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# Vermont Blueprint Evaluation

A Four-Year Overview Based on Two-Year Cohorts with  
Matched Controls (VHCURES Population, Age 18-64)

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# Vermont Blueprint Evaluation

## Agenda

- Summary
- Data Sources & Methods
- Trend Highlights – Expenditures
- Trend Highlights – Chronic Conditions Expenditures
- Trend Highlights – Utilization

# Summary

(1 of 3)

- Onpoint attributed patients to Blueprint practices using E&M visit coding and a 24-month look-back
- A 2-year cohort methodology was used to compare Burlington and St. Johnsbury pilot participants to matched controls:
  - 2007–2008 (Baseline)
  - 2008–2009 (Start-up)
  - 2009–2010 (Operations)
- Members, ages 18–64, covered by commercial payers (i.e., BCBS Vermont, CIGNA, MVP, The Vermont Health Plan) were used to report selected measures

# Summary

(2 of 3)

- Preliminary trends suggest that Blueprint is having a positive impact on overall expenditure growth when compared to controls
- Results suggest that the growth curve is slowing or “bending” for a number of important expenditure and utilization measures
- When Blueprint operations were most mature in the pilot communities (2009–2010), the degree of improvement among participants tended to be greater than among controls for most measures

# Summary

(3 of 3)

- Noted differences between participant and control populations were not likely to be statistically significant due to small sample size and variability
- Detection of impact of specific intervention in small population may be difficult when overarching statewide changes are influencing trends
- Since the commercial population typically is healthier than the Medicaid and Medicare populations, the ability to detect differences, if present, will be enhanced with the inclusion of Medicare and Medicaid data



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# Vermont Blueprint Evaluation

Data Sources & Methods

Trend Highlights – Expenditures

Trend Highlights – Chronic Conditions Expenditures

Trend Highlights – Utilization

# Data Sources & Methods

## Overview

- **Data source** — VHCURES, commercial, ages 18–64
- **Study design** — Matched control based on geographic area, age, gender, health status, baseline expenditures, and occurrence of a chronic disease
- **Statewide comparison population** — Ages 18–64 covered by BCBS of Vermont, CIGNA, MVP, The Vermont Health Plan
- **Selected Measures** — Total expenditures, inpatient expenditures and utilization, outpatient expenditures, outpatient ED use, expenditures for members with at least one selected chronic condition

# Data Sources & Methods

## Study Population

HSA / PRACTICE	START-UP DATE
<b>St. Johnsbury</b>	
Corner Medical	July 1, 2008
Danville Health Center	July 1, 2008
St. Johnsbury Family Health Center	July 1, 2008
Caledonia Internal Medicine	July 1, 2008
Concord Health Center	July 1, 2008
<b>Burlington</b>	
Aesculapius Medical Center	October 1, 2008
Dr. Eugene Moore	October 1, 2008

# Data Sources & Methods

## Count of Members Attributed to Blueprint by 2-Year Cohort

POPULATION	2007–2008 (Baseline)	2008–2009 (Start-up)	2009–2010 (Operations)
<b>Burlington</b>			
Total	4,409	4,453	4,418
At least 1 chronic condition*	1,258	1,466	1,403
<b>St. Johnsbury</b>			
Total	3,033	3,226	3,653
At least 1 chronic condition*	1,141	1,346	1,513
<b>Combined</b>			
Total	7,442	7,679	8,071
At least 1 chronic condition*	2,399	2,812	2,916

\* Includes Blueprint-targeted conditions: asthma, COPD, congestive heart failure, coronary heart disease, diabetes, depression, and hypertension

# Data Sources & Methods

## 2-Year Cohort Control Matching Results at Baseline (2007)

POPULATION	PARTICIPANTS	POTENTIAL CONTROLS	MATCHED CONTROLS
<b>Burlington — Total</b>	<b>4,409</b>	<b>32,076</b>	<b>4,409</b>
Older adults (ages 50–64 years)	45%	37%	45%
Male	46%	46%	46%
At least 1 chronic condition	29%	26%	29%
Not healthy (CRGs)	50%	47%	50%
Expenditures >\$10,000	10%	8%	10%
<b>St. Johnsbury — Total</b>	<b>3,033</b>	<b>6,016</b>	<b>3,033</b>
Older adults (ages 50–64 years)	48%	43%	49%
Male	42%	45%	42%
At least 1 chronic condition	38%	34%	38%
Not healthy (CRGs)	57%	48%	55%
Expenditures >\$10,000	11%	10%	10%



