

# Report to the Greater Milwaukee Business Foundation on Health

Key Factors Influencing 2003 – 2015  
Southeast Wisconsin Commercial Payer  
Hospital Payment Levels

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# Table of Contents

	Page
Study Background and Objectives	3
Study Parameters	6
Summary of Results	12
Hospital Commercial Payment Comparisons	17
Hospital Operating Cost Comparisons	36
Distribution of Hospital Cost Shift Burden	49
Commercial Market Concentration	59
Caveats and Use of this Report	71
Supplemental Information - Appendices	75

# Study Background and Objectives

# Background

- An initial study based on 2003 data for Milwaukee, Ozaukee, Washington, and Waukesha counties identified interplay of the following factors as contributing to the Milwaukee area's high health care costs:
  - Health system commercial market concentration
  - Hospital operating cost levels
  - Distribution of cost shift burden among health systems
  - Lack of fixed payment methods for hospitals
  - Commercial payer market concentration
- Previous studies measured changes in average hospital commercial payment levels and three of the five factors for an expanded seven county area from 2003 through 2014
  - Data to measure fixed payment methods and commercial payer market concentration was not available for any of the studies

# 2015 Study Objectives

- This study provides updated measures through 2015 for each measure in the previous studies
  - Average hospital commercial payment levels
  - Hospital operating cost levels
  - Distribution of cost shift burden among health systems
  - Health system commercial market concentration
- Evaluate change in each measure from 2003 through 2015
  - Emphasis is on results for 2013, 2014 and 2015

# Study Parameters

# Data Sources

- Wisconsin Hospital Association (WHA) Information Center
  - FY 2003 - 2015
    - Wisconsin Hospital Fiscal Survey
    - Wisconsin Hospital Inpatient Discharge Data
  
- United States Bureau of Labor Statistics
  - Hospital Component of Consumer Price Index (Hospital CPI)
  - Hospital Producer Price Index (Hospital PPI)
  
- Centers for Medicare and Medical Services
  - Hospital Market Basket (CMS Market Basket)
  - CMS-DRG weights
  - Medicare 5% sample data set

# Included Hospitals and Health Systems

- Limited to health systems with substantial adult, acute care inpatient hospital operations in the following counties:
  - Milwaukee
  - Kenosha
  - Racine
  - Ozaukee
  - Washington
  - Walworth
  - Waukesha
- Includes specialty hospitals (Orthopedic Hospital of Wisconsin (CSM), Wisconsin Heart Hospital, and Midwest Orthopedic Specialty Hospital (Wheaton))
- Excludes Psychiatric, Rehabilitation, LTAC hospitals and Children's Hospital of Wisconsin



# Included Hospitals and Health Systems *(continued)*

- Hospital information from the following health systems was used as the basis for the comparisons:
  - Aurora Health Care (Aurora)
  - Columbia St. Mary's (CSM)
  - Froedtert Health (FH)
  - ProHealth Care (ProHealth)
  - United Hospital System (United)
  - Wheaton Franciscan Healthcare (Wheaton)
  
- Mercy Health Services (Lake Geneva and Janesville) and Columbia Center (Mequon) included for health system market concentration comparisons **ONLY**

# 2015 Study Interpretation Considerations

- The same hospitals included in the 2014 study are included in the 2015 analyses
- As a result of the FY 2009 merger between SynergyHealth and Froedtert Health, the following three financial measures in the study are reported as combined “FH” results for the full study period from 2003 through 2015
  - Hospital commercial payment levels
  - Hospital operating cost levels
  - Distribution of cost shift burden among health systems
- SynergyHealth and Froedtert Health market concentration is reported on a combined basis for 2009-2015 **ONLY**

# 2015 Study Interpretation Considerations *(continued)*

- Wheaton completed the planned transfer of operations to Ascension Health in early 2016. Also, the Wisconsin Heart Hospital closed in July 2016; future studies will reflect this change
- Since the release of some of our previous studies, certain information sources have changed and additional information has become available which may affect our previous analyses. Certain measures presented in our previous reports have been modified to incorporate the additional information or to be consistent with the presentation of our results in this report

# Summary of Results

# Hospital Commercial Payment Levels

- The average increase in Southeast Wisconsin hospital commercial payment levels from 2003 through 2015 was roughly one-half the corresponding increase in the Hospital CPI.
- From 2012 through 2015, the increase in average SE Wisconsin commercial hospital payment levels (8%) was also significantly lower than the corresponding increase in the Hospital CPI (14%)
  - The 2014 increase in average SE Wisconsin commercial hospital payment levels (6.5%) exceeded the national average increase (5.0%)
  - In 2015, the increase in average SE Wisconsin commercial hospital payment levels (1.9%) returned to levels significantly less than the national average increase (4.1%).

# Hospital Operating Costs

- Average Southeast Wisconsin hospital operating costs have also increased at a substantially slower rate than national indices during the same period, particularly in recent years
- Annual increases in SE Wisconsin per-unit hospital operating costs averaged roughly 1.5% from 2003 through 2015
  - SE Wisconsin increases were approximately one-half the national benchmark
- Average SE Wisconsin hospital per-unit operating costs increased by 2.1% from 2014 to 2015
  - Increase is generally consistent with national increases
  - Average per-unit operating costs have increased by only 1.4% since 2009

# Cost Shift Burdens

- Approximately 36% of 2015 total commercial hospital payments were used to offset government payment shortfalls, charity care costs and bad debts
  - Approximately 32% of commercial payments were used for this purpose in 2003
- The composition of hospital cost shift burdens changed significantly since 2013, in part as the result of changes associated with the Affordable Care Act (ACA)
  - Total Medicare and Medicaid cost shift burdens increased 43% from 2013 to 2015
  - Total Uncompensated Care and Bad Debt cost shift burdens decreased by 43% during this period
  - Aggregate cost shift burdens increased by more than 16% since 2013

# Commercial Market Concentration

- Average SE Wisconsin “Predominant Health System” inpatient market shares increased slightly in 2015 but remain near the lowest levels experienced during the study period
  - Increase appears to be the result of modest increases distributed across most areas of SE Wisconsin
    - Increase does not appear to be concentrated in one or two health systems
- Significant local area changes have occurred since 2003
  - Almost 58% of SE Wisconsin zip codes experienced “significant” (>10%) changes in Predominant Health System market shares
    - Approximately 37% of SE Wisconsin zip codes have experienced significant declines in Predominant Health System market shares
  - Roughly 41% of SE Wisconsin zip codes experienced a change in their Predominant Health System between 2003 and 2015



# Hospital Commercial Payment Comparisons

# SE Wisconsin Health System Hospital Commercial Payment Level Comparisons

- Includes information regarding the relative changes in SE Wisconsin hospital commercial payment levels compared to:
  - National indices
  - SE Wisconsin health system averages
  - Average changes in hospital commercial payment level for other SE Wisconsin health systems
- Comparisons of relative SE Wisconsin health system commercial payment levels are also provided

# Hospital Commercial Payment Level Comparisons – *Methods*

- Comparisons based on total net commercial revenues (billed amounts after contractual discounts) as reported in the Wisconsin State Hospital Fiscal Survey, including:
  - Average commercial inpatient payments per case mix adjusted discharge,
  - Average commercial hospital outpatient payment levels as a percentage of Medicare payment levels, and
  - Average composite (blended inpatient and outpatient) commercial payment levels relative to the market average

# Hospital Commercial Payment Level Comparisons – *Methods* (continued)

- Average SE Wisconsin hospital commercial payments were converted to per-unit payment levels using “Adjusted Equivalent Discharges” (AED) to adjust for differences in:
  - Inpatient case mix and severity
  - Relative blend of inpatient / outpatient business
  - Outpatient service mix
- Changes in SE Wisconsin average payment levels were compared to changes in the Hospital Component of National Consumer Price Index (Hospital CPI)
  - Hospital CPI represents the annual change in hospital payments from commercial payers

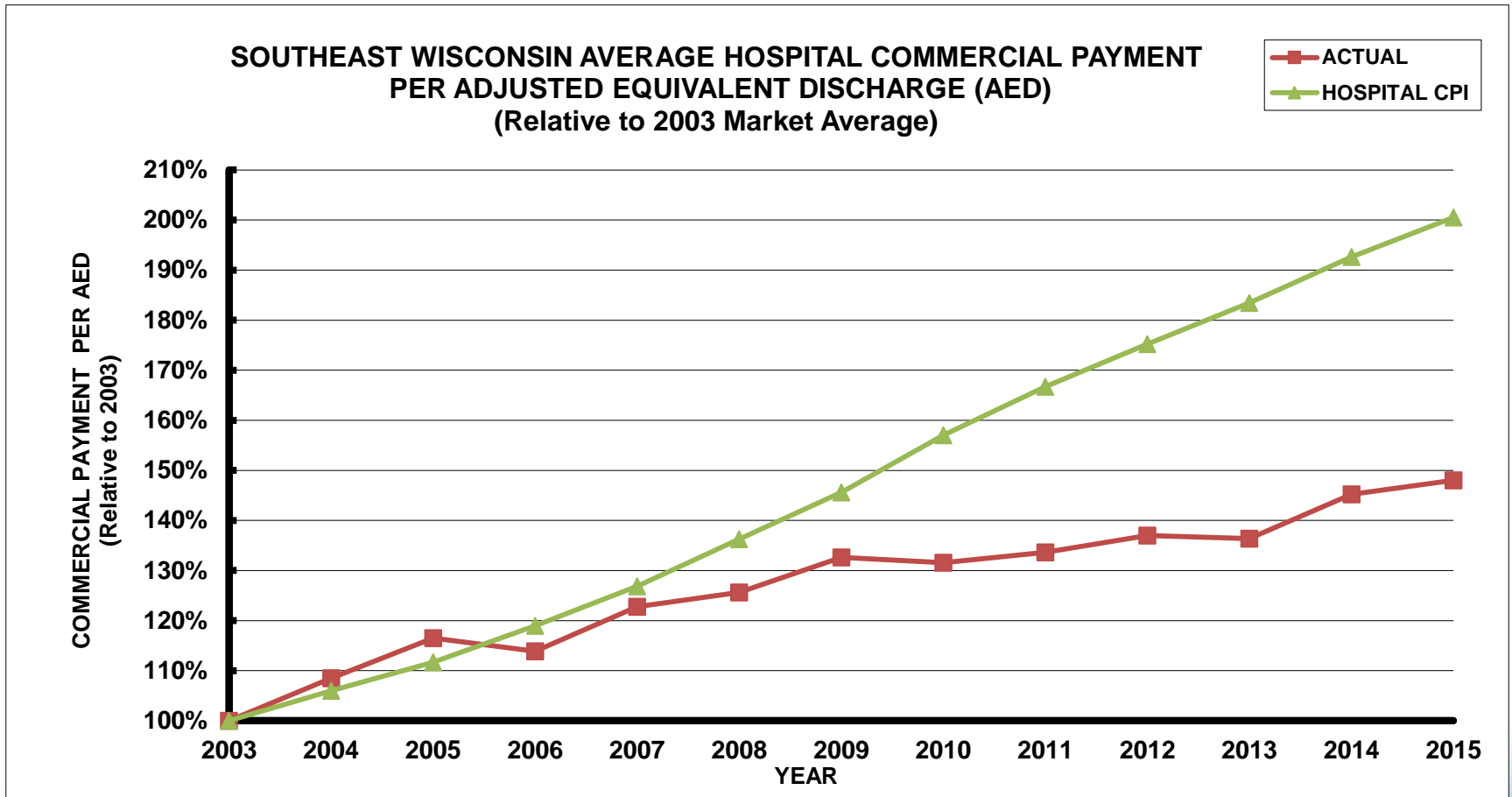
# Potential Causes of Changes in Average Hospital Commercial Payment Levels

- Changes in contracted payment rates
- Changes in payment rate structures (discounted charges, fee schedules, population based payments, incentive programs, etc.)
- Service mix changes if average payment rates differ among services
- Shifts of commercial patients between hospitals with different average payment levels (between or within health systems)

# Hospital Commercial Payment Level Change Comparisons – *Aggregate Results*

- Southeast Wisconsin hospital commercial payment levels increased approximately 48% from 2003 through 2015
  - Increase was roughly one-half of the rate of increase in the Hospital CPI (101%)
  - Average annual increase for SE Wisconsin Hospitals over this time period was approximately 3.3% vs. Hospital CPI of approximately 6.0%
- From 2012 through 2015, total SE Wisconsin hospital commercial payment level increases (8.0%) were also lower than Hospital CPI increases (14.4%)
- Average SE Wisconsin hospital increase in 2015 (1.9%) was also lower than Hospital CPI (4.1%) levels

# Average Southeast WI Hospital Commercial Payments vs National Hospital CPI

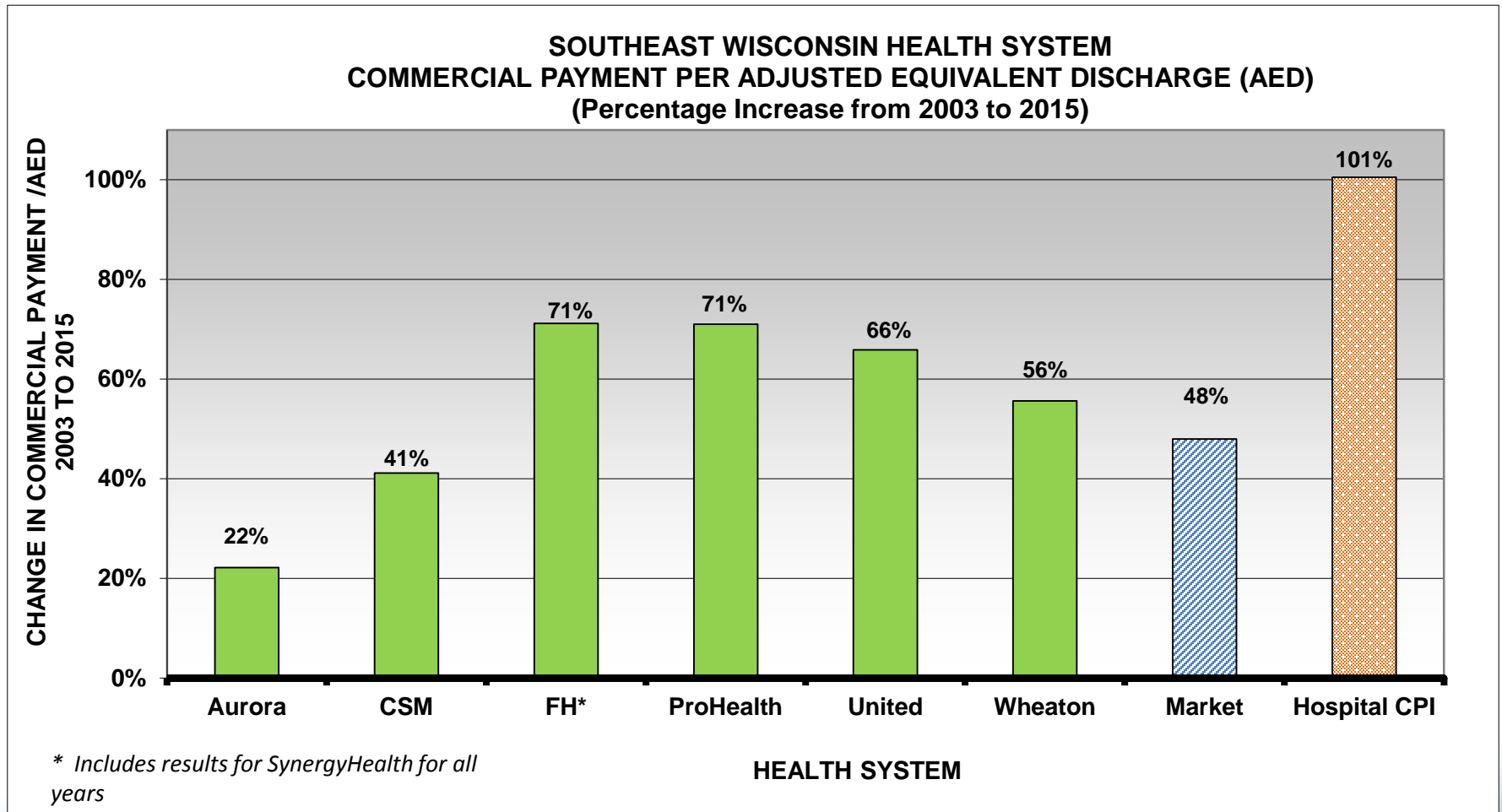


# SE Wisconsin Health System Hospital Commercial Payment Changes Since 2003

- Each SE Wisconsin health system's aggregate commercial hospital payment level increase from 2003 - 2015 was below the Hospital CPI increase of 101% during this period
- Aurora (22%) and CSM (41%) aggregate commercial payment increases were both lower than market average and national benchmark increases
- Aggregate commercial payment level increases for each of the other SE Wisconsin health systems were above market averages but less than 75% of the national benchmark for the period



