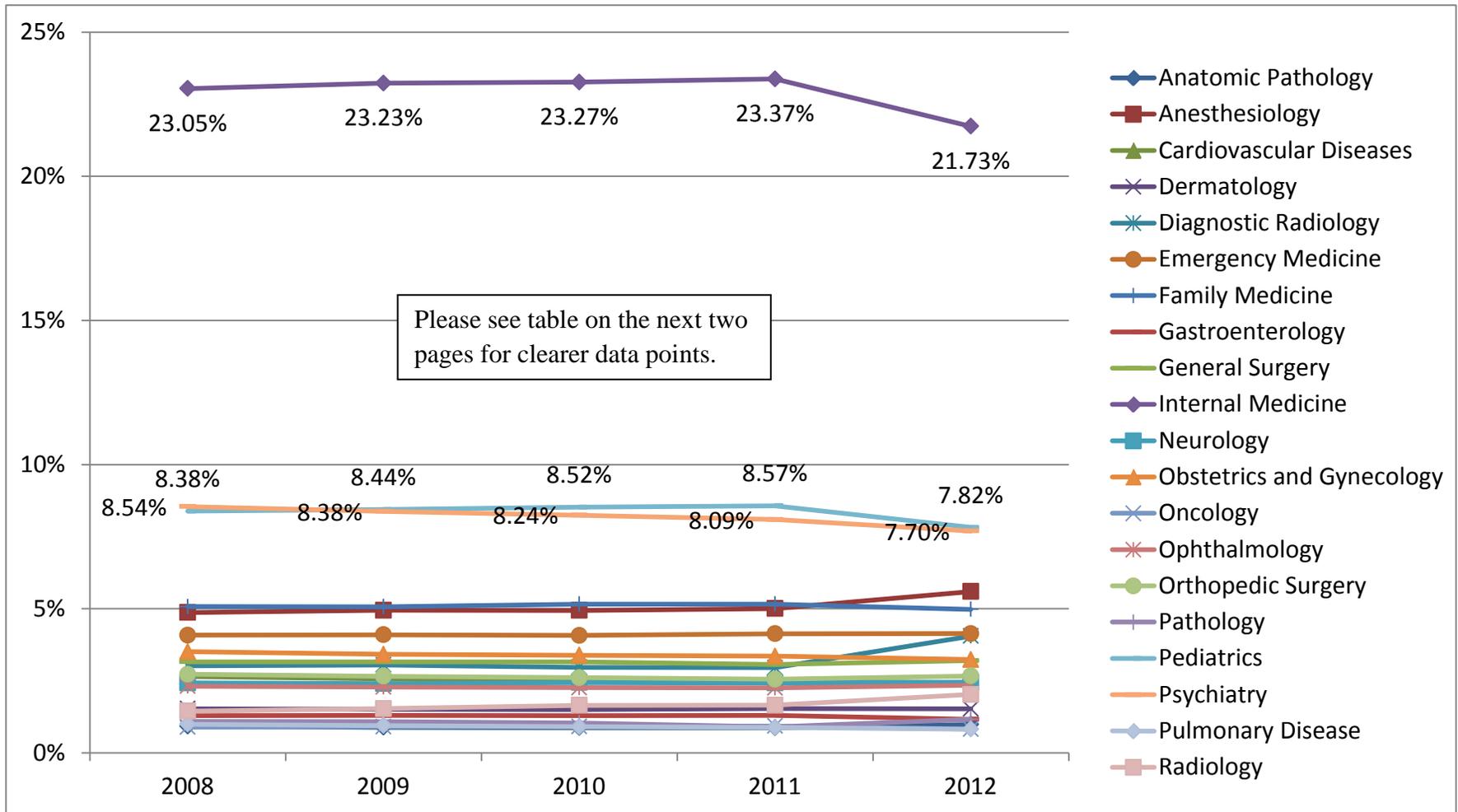
**Graph 5. Percentage of Massachusetts Physicians by Specialty, 2008-2012**



Graph 5 illustrates the percentage of Massachusetts physicians who are considered pediatricians, primary care physicians, and specialists. Primary care physicians are those physicians that specialize in either internal medicine or family medicine. The percentage of Massachusetts physicians that are considered specialists have increased from 2008 to 2012.

Source: Massachusetts Board of Registration of Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 6. Percentage of Massachusetts Physicians by Top Twenty Specialties, 2008-2012**



Graph 6 illustrates the twenty physician specialties with the largest number of physicians in the state of Massachusetts from 2008 to 2012. Please see Table 3 on the next page for additional data points.

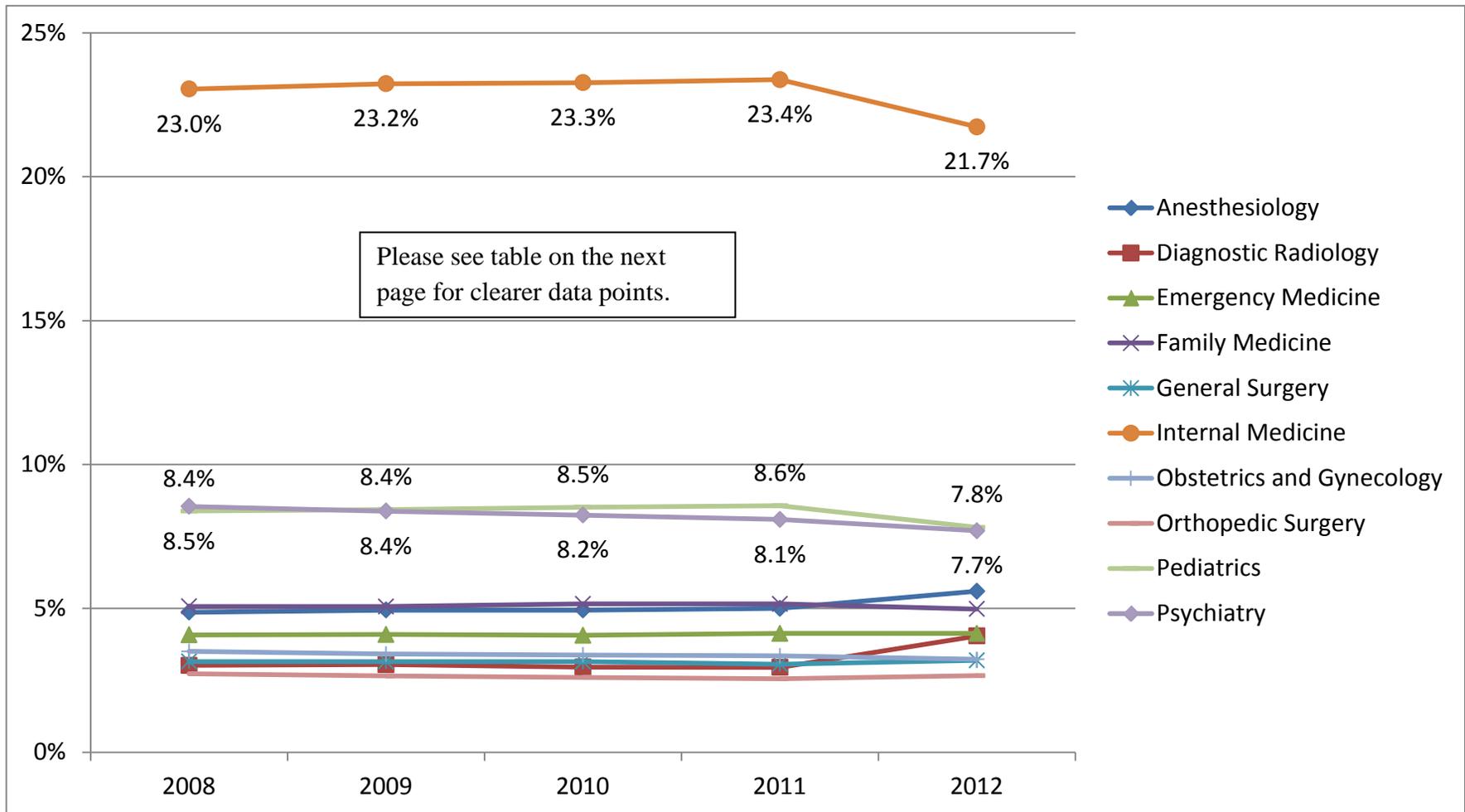
Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Table 3. Top Twenty Massachusetts Specialties by Percentage of Physicians, 2008-2012**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Anatomic Pathology</b>	0.92%	0.88%	0.87%	0.87%	0.98%
<b>Anesthesiology</b>	4.87%	4.94%	4.94%	5.00%	5.60%
<b>Cardiovascular Diseases</b>	2.64%	2.57%	2.56%	2.49%	2.43%
<b>Dermatology</b>	1.53%	1.51%	1.50%	1.53%	1.52%
<b>Diagnostic Radiology</b>	3.02%	3.05%	2.96%	2.95%	4.05%
<b>Emergency Medicine</b>	4.08%	4.10%	4.07%	4.13%	4.13%
<b>Family Medicine</b>	5.07%	5.07%	5.16%	5.16%	4.98%
<b>Gastroenterology</b>	1.29%	1.29%	1.28%	1.30%	1.17%
<b>General Surgery</b>	3.16%	3.16%	3.15%	3.06%	3.20%
<b>Internal Medicine</b>	23.05%	23.23%	23.27%	23.37%	21.73%
<b>Neurology</b>	2.42%	2.40%	2.44%	2.42%	2.46%
<b>Obstetrics and Gynecology</b>	3.51%	3.41%	3.38%	3.35%	3.23%
<b>Oncology</b>	0.89%	0.90%	0.91%	0.93%	0.82%
<b>Ophthalmology</b>	2.31%	2.28%	2.26%	2.25%	2.35%
<b>Orthopedic Surgery</b>	2.73%	2.66%	2.60%	2.55%	2.66%
<b>Pathology</b>	1.09%	1.08%	1.04%	0.90%	1.16%
<b>Pediatrics</b>	8.38%	8.44%	8.52%	8.57%	7.82%
<b>Psychiatry</b>	8.54%	8.38%	8.24%	8.09%	7.70%
<b>Pulmonary Disease</b>	0.99%	0.95%	0.91%	0.88%	0.82%
<b>Radiology</b>	1.44%	1.53%	1.65%	1.65%	2.02%

