

ST. LOUIS HEALTH CARE INDUSTRY OVERVIEW

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Message to the Community - Physicians improve value, few take risk

The U.S. is the world's biggest spender on health care yet trails other rich countries on most measures of quality. In recent years, the cost of outpatient care has been the leading contributor to spending growth, driven by rising prices as utilization declined.¹ In St. Louis, prices for care were lower compared to a benchmark for six regions of the U.S. However, patients generally received more tests and treatments, driving outpatient costs higher, a report from the Midwest Health Initiative found.²

Over a decade ago, the Triple Aim was launched by the Institute for Healthcare Improvement as a framework to redesign the U.S. health system to improve health outcomes, patient experience and reduce cost. A focus on **strengthening primary care has emerged as a means to manage health, coordinate care and reduce overuse and unnecessary services while lowering cost.** Medicare has been a major catalyst in this transition by testing value-based payment models such as accountable care organizations (ACO) that reward providers for delivering better care at lower cost.

Five years in, MSSP improves quality, saves money

In 2017, the largest ACO model, the Medicare Shared Savings Program (MSSP), showed the first signs of providing better care value, saving over \$313 million after paying bonuses to providers that met quality and spending targets. Still, few ACOs have placed their payments at risk. **In St. Louis, BJC HealthCare is recognized as the only ACO to choose downside risk. All local ACOs met quality targets with BJC and MissouriHealth+ having the best overall scores (p. 5).** Locally BJC, SLPA and MissouriHealth+ met spending goals and earned \$16 million in bonuses; however, the remaining ACOs lost money. Mercy's \$23 million loss accounted for over half of the region's loss (p. 6).

Encouraging appropriate emergency department (ED) use

When patients visit the ED for minor illnesses, costs can be 3 to 5 times more than the same care at a doctor's office. **St. Louisans use the ED far more than patients nationally and the visits are more likely to be avoidable.** Establishing strong relationships with primary care providers (PCP) can support patients in managing their acute and chronic health care needs without visiting the ED for non-emergent care. This report recognizes local PCPs in the top 10%, whose patients had the fewest avoidable ED visits (p. 2). **In 2017, a group of employers, providers, health plans, and other stakeholders collaborated on a plan to foster more appropriate ED use.**

Antibiotics overused nationally and in St. Louis

Antibiotics work on bacteria, not viruses. Antibiotic resistance is an urgent public health threat driven by the misuse of antibiotics, such as for the treatment of colds. **In St. Louis, 37% of commercially-insured adults in 2017 received inappropriate antibiotics for viral infections when they received care in a physician office or urgent care center.** A recent national study found similar results (p. 3).

Nationally, care quality was better for privately-insured patients with diabetes compared to St. Louis, indicating an important opportunity for improvement (p. 3). **Among the region's top performing practices, only 71% of people with diabetes received all of the screening tests recommended for diabetes, suggesting widespread**

opportunities. These top performing practices take part in National Committee for Quality Assurance recognition programs (pgs. 12-14) and commercial and Medicare ACOs.

The stakes are high

According to Consumers' Checkbook "Surgeon Ratings," there are meaningful differences in mortality and outcomes across surgeries and surgeons. While there is no nationally agreed-upon rating system, Consumers' Checkbook provides a reliable starting point for consumers seeking to minimize their risk of complications for 12 types of surgery. **In St. Louis, three surgeons earned 5-star ratings for the best outcomes for patients undergoing gallbladder surgery (p. 4).**

Metro East health centers are lower cost

St. Louis is served by six Federally Qualified Health Centers (FQHC) in Missouri and two in the Metro East in Illinois. While most St. Louis FQHCs were less expensive than health centers nationally, Metro East centers had the lowest costs in the region in 2016 (p. 9). For the fourth consecutive year, local FQHC patients were more likely to have their hypertension and diabetes in control than privately-insured patients (p.11), even though health center patients were more likely to lack health coverage (p.8).

