

RHODE ISLAND HOSPITAL VOLUME TRENDS

Coordinated
Health Planning
Council

July 19, 2012

AGENDA

(1) Demand: Inpatient & Outpatient

(2) Supply: Inpatient & Outpatient

(3) Impact of Supply and Demand Trends

Data Sources

This presentation uses information from several data sources to test the strength and direction of regional, statewide, and service area trends.

Kaiser State Health Facts via the America Hospital Association

Regional data for patient days, admissions, lengths of stay, ER visits, and outpatient visits

Booz & Company Analysis via Lifespan Hospital Corporation, BCBSRI

Select Rhode Island statewide data 2000-2010, analysis of future trends

Hospital Discharge Database

Service line and statewide data 2007-2011

Hospital Association of Rhode Island

Staffing, occupancy, and bed data

Rhode Island's hospital care **supply** may be greater than its current and future hospital care **needs**.

Rhode Island's population **is falling**

Hospital inpatient volume **is falling**

Hospital IP volume per person **is falling**

Hospital occupancy **is falling**

Hospital beds per person **are rising**

Staffing ratios are **above the US average**

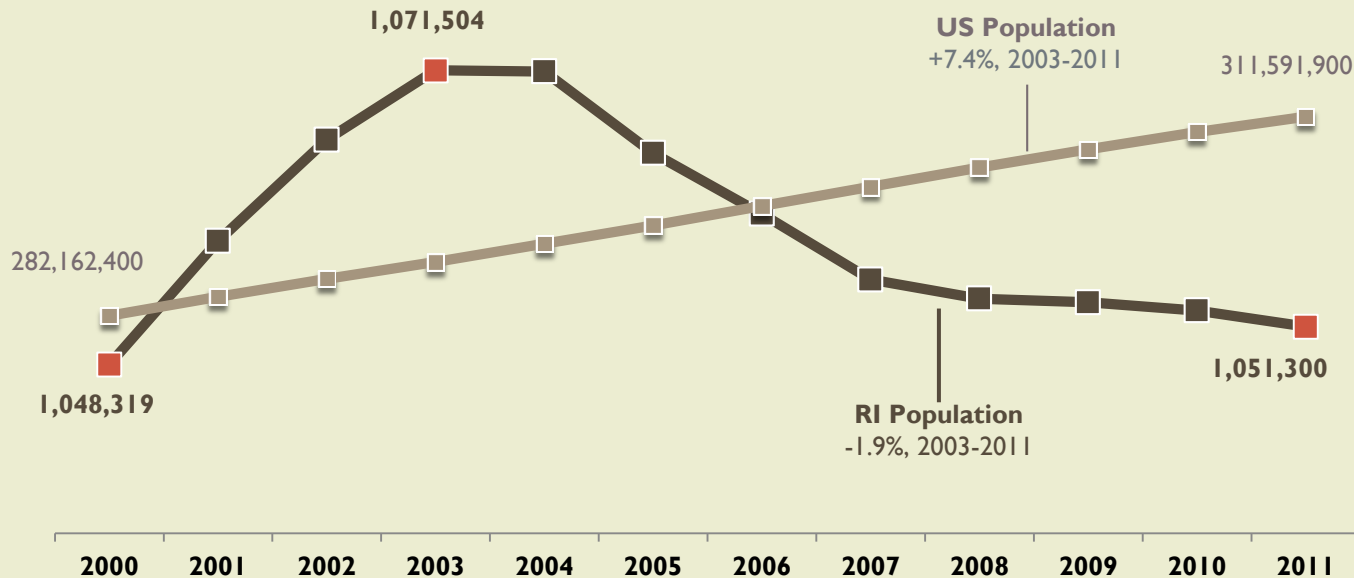
Hospital outpatient volume **is rising**

Hospital OP volume per person **is rising**

Number of freestanding OP sites **is rising**

Rhode Island's population is declining from its 2003 peak

Rhode Island and United States Population | 2000-2011



Data Sources: 2000 and 2010: US Census Actuals by State; Annual Estimate of the Resident Population by Selected Age Groups and Counties in RI April 1, 2000 to July 1, 2011. Release date: May, 2012 | Slide prepared by Booz & Company and provided by Lifespan Hospital Corporation and Blue Cross Blue Shield of Rhode Island

Rhode Island's population increased **less than one third of one percent**, or by 2,981 people, between 2000 and 2011

In contrast, total US population **increased by 10.5%** during the same time.

This lack of growth affects future healthcare demand and infrastructure needs.

VOLUME (DEMAND)

HOSPITAL INPATIENT & OUTPATIENT

Regional,
Statewide,
and
Service Line
Analyses

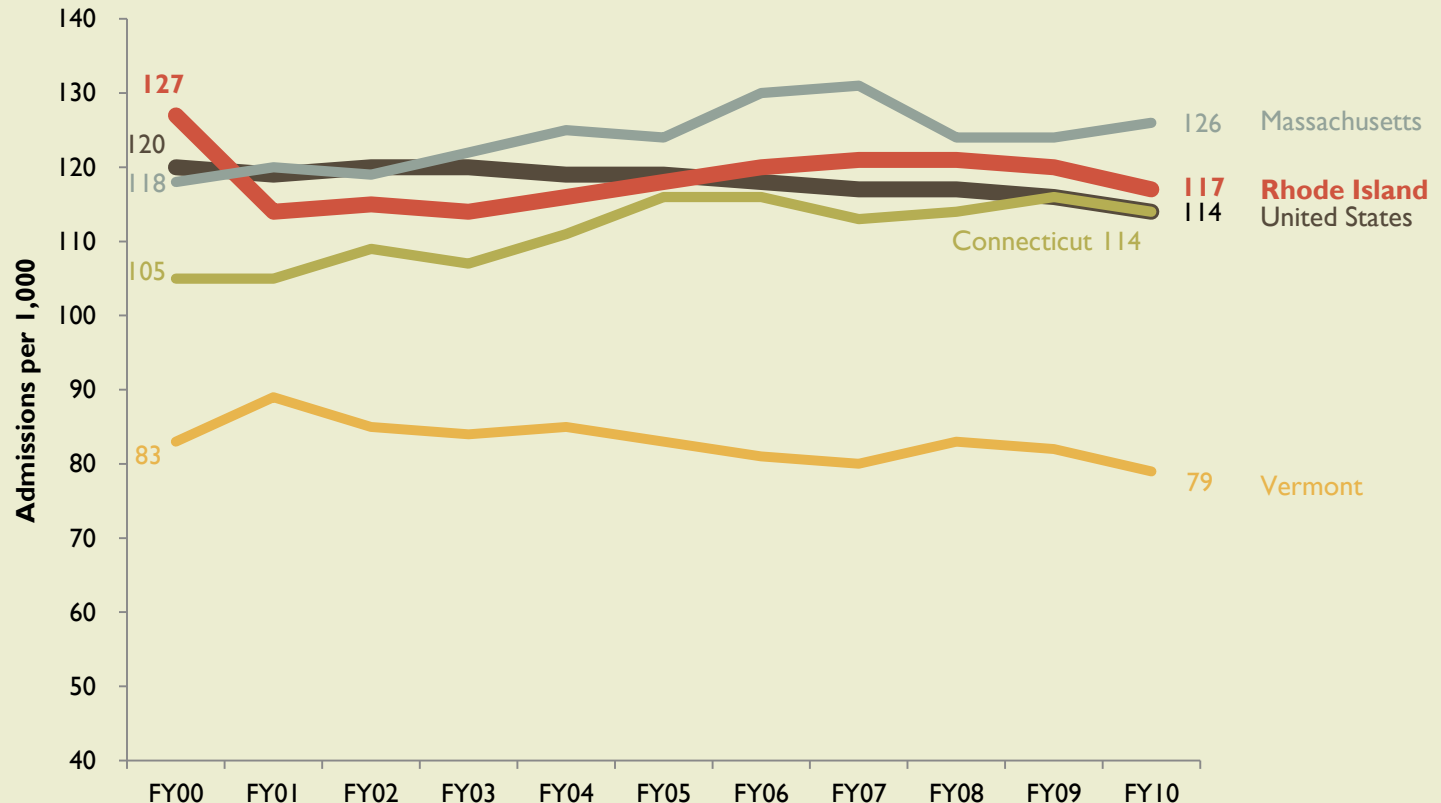
Rhode Island inpatient admissions per resident are both declining and higher than benchmarks

PERCENT CHANGE, FY00-FY11

Admissions

US:	-5.0%
RI:	-7.9%
MA:	+6.8%
CT:	+8.6%
VT:	-4.8%

Admissions per 1,000 People FY00 through FY10



Source: Kaiser State Health Facts via the American Hospital Association Annual Survey