Source: Massachusetts Board of Registration in Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 7. Percentage of Massachusetts Physicians by Top Ten Specialties, 2008-2012**



Graph 7 illustrates the ten physician specialties in Massachusetts with the largest number of physicians from 2008 to 2012. Please see Table 4 on the next page for additional data points.

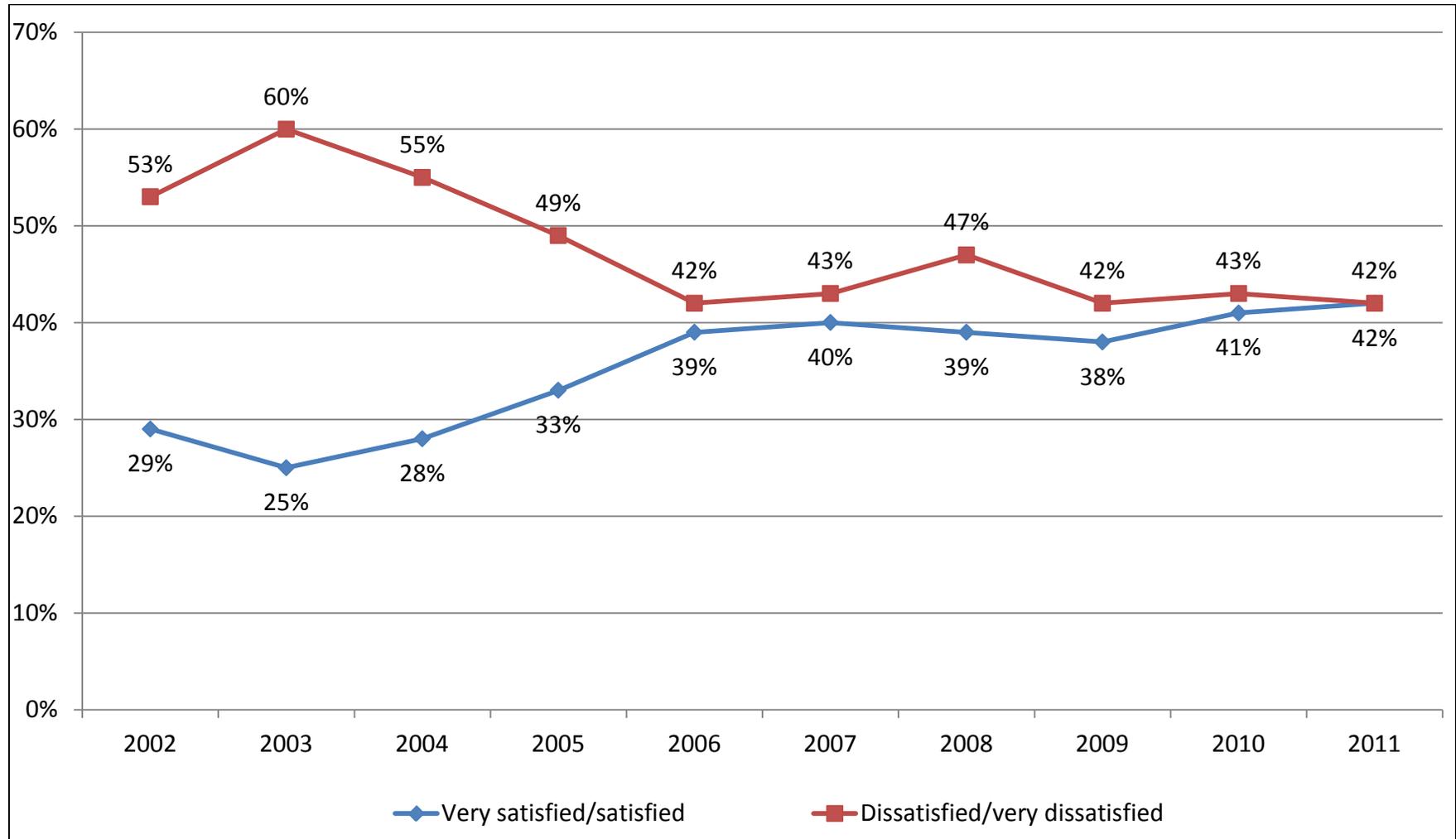
Source: Massachusetts Board of Registration of Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Table 4. Top Ten Massachusetts Specialties by Percentage of Physicians, 2008-2012**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Anesthesiology</b>	4.87%	4.94%	4.94%	5.00%	5.60%
<b>Diagnostic Radiology</b>	3.02%	3.05%	2.96%	2.95%	4.05%
<b>Emergency Medicine</b>	4.08%	4.10%	4.07%	4.13%	4.13%
<b>Family Medicine</b>	5.07%	5.07%	5.16%	5.16%	4.98%
<b>General Surgery</b>	3.16%	3.16%	3.15%	3.06%	3.20%
<b>Internal Medicine</b>	23.05%	23.23%	23.27%	23.37%	21.73%
<b>Obstetrics and Gynecology</b>	3.51%	3.41%	3.38%	3.35%	3.23%
<b>Orthopedic Surgery</b>	2.73%	2.66%	2.60%	2.55%	2.66%
<b>Pediatrics</b>	8.38%	8.44%	8.52%	8.57%	7.82%
<b>Psychiatry</b>	8.54%	8.38%	8.24%	8.09%	7.70%

Source: Massachusetts Board of Registration of Medicine data files, 2008-2012 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

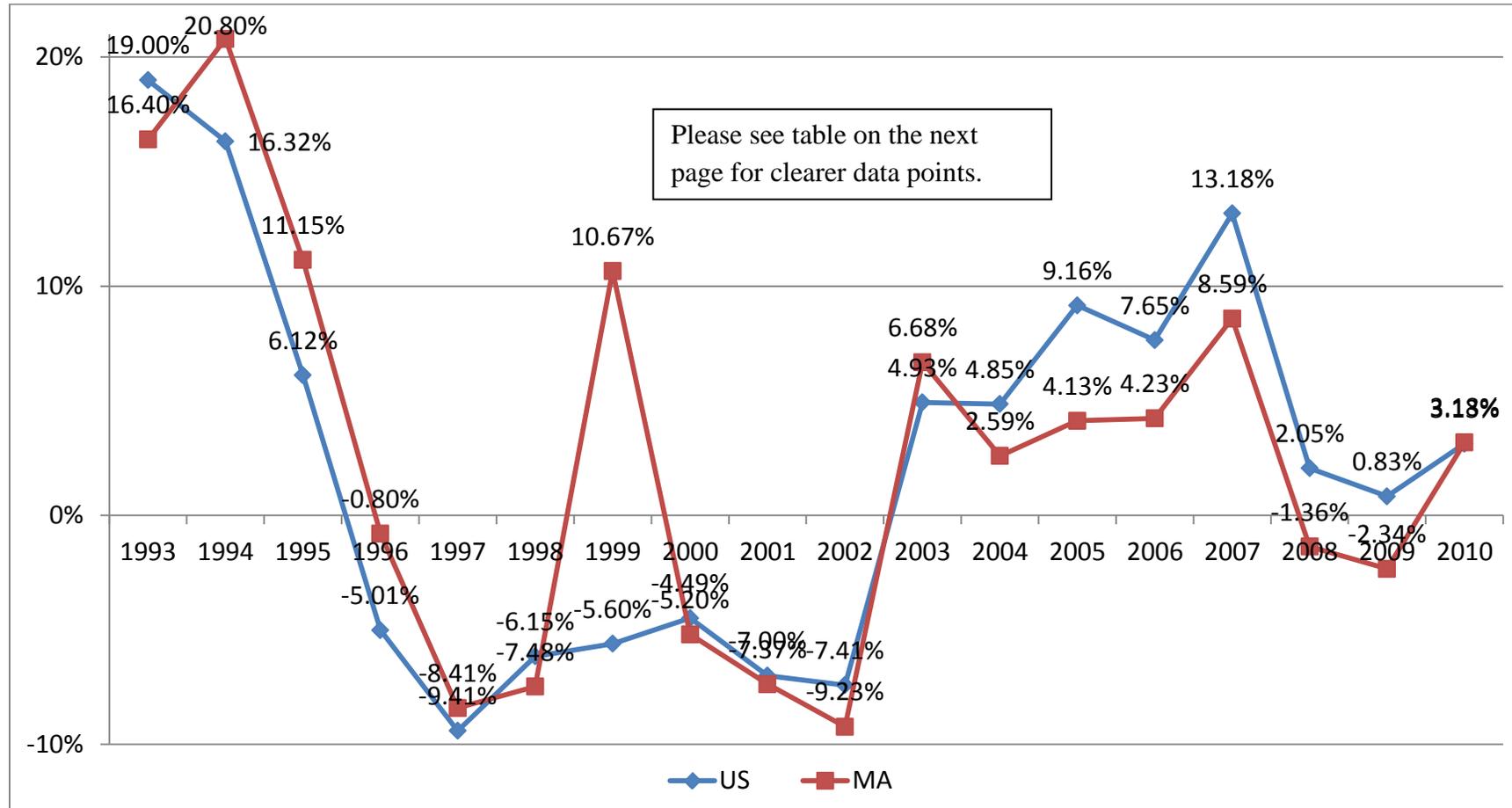
**Graph 8. Physician Satisfaction with the Current Practice Environment by Percentage, 2002-2011**