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**Trend Highlights – Expenditures**

Trend Highlights – Chronic Conditions Expenditures

Trend Highlights – Utilization

# Expenditure Trends

## Per Capita Overview (1 of 2)

- **Total annual expenditures**
  - Blueprint participants: ↑22% (from \$4,458 to \$5,444)
  - Controls: ↑25% (from \$4,136 to \$5,186)
  - Statewide average: ↑22% (from \$3,582 to \$4,387)
- **Inpatient expenditures**
  - Blueprint participants: ↑41% (from \$500 to \$707)
  - Controls: ↑50% (from \$470 to \$702)
  - Statewide average: ↑40% (from \$496 to \$696)

# Expenditure Trends

## Per Capita Overview (2 of 2)

- **Outpatient hospital expenditures** (largest component of cost for both participants and controls)
  - Blueprint participants: ↑32% (from \$1,524 to \$2,016)
  - Controls: ↑39% (from \$1,395 to \$1,944)
  - Statewide average: ↑32% (from \$1,245 to \$1,641)
- **Outpatient ED expenditures**
  - Blueprint participants: ↑50% (from \$115 to \$172)
  - Controls: ↑56% (from \$119 to \$185)
  - Statewide average: ↑41% (from \$129 to \$181)

# Expenditure Trends

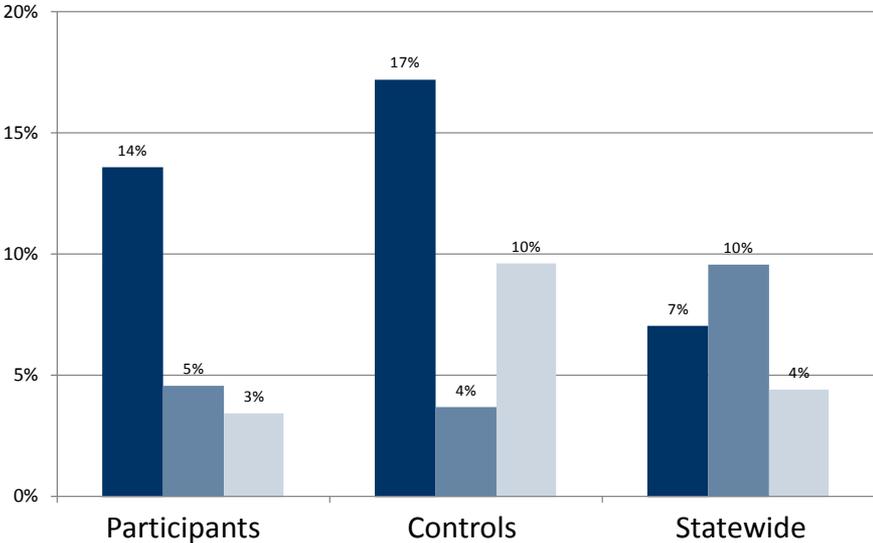
## Year-to-Year Change (Percent Change per Capita)

POPULATION	2007–2008 (Baseline)	2008–2009 (Start-up)	2009–2010 (Operations)
<b>Total Annual Expenditures</b>			
Participants	14%	5%	3%
Controls	17%	4%	10%
Statewide	7%	10%	4%
<b>Inpatient Expenditures</b>			
Participants	12%	38%	-2%
Controls	50%	9%	34%
Statewide	17%	15%	4%
<b>Outpatient Hospital Expenditures</b>			
Participants	21%	3%	3%
Controls	24%	-1%	10%
Statewide	11%	11%	7%
<b>Outpatient ED Expenditures</b>			
Participants	32%	0%	3%
Controls	30%	6%	3%
Statewide	21%	8%	7%