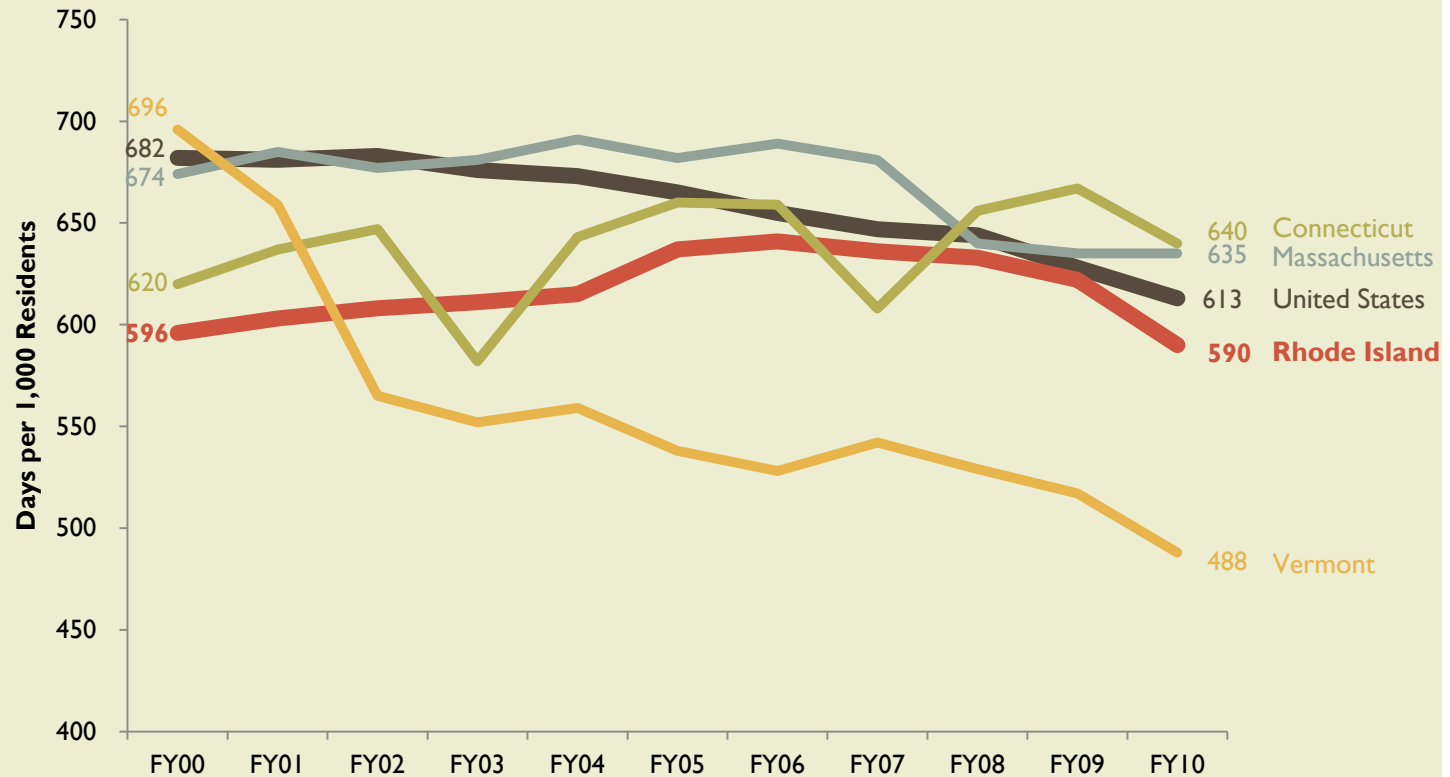
Rhode Island inpatient days per resident are both declining and higher than benchmarks

PERCENT CHANGE, FY00-FY11

Patient Days

US:	-10.1%
RI:	-1.0%
MA:	-5.8%
CT:	+3.2%
VT:	-29.9%

Days per 1,000 People | FY00 through FY10

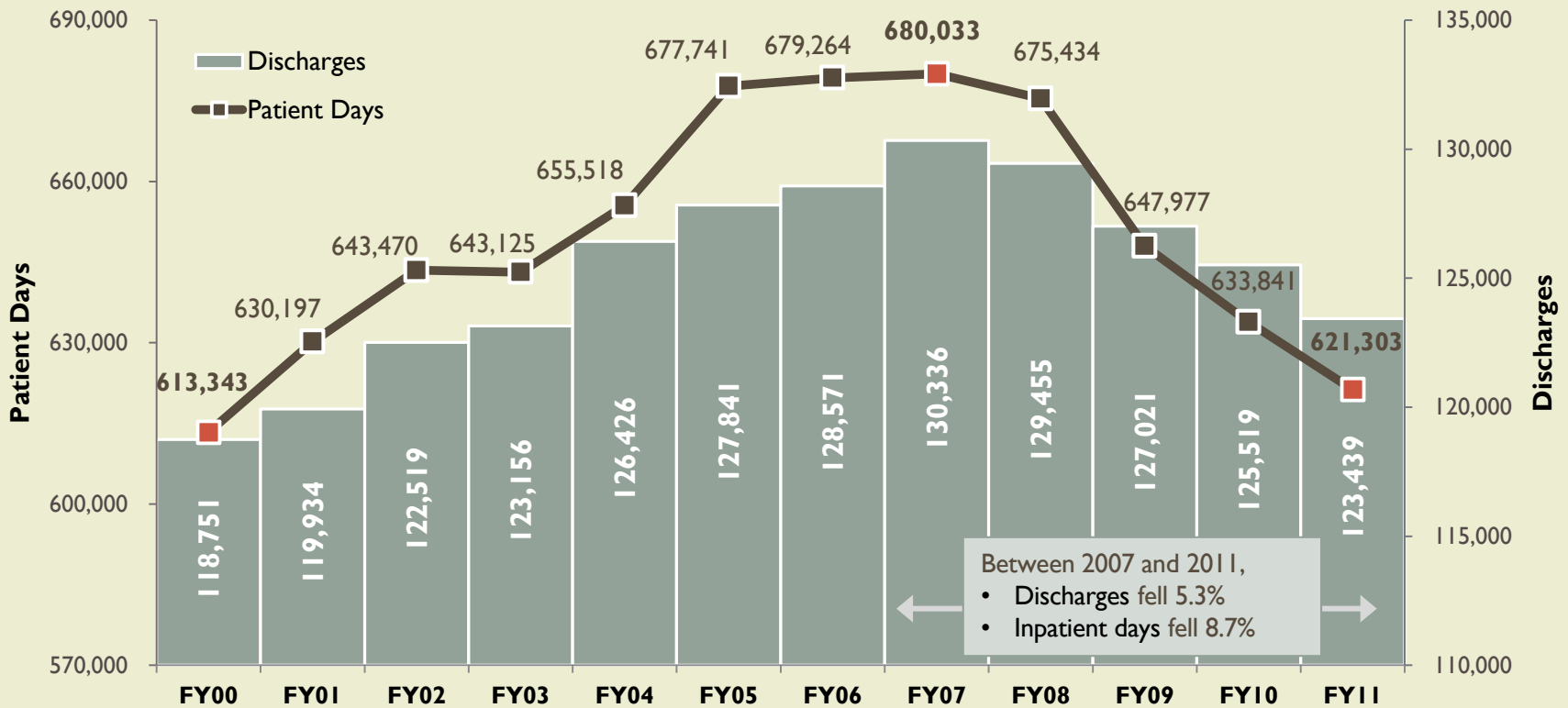


Source: Kaiser State Health Facts via the American Hospital Association Annual Survey

Statewide inpatient volume is falling

Total inpatient days and discharges peaked in 2007

**Total Patient Days and Discharges, All Rhode Island Hospitals
FY00 through FY11**



Data Sources: 2000-2011 Hospital Discharge Database, Rhode Island Department of Health
Slide elements prepared by Booz & Company for Lifespan Hospital Corporation and Blue Cross Blue Shield of Rhode Island