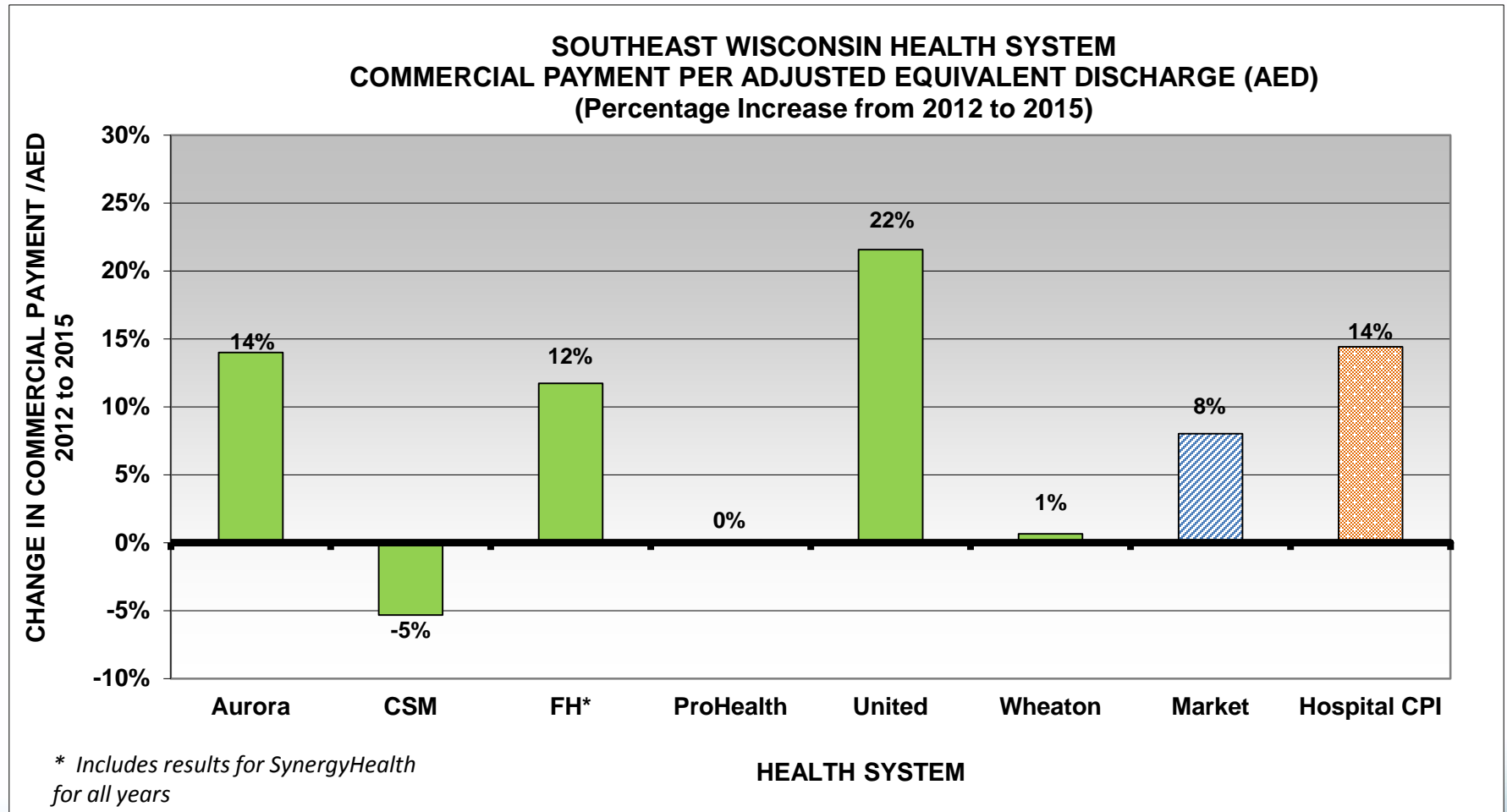
# Aggregate SE Wisconsin Hospital Commercial Payment Increases (2003 – 2015)



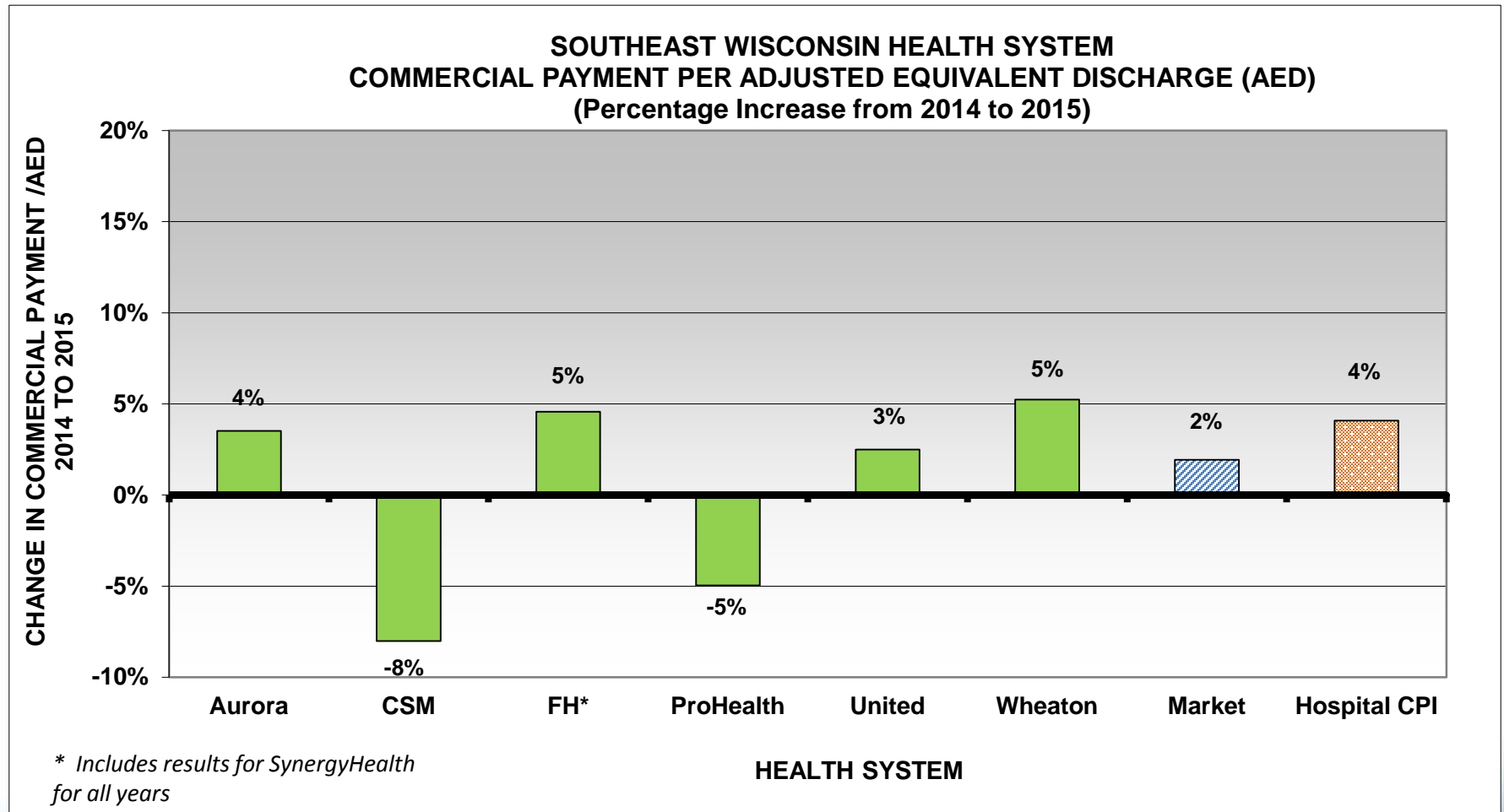
# SE Wisconsin Health System Hospital Commercial Payment Changes (2012 - 2015)

- From 2012 through 2015, all health systems except for United had commercial payment level increases at or below national benchmark
  - United's average commercial payment level increase of 22% was higher than the Hospital CPI increase (14%) for the same period
  - CSM's average commercial payment level decreased 5% during this period
- In 2015, each health system except Froedtert and Wheaton had commercial payment level increases at or below national benchmark
  - CSM (-8%) and ProHealth (-5%) each had commercial payment level decreases
  - Overall aggregated market increase (2%) was below the Hospital CPI increase of 4% from 2014

# SE Wisconsin Health System Hospital Commercial Payment Changes (2012 – 2015)



# SE Wisconsin Health System Hospital Commercial Payment Changes (2014 – 2015)



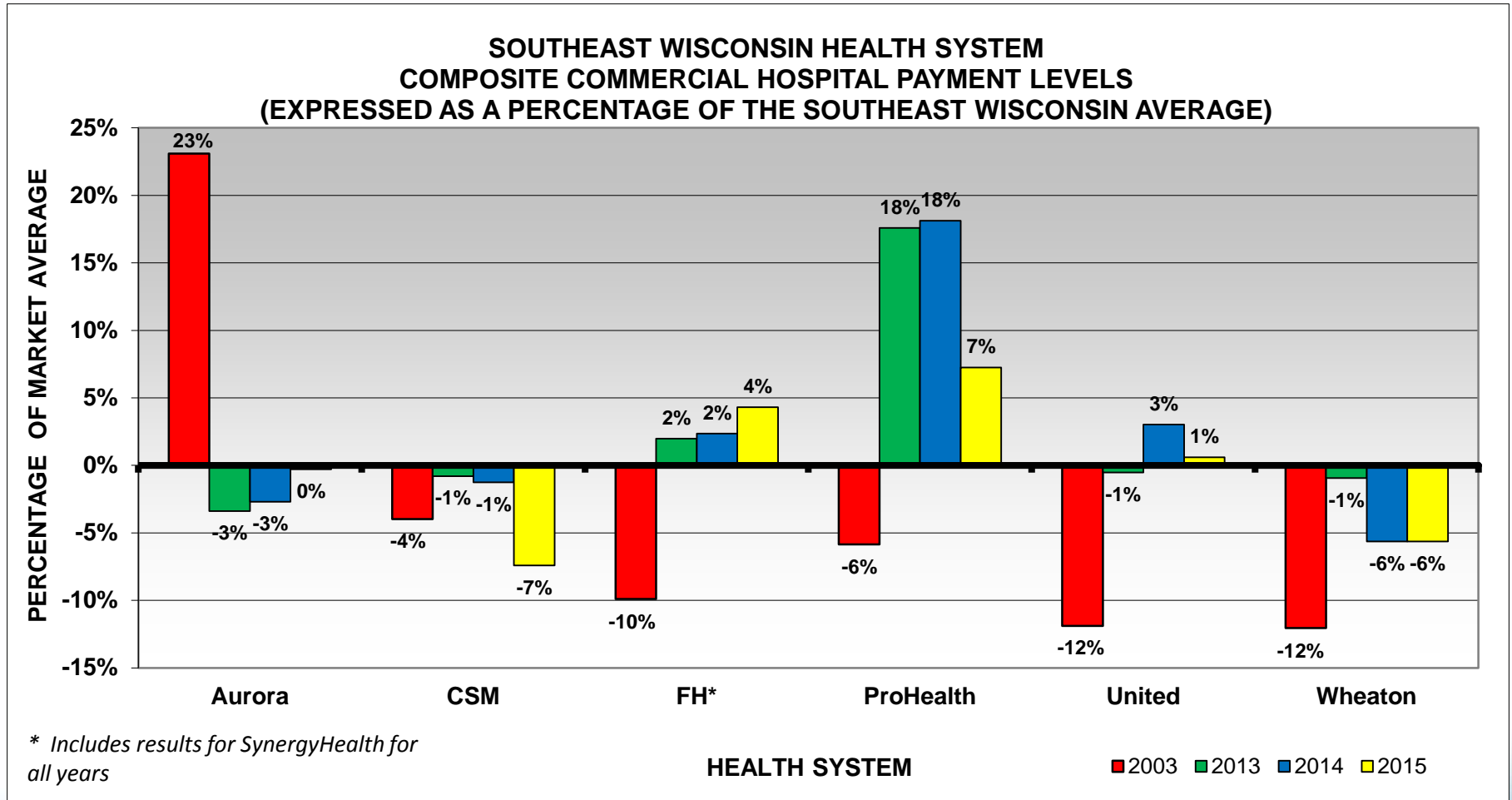
# Comparisons of Individual Health System Hospital Commercial Payment Levels

- Comparisons of average hospital payment levels are based on each health system's relative average hospital commercial payment rates used in the previous comparisons
  - Hospital inpatient comparisons were based on each hospital's average case-mix adjusted payments per admission
  - Outpatient hospital commercial payment levels were estimated as a percentage of each hospital's average Medicare outpatient payment levels
- Composite commercial payment levels were developed by applying the market average blend of inpatient (36%) and outpatient (64%) services to each health system's relative inpatient and outpatient payment levels
  - Blend was 44% inpatient / 56% outpatient in 2003

# Hospital Commercial Payment Level Comparisons – *Health System Results*

- Since 2003, there has been considerable narrowing of the variation in average **composite** hospital commercial payment levels among SE Wisconsin Health Systems
  - Variation decreased from 40% in 2003 to 15% in 2015
- In 2003 only two health systems (CSM and ProHealth) were within 6% of the market average
  - Aurora was 23% above the market average
  - Froedtert, United and Wheaton each were at least 10% below market
- In 2015, all six health systems were within 7% of the market average
  - CSM and Wheaton have the lowest commercial payment levels

# Composite Hospital Commercial Payment Levels Relative to the SE Wisconsin Average



# 2015 Hospital Inpatient and Outpatient Commercial Payment Level Variation

- Greater variation existed among individual health systems' average 2015 commercial hospital **inpatient** payment levels than **outpatient** payment levels
- Inpatient payment levels ranged from 16% above SE Wisconsin averages (FH) to 22% below SE Wisconsin averages (CMH)
- Commercial hospital outpatient payment levels for 5 of the 6 included health systems were within 2% of the SE Wisconsin average
  - ProHealth was 7% above the SE Wisconsin average