Graph 8 illustrates the percentage of Massachusetts physicians that are either very satisfied/satisfied or dissatisfied/very dissatisfied with the current practice environment in the state. The remaining percentage of physicians felt neutral about the current practice environment.

Source: Massachusetts Medical Society Physician Workforce Study data 2002-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 9. Rate of Change in Medical School Applications, U.S. vs. Massachusetts, 2001 to 2010**



Graph 9 illustrates the rate of change in medical school applications in the U.S. and Massachusetts from 2001 through 2010. The rate of applications increased from 2009 through 2010 in both the U.S. and Massachusetts. Please see Table 5 on the next page for clearer data points. Please see Table 5 on the next page for additional data points.

Source: Massachusetts Medical Society Practice Environment Index underlying data 2010 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Table 5. Rate of Change in Medical School Applications U.S. vs. Massachusetts, 2001-2010**

<b>Rate of Change in Medical School Applications U.S. vs. Massachusetts, 2001-2010</b>		
	<b>U.S.</b>	<b>Massachusetts</b>
<b>2001</b>	-7.00%	-7.37%
<b>2002</b>	-7.41%	-9.23%
<b>2003</b>	4.93%	6.68%
<b>2004</b>	4.85%	2.59%
<b>2005</b>	9.16%	4.13%
<b>2006</b>	7.65%	4.23%
<b>2007</b>	13.18%	8.59%
<b>2008</b>	2.05%	-1.36%
<b>2009</b>	0.83%	-2.34%
<b>2010</b>	3.13%	3.18%

Source: Massachusetts Medical Society Practice Environment Index underlying data 2010 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

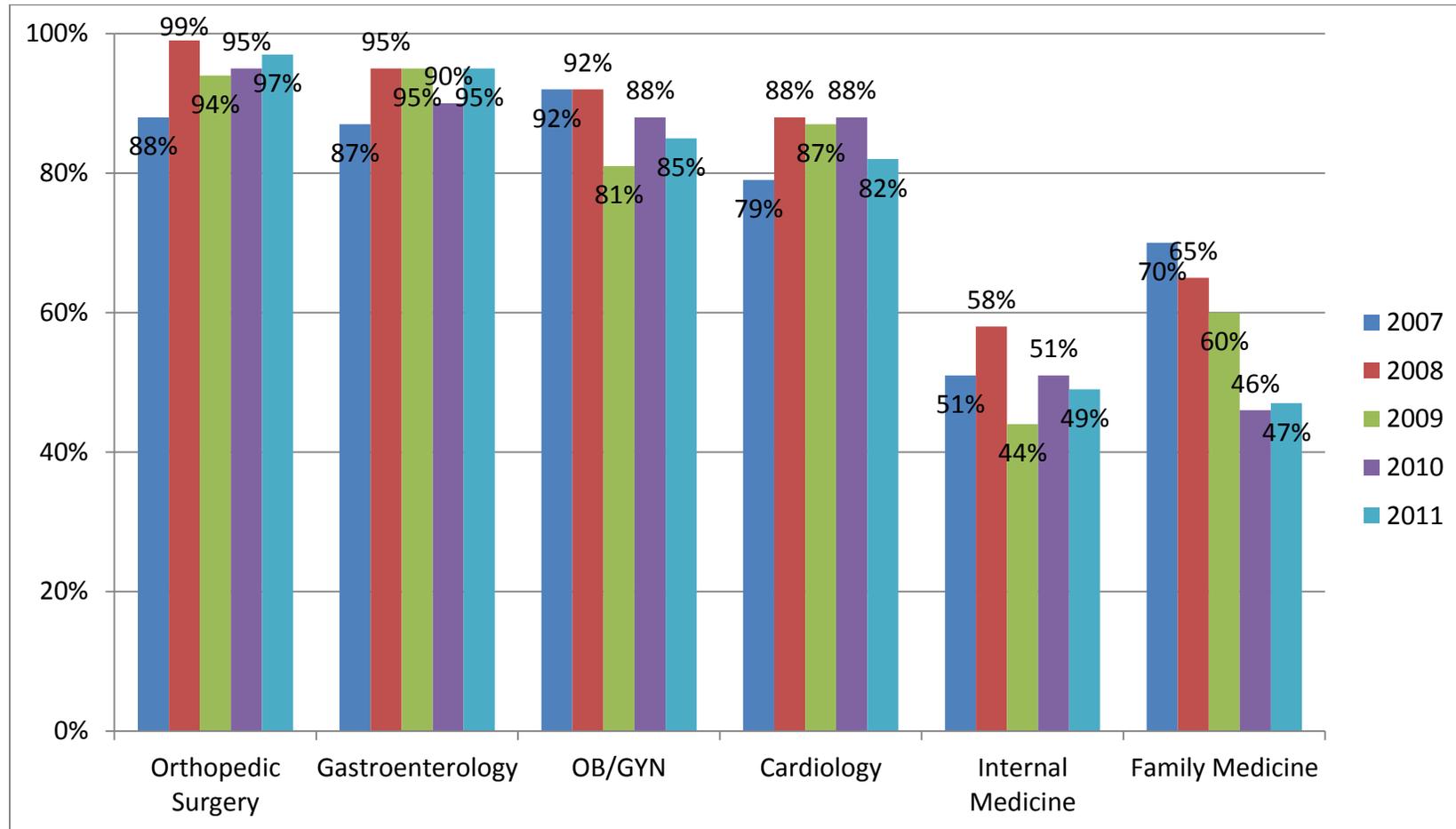
**Table 6. Physicians Specialties Classified as Facing Critical or Severe Shortages, Massachusetts, 2002-2011**

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
<b>Anesthesiology</b>	----	----	----	----	Severe	Severe	Critical	Severe	Critical	Critical
<b>Cardiology</b>	----	----	----	----	Critical	----	Severe	Severe	Critical	Severe
<b>Dermatology*</b>	Severe	Severe	Severe	Severe	*	*	*	*	*	*
<b>Emergency Medicine</b>	----	Severe	----	Severe	----	Severe	----	----	----	----
<b>Family Medicine</b>	Severe	Critical	Critical	Critical	Severe	Severe	----	----	----	----
<b>Gastroenterology</b>	----	----	----	----	Severe	Severe	Severe	----	Critical	Severe
<b>General Surgery</b>	Severe	Severe	----	Severe	----	Severe	Severe	Severe	Severe	----
<b>Internal Medicine</b>	Critical	Critical	Severe	Critical	Critical	Critical	----	----	----	----
<b>Neurology*</b>	----	Severe	Severe	Severe	*	*	*	*	*	*
<b>Neurosurgery</b>	Severe	----	----	Severe	Critical	Severe	Severe	Critical	Critical	Severe
<b>OB/GYN</b>	----	----	Severe	----	----	----	----	----	----	----
<b>Oncology*</b>	----	----	----	Severe	*	*	*	*	*	*
<b>Orthopedics</b>	Severe	Severe	----	Severe	----	Severe	Severe	Severe	Severe	----
<b>Pediatrics</b>	----	----	----	----	----	----	----	----	----	----
<b>Psychiatry</b>	Critical	Severe	----	Severe	Severe	Severe	----	----	----	----
<b>Radiology</b>	----	----	----	----	----	Critical	----	Severe	Critical	Critical
<b>Urology**</b>	Critical	Severe	Severe	Severe	Severe	**	**	**	**	**
<b>Vascular Surgery</b>	----	Severe	Severe	Severe	Critical	Severe	----	----	----	----
* 2008-2011 data only										
**2007-2011 data only										

Table 6 illustrates the physician specialties that have been classified as facing critical or severe shortages in Massachusetts from 2002 through 2011. Please see the Appendix on page 32 for a review of the methodology classifying specialties as “critical” or “severe”. The specialties dermatology, general surgery, and orthopedics have been facing a severe shortage in Massachusetts over the past several years. In 2011, these specialties as well as family medicine and neurosurgery have been facing severe shortages.