Decline in double CT scans is sustained

In 2008, an average of 29% of patients at St. Louis hospitals received double CT scans of the abdomen when Medicare first publicly reported rates of these scans (p. 7). These costly tests increased patients' exposure to radiation without added clinical benefit. After Medicare adopted a policy to deny payment for the second scan, the problem resolved. By 2017, the rate of double CT scans of the abdomen dropped to 5.3%, illustrating the power of public reporting and aligned incentives to serve the public.

Imaging drives outpatient costs higher than other regions

In 2017, use of advanced imaging such as CT and MRI scans increased for privately-insured patients in the region, the *St. Louis MSA Health Stats* community scorecard from the Midwest Health Initiative found (p. 7). In St. Louis, doctors ordered 9% more MRIs and CT scans compared to a six-region average. Notably, outpatient utilization was 29% above average, the highest among care settings, driven in part by greater use of CT and MRI scans than the other communities. Despite lower prices locally, greater resource use drove outpatient spending above the national average.³

Rising health spending lowers the standard of living

For the past 30 years, the rising costs of health benefits have shrunk wage growth for workers overall and completely wiped out pay increases for lower wage earners, a new study finds. This has had a significant negative impact on the standard of living for all Americans, as money that should have been in their paychecks to pay a mortgage, educate their children or fund their retirement was instead funneled into health spending.⁴

¹ "2016 Health Care Cost and Utilization Report," Health Care Cost Institute, January 2018.

^{2,3} "2016 Total Cost of Care Community Report," Midwest Health Initiative, November 2018.

⁴ S Schieber, S Nyce, "A Cancer on the American Dream," Health Care USA, September 2018.



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Section One: Primary Care

Local collaboration promotes appropriate emergency department use



Missourians visited the emergency department (ED) 17% more than patients nationally in 2016, the 10th highest in the U.S.¹ The ED is designed to treat major trauma and severe illness, yet many visits are for conditions better treated in a primary care setting.

Unnecessary ED visits impact care quality and affordability

When patients seek routine care in the ED, it represents a missed opportunity to strengthen the patient-primary care provider (PCP) relationship, diminishes care continuity and increases the potential for redundant tests and treatments which can cause harm. It also wastes money. ED visits can be 3 to 5 times more expensive than the same care provided in a primary care practice (PCP) setting or urgent care center.²

Top 5 conditions driving avoidable visits in St. Louis:

1. Respiratory infections
2. Ear infections in children
3. Back pain
4. Urinary tract infections
5. Headaches

Source: Employer Playbook: Reducing Avoidable Emergency Department Visits, Midwest Health Initiative.

In 2017, 16% of ED use for commercially-insured patients in St. Louis was avoidable, using a definition of preventable visits established by the California Department of Health Services.

Local collaboration addresses the problem

During 2017, employers, health plans, physicians, hospitals, union and consumer representatives from across the region came together to develop a coordinated community plan to reduce potentially-avoidable ED visits. Over the course of the year, the group considered strategies which included community education, benefit plan design and provider recognition.

Strategies to reduce unnecessary ED visits

The collaborative created a series of “playbooks” for employers and primary care physicians (PCP) with suggestions on how to talk about the problem and steps to encourage stronger PCP relationships and appropriate ED use. For example, sample tools help employers communicate with employees about avoidable ED use and having an established relationship with a PCP.

Physicians are asked to contribute to the community goal by having a conversation with patients about their ED use and partnering with them to better manage chronic conditions and find alternative solutions to seeking care for minor illnesses in the ED. The Collaborative convened in November 2018 to celebrate progress and explore future steps.