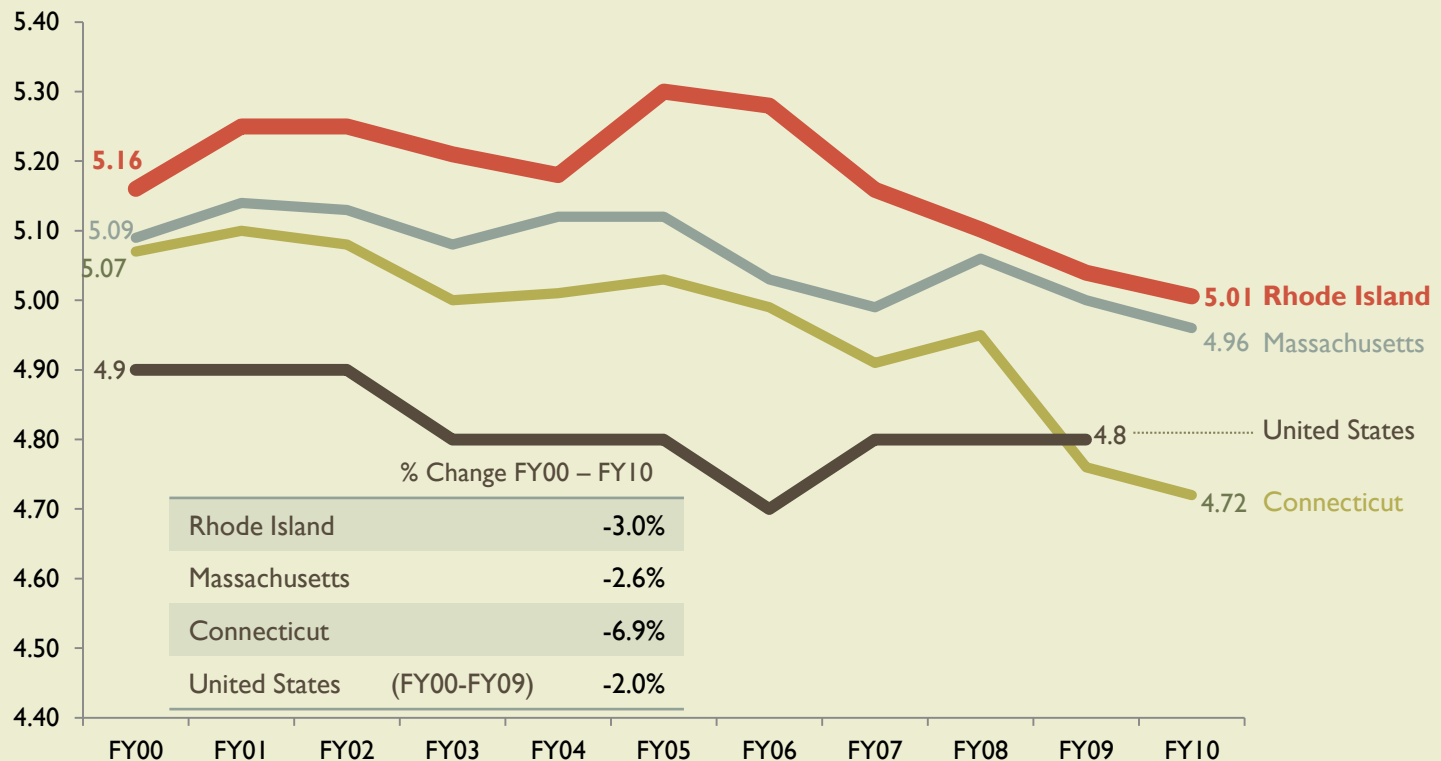
Average Length of Stay (ALOS) is Falling Across the Region

The average length of stay (ALOS) declined in all three states shown at the left. ALOS may fall for several reasons, including rising hospitals efficiency and reduced patients acuity.

Shorter hospital stays may reduce occupancy and lower total hospital demand.

Rhode Island's ALOS, however, is the highest of the three states and declined slower than Connecticut over the ten year period. Based on regional trends, further declines in are expected. 7/19/2012

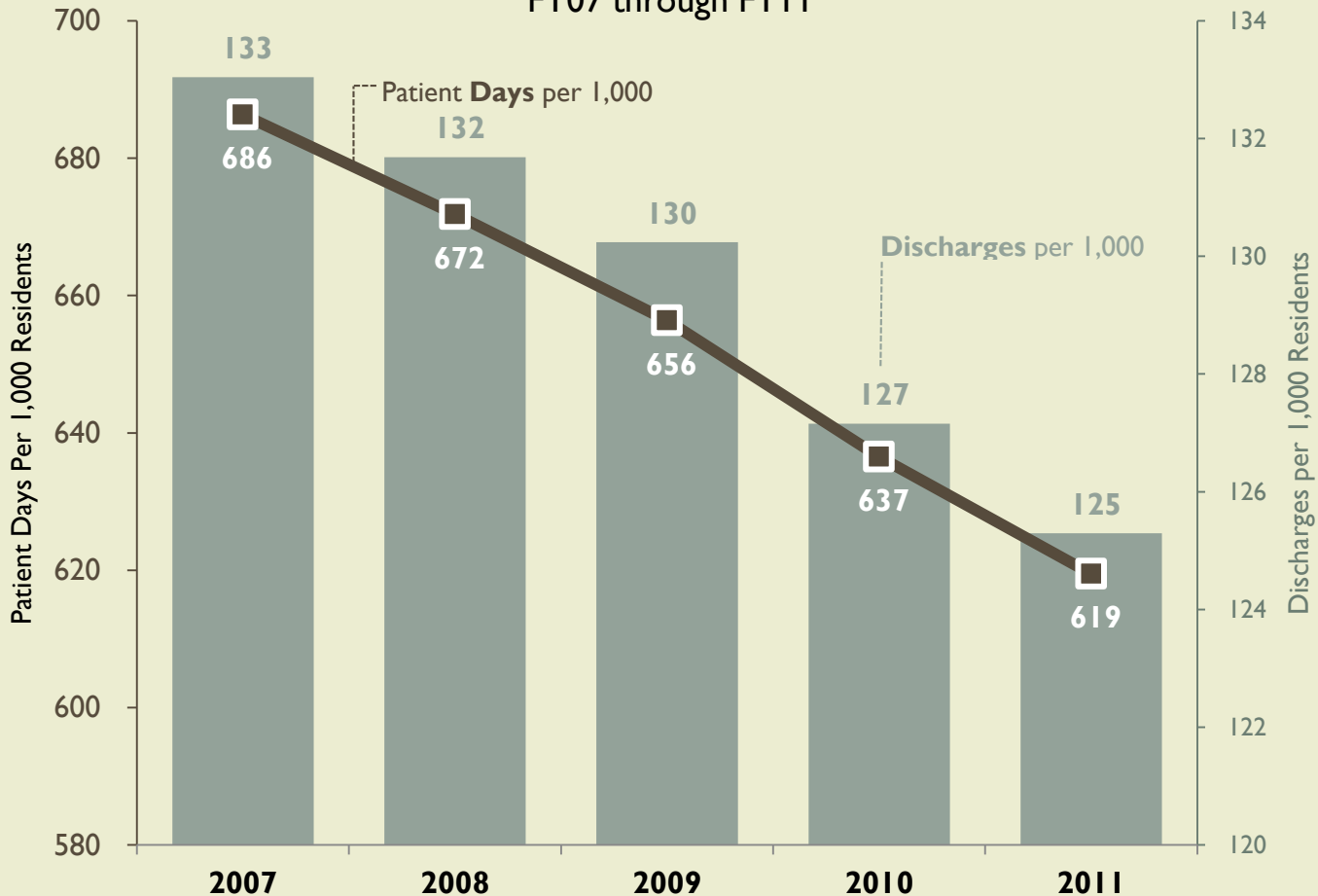
Average Length of Stay
FY00 through FY10



Data excludes Psychiatric, Rehabilitation, and Veteran's hospitals as well as normal newborns
Data Sources: Market Data from Thompson Reuters (MA, CT, RI 2000-2006), Rhode Island Hospital Discharge Database (2007-2010); Kaiser State Health Facts (US)
Slide elements prepared by Booz & Company for Lifespan Hospital Corporation and Blue Cross Blue Shield of Rhode Island

Inpatient Volume per Resident is Falling Faster than Total Volume

**Patient Days and Discharges Per 1,000 Rhode Island Residents
FY07 through FY11**



Data Sources: 2007-2011 Hospital Discharge Database, Rhode Island Department of Health