Source: Massachusetts Medical Society Physician Workforce Study data 2002-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

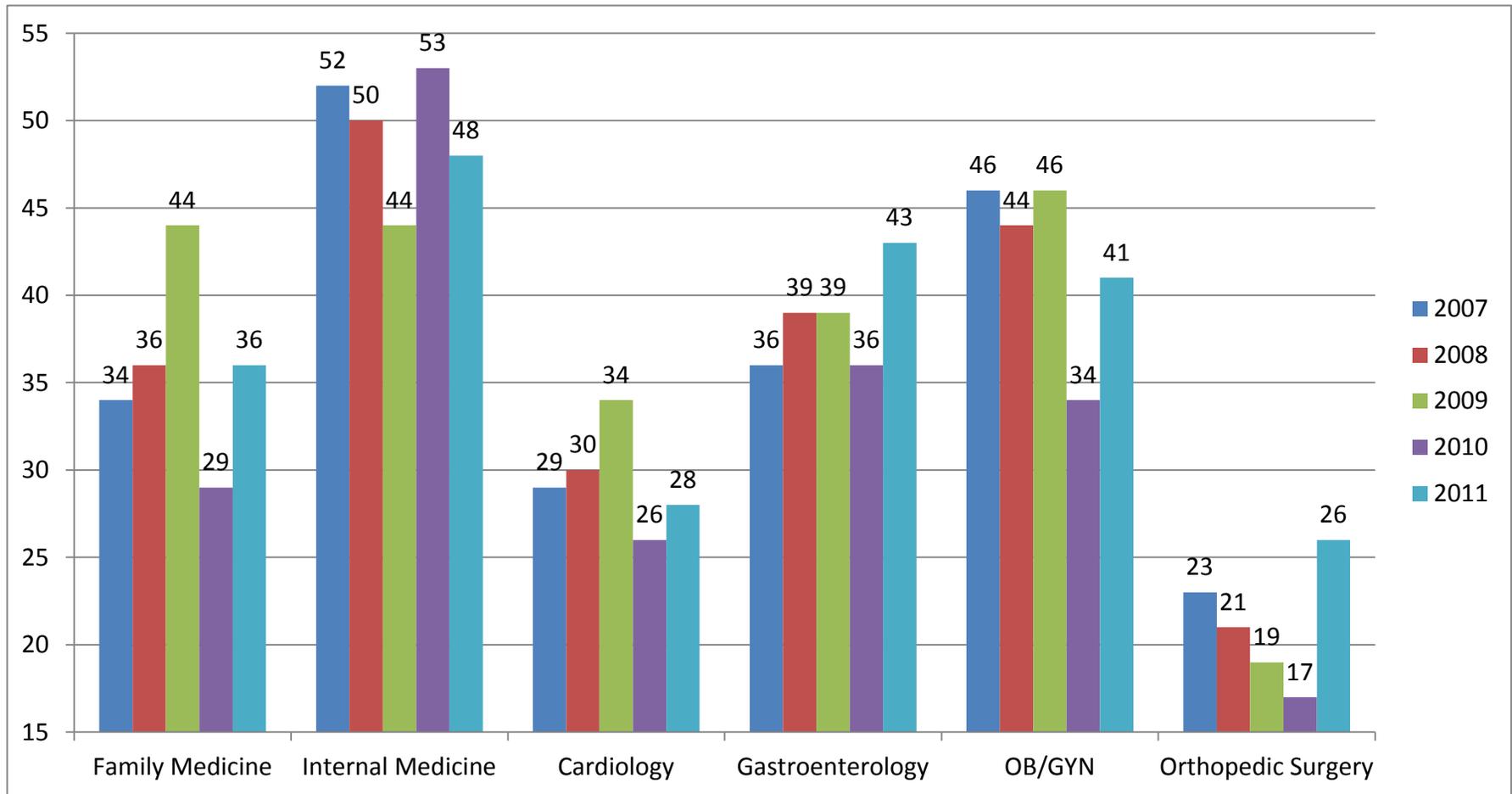
**Graph 10. Percentage of Massachusetts Physicians Accepting New Patients by Specialty, 2007-2011**



Graph 10 illustrates the types of Massachusetts physicians that are accepting new patients. Specialists are more likely to accept new patients in comparison to primary care physicians. In 2011, only 49% of internal medicine physicians and only 47% of family medicine physicians accepted new patients, whereas 95% of gastroenterologists and 97% of orthopedic surgeons accepted new patients.

Source: Massachusetts Medical Society Physician Workforce Study data files, 2007-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

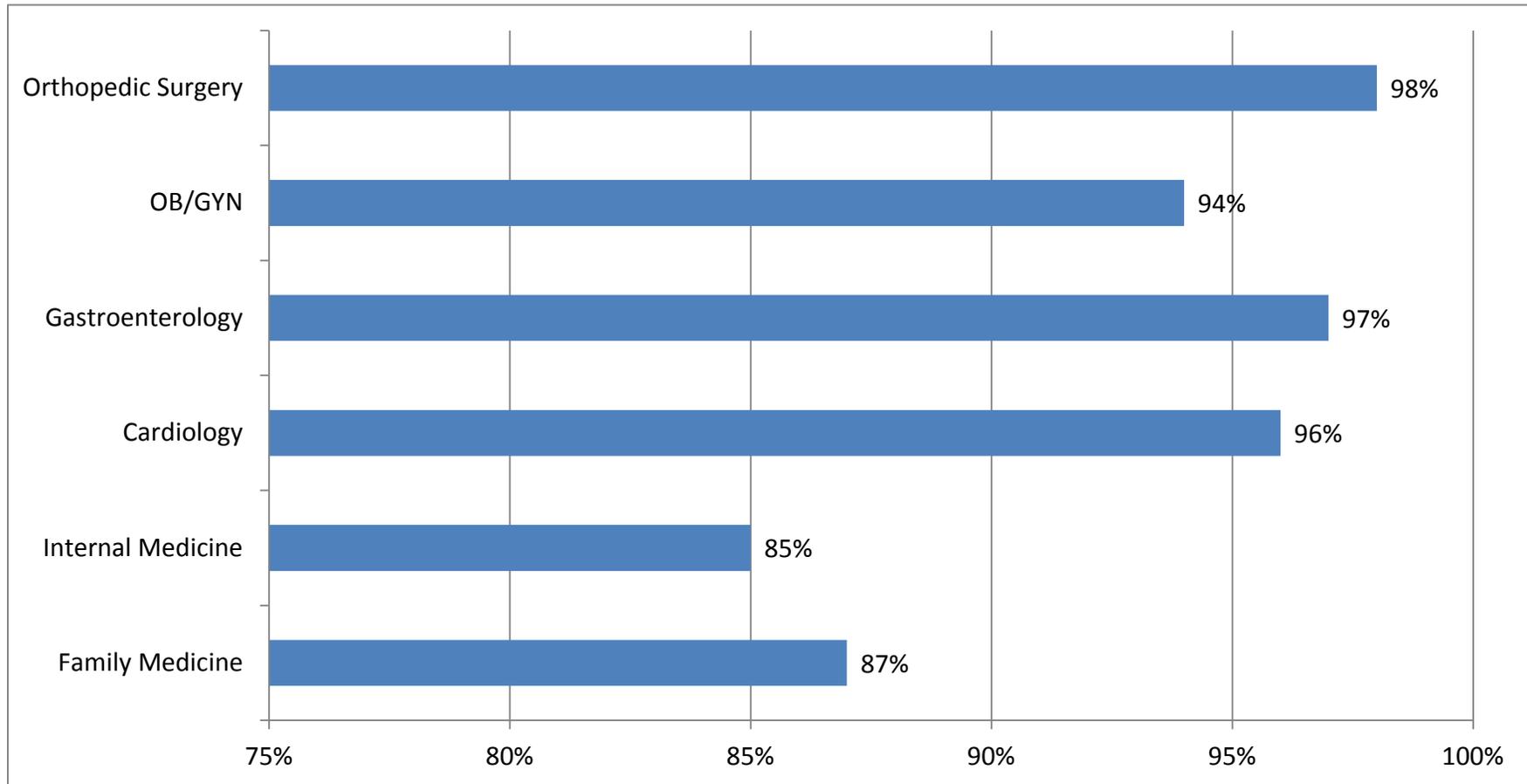
**Graph 11. Average Wait Time in Days by Massachusetts Physician Specialty, 2007-2011**



Graph 11 illustrates the average wait time to see a physician in days by specialty. While the wait time to see an internal medicine physician and a family medicine physician has held relatively constant over the past five years, it currently takes patients, on average, over five weeks to see a family medicine physician, and nearly seven weeks to see an internal medicine physician.