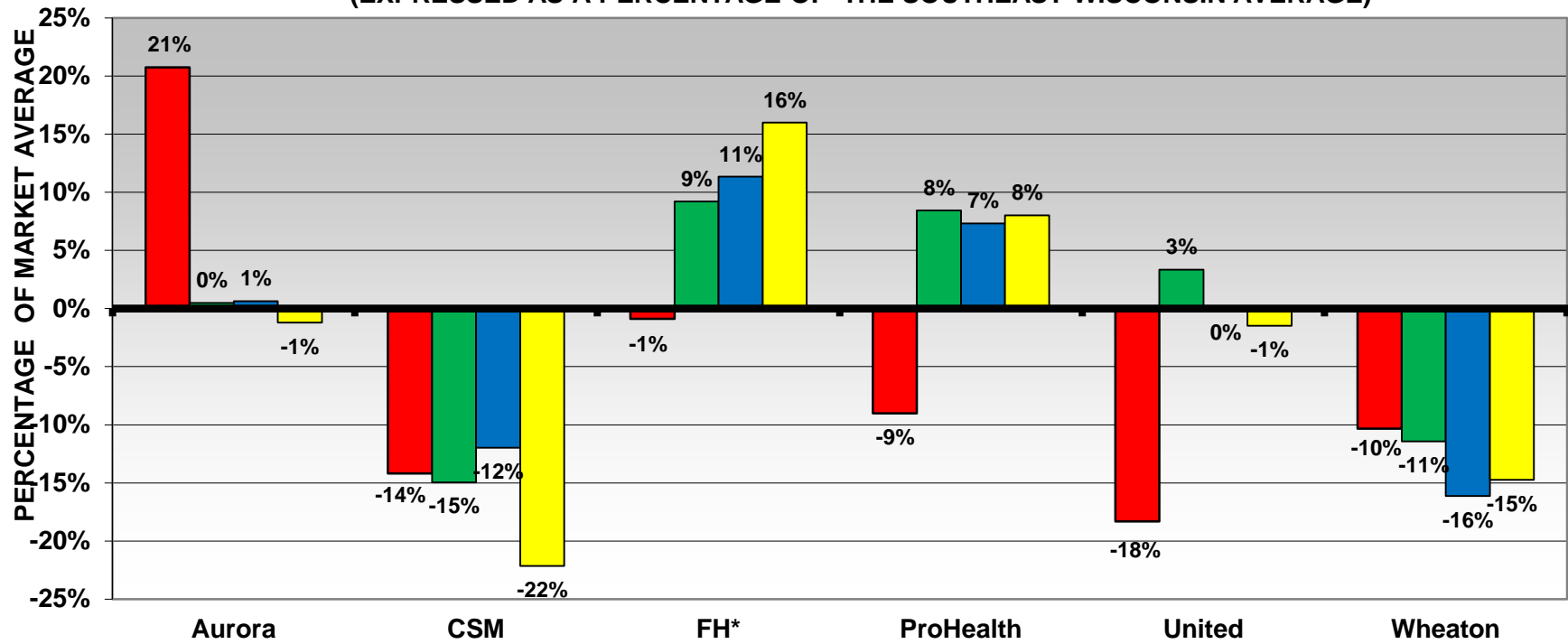
# 2015 SE Wisconsin Health System Hospital Commercial Payment Level Summary

## Relative 2015 Hospital Average Commercial Payment Levels Southeast Wisconsin Health Systems (Percent above / (below) SE Wisconsin Health System Average)

Health System	Inpatient	Outpatient	Composite
Aurora	(1%)	0%	0%
CSM	(22%)	1%	(7%)
Froedtert	16%	(2%)	4%
ProHealth	8%	7%	7%
United	(1%)	2%	1%
Wheaton	(15%)	0%	(6%)

# Average Inpatient Payment Levels Relative to SE Wisconsin Hospital Average

SOUTHEAST WISCONSIN HEALTH SYSTEM  
 COMMERCIAL INPATIENT PAYMENT PER CASE MIX ADJUSTED DISCHARGE  
 (EXPRESSED AS A PERCENTAGE OF THE SOUTHEAST WISCONSIN AVERAGE)



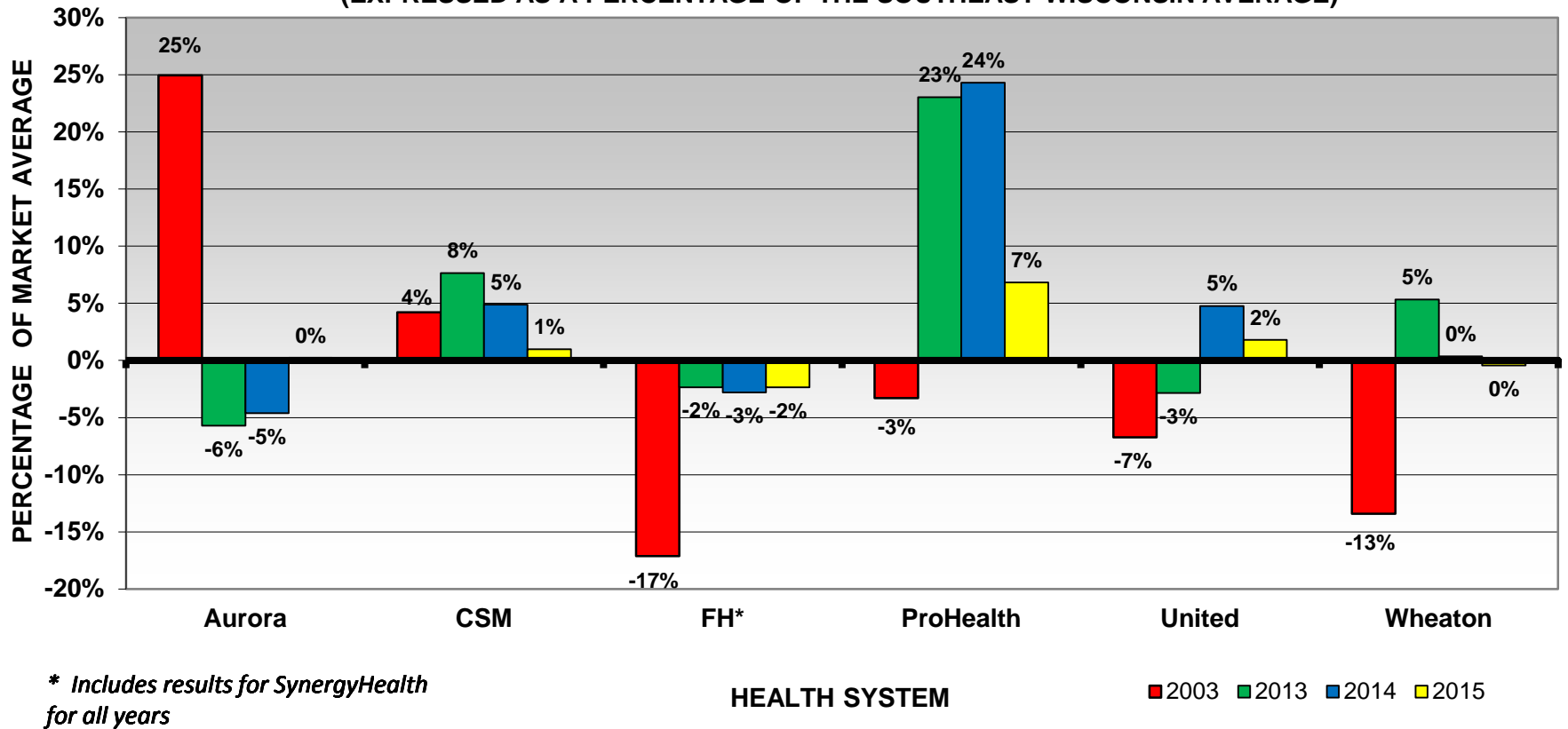
\* Includes results for SynergyHealth for all years

HEALTH SYSTEM

■ 2003 ■ 2013 ■ 2014 ■ 2015

# Average Outpatient Payment Levels Relative to SE Wisconsin Hospital Average

SOUTHEAST WISCONSIN HEALTH SYSTEM  
 AVERAGE COMMERCIAL OUTPATIENT PAYMENT LEVELS  
 (EXPRESSED AS A PERCENTAGE OF THE SOUTHEAST WISCONSIN AVERAGE)



# Hospital Operating Cost Comparisons

# SE Wisconsin Health System Hospital Operating Cost Comparisons

- Our initial 2003 study estimated that 2003 Milwaukee area per-unit hospital operating costs were 14% to 26% higher than the hospital operating costs in some other Midwest cities with lower commercial hospital payment levels
- The comparisons in this report measure the relative change of SE Wisconsin per-unit hospital operating costs against national indices and between SE Wisconsin health systems

# Hospital Operating Cost Comparisons – *Data Sources and Methods*

- Total hospital operating costs as reported in the Wisconsin State Hospital Fiscal Survey used as basis of comparisons
- Total hospital operating costs were converted to average per-unit operating costs using “Adjusted Equivalent Discharges” (AED) to adjust for differences in:
  - Relative blend of inpatient and outpatient business
  - Inpatient case mix and severity
  - Outpatient service mix
- Change in Southeast Wisconsin market average hospital operating costs compared to national inflation indices
  - CMS Hospital Market Basket
  - Hospital Producer Price Index (Hospital PPI)

# Potential Causes of Changes in Average Per-Unit Hospital Operating Costs

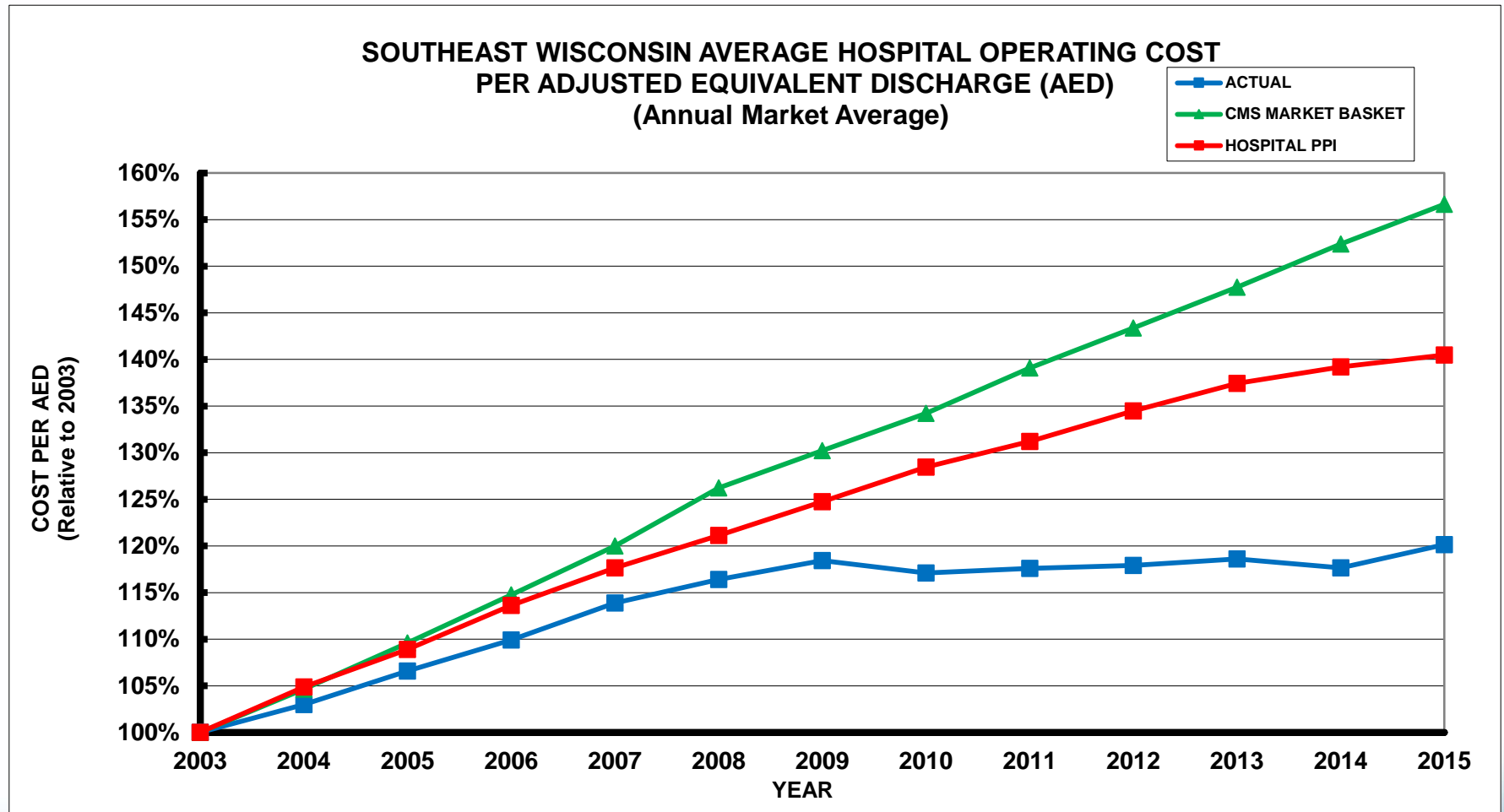
- Changes in the quantity or price of labor, supply, facility or other costs used by each health system to treat its patients
- Changes in inpatient or outpatient volumes may also significantly affect the per-unit allocation of fixed costs
  - Includes changes in case mix or mix of provided services
- Shifts in the relative distribution of business among hospitals with different average operating cost levels (between or within health systems) may also be a cause of changes in average operating cost levels

# Hospital Operating Cost Change Comparisons (2003 - 2015) - Results

- Average Southeast Wisconsin hospital operating costs increased 20% from 2003 to 2015 (roughly 1.5% annually)
  - The Hospital PPI increased 40% and CMS Hospital Market Basket increased 57% during the same period
- Much of the difference between Southeast Wisconsin hospital operating cost increases and the PPI or CMS market basket increases has occurred in recent years
  - Southeast Wisconsin hospital per unit operating costs are only 1.4% higher than in 2009
  - Aggregate average per-unit operating costs increased 2.1% in 2015



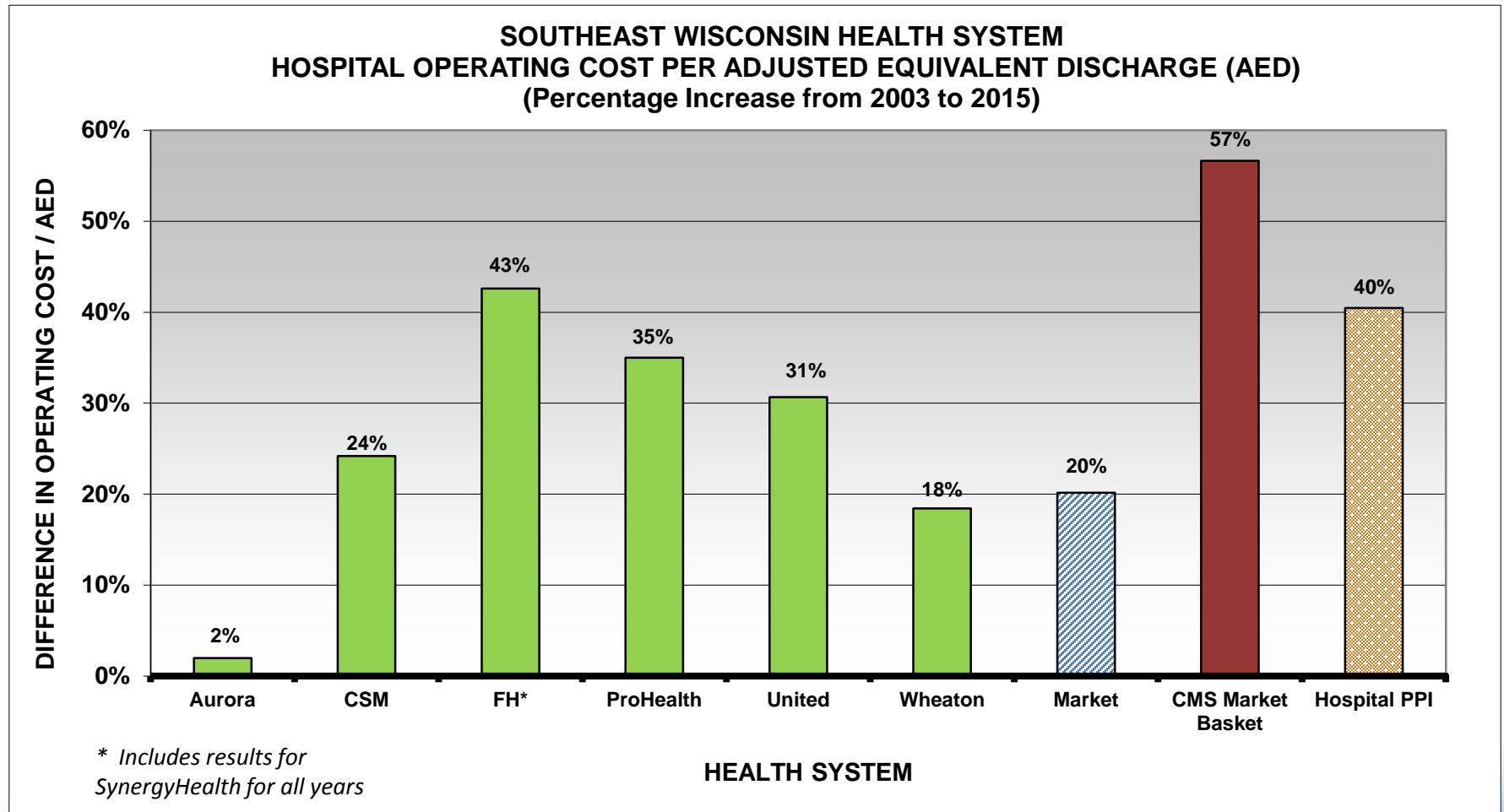
# Comparison of Average Southeast Wisconsin Hospital Operating Costs to Inflation Indices