St. Louis Primary Care Practices, With The Fewest Unneeded ED Visits Among Adult Patients, 2017

Affinia Healthcare-S. Health Ctr.	HSHS Holy Family Health Ctr.-Greenville	Mercy-Washington (SLUCARE)
Alton Int. Med.	Ilini Med. Assoc.-Jerseyville	Nepute Wellness Ctr.
Central West Healthcare	Illinois Ctr. for Advanced Med.	Patel Int. Med.
Esse North County Int. Med.	JCH Med. Group	Rivera Med. LLC
Esse Richmond Heights Int. Med.	Maranatha Health Care	Rural Family Med. Assoc.-Freeburg
Esse Southside Family Practice	Master Med. Care LLC	Southampton Health Care
Family First Health Care of Desoto	Mercy Clinic Family Med.-Marthasville	SSM Health St. Mary's Hospital-St. Louis
Family Practice Assoc.	Mercy Clinic Int. Med.-Patients First Drive	St. Anthonys at SW Med. Ctr. 1
Thomas J Greco MD	Mercy Clinic Int. Med.-Sullivan	Sullivan Clinic (BJC)
Howell Family Practice	Mercy Clinic Family Med.-Patients First Drive	

Source: ChooseWellSTL. Midwest Health Initiative.

ChooseWellSTL.org is a free website that allows patients to compare quality results of local PCP practices. For further information on local practices, log on to www.choosewellstl.org.

¹ Kaiser Family Foundation State Health Facts. <https://www.kff.org/statedata/>

² “Emergency Department and Urgent Care Use in St. Louis, 2013-2016,” Midwest Health Initiative.



Antibiotic overuse in St. Louis above national average

Antibiotic resistance is an urgent public health threat. Antibiotics work on bacteria, not viruses. Widespread use of antibiotics for viral illnesses provides no benefit and leads to the development of antibiotic-resistant bacteria and can harm patients.

According to research published in JAMA, at least 30% of antibiotics in U.S. outpatient facility settings are prescribed inappropriately for viral upper respiratory infections, such as bronchitis and colds.¹ The same study found antibiotics were prescribed inappropriately for 17% of commercially-insured patients at medical offices for viral respiratory infections. Interestingly, the rate was higher at urgent care centers (45.7%) and emergency departments (24.6%). This is one example of why an established relationship with a primary care provider (PCP) is likely to deliver safer and more effective care.²

In 2017, an average of **37% of privately-insured adult patients in St. Louis were prescribed unneeded antibiotics** for bronchitis when receiving care at a physician office or urgent care center. Children fared better, with only 7% on average receiving an unnecessary antibiotic for a cold.³

¹ MA Incze, et al, "Overprescription in Urgent Care Clinics - The Fast and the Spurious, *JAMA Int.Med.* July 16, 2018.

² DL Palms, et al, "Comparison of Antibiotic Prescribing in Retail Clinics, Urgent Care Centers, Emergency Departments and Traditional Ambulatory Care Settings in the United States, *JAMA Int.Med.* July 16, 2018.

³ ChooseWellSTL.org. Midwest Health Initiative. Privately Insured patients.

In 2017, the following St. Louis Primary Care Practices are recognized for ordering the fewest inappropriate antibiotic prescriptions for upper respiratory infections.³

Adults with Bronchitis

St. Louis Primary Care Practices: Best 10%

- Mercy Clinic Family Med.-Warrenton
- Mercy Clinic-O'Fallon-Winding Woods Drive
- Saint Anthony's At Kirkwood Family Med.

Children with Colds

St. Louis Pediatric Practices: Best 10%

- Blue Fish Pediatrics
- Esse O'Fallon Pediatrics
- Hinton Healthcare Group - St. Peters
- Winghaven Pediatrics

Opportunity to improve local diabetes care

About 6% of privately-insured people in St. Louis have diabetes the *St. Louis MSA Health Stats* community scorecard from the Midwest Health Initiative (MHI) found. The U.S. prevalence for all populations was 10%, the most recent CDC data said.⁴

Diabetes is a disorder of serious consequence unless carefully monitored and managed. Optimal outcomes focus on monitoring and managing four key metrics: hemoglobin (HbA1C) for glucose control, kidney function, retinal eye exam, and cholesterol. Below is a comparison of the screening rates for privately-insured people with diabetes in St. Louis when treated by physicians practicing at the 90th percentile. National scores were better.