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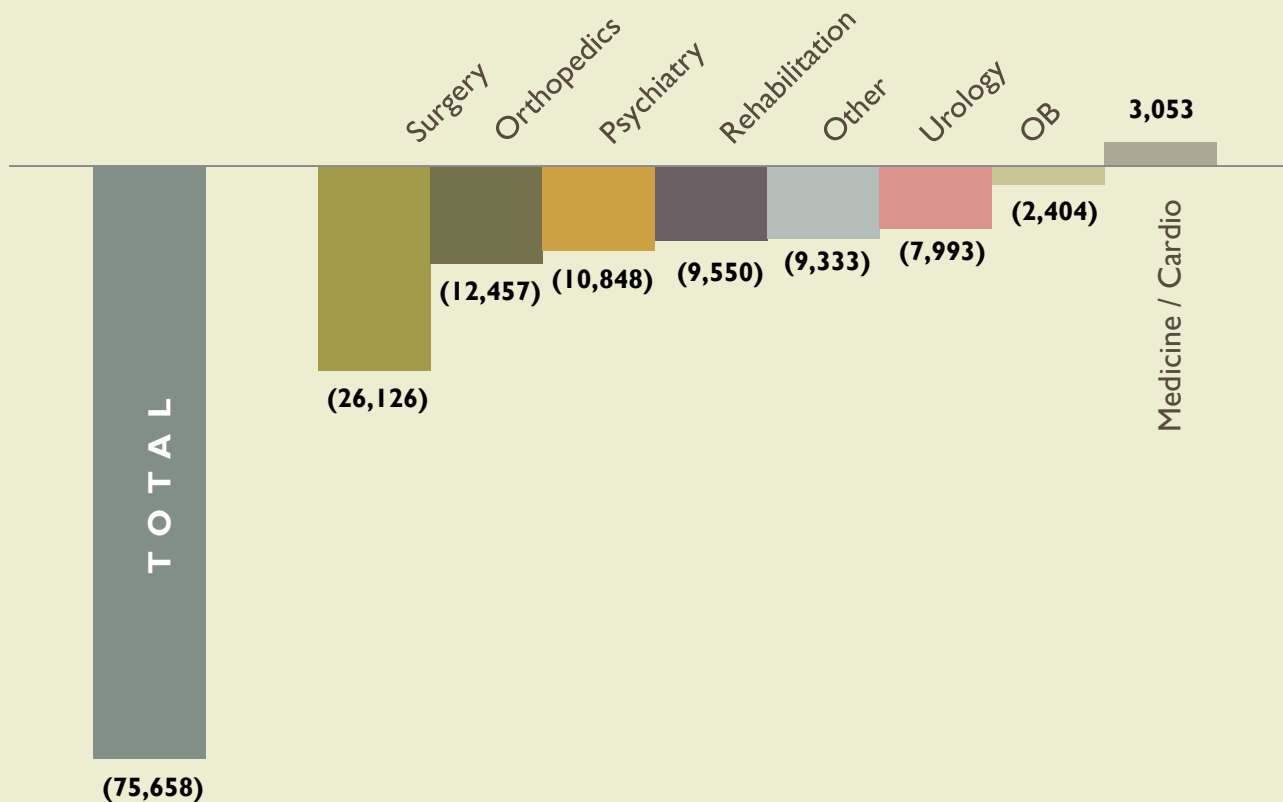
**PERCENT
CHANGE,
FY07-FY11**

Patient Days:
Gross: -8.7%
Per 1,000: -9.7%

Discharges:
Gross: -5.3%
Per 1,000: -5.8%

In 2011, RI hospitals saw 75,658 fewer patient days than in 2007

Change in Patient Days by Service Area FY07-FY11



Data Sources: 2007-2011 Hospital Discharge Database, Rhode Island Department of Health

Note: Due to differences in coding practices, several services areas were included in the 2007 data set only. The largest of these was "cardiology" at 26,599 days. Because cardiology cases were likely classified as "Medicine" in later years, this analysis groups the categories together.

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CHANGE IN PATIENT DAYS, FY07-FY11

Total Change

Surgery	-26k
Orthopedics	-12k
Psychiatry	-11k
Med/Cardio	+3k

Percent Change

Rehab	-56%
Urology	-48%
Orthopedics	-25%
Med/Cardio	+13%

"Other" includes: Abortion, ENT, Gynecology, Newborn, OB not delivered, Ophthalmology, Oral Surgery, and Pediatrics 12