# Health System Hospital Operating Cost Changes from 2003 through 2015

- Aurora's 2015 per-unit operating costs were only 2% higher than its per-unit operating costs in 2003
  - During that period, Aurora moved from the highest cost position to the lowest cost position among SE Wisconsin health systems
- CSM (24%), ProHealth (35%), United (31%) and Wheaton (18%) per-unit operating cost increases from 2003 through 2015 were lower than the PPI (40%) and CMS Market Basket (57%) increases for the same period
- Froedtert's (43%) per-unit operating cost increase from 2003 to 2015 approximated the PPI increase.
  - Increase was less than the corresponding CMS Market Basket increase

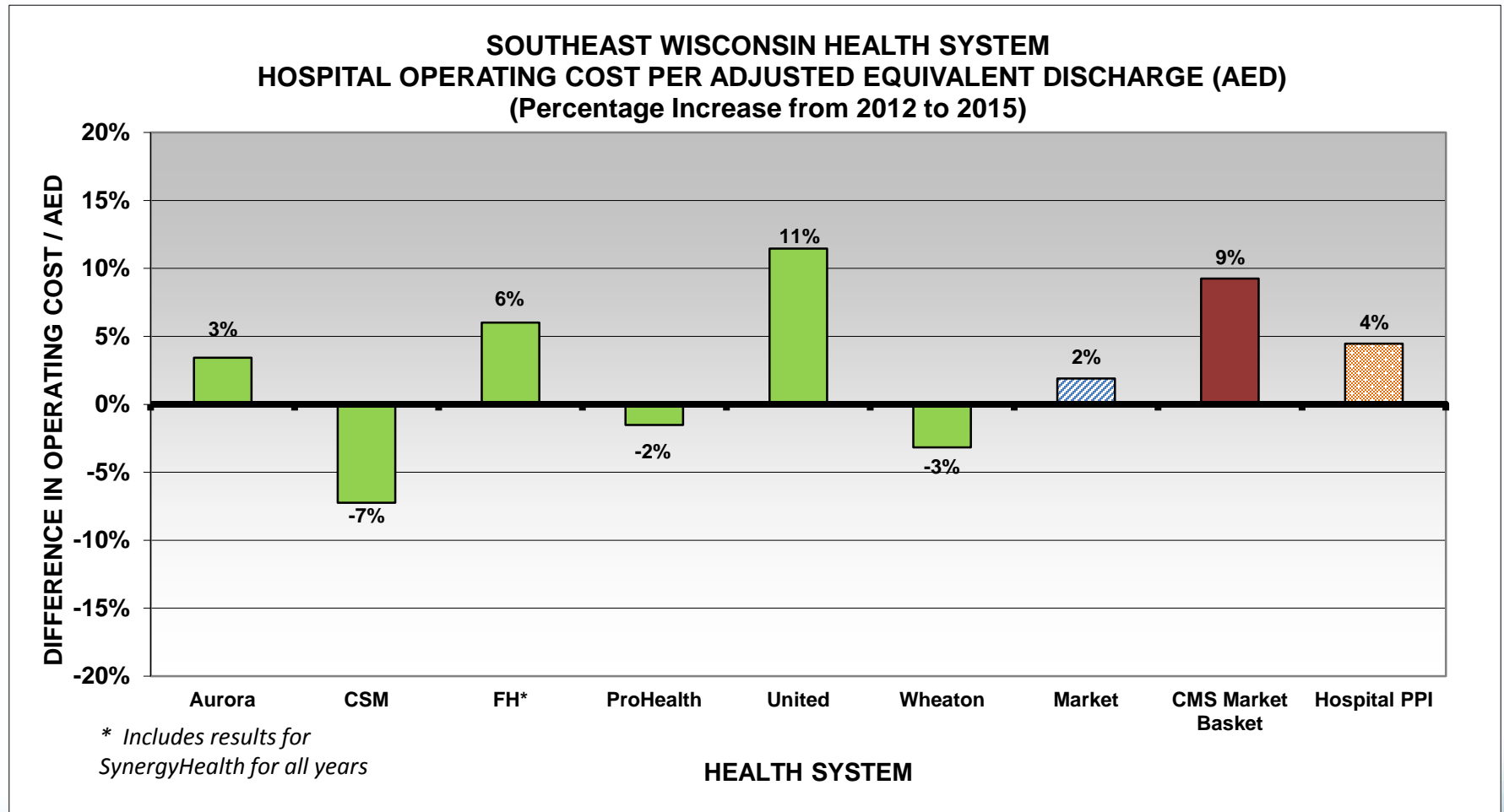
# Southeast Wisconsin Health System Hospital Operating Cost Changes (2003 – 2015)



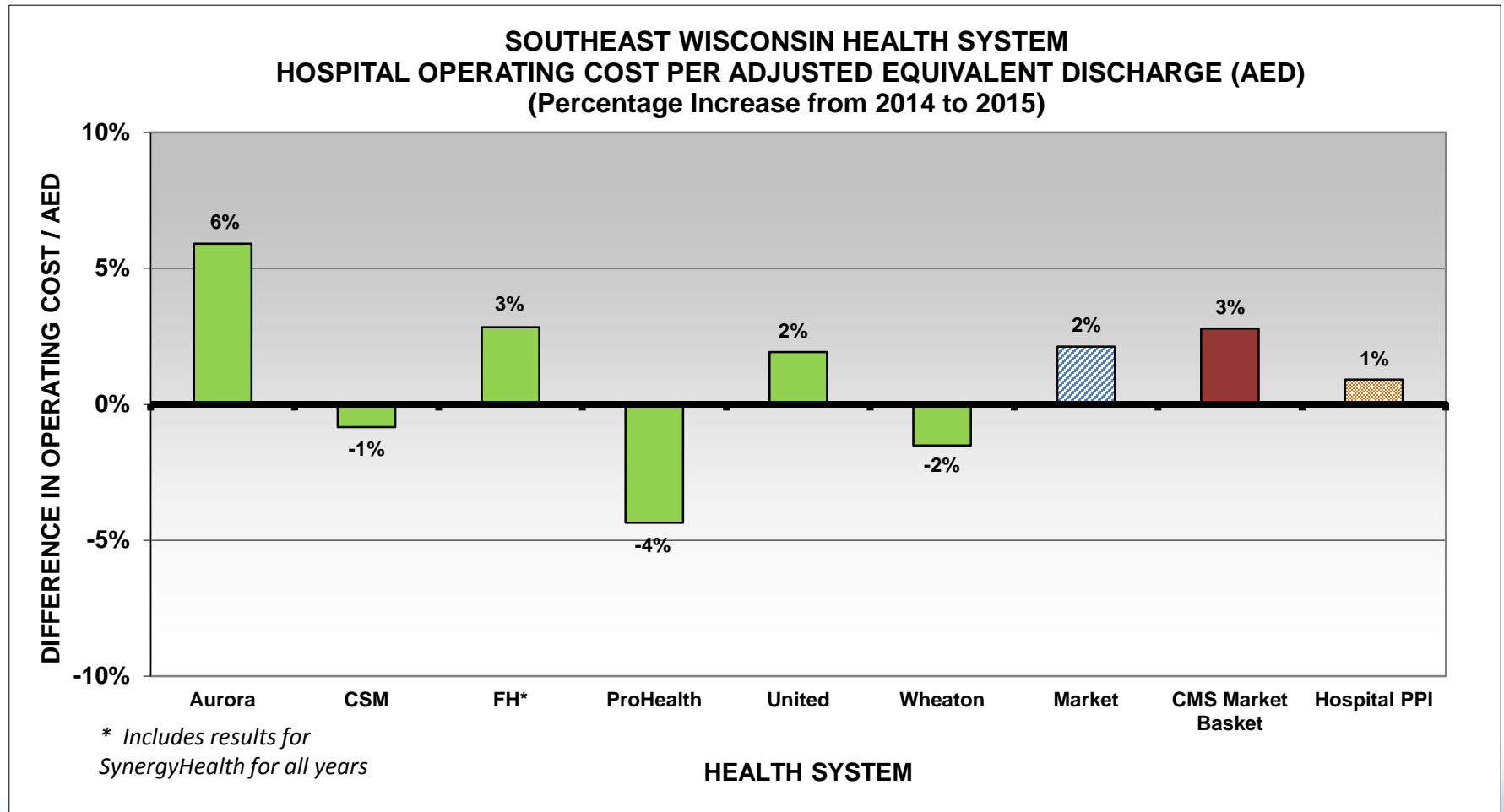
# Health System Hospital Operating Cost Changes from 2012 through 2015

- SE Wisconsin average hospital per-unit operating costs increased at a lower rate than national benchmarks from 2012 through 2015
  - 2015 increases were consistent with benchmarks
- From 2012 through 2015, CSM, Wheaton, and ProHealth **reduced** their average per-unit operating costs
  - Each of these health systems also decreased per-unit operating costs from 2014 to 2015
- Aurora's (3%) and Froedtert's (6%) average per-unit operating cost increases from 2012 through 2015 were lower than at least one of the national benchmarks
- United's operating cost increase (11%) exceeded both benchmarks for the period

# Southeast Wisconsin Health System Hospital Operating Cost Changes (2012 - 2015)



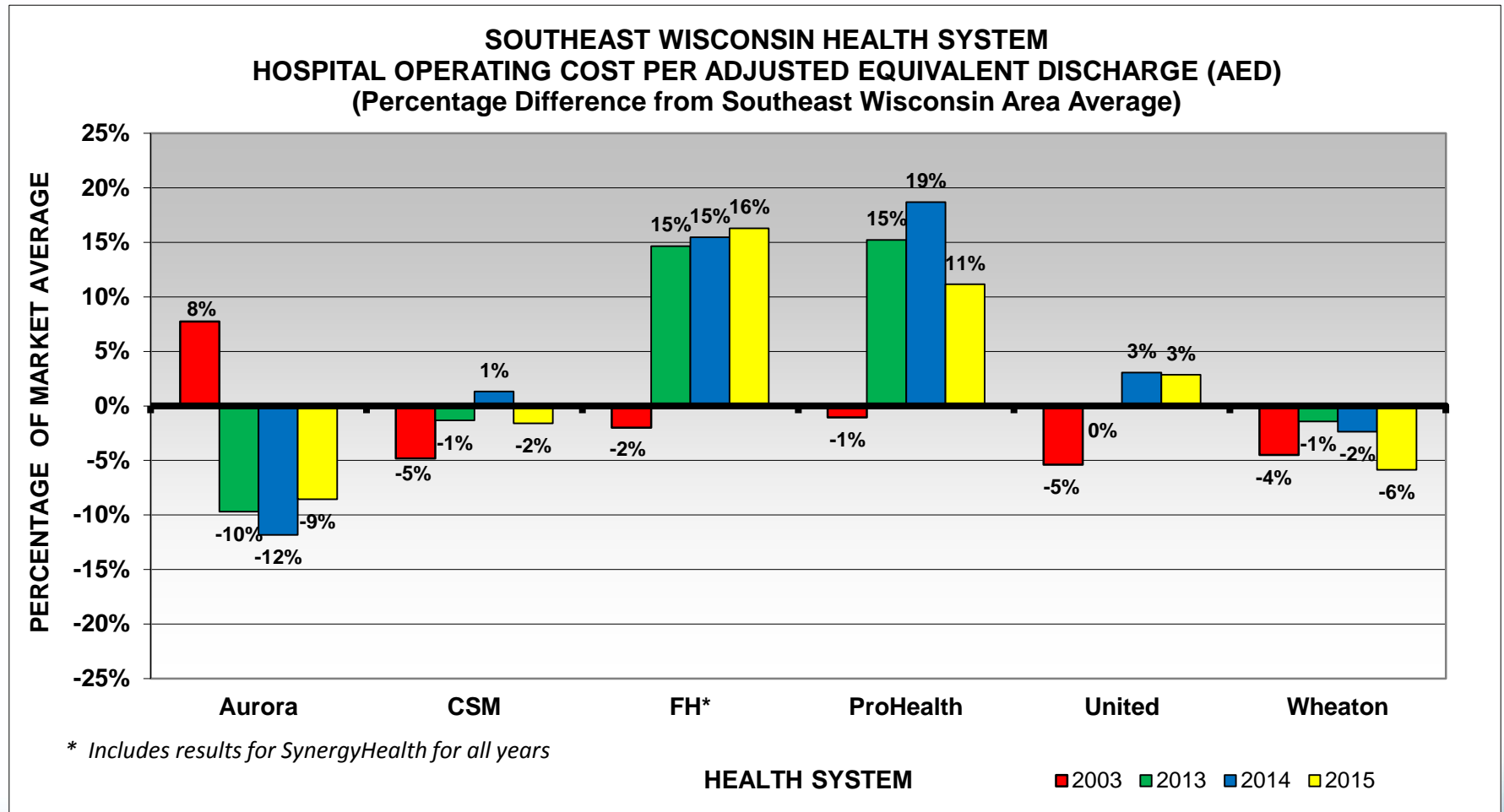
# Southeast Wisconsin Health System Hospital Operating Cost Changes (2014 - 2015)



# 2015 Average Health System Hospital Operating Cost Level Comparisons

- Substantial variation exists among SE Wisconsin health system average per-unit operating costs levels.
  - Approximately 27% difference between health system with highest (Froedtert) and lowest (Aurora) per-unit operating costs
  - ProHealth (higher) and Wheaton (lower) per unit costs also vary substantially from SE Wisconsin average
- Relative per-unit cost levels in 2015 of many health systems are significantly different than relative cost levels in 2003
  - Aurora had highest per-unit operating costs in 2003
  - Per-unit costs of all other health systems were below SE Wisconsin average

# Southeast Wisconsin Health System Hospital Operating Comparisons





# Distribution of Hospital Cost Shift Burden

# Hospital Cost Shift Burden Distribution

- Our initial 2003 study identified the proportionately greater hospital cost shift burden borne by the Milwaukee area's larger health systems as a factor that contributed to higher commercial hospital payment levels in the Milwaukee area
- This report measures the change in the aggregate SE Wisconsin health system hospital cost shift burden over time as well as changes in the distribution of the hospital cost shift burdens between health systems

# Hospital Cost Shift Burden – *Methods*

- Governmental cost shift burdens were estimated as the difference between Medicare, Medicaid and GAMP payments and a pro-rata share of total hospital operating costs and profit
- Charity Care costs and Bad Debts from all types of patients are also included as non-governmental sources in our analysis
- Health system cost management effectiveness may affect cost shift burden levels
  - All reported operating costs are assumed to be “necessary”
- Aggregate cost shift burden is affected over time by changes in:
  - Government payer payment levels and patient volumes
  - Hospital operating cost and profit levels
  - Health plan benefit designs
  - Local economic conditions

# Cost Shift Burden – *Results*

- In 2015, more than one-third of SE Wisconsin hospital payments used to offset government payment shortfalls, charity care costs and bad debts
- From 2013 to 2015, the relative impact of the sources of SE Wisconsin hospital cost shift burdens changed significantly in part due to the implementation of the Affordable Care Act (ACA)
  - Medicare cost shift burdens increased by 39% during this period
  - Medicaid cost shift burdens increased by 53% during this period
  - Cost shift burdens related to charity care and bad debts declined by 43% during this period
- Medicare and Medicaid patients accounted for roughly 85% of total SE Wisconsin hospital cost shift burdens in 2015
  - These sources accounted for 69% of total hospital burdens in 2013