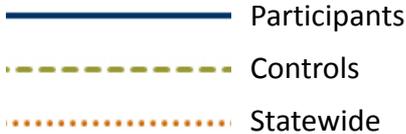
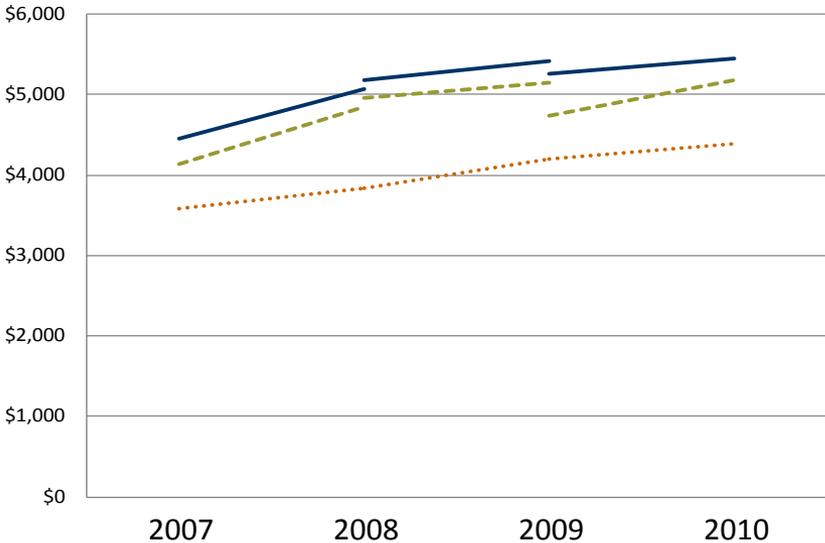
# Total Annual Expenditures

## Percent Change & Total Expenditures (per Capita)

**Percent Change**



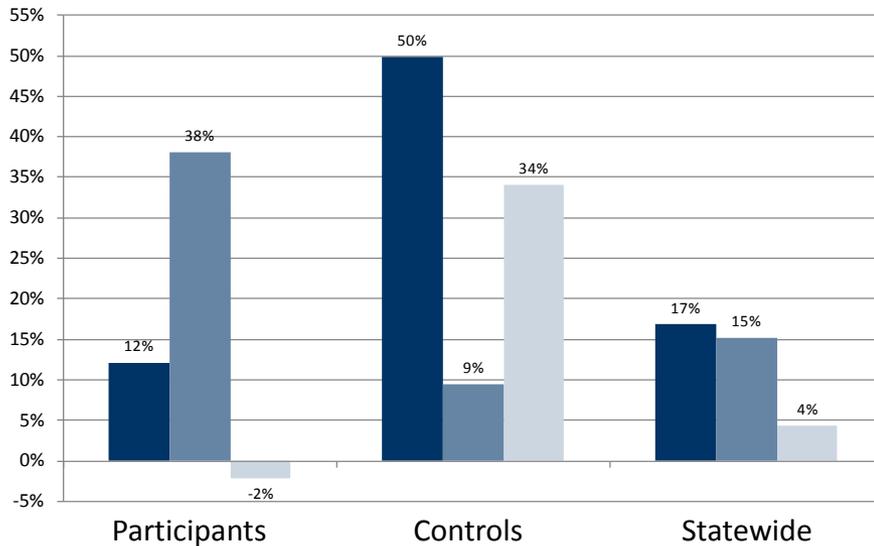
**Total Annual Expenditures**



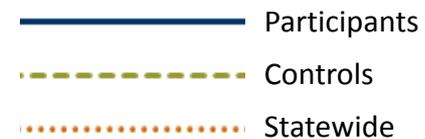
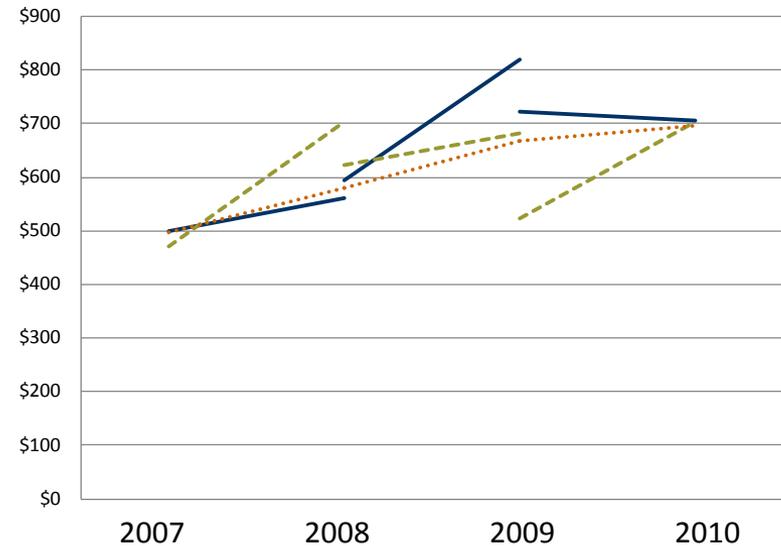
# Inpatient Expenditures