Hospital outpatient volume per person is rising

PERCENT
CHANGE,
FY07-FY11

Outpatient
Visits

US: +14.0%

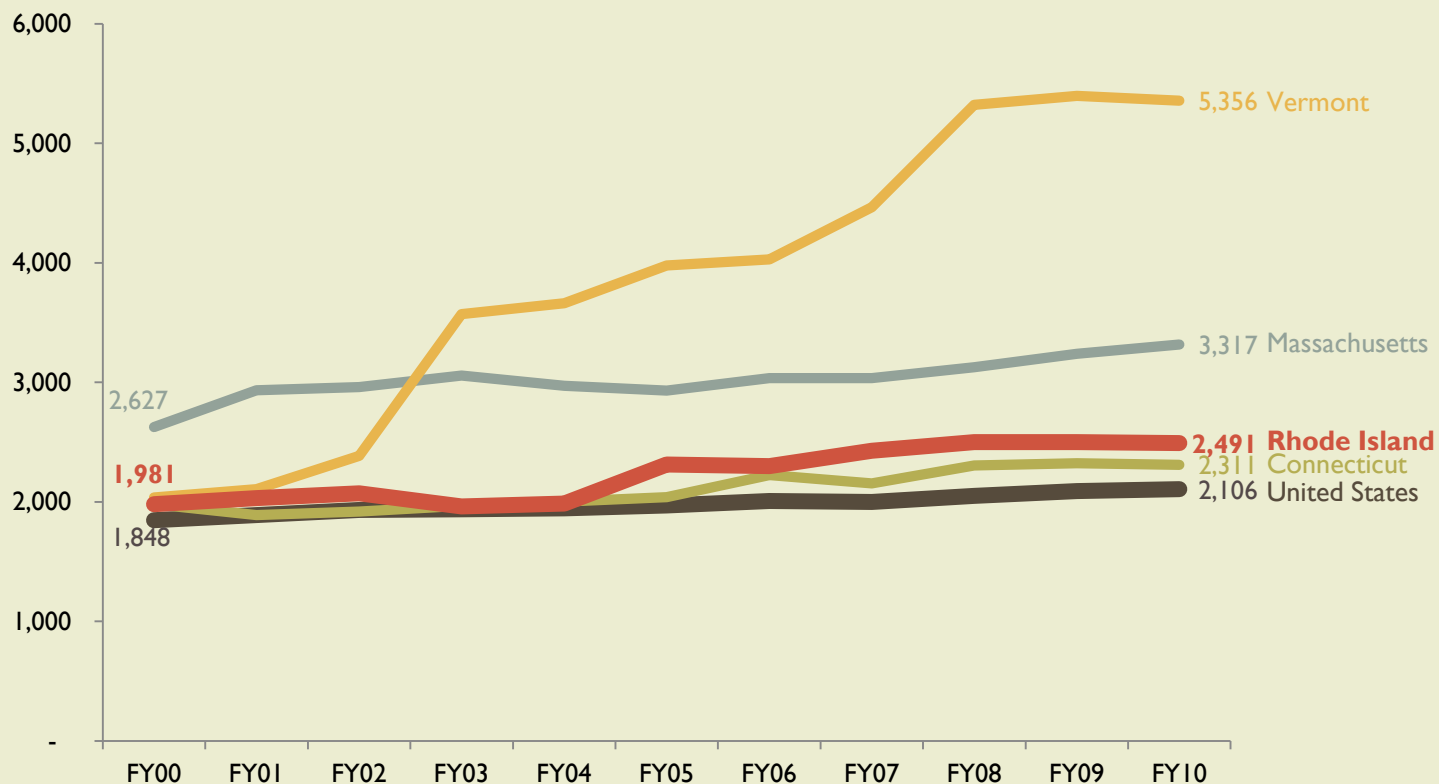
RI: +25.7%

MA: +26.3%

CT: +16.7%

VT: +162.8%

OP Visits per 1,000 People | FY00 through FY10



Source: Kaiser State Health Facts via the American Hospital Association

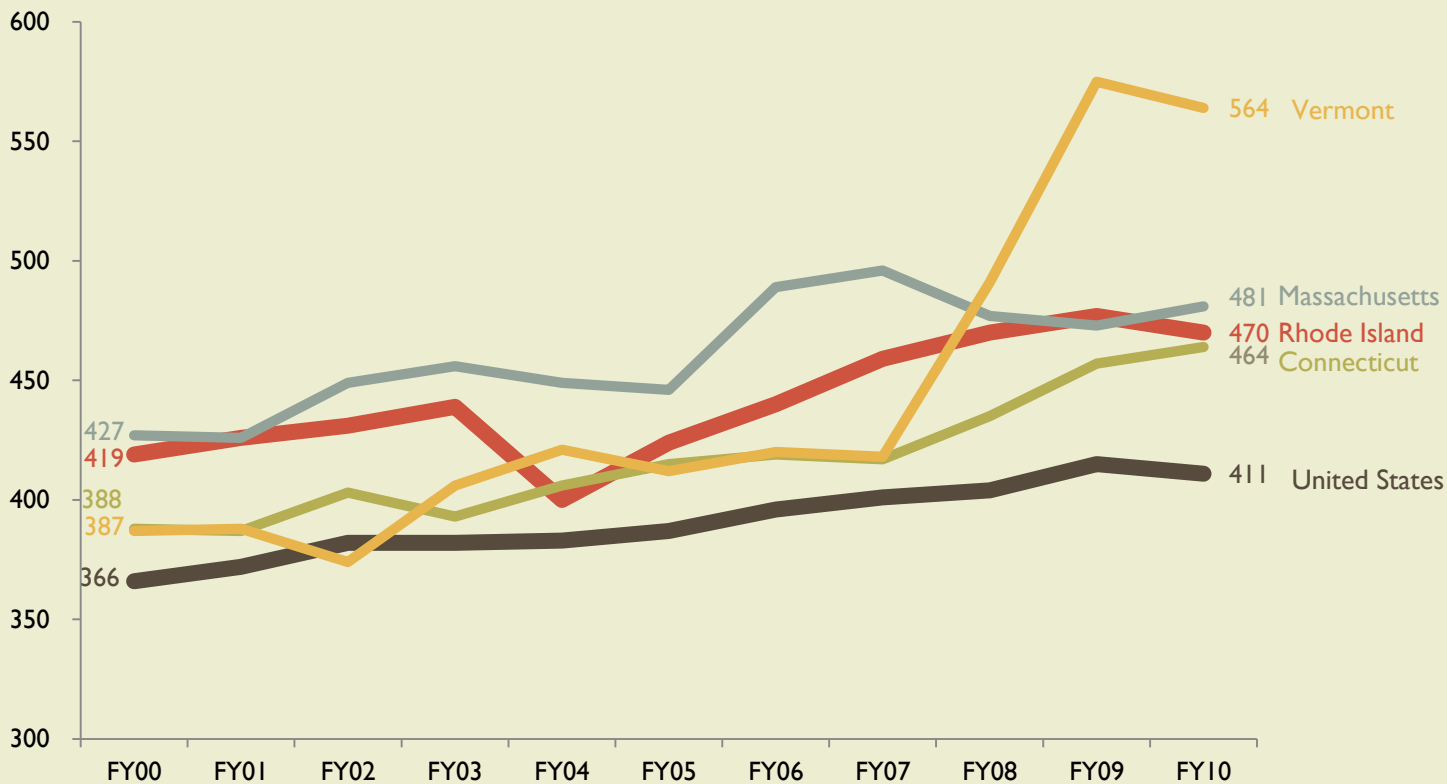
Hospital outpatient volume per person is rising

PERCENT
CHANGE,
FY07-FY11

ER Visits

US: +12.3%
 RI: +12.2%
 MA: 12.6%
 CT: +19.6%
 VT: +45.7%

ER Visits per 1,000 People | FY00 through FY10



Source: Kaiser State Health Facts via the American Hospital Association

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SUPPLY

INPATIENT & OUTPATIENT

Regional,
Statewide,
and
Service Line
Analyses

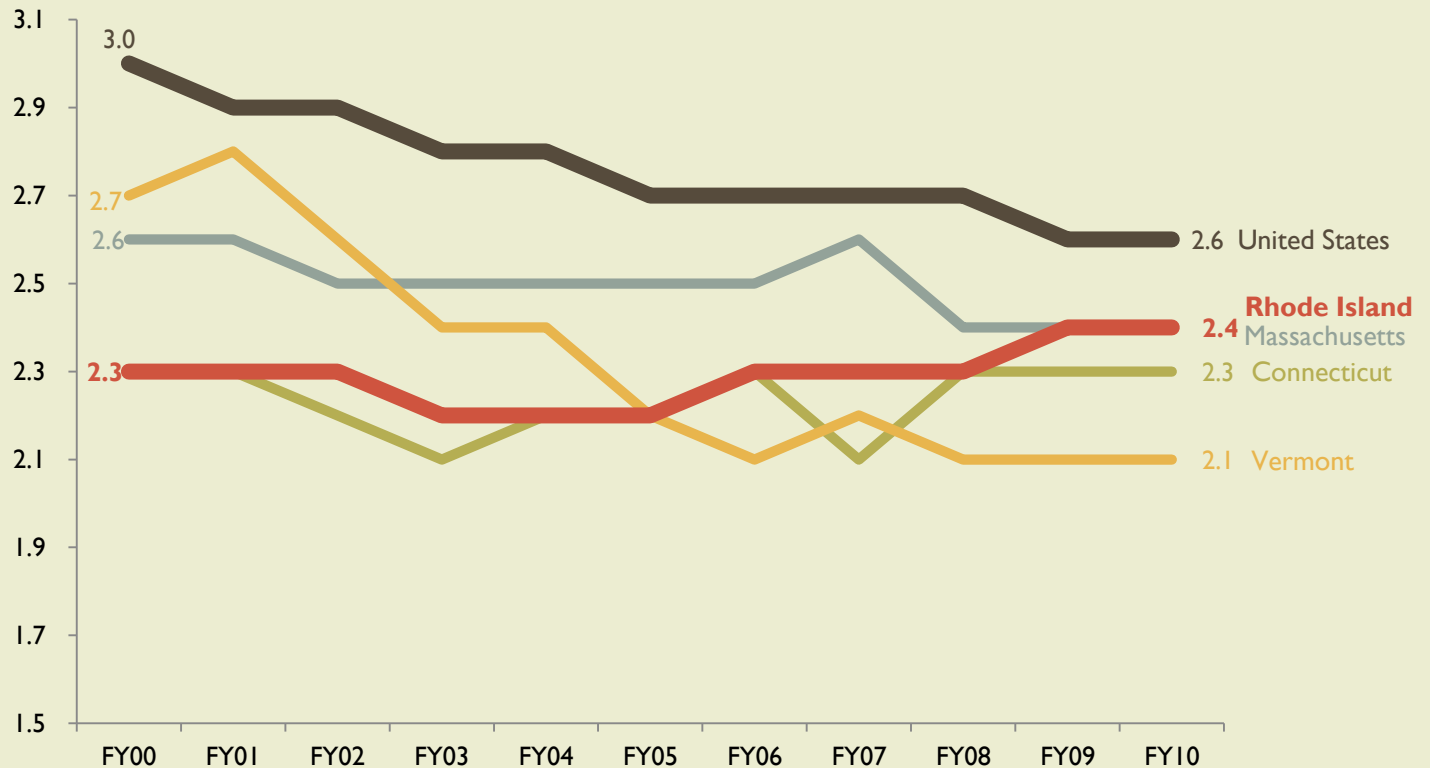
While inpatient demand per resident decreased, staffed beds per 1,000 increased