Source: Massachusetts Medical Society, Physician Workforce Study data 2007-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

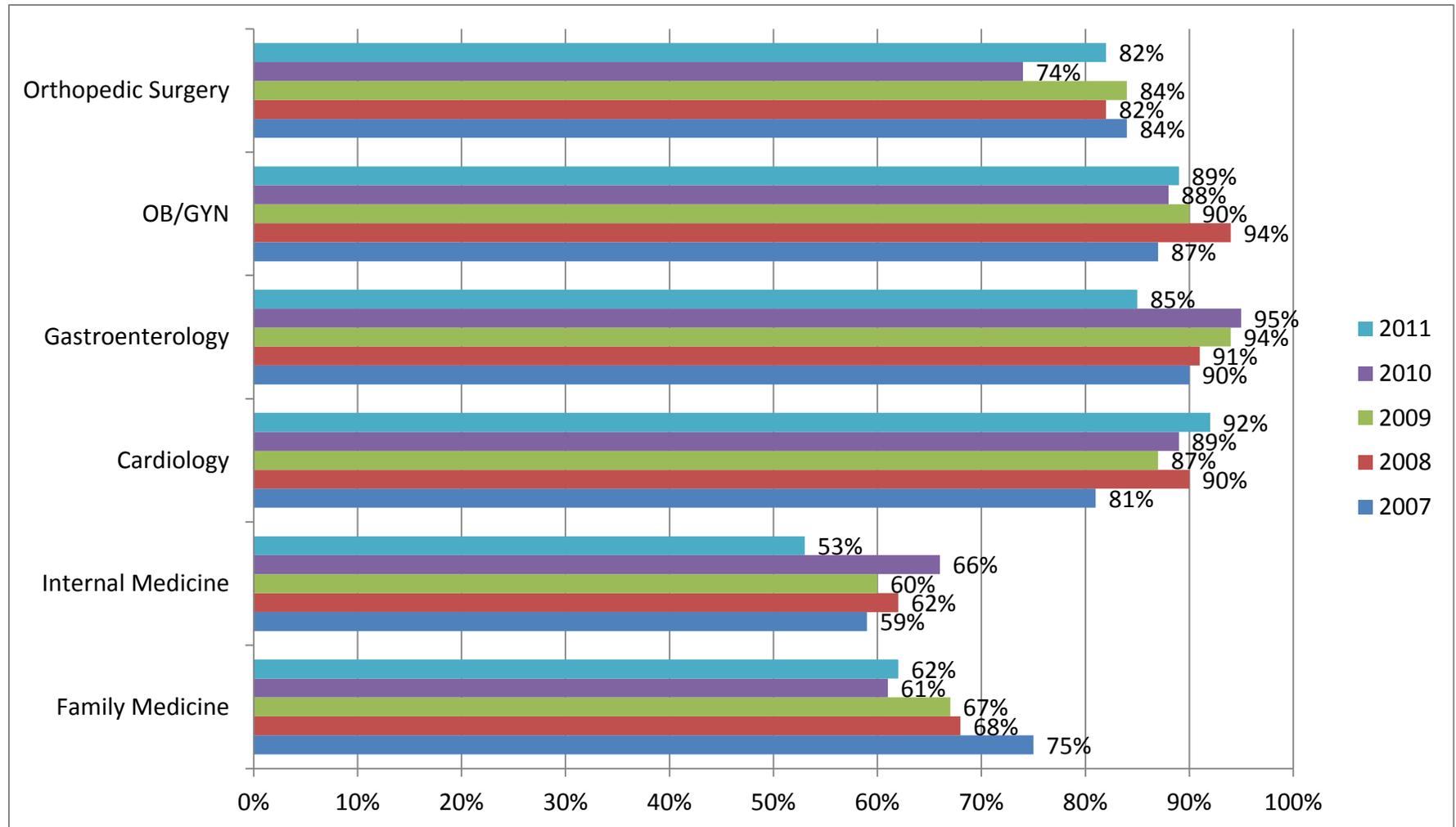
**Graph 12. Percentage of Massachusetts Physicians Accepting Medicare by Specialty, 2011**



Graph 12 illustrates the percentage of Massachusetts physicians that currently accept Medicare by specialty group. Specialists are much more likely than primary care physicians to accept Medicare. While only 85% of internal medicine physicians and 87% of family medicine physicians accept Medicare, 98% of orthopedic surgeons, 97% of gastroenterologists, 96% of cardiologists, and 94% of obstetricians/gynecologists currently accept Medicare.

Source: Massachusetts Medical Society, Physician Workforce Study data 2007-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

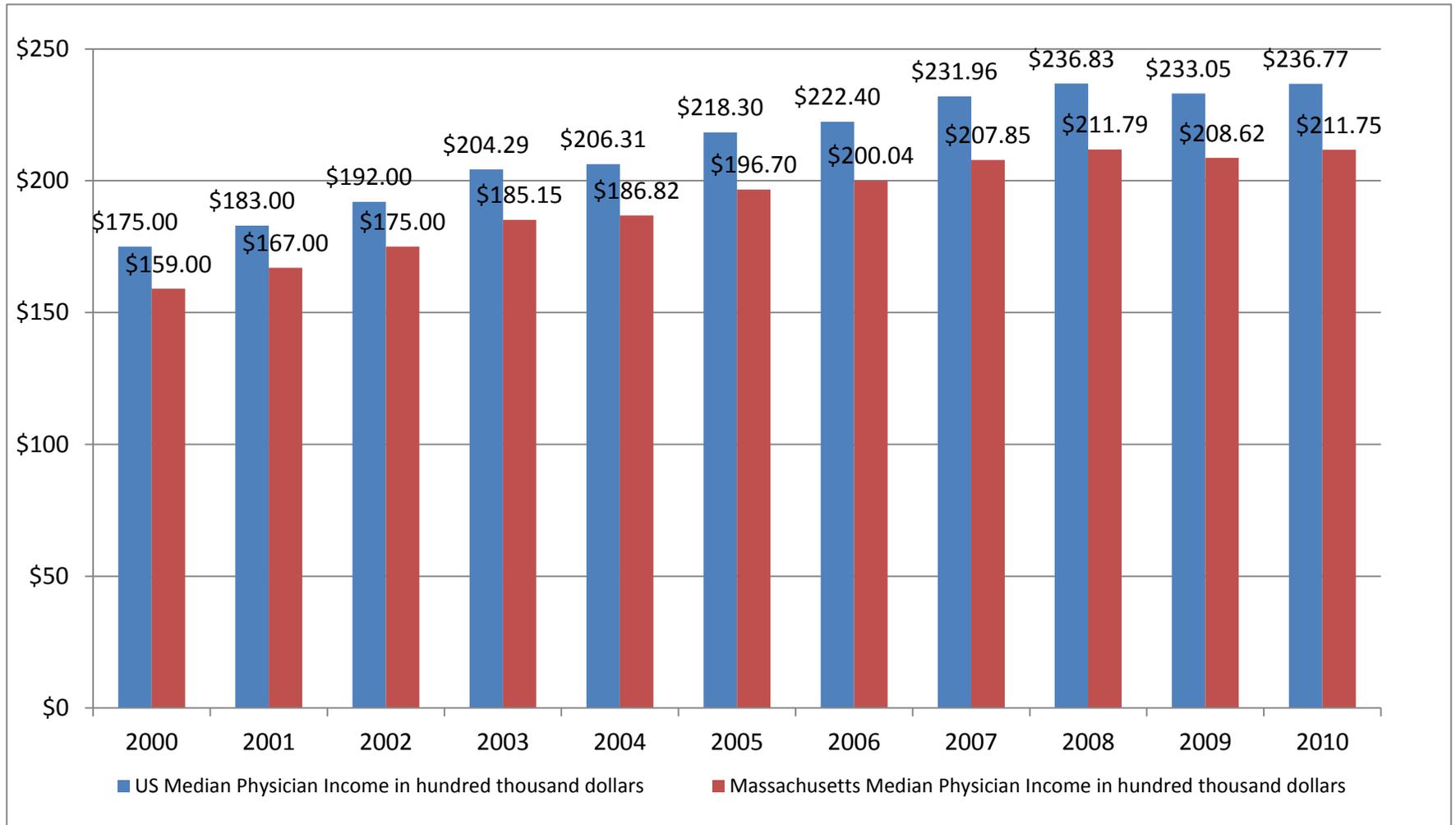
**Graph 13. Percentage of Massachusetts Physicians Accepting Mass Health by Specialty, 2007-2011**



Graph 13 illustrates the percentage of Massachusetts physicians that accept Mass Health (Massachusetts Medicaid) by specialty from 2007 through 2011. A larger percentage of specialists accept Mass Health than primary care physicians. In 2011, only 53% of internal medicine physicians and 62% of family medicine physicians accept Mass Health, where as 92% of cardiologists and 89% of obstetricians/gynecologists accept Mass Health.

Source: Massachusetts Medical Society, Physician Workforce Study data 2007-2011 (Massachusetts physician data includes full and active Massachusetts physicians with a Massachusetts business address).