## Percent Change & Total Expenditures (per Capita)

### Percent Change



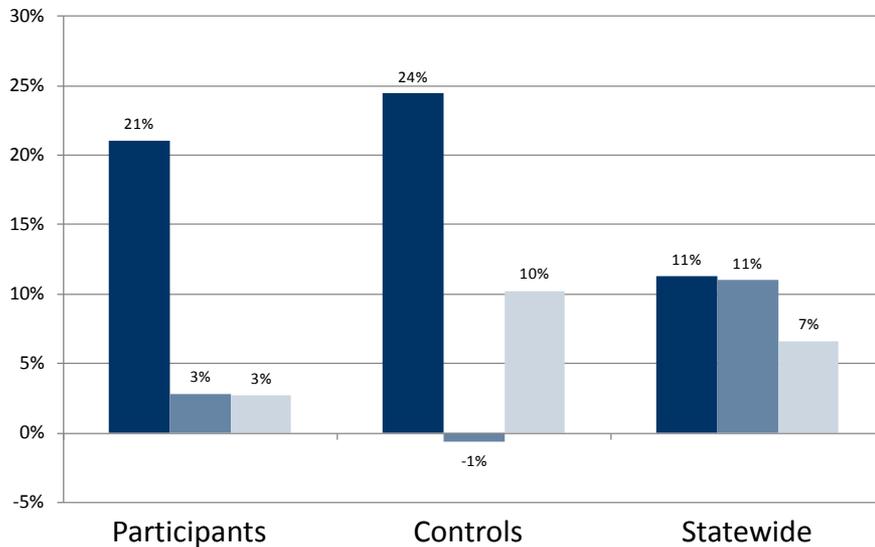
### Total Annual Expenditures



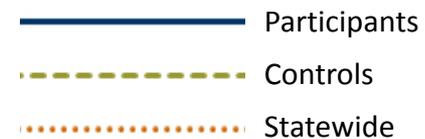
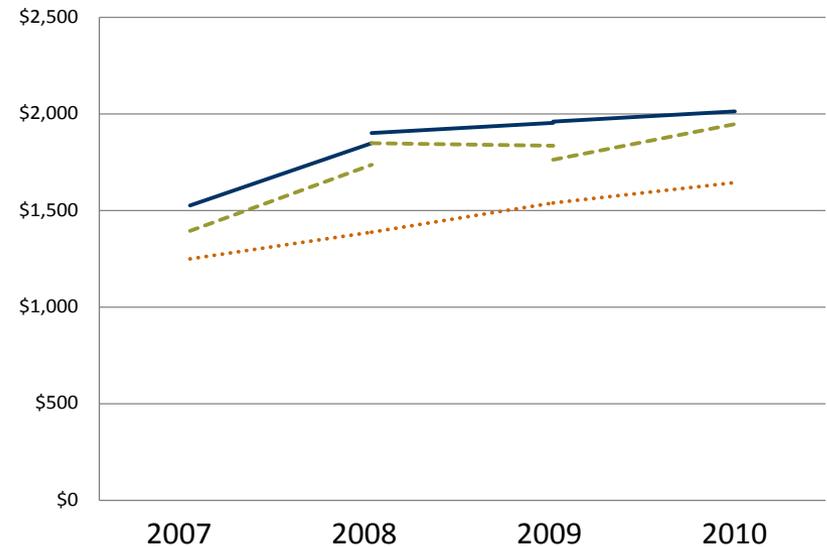
# Outpatient Hospital Expenditures