PERCENT
CHANGE,
FY00-FY11

Staffed Beds
per 1,000

US: -13.3%
RI: +4.3%
MA: -7.7%
CT: -0.0%
VT: -22.2%

Staffed Beds per 1,000 People
FY00 through FY10



Source: Kaiser State Health Facts via the American Hospital Association

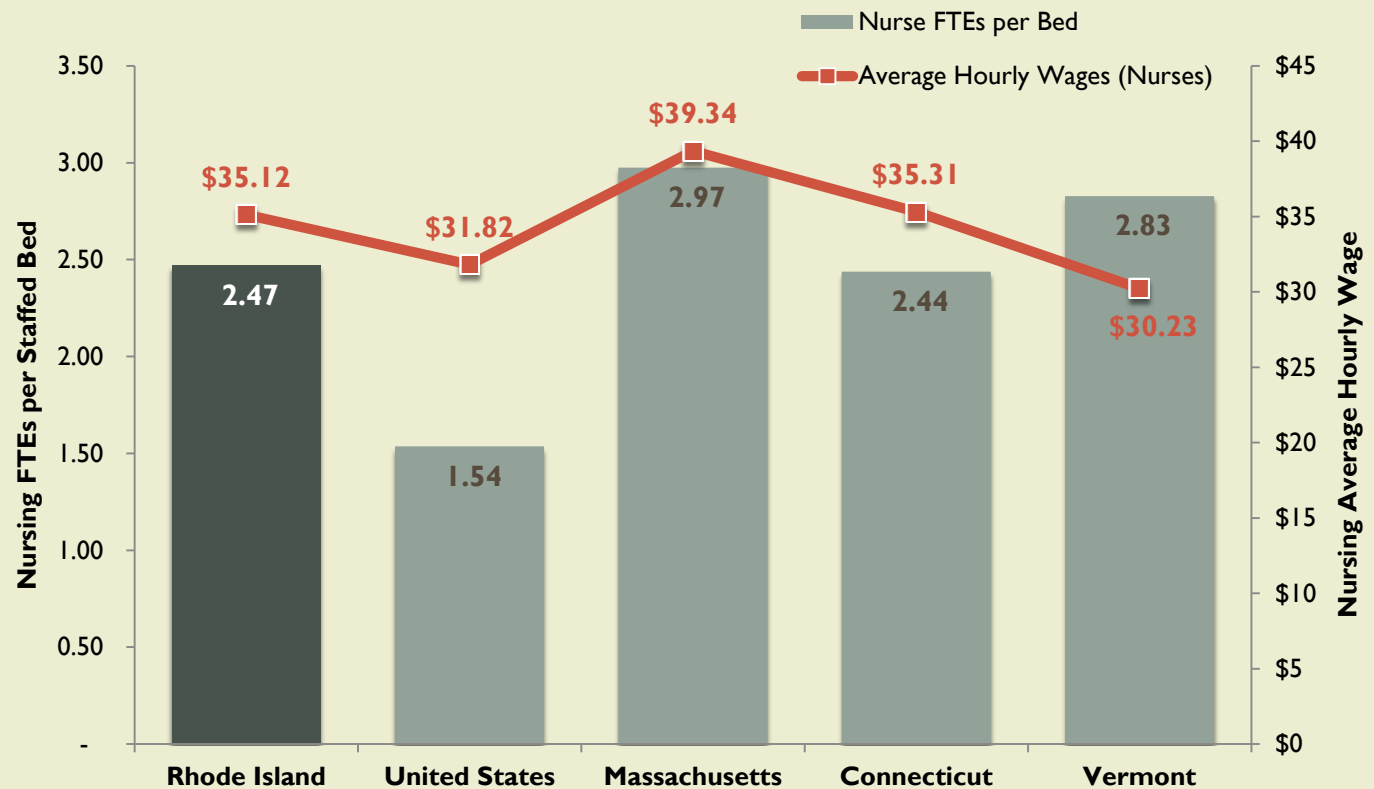
RI, New England have higher staffing ratios than the national average

Rhode Island's ratio of nursing full time equivalents (FTEs) to beds, across all hospitals, is higher than the national rate and lower than other regional states

The average hourly wage for nurses in Rhode Island is \$35.12, higher than the national rate and about equal to the regional average.

Expanding the analysis to all staff yields a similar pattern: RI is in the middle of the region, and all of New England is well above the national rate.

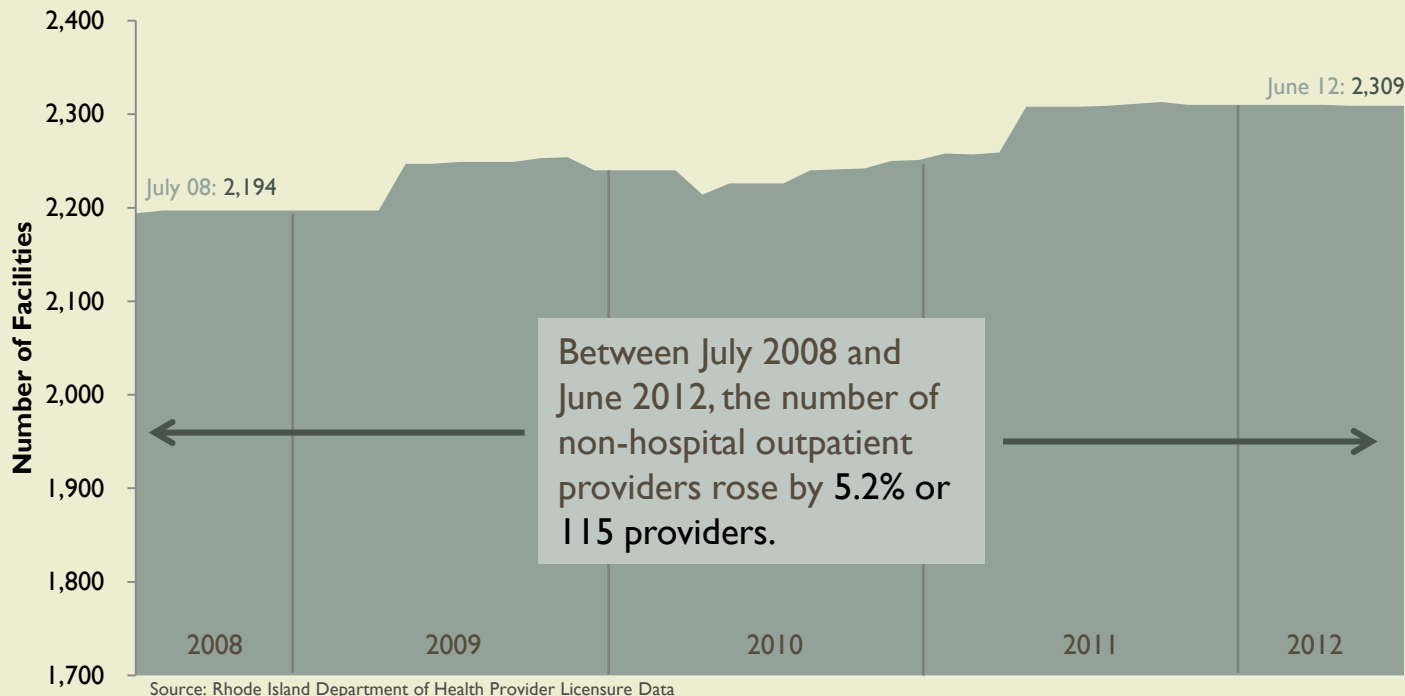
Nursing FTE per Staffed Bed and Nursing Average Hourly Wages, FY10



Source: Hospital Association of Rhode Island via Medicare Occupational Mix dataset, FY10

The number of non-hospital outpatient sites is rising along with hospital outpatient volume

Number of Licensed Non-Hospital Outpatient Providers in Rhode Island
Monthly, July 2008 - June 2012



Along with the shift from inpatient sites of care to outpatient sites of care, the number of *non-hospital* outpatient sites of care have also grown.

Non-hospital outpatient centers perform similar services to hospital outpatient units but at a lower cost since these freestanding centers do not have the overhead of a full-service acute hospital.

Non-hospital outpatient providers include organized ambulatory care, ambulatory surgical centers, freestanding emergency care centers, kidney disease treatment centers, federally qualified health centers, clinical labs, drawing stations, and radiation health facilities

DEMAND & SUPPLY IMPACT OF TRENDS

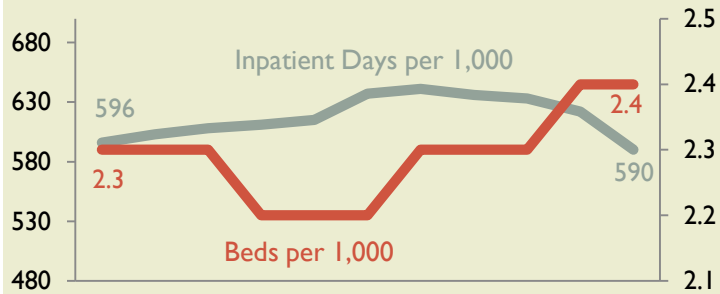
Occupancy

Regional
Analysis

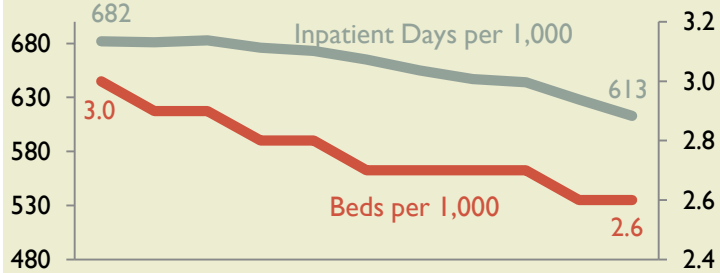
Future Impact

Unlike other states and the nation, Rhode Island's inpatient demand per person is falling while staffed beds per person is rising | **FY00-FY10**