**Graph 14. Median Physician Income Massachusetts vs. U.S., 2000-2010**



As one can see from Graph 14, the median physician income in the U.S. is significantly higher than the median physician income in Massachusetts. In Massachusetts, median physician income has risen 33.17% between 2000 and 2010, from \$159,000 to \$211,750.

Source: Massachusetts Medical Society, Physician Practice Index.

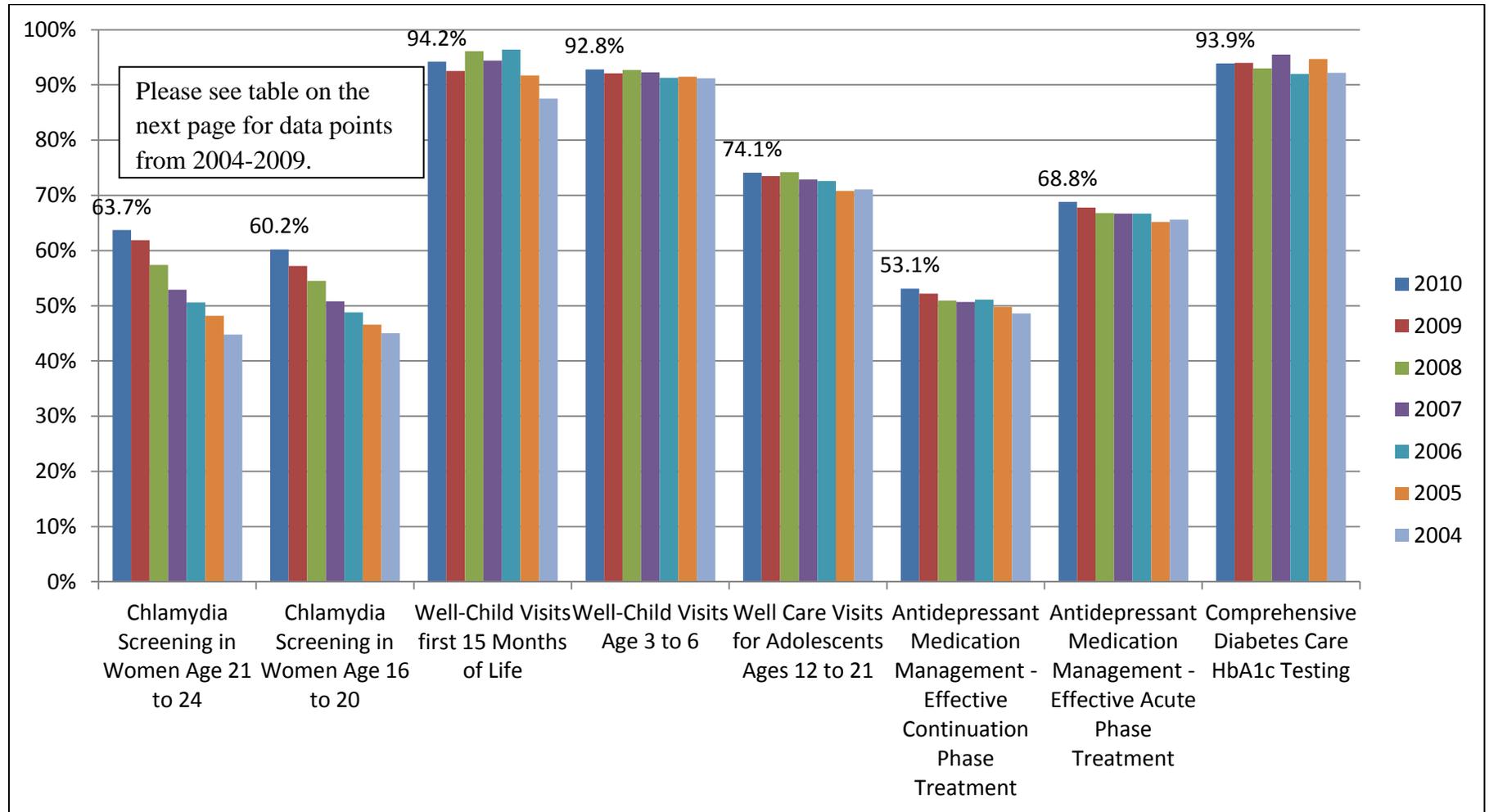
**Table 7. Economic Impact of Office-Based Physicians in Massachusetts**

	<b>Massachusetts</b>	<b>United States</b>
<b>Total Number of Office-Based Physicians</b>	19,550	638,661
<b>Total Number of Jobs Supported by Office-Based Physicians</b>	112,224	4,000,000
<b>Average Number of Jobs Supported per Office-Based Physicians</b>	5.7	6.2
<b>Total Sales Revenue Generated by Office-Based Physicians</b>	31,000,000,000	1,400,000,000,000
<b>Total Wages &amp; Benefits Supported by Office-Based Physicians</b>	23,500,000,000	833,100,000,000
<b>Total State &amp; Local Tax Revenue Generated by Office Based Physicians</b>	1,550,000,000	62,900,000,000

Table 7 illustrates the economic impact of “office based physicians” in Massachusetts, as compared to the United States. It should be noted that the American Medical Association’s (AMA) Physician Masterfile was used to estimate the number of office-based physicians in each state, in aggregate and by specialty. In this Masterfile, the AMA designates physicians 1) office-based practice, 2) hospital-based practice (e.g., residents, full-time staff), 3) other professional career (e.g., research), 4) inactive (i.e., those who work < 20 hours a week), and 5) not classified. The researchers limited their data to physicians classified as “office-based physicians”, as this was the population of interest for this analysis.

Source: American Medical Association. The State-Level Economic Impact of Office-Based Physicians Report, January 2011.

**Graph 15. Quality Process Measures in Massachusetts, 2004-2010**



Graph 15 illustrates the Massachusetts Health Quality Partners (MHQP) quality process measures from 2004 to 2010 in the state of Massachusetts. Please see Table 8 on the next page to view data points from 2004 to 2009.

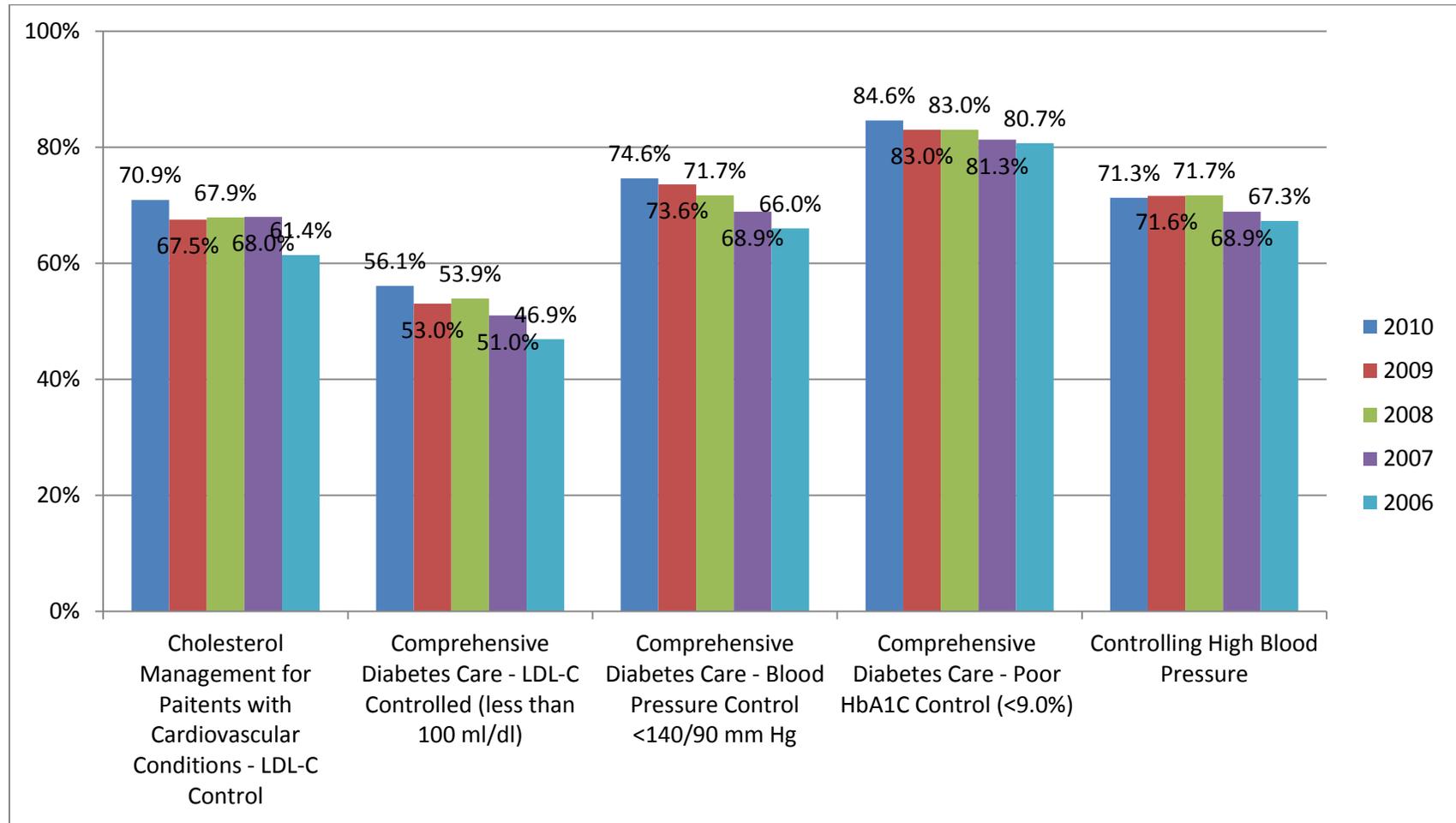
Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