## Percent Change & Total Expenditures (per Capita)

### Percent Change



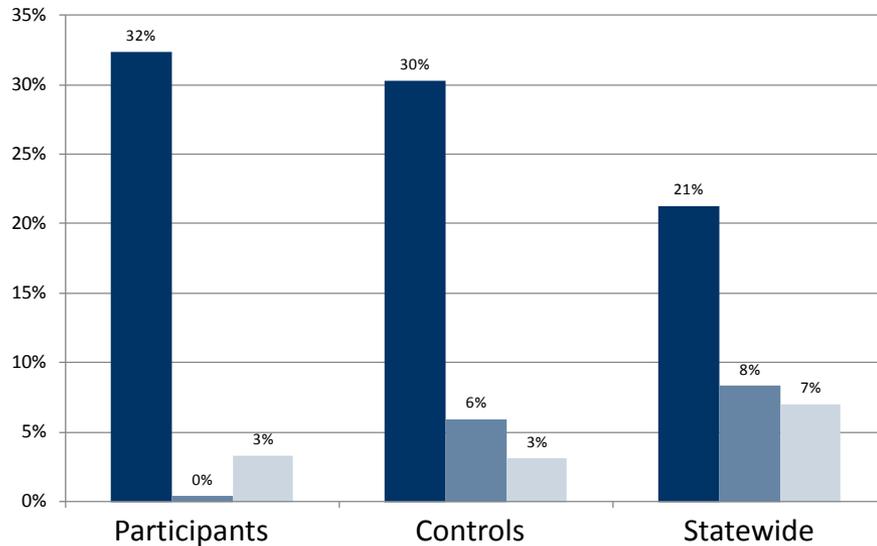
### Total Annual Expenditures



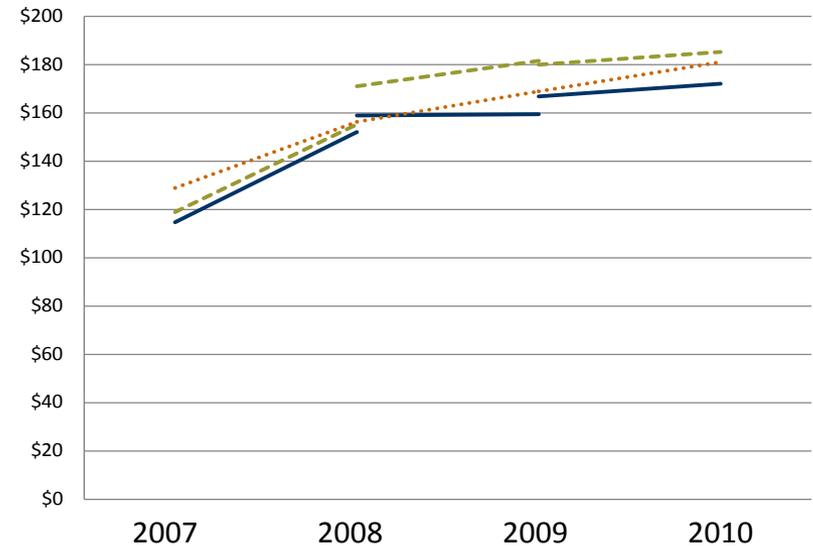
# Outpatient ED Expenditures

## Percent Change & Total Expenditures (per Capita)

### Percent Change



### Total Annual Expenditures





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# Vermont Blueprint Evaluation

Data Sources & Methods

Trend Highlights – Expenditures

**Trend Highlights – Chronic Conditions Expenditures**

Trend Highlights – Utilization

# Chronic Conditions Expenditure Trends

## Overview (1 of 2)

CHARACTERISTIC	2007 PARTICIPANTS	2007 PER CAPITA EXPENDITURE RATE	2007 EXPENDITURE RATE COMPARISON*
0 Blueprint-selected conditions	5,043	\$3,046	1.0
≥1 selected chronic conditions	2,399	\$7,315	2.4
2+ selected chronic conditions	671	\$10,875	3.6
Individual chronic condition			
Asthma	338	\$8,561	2.8
COPD	76	\$9,915	3.3
Congestive heart failure	35	\$19,559	6.4
Coronary heart disease	212	\$13,419	4.4
Depression	800	\$8,240	2.7
Diabetes	419	\$9,278	3.0
Hypertension	1,350	\$7,396	2.4