90th Percentile Score, 2017		
Diabetes Monitoring	St. Louis	NCQA National
Hemoglobin (HbA1C)	85%	94%
Kidney Function	83%	93%
Cholesterol (LDL-C)	78%	NA
Retinal Eye Exam	41%	68%

Source: Midwest Health Initiative (MHI), National Committee for Quality Assurance (NCQA). Privately insured patients.

While understanding how often patients receive these tests is useful, what is more important is how often patients with diabetes receive them all. Since eye exams are sometimes paid for outside of the medical benefit, they are not always captured. Thus, MHI considers receipt of three of these diabetes tests to be comprehensive. **Locally, 71% of privately-insured patients with diabetes treated in practices scoring at the 90th percentile or better obtained three or more of these screenings in 2017.**

Nine practices scored in the best 10% locally for providing three of these tests for their patients with diabetes (see list below). **Alton Internal Medicine, St. Anthony's Arnold and SSM Health-O'Fallon** achieved this distinction for the second year. These practices take part in national quality recognition programs such as NCQA's Diabetes, Heart Stroke and/or Medical Home (see pgs.12-13). They also participate in commercial and Medicare accountable care organizations aimed at providing high-quality care at lower cost (see pgs.5-6).

Top Scoring St. Louis Practices Diabetes Monitoring, 2017

- Alton Int. Med.
- Int. Med. of Saint Luke's
- Mercy Clinic Family Med.-Union
- Mercy Clinic Int. Med.-Patients First Drive
- Mercy Clinic-Saint Peters-Piper Hill Drive
- Myrtle H Davis Comprehensive Health Center
- Saint Anthony's At Arnold Family Health Care
- SSM Health-O'Fallon-Highway K
- SSM Health-Warrenton

Source: ChooseWellSTL.org, Midwest Health Initiative. Privately insured patients.

⁴ Centers for Disease Control and Prevention. Diabetes Report Card 2017.

Choosing a high-quality surgeon to ensure the best outcome

There are no nationally agreed-upon measures of outcomes at the surgeon level. Not long ago, the public had no source of objective information on surgeon-specific care quality. Consumers' Checkbook, a non-profit consumer group, hosts one of two publicly accessible websites that now offer quality ratings for individual surgeons based on a blend of complications and post-surgical death rates.

The stakes are high

SurgeonRatings.org shows meaningful differences in mortality and other outcomes across surgeons. The website provides user-friendly ratings **from one to five stars** based on four measures of bad outcomes, risk-adjusted for the severity of a patient's illness (see box at right) for 12 types of surgery. Surgeons with the best 5-star rating have the lowest rate of adverse outcomes and rank better than 80% of their peers.

Gallbladder removal (cholecystectomy) is the most common procedure in general surgery. **Nearly 30 years ago, minimally-invasive laparoscopic surgery was introduced to remove the gallbladder via tiny incisions, reducing recovery time and cost.** This innovation quickly became the standard, however, it had a downside. **Bile duct injuries doubled.**¹ This serious complication can destroy the liver. Mortality rates range from 10%-20%, and patients that survive often need liver transplants.




St. Louis Surgeons, Gallbladder Removal 5-Star Rating Based on Outcomes


Name	Fewer Deaths, Prolonged Length of Stay & Readmissions	Surgeon's Hospitals (√ = Hospital high-rated for outcomes for this surgery)
Omar M. Guerra (66 Cases)	★ ★ ★ ★ ★	√ Missouri Baptist Med. Ctr.
Jonathan M. Limpert (26 Cases)	★ ★ ★ ★ ★	√ Mercy Washington
John E. Mason (51 Cases)	★ ★ ★ ★ ★	St. Luke's Hospital

Source: SurgeonRatings.org. Centers for Medicare and Medicaid claims data (2010-14) for patients 65 years or older. Number of cases may be larger with inclusion of commercially insured patients under 65 years.