# Southeast Wisconsin Aggregate Hospital Cost Shift Burden

<b>TOTAL SOUTHEAST WISCONSIN AREA HOSPITAL COST SHIFT BURDEN (IN MILLIONS OF DOLLARS)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>MEDICARE</b>	429	638	747	889
<b>MEDICAID</b>	165	216	260	331
<b>GAMP</b>	20	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	614	854	1,007	1,220
<b>CHARITY CARE COST</b>	36	98	108	55
<b>BAD DEBT</b>	133	286	248	165
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	169	383	356	220
<b>AGGREGATE COST SHIFT BURDEN</b>	782	1,238	1,363	1,439
<b>% of Commercial Payments (Total Government)</b>	25.2%	23.5%	26.6%	30.6%
<b>% of Commercial Payments (Total Non-Government)</b>	6.9%	10.6%	9.4%	5.5%
<b>% of Commercial Payments (Aggregate)</b>	32.1%	34.1%	36.0%	36.1%

Attachment 1 includes similar information for each Southeast Wisconsin Health System

# Factors Affecting Relative Health System Hospital Cost Shift Burdens

- Relative mix of Commercial, Medicare, Medicaid and Charity Care “business” relative to the Southeast Wisconsin average percentage
  - Higher levels of commercial business provide larger “base” for spreading cost shift burden amounts from other sources
- Differences in hospital Medicare and Medicaid payment levels including medical education or other enhanced payments
- Hospital operating cost levels relative to the Southeast Wisconsin average
- Differences in Charity Care policies and effectiveness of collection practices impacting Bad Debts
  - Froedtert and Wheaton’s bad debt decreased in 2015
  - Aurora’s charity care declined 50% in 2015

# Relative Southeast Wisconsin Hospital Cost Shift Burden Comparison – *Methods*

- Comparisons of the estimated relative impact of cost shift burdens on each health system's commercial payments
- Calculations based on each health system's total cost shift burden as a percentage of its commercial payment levels
  - Represents each health system's share of commercial hospital payments used to offset cost shift burdens
- Comparisons based on difference between individual health system cost shift burden percentage and market average (36%)
  - Reported percentages are estimated impacts of higher (or lower) cost shift burdens on each health system's commercial payment levels

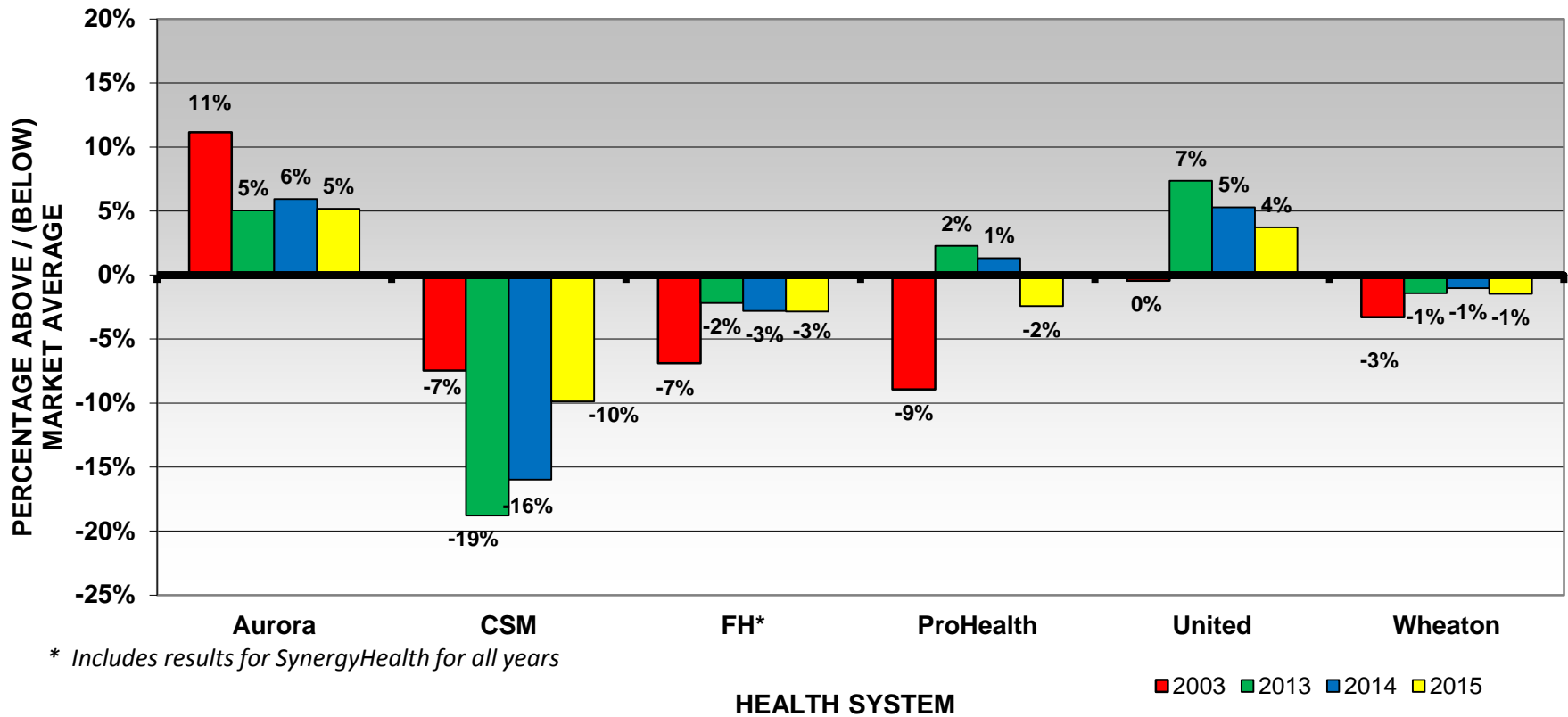
# 2015 Southeast Wisconsin Hospital Relative Cost Shift Burden – *Results*

- There has been a redistribution of hospital cost shift burdens among SE Wisconsin health systems since 2003
  - In 2003, only two health systems had cost shift burdens within 5% of the SE Wisconsin average
  - In 2015, 5 of 6 SE Wisconsin health systems had cost shift burdens within 5% of the SE Wisconsin average
- In 2015, Aurora and United used the highest percentages of their hospital commercial payments to compensate for cost shift burdens
  - CSM used the lowest percentage of hospital commercial payments to compensate for cost shift burdens
- On a combined basis, Aurora and Froedtert accounted for about 66% of the total SE Wisconsin hospital cost shift burdens in 2015
  - These two health system accounted for about 59% of total cost shift burdens in 2003



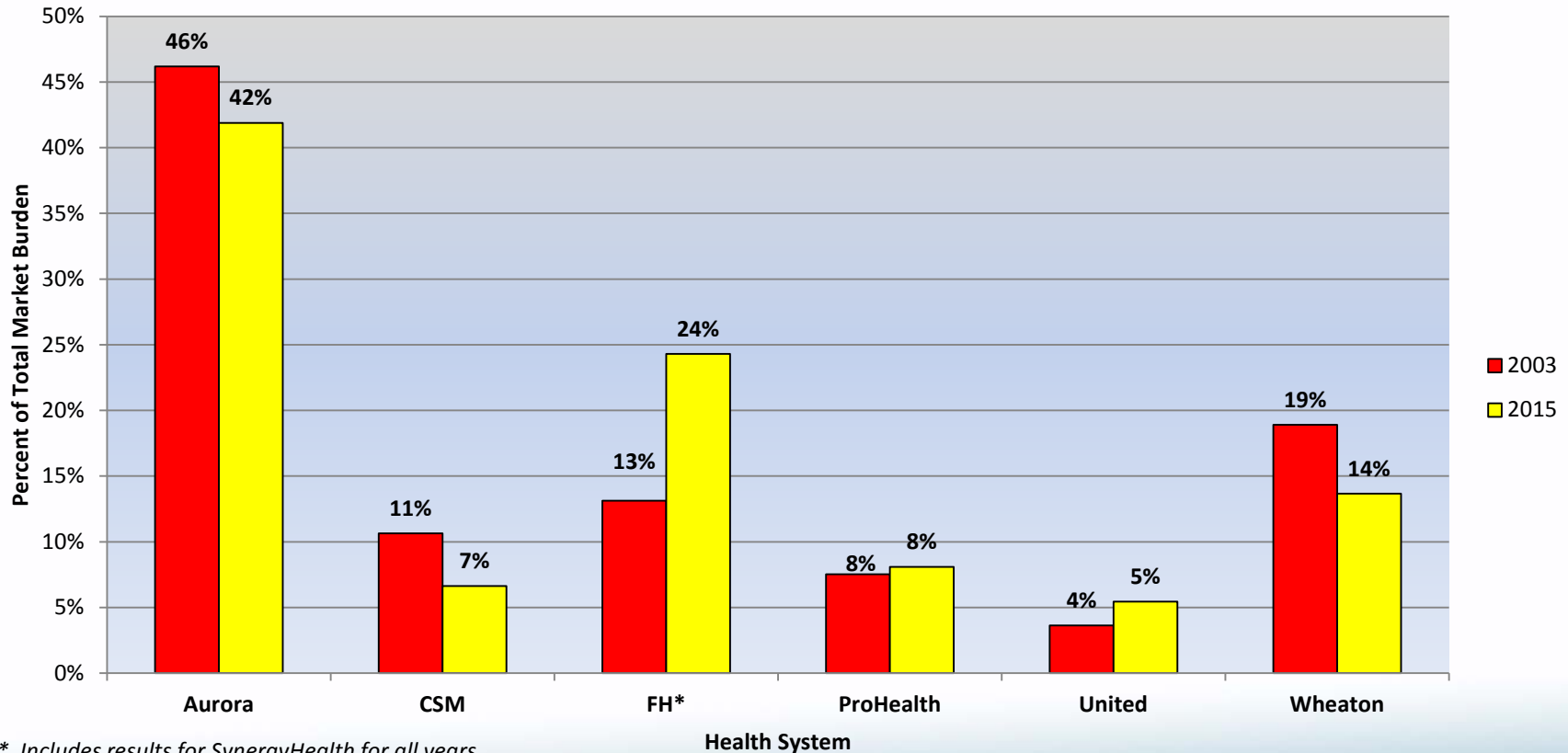
# Distribution of Relative Hospital Cost Shift Burden Among Health Systems

Southeast Wisconsin Health System Cost Shift Burden  
(Above/Below Market Average as a Percentage of Commercial Allowed)



# Southeast Wisconsin Commercial Cost Shift Burden Distribution

## Southeast Wisconsin Health System Cost Shift Burden (Percent of Total Market Burden)



# Commercial Market Concentration

# Commercial Market Concentration

- Our initial 2003 study identified the high geographic concentration of hospitals within individual Milwaukee area health systems as a factor contributing to Milwaukee's higher commercial hospital payment levels
  - Purchasers had relatively limited health system options in many areas
- This portion of our report attempts to measure changes in the availability of health system alternatives within SE Wisconsin by comparing changes in the market shares of “predominant” health systems in each area
  - “Predominant Health System” defined as health system with largest inpatient market share
  - Measured separately for each 5 digit zip code

# Commercial Market Concentration – *Background*

- Each health system's average commercial market shares appear to be the result of relatively higher market shares in a small number of zip codes
- Preference for Closest Hospitals
  - Health system commercial market shares appeared to be highly related to hospital proximity throughout the study period (2003 through 2015)
    - Predominant Health System commercial market shares tended to be higher when competitors were located farther away
- There was a 33% decline in total commercial discharges from 2003 through 2015 due to utilization and commercial enrollment changes
  - City of Milwaukee affected significantly (50% of the total decline), impact varies elsewhere
- The majority of the decline occurred from 2003 to 2009 (approximately 29% decline)
  - 2010 to 2015 has been relatively stable (approximately 4% decline)

# Commercial Market Concentration – *Data*

- Measures used WHA hospital inpatient discharge data
- Included only commercial discharges of residents from the seven county area to “Included Hospitals,” Mercy Health Services (Lake Geneva or Janesville hospitals), and Columbia Center (Mequon)
  - Excluded Medicare, Medicaid, GAMP, Charity, Self Pay, and other non-commercial discharges
  - Excluded seven county area residents discharged from hospitals in other markets (Madison, Green Bay, Fond du Lac, Chicago, etc.)
- Effective with their merger in 2009, market shares for Synergy Health and Froedtert Health were calculated on a combined basis (presented as Froedtert Health)
  - Calculated separately prior to 2009

# Commercial Market Concentration – *Methods*

- Based on analysis of health system inpatient commercial discharge market shares of commercially insured members residing in each Southeast Wisconsin zip code (113 zip codes)
- Health system with the highest commercial market share in each zip code was defined as the “Predominant Health System” for that zip code
- Market average comparisons were developed using the weighted averages of Predominant Health System commercial market shares for each zip code
- Changes in the Predominant Health System for each zip code over the study period (2003 through 2015) were also reviewed

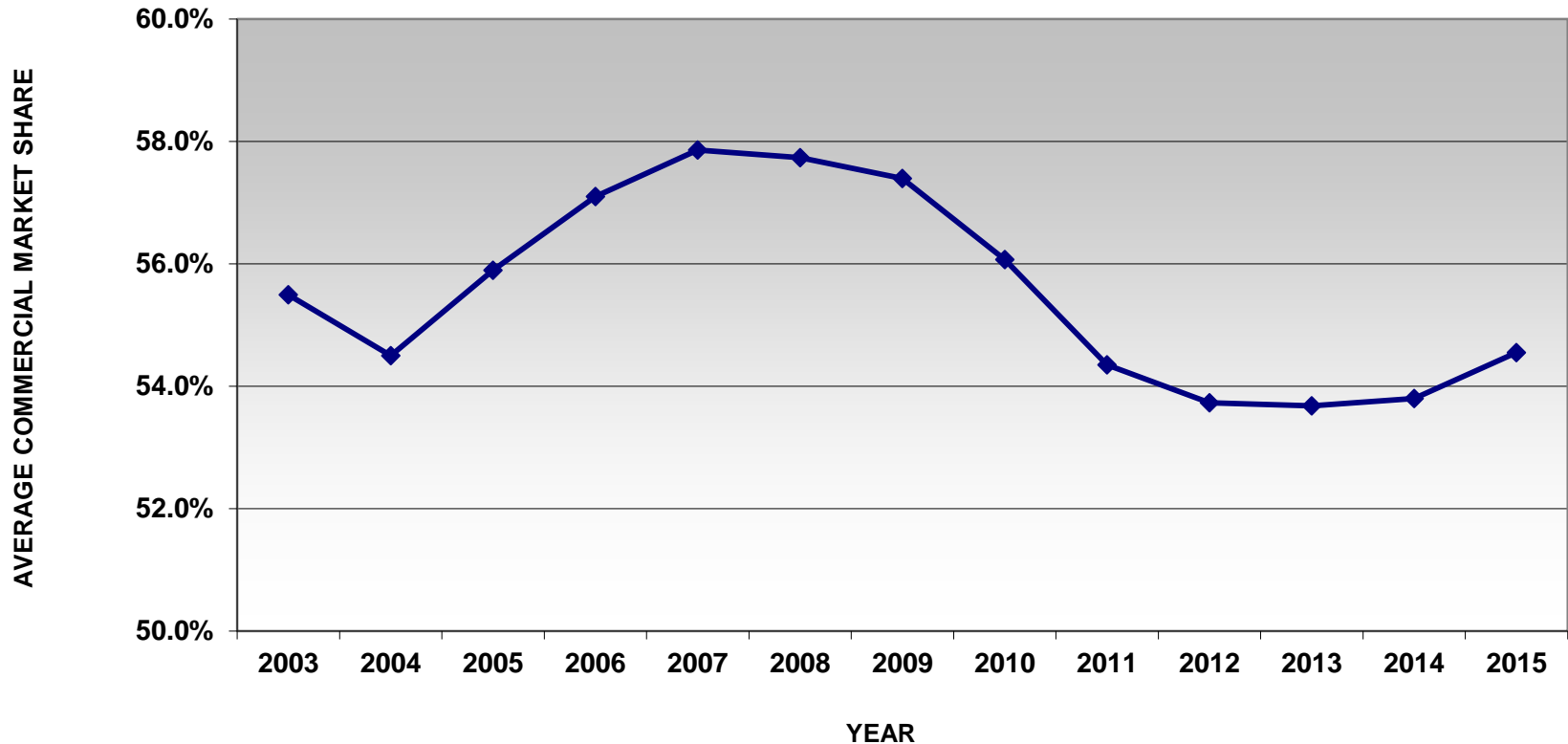
# Aggregate Market Concentration Changes