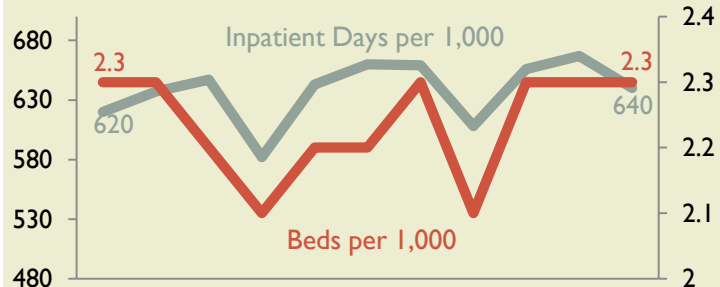
Rhode Island



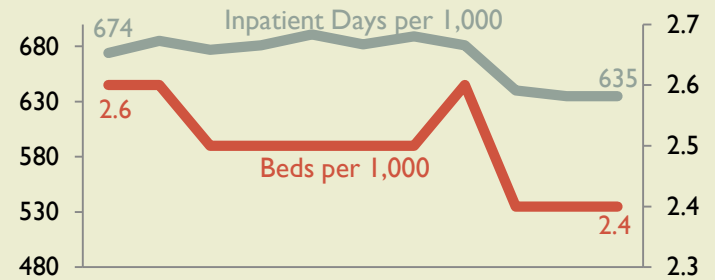
United States



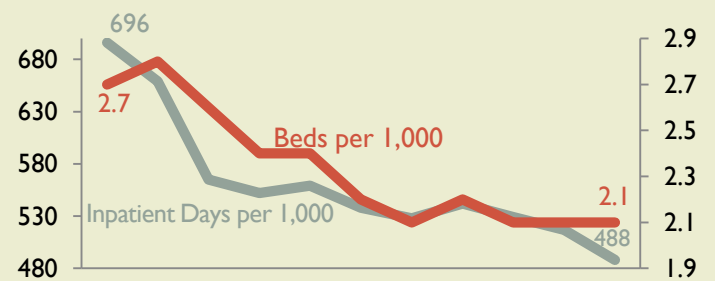
Connecticut



Massachusetts



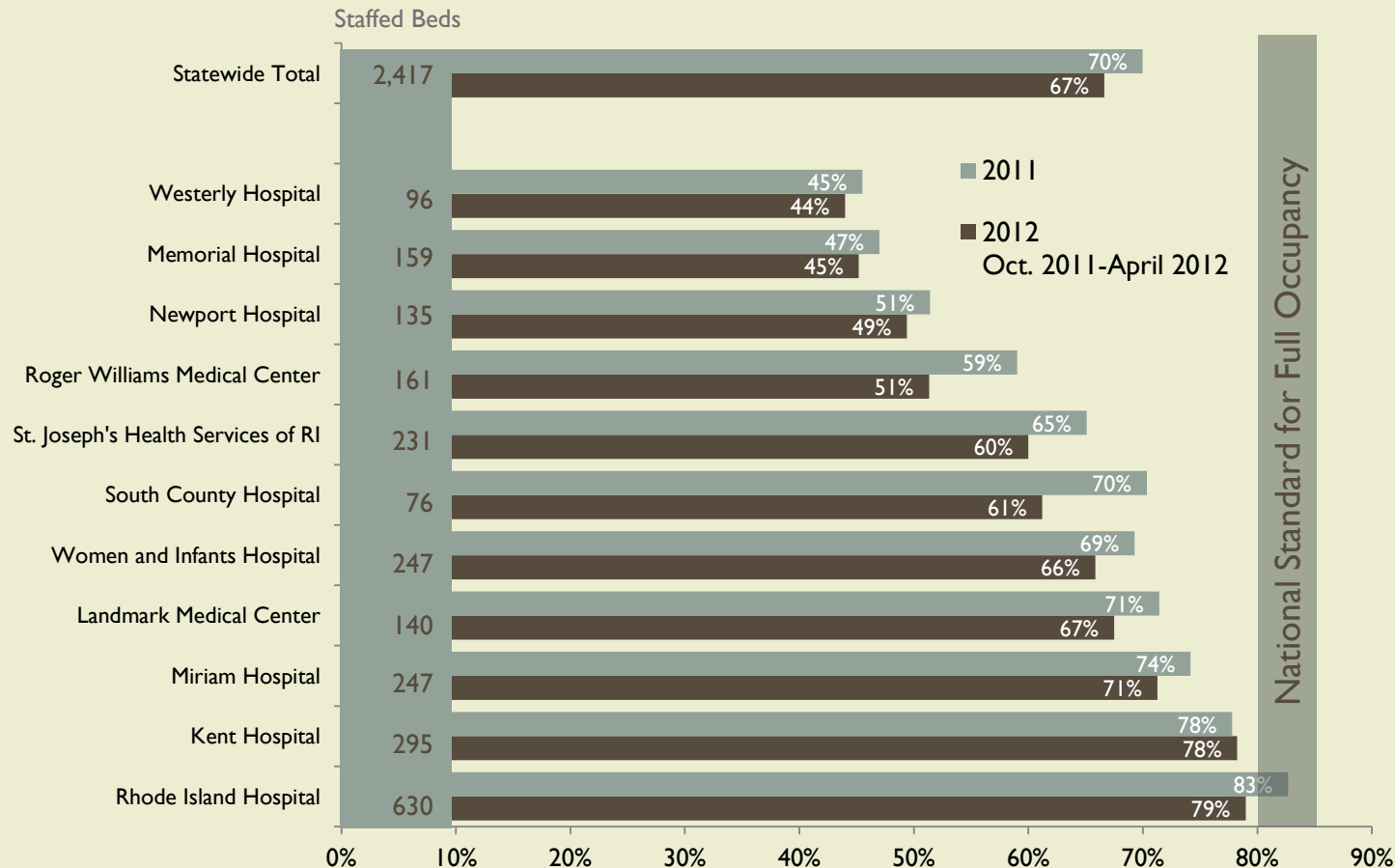
Vermont



% Change FY00 – FY10	Patient Days per 1,000	Beds per 1,000
Rhode Island	-1.0%	4.3%
United States	-10.1%	-13.3%
Massachusetts	-5.8%	-7.7%
Connecticut	3.2%	0.0%
Vermont	-29.9%	-22.2%

Statewide Occupancy Rate (67%, FY 12) is Falling, Below National Standard for Full Occupancy (83%)

Occupancy Rates, FY11 and FY12
Average Daily Census / Average Staffed Beds



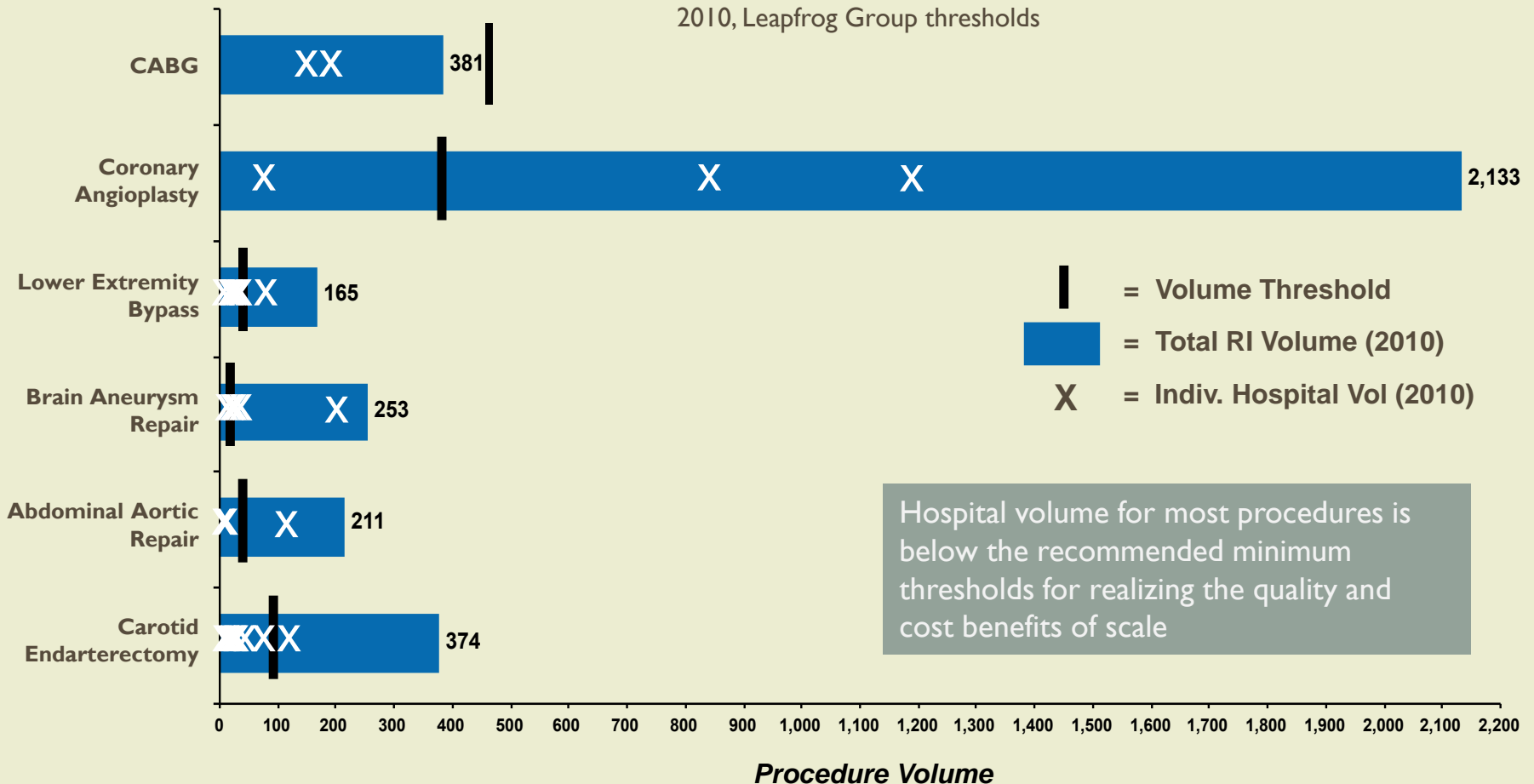
In FY12, the statewide occupancy rate was 67%, down from 70% in FY11. Only one of Rhode Island's hospitals met or exceeded the industry standard for a "full occupancy" hospital (80% and 85%*.)