\* Compared to **2007 per Capita Expenditure Rate** for members with no Blueprint-selected chronic condition (i.e., \$3,046) (e.g., \$7,315 ÷ \$3,046 = 2.4)

# Chronic Conditions Expenditure Trends

## Overview (2 of 2)

- **Expenditures**

- Blueprint participants: ↑21% (from \$7,315 to \$8,851)
- Controls: ↑29% (from \$6,735 to \$8,706)
- Statewide average: ↑26% (from \$7,294 to \$9,198)



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Trend Highlights – Expenditures

Trend Highlights – Chronic Conditions Expenditures

**Trend Highlights – Utilization**

# Utilization Trends

## Overview (per 1,000 Members)

- **Inpatient stays**
  - Blueprint participants: ↓6% (from 43.4 visits to 40.8)
  - Controls: ↓<1% (from 42.5 visits to 42.3)
  - Statewide average: ↑6% (from 42.9 visits to 45.6)
- **Outpatient ED visits**
  - Blueprint participants: ↓<1% (from 161.8 visits to 160.7)
  - Controls: ↑10% (from 154.9 visits to 170.9)
  - Statewide average: ↑2% (from 175.6 visits to 178.8)

# Utilization Trends

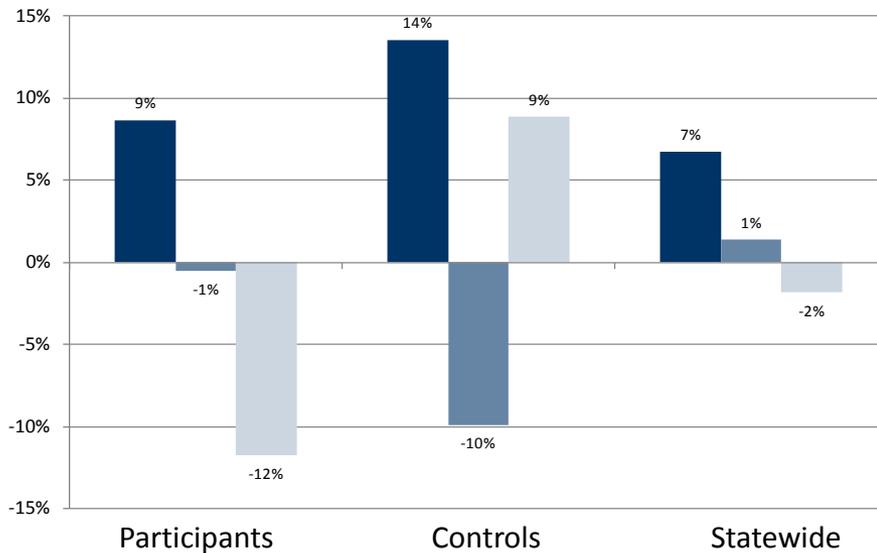
## Year-to-Year Change (Percent Change per 1,000 Members)

POPULATION	2007–2008 (Baseline)	2008–2009 (Start-up)	2009–2010 (Operations)
<b>Inpatient Stays</b>			
Participants	9%	-1%	-12%
Controls	14%	-10%	9%
Statewide	7%	1%	-2%
<b>Outpatient ED Visits</b>			
Participants	15%	-11%	-9%
Controls	9%	-5%	-5%
Statewide	5%	-2%	-1%