Bad Outcomes Criteria




Death in hospital



Prolonged length of stay caused by infection, fall or other complication



Death 90-days after hospital discharge



Readmission within 90-days of discharge

In St. Louis, Consumers' Checkbook awarded **5-star ratings to three St. Louis surgeons (5%) for gallbladder removal surgery** (see table at left). A check mark (√) indicates a surgeon's outcomes were better at certain hospitals. The types of surgeries include both the open approach (large incision) and the minimally-invasive laparoscopic gallbladder removal technique.

The choice of surgeon matters

Nationally, deaths and other rates of bad outcomes for gallbladder surgery ranged from 14.5% for the best scoring one-tenth of surgeons to more than 36% for the bottom one-tenth.

The Safe Cholecystectomy Program

In 2015, in light of the increase in bile duct injuries and devastating patient outcomes since introduction of laparoscopic gallbladder surgery, the Society of American Gastrointestinal and Endoscopic Surgeons established the Safe Cholecystectomy Program.

To minimize the risk of bile duct injury, the **Society of American Gastrointestinal and Endoscopic Surgeons** suggests surgeons employ the following strategies:

- **Clear View of Safety (CVS):** The surgeon must cut the cystic duct to remove the gallbladder which can be mistaken for the common bile duct. Inflammation and anatomic variation contribute to this problem. The CVS is a technique to clearly visualize the area around the cystic duct, the common hepatic duct, and the cystic artery, reducing the risk of cutting the bile duct by mistake.
- **Intra-operative Time-Out** during laparoscopic cholecystectomy prior to clipping, cutting or transecting any ductal structures.
- Understand the **potential for anatomic variation, malformations or injuries (i.e., scar tissue)** in all cases.
- If CVS is not feasible, obtain intra-operative **biliary imaging**, convert to an **open procedure or get help from another surgeon.**

Gallstones do not need to be treated if they are not causing symptoms. However if symptoms are severe, patients have few better options than undergoing surgery. Checkbook's Surgeon Ratings website provides a good starting point for consumers to select a high-quality surgeon for themselves, a friend or a loved one to help ensure an optimal outcome. In addition to the ratings, the website provides other helpful tips to patients on decision-making and how to do their part in getting safe, high-quality care.

¹ Kaya B, et al, "Critical Strategies for Safe Laparoscopic Cholecystectomy," Clin Surg. 2017; 2: 1779, November 2017.



Section Two: Value-Based Care BJC and MissouriHealth+ score best on care quality

Nationally, over 472 accountable care organizations (ACO) took part in the Medicare Shared Savings Program (MSSP) in 2017. The MSSP rewards teams (doctors, hospitals, and other providers) that deliver quality care to a defined population at lower cost compared to the prior year. In its fifth year, the 2017 MSSP population increased to nearly 9 million Medicare recipients, the largest ACO model administered by the Centers for Medicare and Medicaid Services (CMS).

91%

Since the program's inception, MSSP ACOs have achieved high levels of care quality. In 2017, the average composite quality score was 91% based on 34 metrics (see measure examples in the box at right).

In St. Louis, eight ACOs participated in the MSSP in 2017, up from four in 2015. Over the two-year period the volume of patients grew to over 235,000, a 52% increase. This was driven by a twofold increase in patients at SLPA and the addition of four new ACOs. This includes two in the Metro East, **Hospital Sisters Health System (HSHS) and IRCCO**, and two in Missouri, **MissouriHealth+ and Aledade ACO**. MissouriHealth+ is comprised of federally qualified health centers. All local ACOs met the MSSP quality standard, however, they had different strengths and quality scores varied:

- **BJC and MissouriHealth+ had the best overall quality.**
- Mercy Health and SSM are noted for the best preventive health scores.
- SLPA stood out in the care of at-risk populations and patient experience.

In 2017, BJC, SLPA and MissouriHealth+ earned shared savings by meeting quality and spending targets. Notably, physician-led SLPA earned this distinction for two consecutive years receiving a combined \$17 million in bonuses (see p. 6).