- 2015 SE Wisconsin weighted average Predominant Health System market shares remain near the lowest levels during the study period
  - First increase since 2007 but average Predominant Health System market shares remain among the lowest during the study period
  - Increase does not appear to be concentrated within health systems or by geography
- While not reflected in this study, the 2016 merger of CSM and Wheaton through Ascension Health will likely result in increased Predominant Health System market shares in future studies



# Southeast Wisconsin Average “Predominant” Health System Market Shares

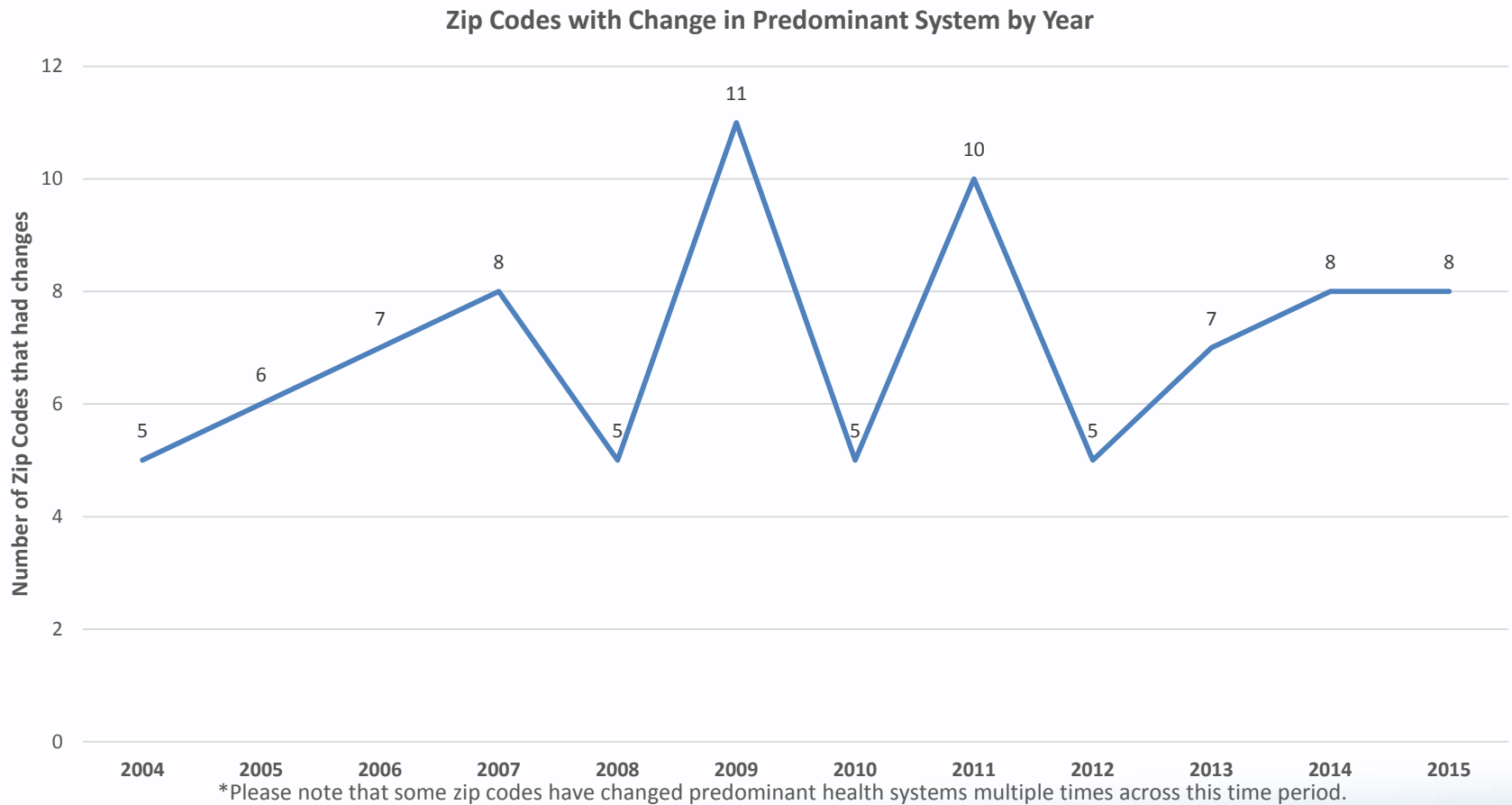
WEIGHTED AVERAGE "PREDOMINANT" HEALTH SYSTEM  
COMMERCIAL MARKET SHARE



# Local Area Market Concentration Changes

- While the aggregate market measures have been relatively stable over the years, there have been significant changes in Predominant Health System identity in many zip codes
- Approximately 41% of the included zip codes experienced a change of Predominant Health System between 2003 and 2015
  - 85 total changes of Predominant Health System
  - The highest number of changes occurred in 2009 and 2011 coinciding with the time period of greatest decline in average Predominant Health System market shares

# Southeast Wisconsin Predominant Health System Changes by Year



# Local Area Market Concentration Changes

- Predominant Health System market shares within many zip codes also experienced significant changes over the study period
  - Almost 58% of SE Wisconsin zip codes had significant (>10%) changes in Predominant Health System market share since 2003
- About 37% of zip codes experienced Predominant Health System market share reductions of at least 10% between 2003 and 2015
  - Ozaukee County was affected most significantly
    - 75% of county zip codes changed Predominant Health System after opening of Aurora hospital in Grafton
  - At least half of zip codes in Racine and Walworth counties also experienced >10% reductions in Predominant Health System market shares
  - Affected Milwaukee County zip codes appear to be the result of increased Aurora market shares in the northern part of the county

# Local Area Market Concentration Changes *(continued)*

- Only Milwaukee and Washington counties had zip codes with significant (>10%) increases in predominant health system market share increases since 2003
  - Most affected Milwaukee County zip codes are located in areas in the southern half of the county where Aurora increased its Predominant Health System market shares
  - Affected Washington County zip codes were impacted by the merger of Synergy and Froedtert Health

# Predominant Health System Market Share Changes (2003 – 2015)

## Predominant Health System Market Share Changes Percentage of Affected Zip Codes by County 2003 to 2015

County	Count of Zip Codes	Significant (>10%) Decrease	10% or Less Change	Significant (>10%) Increase
Kenosha	11	27.3%	72.7%	0.0%
Milwaukee	35	20.0%	34.3%	45.7%
Ozaukee	8	100.0%	0.0%	0.0%
Racine	12	66.7%	33.3%	0.0%
Walworth	12	50.0%	50.0%	0.0%
Washington	11	0.0%	45.5%	54.5%
Waukesha	24	41.7%	54.2%	4.2%
<b>Total</b>	<b>113</b>	<b>37.2%</b>	<b>42.5%</b>	<b>20.4%</b>

Attachment 2 includes Predominant Health System market share information for each Southeastern Wisconsin zip code

# Caveats and Use of This Report

# Caveats

Hospital commercial payment and operating cost comparisons are based on hospital financial reports filed with the Wisconsin Hospital Association (WHA). To the extent health systems use different methods to account for the commercial payments or operating costs of its hospitals, or include non-hospital costs or payments in their reports to WHA, our comparisons may not be valid

Cost shift burden results pertain to aggregate commercial and governmental hospital payment levels only and do not reflect cost shift burden from non-hospital services (Physicians, Home Health, Retail Pharmacy, etc.)

Our comparisons of health system geographic market concentration are based on commercial inpatient discharge data only. Health system market shares for outpatient services and / or non-commercial payers may be different

Our comparisons were based on information from 2015 and may not apply to subsequent time periods

Our analyses were performed on information intended to represent entire SE Wisconsin market and may not apply to information limited to individual commercial health plans, local area markets or other subsets of SE Wisconsin

Results were developed using data that we did not audit, but we did review the data for general reasonableness



# Use of This Report

This report is intended for use in collaborative quality and cost improvement initiatives. Use of this information for public relations, general media, contract negotiations or other similar business purposes is expressly prohibited

Reproduction of any portion of this report in any manner is also expressly prohibited without written permission from the Greater Milwaukee Business Foundation on Health and Milliman

Please review the full report (including the Appendix and its Attachments) and use the information in its entirety. Market comparisons using only one measure or even a limited number of comparisons can be misleading

# *Thank You*

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# Appendices



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**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 – 2015  
Southeast Wisconsin Commercial  
Payer Hospital Payment Levels**

**APPENDIX**

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## TABLE OF CONTENTS

<b>I.</b>	<b>OVERVIEW .....</b>	<b>1</b>
<b>II.</b>	<b>DEFINITION OF SOUTHEAST WISCONSIN HEALTH SYSTEMS.....</b>	<b>3</b>
<b>III.</b>	<b>DATA SOURCES AND TIME PERIOD .....</b>	<b>5</b>
<b>IV.</b>	<b>HOSPITAL SERVICES FORM THE BASIS OF COMPARISON .....</b>	<b>6</b>
<b>V.</b>	<b>QUALITY COMPARISONS .....</b>	<b>7</b>
<b>VI.</b>	<b>METHODOLOGY AND ASSUMPTIONS .....</b>	<b>8</b>
	Hospital Commercial Payment Level Comparisons.....	8
	Hospital Operating Cost Comparisons.....	8
	Cost Shift Burden Estimates .....	9
	Geographic Market Concentration Comparisons.....	9
<b>VII.</b>	<b>USES OF INFORMATION .....</b>	<b>10</b>
<b>VIII.</b>	<b>CAVEATS AND LIMITATIONS ON USE .....</b>	<b>11</b>
<b>IX.</b>	<b>FOR FURTHER INFORMATION .....</b>	<b>12</b>

**ATTACHMENT 1      Southeast Wisconsin Health System Cost Shift Burden Comparisons**

**ATTACHMENT 2      Predominant Health System Commercial Market Share by Zip Code**

This Appendix describes the data, methods, assumptions, and tools Milliman used to compare Southeast Wisconsin market average and health system specific hospital commercial payment levels, total hospital operating cost levels, cost shift burden from non-commercial payers (including charity care and bad debts), and overall levels of geographic commercial market concentration among Southeast Wisconsin health systems from 2003 through 2015. Measuring hospital commercial payment and operating cost levels, impacts of commercial and governmental payments to hospitals, and market share concentrations is complicated and often controversial. Therefore, the descriptions in this Appendix are crucial to the effective use of this hospital comparison. Milliman's comparison of Milwaukee hospital commercial payment and operating cost levels, cost shift burden, and market concentrations should only be considered in its entirety and only after consideration of the information included in this Appendix.

## I. OVERVIEW

The Greater Milwaukee Business Foundation on Health (the Foundation) commissioned Milliman to provide updated comparisons of five market factors previously identified by Milliman as contributing to higher commercial hospital payment levels in the Milwaukee area (Milwaukee, Ozaukee, Washington, and Waukesha counties) compared to other Midwest cities in 2003. This report provides comparisons of 2003 baseline measures for Southeast Wisconsin (Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties) commercial hospital payment levels and three of the five factors (hospital operating cost levels, cost shift burden, and geographic commercial market concentration) to similar market and individual health system measures for 2013, 2014 and 2015. Milliman's previous report issued in 2015 included annual comparisons of the same measures from 2003 through 2014. Information necessary to measure the other two factors identified as impacting the 2003 hospital costs was not available for comparison after 2005 and is not included in either study.

The Foundation's goals for these comparisons are to:

- Provide overall market average and individual health system hospital commercial payment level, operating cost, and cost shift comparisons,
- Provide measures of the geographic concentration of health systems operating in Southeast Wisconsin, and
- Measure changes in each factor from 2003 through 2015 with particular emphasis on changes occurring in 2013, 2014 and 2015.

Individual health system inpatient hospital commercial payment comparisons are based on a hospital's total inpatient commercial net revenues (allowed amounts), as reported in hospital financial statements, measured on a per-unit basis. We adjusted each hospital's per-unit commercial payments for differences in commercial inpatient case mix. Outpatient hospital commercial payment comparisons are based on commercial outpatient payment rates as a percentage of each hospital's Medicare outpatient payment rates (both expressed as a percentage of each hospital's billed charges). Average composite (blended inpatient and outpatient) commercial payment levels were reported relative to the market average.

Comparisons of changes in average market commercial payment levels to the Hospital CPI were developed based on changes in the Southeast Wisconsin average per-unit commercial payments adjusted for differences in commercial inpatient case mix and severity, relative percentages of commercial inpatient and outpatient business, and mix of commercial outpatient services among each year.

Hospital operating cost comparisons are based on a hospital's underlying total expenses incurred in providing services to all patients as reported in hospital financial statements, measured on a per-unit basis. We adjusted each hospital's per-unit expenses for differences in inpatient case mix and severity, relative percentages of inpatient and outpatient business, and mix of outpatient services among all hospitals.

Comparisons of "cost shift burden" are based on the impact to commercial payers resulting from government payment shortfalls to Milwaukee area hospitals. "Cost shift burden" is defined as the increase in hospital commercial insurance payment levels necessary to offset the impact of government payments, charity care and bad debts that do not fully cover a pro rata share of operating costs, and operating profit.

Market share concentration measurements are based on health system commercial inpatient discharge market shares of residents in each of the 113 zip codes with reported commercial discharge volumes in Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties. Results of the analyses of individual zip code market shares are weighted by the number of commercial discharges in each zip code when providing overall market comparisons.

## II. DEFINITION OF SOUTHEAST WISCONSIN HEALTH SYSTEMS

Our analyses of hospital operating costs and cost shift burden include all adult, general acute care hospitals with 25 or more facility beds located in Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties.

Our analysis of Southeast Wisconsin health system geographic market share concentration includes all adult, general, acute care hospitals with health system commercial market shares of at least 10% in any individual zip codes located in Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties.

Children's Hospital and Health System and Columbia Center (Columbia Health System) are not included in the analyses or in Southeast Wisconsin averages because of their unique demographic and service characteristics. Mercy Health System is not included in the operating cost and cost shift analyses because of the unique configuration of its Mercy Walworth Hospital and Medical Center (15 beds), its only hospital located within the study area. Discharges from Mercy Health System's Lake Geneva and Janesville, in addition to Columbia Center hospitals, are included in our analysis of geographic concentration of health systems. Information for sub-acute care and non-medical / surgical specialty hospitals (e.g., behavioral health, rehabilitation, and long-term acute care) is also excluded from the analyses.

SynergyHealth and Froedtert Health (FH) merged on July 1, 2008, the first day of SynergyHealth's 2009 fiscal year. Accordingly, we combined the 2003 through 2008 commercial payment levels, operating cost, and cost shift comparison results for both organizations (i.e., Synergy information included with FH) in this report. SynergyHealth and FH market share results were not combined prior to 2009 in our market concentration measurements.

The following table details the individual hospitals from each Southeast Wisconsin health system included in our analyses.