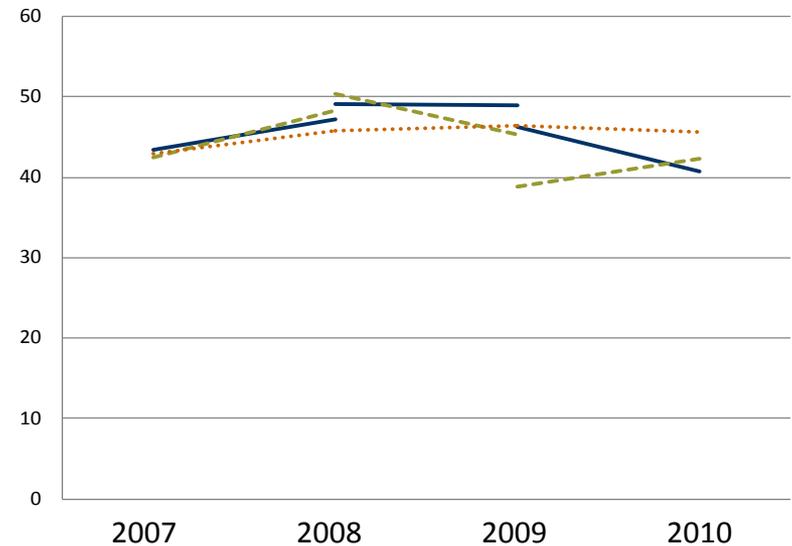
# Inpatient Stays

## Percent Change & Annual Rate (per 1,000 Members)

### Percent Change



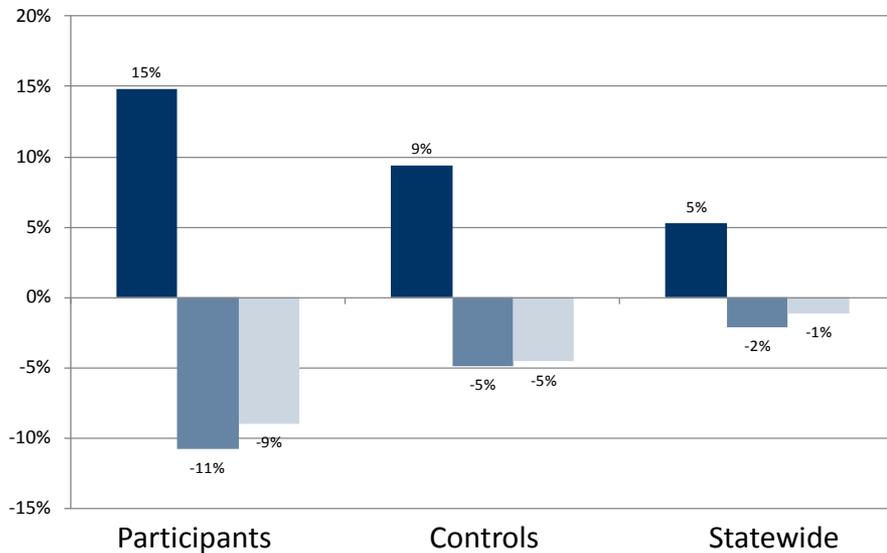
### Annual Rate



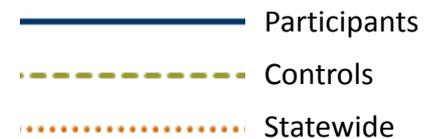
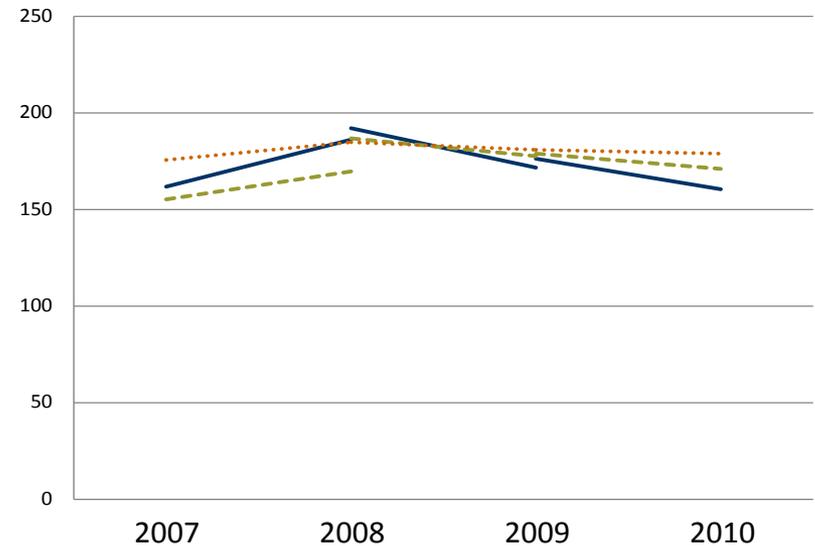
# Outpatient ED Visits

Percent Change & Annual Rate (per 1,000 Members)

### Percent Change



### Annual Rate





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