**Table 8. Quality Process Measures in Massachusetts, 2004-2010**

<b>Quality Process Measures Trends in Massachusetts, 2004-2010</b>							
	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>
Chlamydia Screening in Women Age 21 to 24	63.7%	61.9%	57.4%	52.9%	50.6%	48.2%	44.8%
Chlamydia Screening in Women Age 16 to 20	60.2%	57.2%	54.5%	50.8%	48.8%	46.6%	45.0%
Well-Child Visits first 15 Months of Life	94.2%	92.5%	96.1%	94.4%	96.4%	91.7%	87.5%
Well-Child Visits Age 3 to 6	92.8%	92.1%	92.7%	92.3%	91.3%	91.5%	91.2%
Well Care Visits for Adolescents Ages 12 to 21	74.1%	73.5%	74.2%	72.9%	72.6%	70.8%	71.1%
Antidepressant Medication Management - Effective Continuation Phase Treatment	53.1%	52.2%	50.9%	50.7%	51.1%	49.8%	48.6%
Antidepressant Medication Management - Effective Acute Phase Treatment	68.8%	67.8%	66.8%	66.7%	66.7%	65.2%	65.6%
Comprehensive Diabetes Care HbA1c Testing	93.9%	94.0%	93.0%	95.5%	92.0%	94.7%	92.2%

Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

**Graph 16. Quality Outcome Measures in Massachusetts, 2006-2010**



Graph 16 illustrates the MHQP quality outcome measures from 2004 to 2010 in the state of Massachusetts.

Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

**Table 9. Quality Process Measures in Massachusetts, 2009-2010**

	<b>2010</b>	<b>2009</b>
Appropriate Testing for Children with Pharyngitis	93.4%	90.1%
Chlamydia Screening in Women Ages 16 to 20	60.2%	57.2%
Follow-up of Care of Children Prescribed ADHD Medications - Initiation Phase	47.7%	45.2%
Chlamydia Screening in Women Ages 21 to 24	63.7%	61.9%
Well-Child Visits first 15 months of life	94.2%	92.5%
Antidepressant Medication Management - Effective Acute Phase Treatment	68.8%	67.8%
Antidepressant Medication Management - Effective Continuation Phase Treatment	53.1%	52.2%
Comprehensive Diabetes Care - LDL-C Screening	91.4%	90.6%
Appropriate Treatment for Children with Upper Respiratory Infection (URI)	94.9%	94.2%
Well-Child Visits Ages 3 to 6	92.8%	92.1%
Colorectal Cancer Screening	78.1%	77.5%
Well Care Visits for Adolescents Ages 12 to 21	74.1%	73.5%
Use of Appropriate Medications for People with Asthma: Children Ages 5 to 11	97.5%	97.0%
Cholesterol Management for Patients with Cardiovascular Conditions -- LDL-C Screening	92.4%	92.0%
Use of Imaging Studies for Low Back Pain	78.4%	78.1%
Annual Monitoring for Patients on Persistent Medications - Diuretics	83.9%	83.7%
Comprehensive Diabetes Care - Medical Attention for Nephropathy	89.6%	89.4%
Annual Monitoring for Patients on Persistent Medications - Total	83.6%	83.5%
Breast Cancer Screening	83.2%	83.1%
Use of Spirometry Testing in the Assessment and Diagnosis of COPD	44.0%	44.0%
Annual Monitoring for Patients on Persistent Medications - ACE Inhibitors or ARBs	84.1%	84.1%
Comprehensive Diabetes Care - HbA1c Testing	93.9%	94.0%
Cervical Cancer Screening	86.7%	86.8%
Use of Appropriate Medications for People with Asthma: Children Ages 12 to 50	89.5%	89.8%

Table 9 illustrates a more extensive list of the MHQP quality process measures from 2009 to 2010 in the state of Massachusetts.

Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

**Table 10. Comparison of Massachusetts Process Measure Rates to National Center for Quality Assurance United States National Benchmarks**

	<b>MA Rate</b>	<b>National Average</b>
Use of Appropriate Medications for People with Asthma: Children Ages 5 to 11	97.5%	96.7%
Appropriate Treatment for Children with Upper Respiratory Infection (URI)	94.9%	85.1%
Well-Child Visits first 15 Months of Life	94.2%	76.3%
Comprehensive Diabetes Care - HbA1c Testing	93.9%	89.9%
Appropriate Testing for Children with Pharyngitis	93.4%	77.6%
Well-Child Visits Ages 3 to 6	92.8%	71.6%
Cholesterol Management for Patients with Cardiovascular Conditions - LDL-C Screening	92.4%	88.9%
Comprehensive Diabetes Care - LDL-C Screening	91.4%	85.6%
Comprehensive Diabetes Care - Medical Attention for Nephropathy	89.6%	83.6%
Use of Appropriate Medications for People with Asthma: Children Ages 12 to 50	89.5%	91.8%
Cervical Cancer Screening	86.7%	77.0%
Annual Monitoring for Patients on Persistent Medications - ACE Inhibitors or ARBs	84.1%	81.6%
Annual Monitoring for Patients on Persistent Medications - Diuretics	83.9%	81.0%
Annual Monitoring for Patients on Persistent Medications - Total rate	83.6%	80.9%
Breast Cancer Screening	83.2%	70.8%
Use of Imaging Studies for Low Back Pain	78.4%	74.2%
Colorectal Cancer Screening	78.1%	62.6%
Well Care Visits for Adolescents Ages 12 to 21	74.1%	42.7%
Antidepressant Medication Management - Effective Acute Phase Treatment	68.8%	64.7%
Chlamydia Screening in Women Ages 21 to 24	63.7%	45.7%
Chlamydia Screening in Women Ages 16 to 20	60.2%	40.8%
Antidepressant Medication Management - Continuation Phase Treatment	53.1%	48.3%
Follow-up of Care of Children Prescribed ADHD Medications - Initiation Phase	47.7%	38.8%
Use of Spirometry Testing in the Assessment and Diagnosis of COPD	44.0%	41.7%

Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

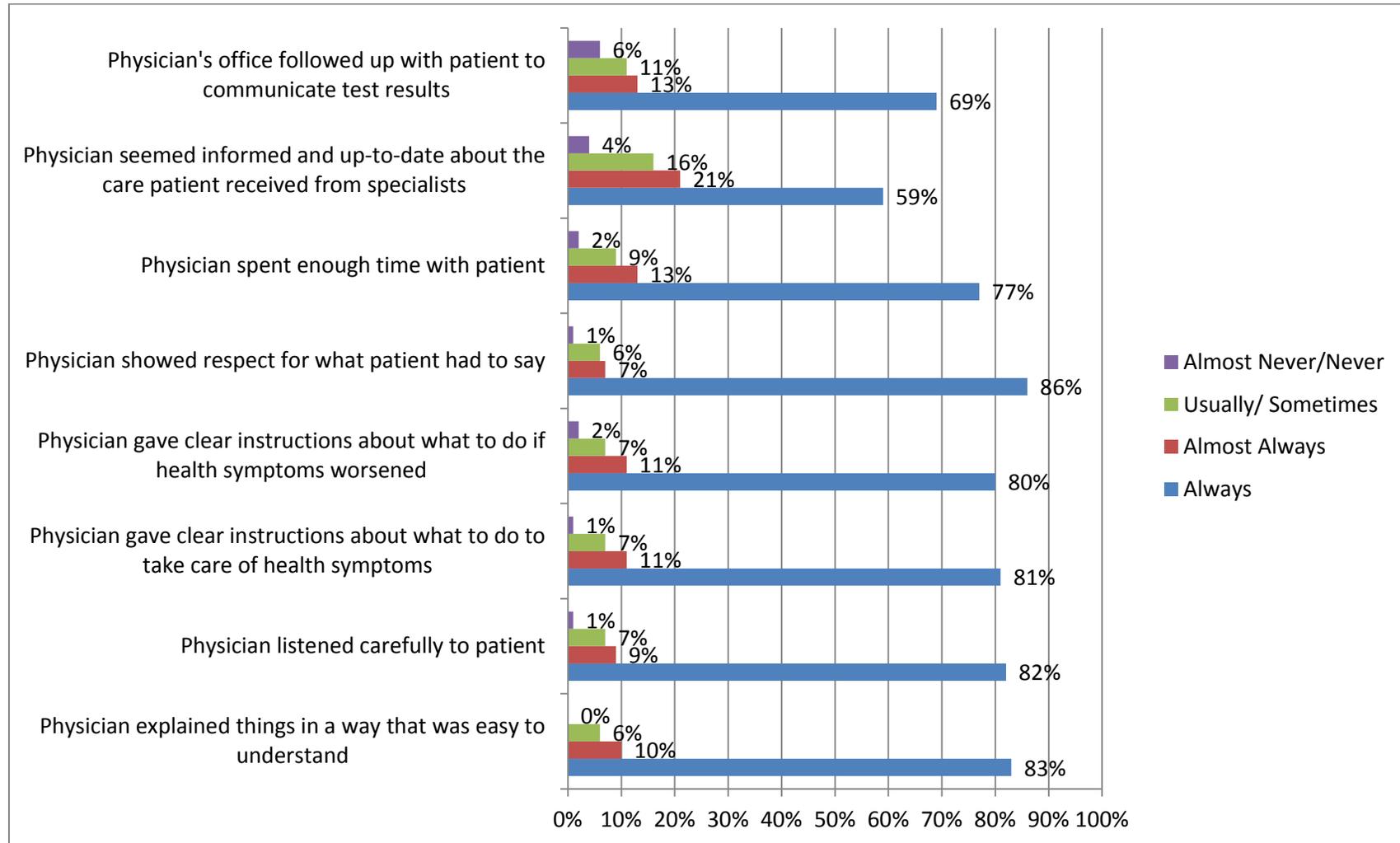
**Table 11. Comparison of Massachusetts Outcome Measure Rates to National Center for Quality Assurance United States National Benchmarks**