Southeast Wisconsin Comparisons Included Hospitals and Health Systems	
Health System	Included Hospitals
Aurora Health Care (Aurora)	Aurora Medical Center – Grafton Aurora Medical Center – Kenosha Aurora Medical Center – Summit Aurora Medical Center - Washington County Aurora Memorial Hospital of Burlington Aurora Sinai Medical Center Aurora St. Luke’s Medical Center (Oklahoma Campus) Aurora St. Luke’s Medical Center (South Shore Campus) Aurora West Allis Medical Center Aurora Lakeland Medical Center
Columbia St. Mary’s (CSM)	Columbia St. Mary’s Hospital – Milwaukee Columbia St. Mary’s Hospital – Ozaukee Orthopedic Hospital of Wisconsin
Froedtert Health (FH)	Community Memorial Hospital (Menomonee Falls) Froedtert and Medical College of Wisconsin St. Joseph’s Hospital (West Bend) – formerly SynergyHealth
United Hospital System (United)	Kenosha Medical Center Campus St. Catherine’s Medical Center Campus
ProHealth Care (ProHealth)	Oconomowoc Memorial Hospital Waukesha Memorial Hospital
Wheaton Franciscan Healthcare (Wheaton)	Midwest Orthopedic Specialty Hospital St. Michael Hospital (closed in 2006) Wheaton Franciscan Healthcare – All Saints Wheaton Franciscan Healthcare – Elmbrook Memorial Wheaton Franciscan Healthcare – Franklin Wheaton Franciscan Healthcare – St. Francis Wheaton Franciscan Healthcare – St. Joseph Wheaton Franciscan Healthcare – Wisconsin Heart Hospital

### III. DATA SOURCES AND TIME PERIOD

We used hospital inpatient claims data and information included in the Wisconsin Hospital Fiscal Survey, as reported by each hospital obtained from the Wisconsin Hospital Association (WHA) Information Center, as the basis for each analysis.

CMS-DRG weights obtained from the Centers for Medicare and Medicaid Services (CMS) were used to calculate inpatient case-mix adjustments.

The hospital commercial payment, operating cost, and cost shift burden comparisons are based on inpatient claims and financial report data from each health system's fiscal year as reported in the WHA Discharge Database. Southeast Wisconsin health systems have different fiscal years ending from June 30 through December 31 of each year. We do not believe the differences in health system fiscal years are likely to have a material impact on our comparisons. Individual hospital system information included in the comparisons was developed from summaries of the respective individual Wisconsin Hospital Fiscal Survey reports. These summaries may differ from other publicly available financial information from each hospital system, due to exclusion of non-hospital subsidiaries or accounting treatment of intercompany revenues and expenses. Hospital service and payer mix, reimbursement levels (i.e., discounts), operating costs, and profit levels may change over time. The results of this comparison may be different if the analysis was performed on more recent data.

Hospital Medicare payment percentages were developed using information from the Wisconsin Hospital Fiscal Survey and outpatient claims from the Medicare 5% sample. We excluded inpatient psychiatric, rehabilitation, and transfer patients from each hospital's data. Newborn infants and their mothers were counted as single discharges for the purpose of this analysis. Estimated commercial payments and costs of the excluded patients were removed from each hospital's total commercial payments or expenses, based on each hospital's overall ratio of commercial payments or operating costs to charges.

The measures of geographic market share concentration among health systems are based on commercial inpatient discharge data for residents of Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties admitted to Included Hospitals or Mercy Health Services' Lake Geneva or Janesville hospitals from January 1 through December 31 of each measurement year.

#### **IV. HOSPITAL SERVICES FORM THE BASIS OF COMPARISON**

The hospital commercial payment, operating cost, cost shift, and market share comparisons are based solely on hospital services, payments, costs, and profits. The comparisons do not include commercial payments, operating costs, cost shift burden, or market shares related to other types of health care services such as physicians, home health agencies, pharmacies, and other providers that are not included in each health system's hospital financial statements as reported to WHA. To the extent that any of the health systems have included non-hospital payments or costs in their reports to WHA, our results may not be valid.

The reader of this report should consider all elements of health care costs before drawing conclusions from this report.

## V. QUALITY COMPARISONS

Our analysis did not include any comparisons of quality or outcomes information because such data was outside the scope of the comparisons. Quality information is a critical component of provider evaluation and should be considered when evaluating hospital performance.

## VI. METHODOLOGY AND ASSUMPTIONS

### HOSPITAL COMMERCIAL PAYMENT COMPARISONS

Inpatient hospital commercial payment levels were calculated for each health system by dividing total hospital inpatient commercial payments (billed commercial charges less corresponding contractual allowances) by each health system's commercial case mix adjusted discharges. Case mix adjusted discharges are a standardized unit of measure used to adjust each hospital's commercial inpatient payment levels for differences in service mix among the hospitals. Each hospital's case mix is developed using MSDRGs and reflects relative differences among admission types. Normalizing for these differences allows for a consistent comparison of inpatient discharges from one hospital to another.

Outpatient hospital commercial payment levels were estimated as a percentage of each hospital's average Medicare outpatient payment levels. Hospitals in Southeast Wisconsin are generally paid on a uniform outpatient fee schedule by Medicare. Our estimates of commercial payment levels as a percentage of Medicare payment levels were developed by comparing the relative average commercial outpatient payment levels (expressed as a percentage of billed charges) to the average Medicare outpatient payment levels (also expressed as a percentage of billed charges).

The composite (blended inpatient and outpatient) commercial payment levels were developed by blending each health system's relative inpatient and outpatient payment levels (relative to market averages) using the average mix of inpatient and outpatient billed charges for all hospitals included in our analysis.

We compared changes in Southeast Wisconsin average hospital commercial payment levels to estimated changes in national average commercial hospital payments using the United States Bureau of Labor Statistics Hospital Services component of the All Urban Consumer Price Index for each year. These comparisons relied on per-unit hospital commercial payment levels, calculated for each health system by dividing total hospital commercial payments (billed commercial charges less corresponding contractual allowances) by each health system's commercial adjusted equivalent discharges. Adjusted equivalent discharges are a standardized unit for measuring each hospital's combined inpatient and outpatient activity adjusting for differences in inpatient case-mix and severity, outpatient service mix, and relative mix of inpatient and outpatient business mix among hospitals.

### HOSPITAL OPERATING COST COMPARISONS

Per-unit hospital operating cost levels were calculated for each health system by dividing total hospital operating costs (net of other operating revenues) by each health system's total adjusted equivalent discharges. Adjusted equivalent discharges are a standardized unit for measuring each hospital's combined inpatient and outpatient activity adjusting for differences in inpatient case-mix and severity, outpatient service mix, and relative mix of inpatient and outpatient business mix among hospitals.

We compared changes in Southeast Wisconsin average hospital operating cost levels to estimated changes in national average hospital costs using the Centers for Medicare and Medicaid Services' Hospital Market Basket Index and the United States Bureau of Labor Statistics Hospital Producer Price Index for each year.

## **COST SHIFT BURDEN ESTIMATES**

Southeast Wisconsin hospital cost shift burden is calculated for Medicare, Wisconsin Medicaid, Milwaukee County General Assistance (GAMP), and Charity Care patient activity at each hospital. We also included each hospital's bad debts as source of cost shift burden in each year. Effective January 1, 2009 GAMP enrollees in Milwaukee County were transitioned into the Wisconsin Medicaid program. Accordingly, GAMP cost shift burden is not reported separately for fiscal years 2013, 2014 and 2015.

Cost shift burden related to patients covered by other governmental payers, such as CHAMPUS or non-Wisconsin Medicaid, are not reported separately in the comparisons due to the relatively immaterial impact of these patients on Southeast Wisconsin hospital overall cost shift burden levels.

Medicare, Medicaid, GAMP, charity care, and bad debt cost shift burden estimates were developed using hospital specific Wisconsin Hospital Fiscal Survey data for each payer summarized by health system to provide the information presented in the market and hospital system comparisons. The payer specific cost shift burden for each health system was estimated by comparing total reimbursement from each payer to a pro rata share of the net operating cost (net of bad debt adjustments) and hospital operating profit for all health system hospitals. Hospital net operating costs and profits were allocated among payment sources based on the ratio of each hospital's operating costs or operating profits to gross patient revenues (billed charges). Total hospital operating expenses were reduced by non-payer sources of revenue (other operating revenue) to calculate the net operating costs used to develop the cost shift burden estimates for each health system. As bad debts represent actual uncollected amounts due to each hospital, we included the full amount of each hospital's reported bad debt expense in our estimates.

The detailed Southeast Wisconsin health system cost shift burden comparisons are included in Attachment 1 to this Appendix.

## **GEOGRAPHIC MARKET CONCENTRATION COMPARISONS**

The analysis of health system geographic market concentration was based on health system market share calculations using commercial discharge data from residents of each zip code in Milwaukee, Kenosha, Racine, Ozaukee, Washington, Walworth, and Waukesha counties (113 total zip codes) for each of the Included Hospitals and Mercy Health Services hospitals in Lake Geneva or Janesville, Wisconsin. The analysis was limited to commercial data in order to better illustrate market characteristics and changes impacting commercial insurance and self-funded health plans.

We measured changes in the overall geographic market concentration of health systems in Southeast Wisconsin by comparing measures of "Predominant Health System" market shares across all zip codes included in the study. The Predominant Health System was defined as the health system with the highest commercial inpatient discharge market share within each zip code. Overall measures of Southeast Wisconsin geographic market concentration were developed by summarizing total commercial inpatient hospital discharge volumes from each zip code based on the Predominant Health System market share within the zip code. Market average comparisons were developed using the weighted averages of Predominant Health System commercial market shares for each zip code.

Predominant Health System market share measures for each zip code are included in Attachment 2 to this Appendix.

## VII. USES OF INFORMATION

The Foundation and Milliman encourage the business, provider, and government communities to use this information to collaborate on quality and cost improvement initiatives. We did not create this information for, and we ask that it not be used in, hospital-specific public relations efforts or for general media purposes. We also ask that this information be reviewed and used in its entirety. Market comparisons using only one measure or even a limited number of measures can be misleading. An informed comparison of health care market characteristics should also incorporate other information, particularly additional quality measures, not included in this report. This information is designed for use by the business community and health care providers, not individual consumers of health care services.

## VIII. CAVEATS AND LIMITATIONS ON USE

Milliman reviewed but did not audit information obtained from public data sources to develop the estimates and measures included in this report. To the extent this information is not accurate; the results of Milliman's analyses may not be accurate. Hospital commercial payment, operating cost and cost shift burden comparisons are based on hospital financial reports filed with WHA. To the extent any of the health systems used different methods to account for the payments or operating costs of its hospitals, or include non-hospital costs or payments in their reports to WHA, our comparisons may not be valid.

Cost shift burden results pertain to aggregate commercial and governmental hospital payment levels only and do not reflect cost shift burden from non-hospital services (Physicians, Home Health, and Retail Pharmacy), unless such information is included in any hospital's reports to WHA.

Our comparisons of health system geographic market concentration are based on commercial inpatient discharge data only. Health system market shares for outpatient services and / or non-commercial payers may be different. Predominant Health System commercial market share measures are subject to random variation from year to year, which is most likely to have the greatest effect in zip codes with low numbers of commercial discharges.

This report is designed to measure changes in certain market factors affecting hospital commercial payment levels. This information may not be appropriate, and should not be used, for other purposes.

This report is intended for use by the Greater Milwaukee Business Foundation on Health. We do not intend this information to benefit any third party.

The terms of Milliman's Consulting Services Agreement with the Greater Milwaukee Business Foundation on Health signed on September 4, 2003 apply to this report and its use.



## IX. FOR FURTHER INFORMATION

Please contact Keith Kieffer, CPA, RPh, in the Milwaukee office of Milliman (Phone: 262-784-2250; Email: [keith.kieffer@milliman.com](mailto:keith.kieffer@milliman.com)) with questions and comments about the comparisons in this report.

## Attachment 1

# Southeast Wisconsin Health System Cost Shift Burden Comparisons

**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 - 2015  
Southeast Wisconsin Commercial  
Payer Hospital Payment Levels**

**Attachment 1**

**Aurora Health Care 2003 - 2015 Aggregate Cost Shift Burden**

<b>Aurora Health Care Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	204	272	337	388
MEDICAID	89	117	116	141
GAMP	11	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>305</b>	<b>389</b>	<b>452</b>	<b>528</b>
CHARITY CARE	11	32	38	19
BAD DEBT	46	96	64	56
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>57</b>	<b>128</b>	<b>102</b>	<b>75</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>361</b>	<b>517</b>	<b>554</b>	<b>603</b>
% of Commercial Payments (Total Government)	36.5%	29.5%	34.3%	36.2%
% of Commercial Payments (Total Non-Government)	6.8%	9.7%	7.7%	5.1%
% of Commercial Payments (Aggregate)	43.3%	39.2%	42.0%	41.3%

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Key Factors Influencing 2003 - 2015  
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**Attachment 1**

**Columbia St. Mary's 2003 - 2015 Aggregate Cost Shift Burden**

<b>Columbia St. Mary's Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	48	15	13	29
MEDICAID	16	(5)	20	29
GAMP	1	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>64</b>	<b>10</b>	<b>33</b>	<b>58</b>
CHARITY CARE	4	11	12	7
BAD DEBT	15	29	32	31
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>19</b>	<b>40</b>	<b>44</b>	<b>38</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>83</b>	<b>50</b>	<b>77</b>	<b>96</b>
% of Commercial Payments (Total Government)	19.1%	3.0%	8.6%	15.8%
% of Commercial Payments (Total Non-Government)	5.6%	12.3%	11.4%	10.4%
% of Commercial Payments (Aggregate)	24.7%	15.3%	20.0%	26.2%

**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 - 2015  
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**Attachment 1  
Froedert Health 2003 - 2015 Aggregate Cost Shift Burden**

<b>Froedert Health* Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	54	138	176	231
MEDICAID	18	51	55	86
GAMP	4	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>76</b>	<b>189</b>	<b>231</b>	<b>317</b>
CHARITY CARE	8	18	19	7
BAD DEBT	19	71	67	26
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>27</b>	<b>89</b>	<b>86</b>	<b>33</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>103</b>	<b>278</b>	<b>317</b>	<b>350</b>
% of Commercial Payments (Total Government)	18.6%	21.8%	24.2%	30.0%
% of Commercial Payments (Total Non-Government)	6.6%	10.2%	9.0%	3.1%
% of Commercial Payments (Aggregate)	25.3%	32.0%	33.2%	33.2%

*\* Includes results for SynergyHealth for all years.*

**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 - 2015  
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**Attachment 1  
ProHealth Care 2003 - 2015 Aggregate Cost Shift Burden**

<b>ProHealth Care Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	44	94	95	102
MEDICAID	5	7	12	(0)
GAMP	0	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>49</b>	<b>101</b>	<b>108</b>	<b>101</b>
CHARITY CARE	1	7	8	6
BAD DEBT	9	15	14	9
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>10</b>	<b>22</b>	<b>22</b>	<b>15</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>59</b>	<b>123</b>	<b>130</b>	<b>116</b>
% of Commercial Payments (Total Government)	19.2%	29.8%	30.9%	29.6%
% of Commercial Payments (Total Non-Government)	4.0%	6.5%	6.3%	4.4%
% of Commercial Payments (Aggregate)	23.2%	36.3%	37.2%	33.9%

**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 - 2015  
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**Attachment 1  
United Hospital System 2003 - 2015 Aggregate Cost Shift Burden**

<b>United Hospital System Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	17	38	46	48
MEDICAID	5	16	17	15
GAMP	0	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>22</b>	<b>54</b>	<b>63</b>	<b>62</b>
CHARITY CARE	2	4	5	4
BAD DEBT	5	23	20	12
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>6</b>	<b>27</b>	<b>25</b>	<b>16</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>28</b>	<b>81</b>	<b>88</b>	<b>78</b>
% of Commercial Payments (Total Government)	24.5%	27.8%	29.6%	32.0%
% of Commercial Payments (Total Non-Government)	7.2%	13.9%	11.7%	8.2%
% of Commercial Payments (Aggregate)	31.7%	41.7%	41.3%	40.2%