The occupancy rate is the ratio of the average daily census to total staffed beds. Hospitals with lower occupancy rates may have lower net income as they must cover the overhead costs of a staffed bed without receiving patient reimbursement.

Low volume compromises hospitals' ability to achieve **minimum essential scale** for key procedures

Actual Procedure Volume vs. Volume Thresholds

2010, Leapfrog Group thresholds



Rhode Island's inpatient volume is declining and shifting to outpatient, and IP hospital supply exceeds current demand. However, other factors may increase demand in the future.

What is the net effect of the up and down forces on inpatient utilization in the future?

Despite some upward pressure, Booz & Company estimates that by 2015, RI utilization could fall by another 6% to 13% beyond existing declines

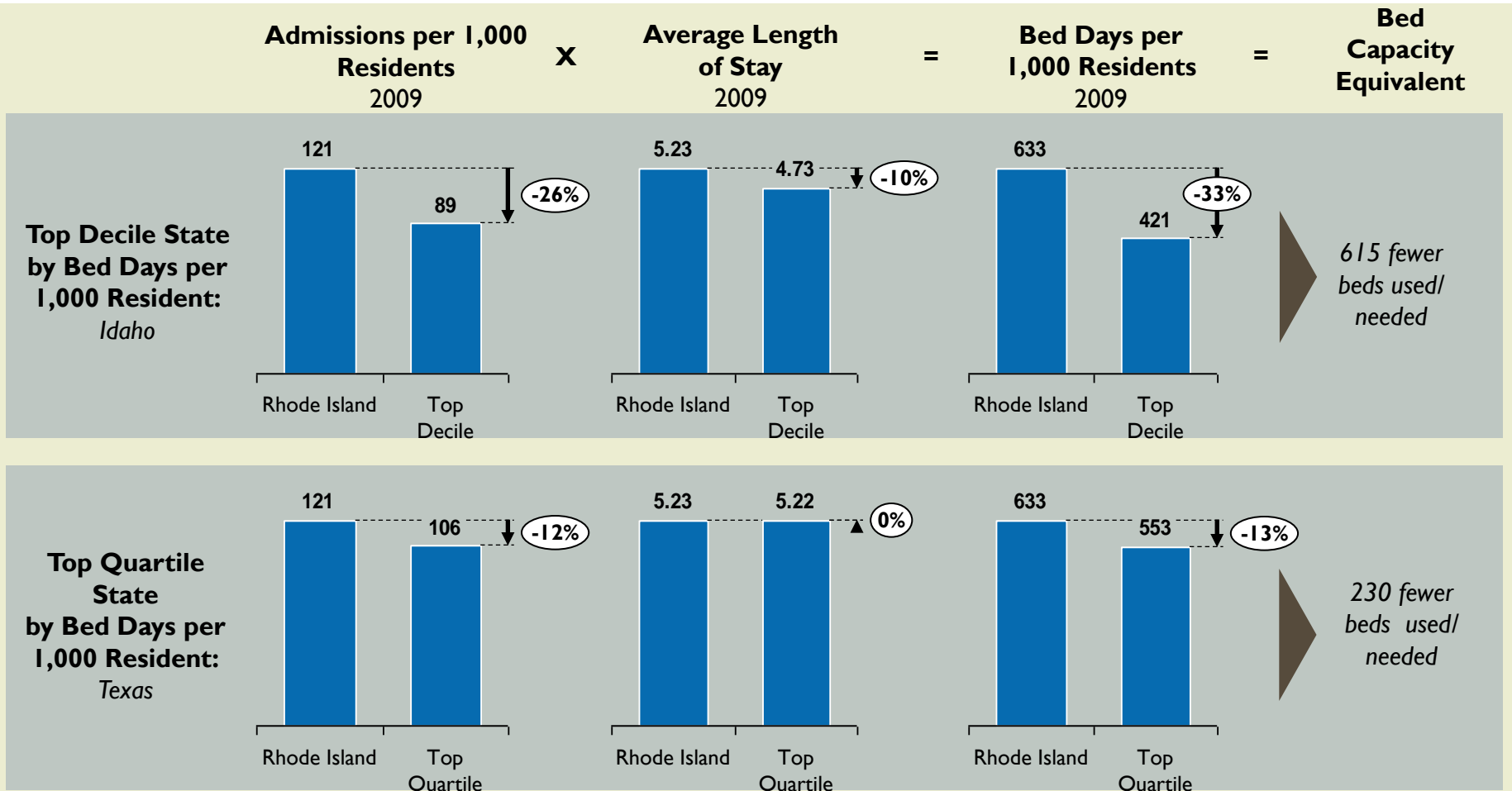
Upward Pressure		Downward Pressure		Net Impact	
Factor	Impact on Utilization	Factor	Impact on Utilization	Measure	Impact on Utilization
Population Growth + Aging	0.3% Increase	Shifts to Outpatient	2% - 4% Decrease	Bed days	38 - 82 thousand day decrease
Access via Health Care Reform	0.7% - 0.8% Increase	Decreasing Readmissions	2% - 3% Decrease	\$ Savings	\$85-\$170 million
Worsening Health	1.1% - 2.2% Increase	Decreasing ALOS	4% - 10% Decrease	Beds	105-120 fewer beds
Increased Imports	0.05%- 0.11% Increase				
Avoided Exports	0.02% - 0.05% Increase				
Net Impact	2 - 3% Increase		8% - 17% Decrease		6 - 13% Decrease

Source: DOH, AHD, RI Hospital Discharge Data, US Census, Statewide Planning Program - RI Department of Administration, Health Director, Booz & Company analysis; Slide elements prepared by Booz & Company for Lifespan Hospital Corporation and Blue Cross Blue Shield of Rhode Island

Even though Rhode Island inpatient demand (volume) is decreasing, lengths of stay and admission rates are still above the national average.

What happens if RI performed the same as high-performing states?

Achieving utilization rates similar to top performing states would result in a 13-33% reduction and less bed capacity needed in RI



Source: American Hospital Association 2009, Kaiser State Health Facts, Booz & Company analysis
 Slide prepared by Booz & Company for Lifespan Hospital Corporation and Blue Cross Blue Shield of Rhode Island

What do the data say?

Demand in Rhode Island:

- Inpatient hospital demand is decreasing at a faster rate than other New England states from a higher starting point
- Decreasing admissions drives falling demand
- Hospital outpatient volume is rising in step with the national average

Supply in Rhode Island:

- Staffed beds per person are increasing while declining or holding steady in other states
- There are more staff per bed in RI than there are nationally

What do the data say?

Impact of Supply and Demand Trends:

- Hospitals have low occupancy rates with great variation
- Supply per person is rising while demand is decreasing, unlike in other states and the nation
- Low volume for certain procedures compromises high quality outcomes
- Some models indicate that excess capacity will only grow in coming years

Conclusion

The problem:

Rhode Island inpatient hospital supply exceeds current and future inpatient hospital demand

The Challenge:

→ Given our excess capacity, what is our ideal hospital landscape?

→ How can we best organize our primary care infrastructure to support realigning capacity to need?