	<b>MA Rate</b>	<b>National Average</b>
Comprehensive Diabetes Care - Blood Pressure Control <140/90 mm Hg	74.6%	65.7%
Controlling High Blood Pressure	71.3%	63.4%
Comprehensive Diabetes Care - Good HbA1c Control (<8.0%)	71.2%	62.3%
Cholesterol Management for Patients with Cardiovascular Conditions - LDL-Control	70.9%	59.9%
Comprehensive Diabetes Care - LDL-C Controlled (less than 100 mg/dl)	56.1%	47.7%
Comprehensive Diabetes Care - Poor HbA1c Control (>9.0%)	15.4%	27.3%

Table 11 compares the MHQP outcome measures in the state of Massachusetts to the national average in the United States. Overall, Massachusetts scores higher than the national average with regards to quality outcome measures.

Source: Massachusetts Health Quality Partners, Primary Care in Massachusetts, 2011 Clinical Quality Performance Results and Trends

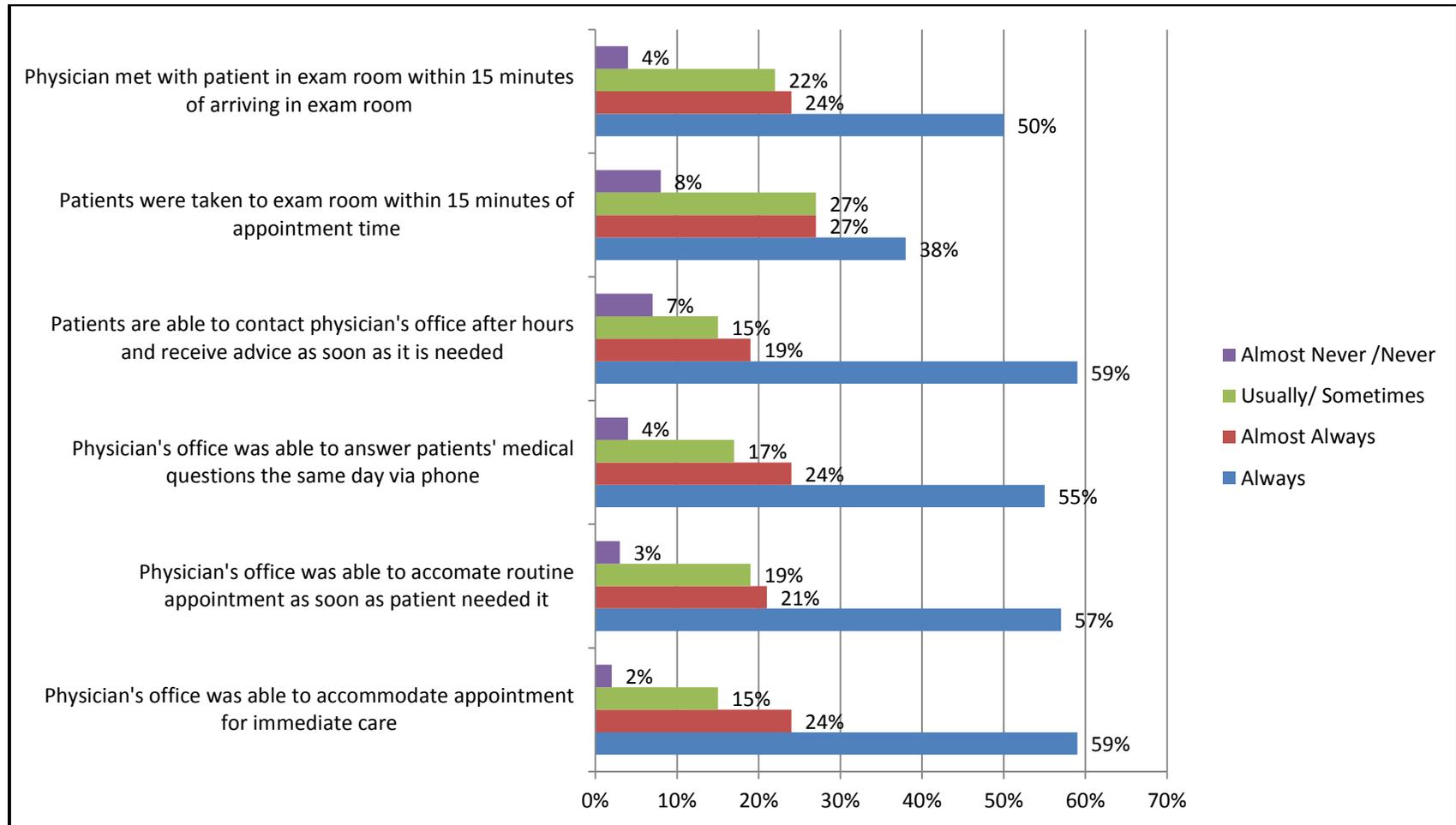
**Graph 17. Massachusetts Patient Satisfaction with Physician Communication Over Past Year**



In 2009, 56,000 adult patients and 22,000 parents of pediatric patients responded to an MHQP survey about their experiences with primary care during the preceding year. The survey asked patients about aspects of their health care experience that are closely linked to quality, the strength of the doctor-patient relationship and access to care. Graph 17 illustrates patient satisfaction with their physician in the state of Massachusetts with regards to communication.

Source: Massachusetts Health Quality Partners, Quality Insights: 2009 Patient Experiences in Primary Care

**Graph 18. Massachusetts Patient Satisfaction with Physician Organizational Access Over Past Year**



In 2009, MHQP surveyed Massachusetts adults to determine whether Massachusetts physicians provided quality healthcare by giving patients appointments, care, and information in a timely way. Graph 18 illustrates patient satisfaction with their physician in the state of Massachusetts with regards to organizational access.

Source: Massachusetts Health Quality Partners, Quality Insights: 2009 Patient Experiences in Primary Care

Appendix A.

**Defining Labor Market Conditions for the Eighteen Specialties**

In order to categorize whether labor market shortages are critical or severe, the following criteria was established. First, six questions were identified in the Survey of Practicing Physicians to serve as a proxy for physician shortages. These six key questions included:

- Is the current pool of physician applicants adequate to fill your vacant positions or expand your practice?
- Are you currently experiencing difficulty filling physician vacancies?
- Have physician supply problems made it necessary for you to alter the services you provide (e.g., volume or mix of services)?
- Have physician supply problems made it necessary to adjust your professional staffing patterns?
- Based on your current experience, on average, how long does it take to recruit a physician for your practice?
- Over the past three years, has the amount of time needed to recruit physicians changed?

For a physician specialty to be considered “critical” in terms of its labor market tightness, responses to the aforementioned key questions must meet the following criteria:

- Responses to at least two out of six questions must equal or exceed 50 percent.
- Responses to the remaining questions must equal or exceed 20 percent.
- Responses to all six questions must be greater than the mean for each of the respective six questions for all physician specialties combined.

For a physician specialty to be considered “severe” in terms of its labor market tightness, responses to the aforementioned key questions must meet the following criteria:

- Responses to one out of six questions must equal or exceed 50 percent.
- Response to at least five out of any six questions must equal or exceed 20 percent.
- Responses to any three out of six questions must be greater than the mean for each of the respective six questions for all physician specialties combined.

Therefore, those specialties categorized as “critical” specialties are experiencing the highest possible degree of shortage as established by our criteria, while those specialties identified as “severe” are experiencing a high degree of shortage