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**Attachment 1**

**Wheaton Franciscan Healthcare 2003 - 2015 Aggregate Cost Shift Burden**

<b>Wheaton Franciscan Healthcare Cost Shift Burden (in \$Millions)</b>				
	<b>2003</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
MEDICARE	63	81	80	91
MEDICAID	32	31	40	61
GAMP	4	0	0	0
<b>TOTAL GOVERNMENT COST SHIFT BURDEN</b>	<b>99</b>	<b>111</b>	<b>120</b>	<b>153</b>
CHARITY CARE	10	26	25	13
BAD DEBT	40	52	51	31
<b>TOTAL NON-GOVERNMENT COST SHIFT BURDEN</b>	<b>49</b>	<b>78</b>	<b>76</b>	<b>44</b>
<b>AGGREGATE COST SHIFT BURDEN</b>	<b>148</b>	<b>189</b>	<b>196</b>	<b>197</b>
% of Commercial Payments (Total Government)	19.2%	19.2%	21.3%	26.9%
% of Commercial Payments (Total Non-Government)	9.6%	13.4%	13.6%	7.7%
% of Commercial Payments (Aggregate)	28.8%	32.6%	34.9%	34.6%



## Attachment 2

# Predominant Health System Commercial Market Share by Zip Code

**Greater Milwaukee Business Foundation on Health  
Key Factors Influencing 2003 - 2015  
Southeast Wisconsin Commercial  
Payer Hospital Payment Levels**

Predominant Health System Key	
A - Aurora	P - ProHealth
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**Attachment 2  
Market Concentration**

**Predominant Health System Market Share by Zip Code**

Zip Code			Predominant Health System Market Share				Predominant Health System				Commercial Discharges			
<i>City</i>	<i>County</i>	<i>Zip</i>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Allenton	Washington	53002	45.5%	79.7%	62.3%	62.9%	S	F	F	F	145	79	69	97
Belgium	Ozaukee	53004	83.0%	61.0%	57.6%	69.8%	C	A	A	A	153	118	132	126
Brookfield	Waukesha	53005	49.3%	34.2%	32.8%	30.3%	W	F	W	W	900	726	787	743
Butler	Waukesha	53007	46.0%	46.5%	60.9%	38.0%	F	F	F	F	113	71	69	71
Cedarburg	Ozaukee	53012	75.6%	40.4%	41.8%	43.9%	C	A	A	C	817	617	636	670
Colgate	Washington	53017	60.2%	67.0%	68.8%	69.6%	F	F	F	F	266	224	192	204
Delafield	Waukesha	53018	69.2%	46.9%	49.7%	40.0%	P	P	P	P	289	226	187	240
Fredonia	Ozaukee	53021	69.2%	54.2%	50.0%	56.5%	C	A	A	A	247	190	184	209
Germantown	Washington	53022	63.1%	69.1%	64.7%	64.1%	F	F	F	F	1,097	695	658	774
Grafton	Ozaukee	53024	80.5%	55.5%	55.3%	53.2%	C	A	A	A	844	705	703	737
Hartford	Washington	53027	42.0%	50.6%	48.1%	50.6%	A	F	F	F	1,209	939	810	844
Hartland	Waukesha	53029	60.4%	45.1%	42.0%	43.1%	P	P	P	P	962	656	636	652
Hubertus	Washington	53033	68.7%	70.6%	76.7%	66.7%	F	F	F	F	284	170	189	171
Jackson	Washington	53037	35.8%	59.6%	65.5%	58.0%	F	F	F	F	481	450	478	419
Kewaskum	Washington	53040	61.2%	74.5%	75.0%	77.8%	S	F	F	F	330	282	276	311
Brookfield	Waukesha	53045	53.1%	35.0%	35.4%	37.9%	W	W	W	W	966	698	656	688
Lannon	Waukesha	53046	69.2%	77.8%	52.5%	83.3%	F	F	F	F	13	27	40	30
Menomonee Falls	Waukesha	53051	68.4%	69.1%	67.4%	67.7%	F	F	F	F	2,142	1,414	1,347	1,354
Nashotah	Waukesha	53058	64.7%	38.8%	43.9%	40.7%	P	P	P	A	190	85	82	86
Oconomowoc	Waukesha	53066	78.7%	50.9%	50.2%	51.4%	P	P	P	P	1,579	1,012	1,043	1,147
Pewaukee	Waukesha	53072	52.6%	48.8%	42.1%	43.7%	P	P	P	P	1,231	908	907	918
Port Washington	Ozaukee	53074	86.1%	60.0%	62.0%	63.8%	C	A	A	A	617	492	519	522
Richfield	Washington	53076	65.3%	86.3%	67.4%	65.7%	F	F	F	F	173	117	135	143
Saukville	Ozaukee	53080	78.8%	57.0%	47.8%	59.1%	C	A	A	A	312	249	230	252
Slinger	Washington	53086	37.7%	51.7%	57.3%	59.6%	A	F	F	F	374	267	314	314
Sussex	Waukesha	53089	45.6%	45.0%	49.2%	45.7%	F	F	F	F	928	667	687	681
West Bend	Washington	53090	50.9%	72.4%	70.1%	69.2%	S	F	F	F	271	709	722	766
Thiensville	Ozaukee	53092	70.2%	47.2%	43.6%	45.0%	C	C	C	C	953	638	645	676
West Bend	Washington	53095	49.9%	74.5%	71.9%	70.1%	S	F	F	F	1,424	1,037	960	940
Mequon	Ozaukee	53097	68.6%	43.3%	46.9%	37.0%	C	C	C	C	188	187	196	165
Big Bend	Waukesha	53103	59.5%	47.7%	60.5%	53.4%	P	P	P	P	190	128	147	103
Bristol	Kenosha	53104	47.4%	43.5%	48.6%	55.0%	A	U	A	A	209	184	175	169
Burlington	Racine	53105	74.8%	66.7%	68.3%	71.9%	A	A	A	A	1,334	953	1,090	963
Caledonia	Racine	53108	65.8%	43.5%	45.2%	44.2%	W	W	W	W	187	138	124	113
Cudahy	Milwaukee	53110	46.7%	67.3%	65.0%	69.1%	A	A	A	A	1,018	640	677	656
Darien	Walworth	53114	61.2%	49.2%	54.5%	52.4%	A	A	A	M	98	61	66	63
Delavan	Walworth	53115	72.4%	51.8%	51.5%	54.0%	A	A	A	A	671	400	365	435
Dousman	Waukesha	53118	77.7%	46.7%	42.5%	46.2%	P	P	P	P	341	229	219	212
Eagle	Waukesha	53119	69.9%	69.2%	62.7%	66.4%	P	P	P	P	312	221	158	217
East Troy	Walworth	53120	48.8%	49.3%	52.8%	47.8%	P	P	P	P	545	341	305	278
Elkhorn	Walworth	53121	74.5%	59.8%	58.9%	60.6%	A	A	A	A	933	528	579	609

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**Attachment 2  
Market Concentration**

**Predominant Health System Market Share by Zip Code**

Zip Code			Predominant Health System Market Share				Predominant Health System				Commercial Discharges			
<i>City</i>	<i>County</i>	<i>Zip</i>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2003</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Elm Grove	Waukesha	53122	43.4%	33.7%	39.4%	39.1%	W	W	F	F	249	208	193	207
Fontana	Walworth	53125	77.6%	69.2%	52.3%	56.4%	A	A	A	A	76	13	44	39
Franksville	Racine	53126	60.4%	48.4%	45.0%	46.2%	W	W	W	W	278	273	240	275
Genoa City	Walworth	53128	83.5%	72.7%	68.6%	74.8%	A	A	A	A	212	183	175	230
Greendale	Milwaukee	53129	46.5%	61.1%	60.1%	64.2%	A	A	A	A	709	527	449	478
Hales Corners	Milwaukee	53130	48.1%	63.2%	54.5%	55.7%	A	A	A	A	372	272	297	289
Franklin	Milwaukee	53132	54.3%	56.2%	53.9%	53.1%	A	A	A	A	1,573	1,295	1,233	1,274
Kansasville	Racine	53139	45.8%	44.2%	50.0%	38.7%	A	A	A	A	168	113	112	106
Kenosha	Kenosha	53140	49.1%	52.0%	47.7%	44.0%	U	U	U	A	1,243	742	736	757
Kenosha	Kenosha	53141	50.0%	0.0%	0.0%	0.0%	W	A	A	A	14	0	0	0
Kenosha	Kenosha	53142	48.6%	52.0%	51.1%	49.2%	U	U	U	U	1,440	1,135	1,080	1,138
Kenosha	Kenosha	53143	51.3%	50.1%	53.4%	48.0%	U	U	U	U	1,206	679	698	717
Kenosha	Kenosha	53144	43.8%	49.4%	44.6%	42.1%	U	U	U	U	1,094	773	803	807
New Berlin	Waukesha	53146	31.8%	34.8%	38.6%	33.9%	P	A	P	A	390	256	228	289
Lake Geneva	Walworth	53147	78.6%	68.3%	62.9%	73.1%	A	A	A	A	635	436	453	412
Mukwonago	Waukesha	53149	67.2%	67.2%	58.5%	60.4%	P	P	P	P	966	679	684	604
Muskego	Waukesha	53150	36.0%	42.0%	44.7%	41.5%	A	A	A	A	1,168	1,007	929	969
New Berlin	Waukesha	53151	36.1%	37.5%	40.0%	40.9%	A	A	A	A	1,624	1,233	1,230	1,176
North Prairie	Waukesha	53153	75.2%	61.3%	60.9%	52.2%	P	P	P	P	121	75	87	90
Oak Creek	Milwaukee	53154	48.6%	57.3%	54.6%	58.9%	A	A	A	A	1,803	1,425	1,387	1,420
Pell Lake	Walworth	53157	84.4%	0.0%	0.0%	0.0%	A	A	A	A	45	0	0	0
Pleasant Prairie	Kenosha	53158	47.9%	53.0%	49.3%	50.9%	U	U	U	U	585	577	481	432
Salem	Kenosha	53168	54.6%	44.4%	44.6%	50.2%	A	A	A	A	416	286	289	325
Silver Lake	Kenosha	53170	68.6%	45.2%	42.6%	47.4%	A	A	U	A	86	62	94	97
South Milwaukee	Milwaukee	53172	49.3%	67.4%	68.8%	71.2%	A	A	A	A	1,139	806	836	825
Sturtevant	Racine	53177	80.2%	62.7%	57.1%	55.9%	W	W	W	W	354	327	294	315
Trevor	Kenosha	53179	66.1%	47.9%	57.1%	44.5%	A	U	A	A	177	163	140	155
Twin Lakes	Kenosha	53181	73.6%	63.3%	65.2%	76.0%	A	A	A	A	254	196	178	171
Union Grove	Racine	53182	61.5%	49.1%	51.5%	42.7%	W	W	W	W	452	342	334	358
Wales	Waukesha	53183	77.9%	52.9%	67.9%	48.1%	P	P	P	A	172	87	56	81
Walworth	Walworth	53184	70.6%	57.0%	51.4%	44.4%	A	A	A	A	180	93	111	117
Waterford	Racine	53185	46.8%	51.3%	50.9%	54.4%	A	A	A	A	961	628	642	645
Waukesha	Waukesha	53186	67.9%	57.6%	58.5%	56.4%	P	P	P	P	1,951	1,120	1,133	1,098
Waukesha	Waukesha	53188	75.6%	68.5%	65.9%	66.1%	P	P	P	P	1,928	1,316	1,393	1,308
Waukesha	Waukesha	53189	67.1%	65.1%	61.2%	64.0%	P	P	P	P	1,254	990	985	967
Whitewater	Walworth	53190	52.4%	52.6%	58.6%	50.7%	M	M	M	M	164	135	145	150
Williams Bay	Walworth	53191	84.1%	58.3%	45.6%	71.4%	A	A	A	A	107	72	79	77
Milwaukee	Milwaukee	53201	40.0%	0.0%	0.0%	0.0%	C	A	A	A	35	0	0	0
Milwaukee	Milwaukee	53202	60.4%	51.4%	49.1%	43.5%	C	C	C	C	732	533	521	515
Milwaukee	Milwaukee	53204	39.9%	55.1%	56.8%	64.5%	W	A	A	A	1,273	396	451	560
Milwaukee	Milwaukee	53205	39.3%	52.3%	48.2%	65.9%	W	A	A	A	354	128	139	182

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Milwaukee	Milwaukee	53206	50.1%	36.3%	47.2%	54.4%	W	A	A	A	1,213	328	362	423
Milwaukee	Milwaukee	53207	41.6%	52.0%	51.2%	52.4%	A	A	A	A	2,018	1,407	1,388	1,365
Milwaukee	Milwaukee	53208	43.0%	39.9%	40.8%	47.9%	W	A	A	A	1,434	676	692	723
Milwaukee	Milwaukee	53209	45.5%	31.1%	37.9%	41.6%	W	A	A	A	2,464	1,089	1,082	1,124
Milwaukee	Milwaukee	53210	56.6%	30.3%	33.6%	38.7%	W	A	A	A	1,432	535	535	671
Milwaukee	Milwaukee	53211	70.8%	57.9%	55.9%	54.1%	C	C	C	C	1,276	803	851	838
Milwaukee	Milwaukee	53212	43.8%	50.8%	46.3%	42.6%	C	C	C	C	1,243	547	503	636
Milwaukee	Milwaukee	53213	38.9%	38.1%	40.0%	42.2%	W	F	F	F	1,445	970	997	1,083
Milwaukee	Milwaukee	53214	38.4%	51.8%	54.5%	56.3%	A	A	A	A	1,894	1,210	1,191	1,356
Milwaukee	Milwaukee	53215	40.0%	58.8%	61.3%	64.6%	W	A	A	A	2,582	1,082	1,107	1,163
Milwaukee	Milwaukee	53216	51.8%	31.8%	36.7%	39.7%	W	A	A	A	1,829	727	735	744
Milwaukee	Milwaukee	53217	66.6%	46.5%	45.4%	46.2%	C	C	C	C	1,559	1,077	1,047	1,151
Milwaukee	Milwaukee	53218	50.8%	31.3%	37.2%	43.6%	W	A	A	A	2,191	859	827	983
Milwaukee	Milwaukee	53219	46.1%	63.6%	64.7%	67.8%	A	A	A	A	1,867	1,375	1,405	1,390
Milwaukee	Milwaukee	53220	50.2%	61.2%	65.6%	65.4%	A	A	A	A	1,422	970	980	957
Milwaukee	Milwaukee	53221	49.7%	59.3%	61.3%	64.0%	A	A	A	A	1,994	1,253	1,180	1,288
Milwaukee	Milwaukee	53222	51.5%	32.3%	34.2%	36.0%	W	A	F	A	1,469	1,110	956	1,006
Milwaukee	Milwaukee	53223	36.0%	39.0%	36.8%	45.1%	W	A	A	A	1,493	820	777	782
Milwaukee	Milwaukee	53224	36.0%	41.0%	45.7%	41.8%	W	F	F	F	1,050	590	586	637
Milwaukee	Milwaukee	53225	43.3%	35.7%	39.9%	37.5%	W	F	F	F	1,481	694	706	717
Milwaukee	Milwaukee	53226	43.2%	39.6%	40.7%	47.0%	W	F	F	F	940	780	697	766
Milwaukee	Milwaukee	53227	46.4%	58.2%	61.4%	59.4%	A	A	A	A	1,175	935	829	990
Milwaukee	Milwaukee	53228	50.4%	56.1%	57.0%	63.0%	A	A	A	A	738	549	491	606
Milwaukee	Milwaukee	53233	35.1%	46.5%	65.7%	64.5%	W	A	A	A	279	99	108	200
Milwaukee	Milwaukee	53235	45.6%	62.4%	65.5%	57.4%	A	A	A	A	432	338	304	338
Racine	Racine	53402	78.3%	68.1%	64.4%	64.1%	W	W	W	W	1,826	1,213	1,257	1,174
Racine	Racine	53403	82.5%	69.7%	69.2%	65.0%	W	W	W	W	1,312	746	821	832
Racine	Racine	53404	85.5%	73.3%	75.5%	73.6%	W	W	W	W	718	409	417	413
Racine	Racine	53405	81.2%	71.1%	70.6%	75.3%	W	W	W	W	1,496	1,016	1,020	907
Racine	Racine	53406	79.8%	63.6%	64.0%	65.9%	W	W	W	W	1,241	1,012	964	1,038
Sharon	Walworth	53585	61.9%	61.1%	50.8%	63.2%	A	M	A	A	63	36	59	38
Total											96,872	63,314	62,627	64,762