Medicare Shared Savings Program Quality Domains 2016-2017

Patient/Caregiver Experience:

- Getting Timely Care, Shared Decision Making, Health Status & Stewardship of Resources

Care Coordination/Patient Safety:

- All-Cause Unplanned Admissions & Readmissions, Fall Risk & Imaging for Low Back Pain

Preventive Health:

- Influenza & Pneumonia Vaccination, Depression Screening & Cancer Screening (Colorectal & Breast)

At-Risk Population:

- Diabetes Composite, Controlling High Blood Pressure & Heart Failure Management

Medicare Shared Savings Program Quality Score Percentile Rankings St. Louis Accountable Care Organizations, 2016-2017

Quality Performance Selected Indicators <i>Higher Scores are Better</i>	BJC HealthCare ACO, LLC		Missouri Health+		HSHS ACO, LLC		SLPA ACO, LLC		Mercy Health ACO, LLC		SSM ACO, LLC		Aledade ACO 13, LLC	IRCCO
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2017	2017
Overall Quality Score	94%	98%	NA	98%	NA	97%	91%	93%	97%	91%	94%	89%	NA	NA
Patient/Caregiver Experience														
How Well Your Doctors Communicate	93%	94%	91%	92%	94%	93%	92%	94%	92%	93%	94%	95%	94%	92%
Patients' Rating of Doctor	93%	92%	90%	89%	94%	94%	93%	94%	92%	93%	94%	94%	93%	91%
Shared Decision Making	62%	90%	41%	90%	100%	90%	20%	90%	89%	60%	28%	80%	90%	70%
Stewardship of Patient Resources	30%	70%	90%	90%	75%	40%	50%	80%	100%	50%	20%	30%	80%	40%
Care Coordination/Patient Safety														
All Cause Readmissions	30%	40%	85%	90%	62%	50%	20%	60%	100%	100%	85%	40%	60%	40%
SNF 30-Day All-Cause Readmissions	30%	30%	75%	50%	45%	30%	20%	40%	20%	40%	40%	40%	30%	70%
Unplanned Admissions for Diabetes	40%	50%	55%	60%	34%	30%	45%	50%	65%	70%	100%	70%	40%	30%
Unplanned Admissions for Heart Failure	34%	40%	62%	40%	20%	30%	55%	50%	60%	60%	65%	40%	50%	30%
Admissions Multiple Chronic Conditions	66%	40%	56%	40%	33%	30%	60%	50%	59%	70%	75%	50%	50%	30%
Preventive Health														
Adult Weight Screening & Follow-up	86%	90%	75%	74%	47%	51%	79%	72%	83%	69%	89%	81%	49%	68%
Depression Screening	71%	82%	66%	79%	42%	21%	52%	50%	69%	69%	74%	76%	80%	52%
At-Risk Population														
Diabetes Composite	80%	90%	20%	50%	60%	50%	47%	90%	75%	80%	75%	90%	60%	40%
% Patients Hypertension in Control	78%	77%	64%	69%	65%	74%	72%	75%	71%	73%	67%	72%	73%	69%

Source: Centers for Medicare and Medicaid Services. MissouriHealth+ excludes Family Care Health Centers.

Nationally, MSSP ACOs showed the largest quality improvements in the care coordination/patient safety and preventive health domains, notably heart failure admission rates, screening for fall risk, pneumonia vaccination, screening and follow-up for depression and blood pressure. As MSSP enrollment grew and patient-to-provider ratios increased, many but not all ACOs were able to improve quality. This was likely due to economies of scale, well-developed infrastructure and referral networks to handle complex patients at larger ACOs. Thus, growing cautiously as resources permit, not aggressively, may be a better strategy.¹

¹ W K Blesser et al., "ACO Quality Over Time: The MSSP Experience and Opportunities for System-Wide Improvement," The American Journal of Accountable Care, February 13, 2018.

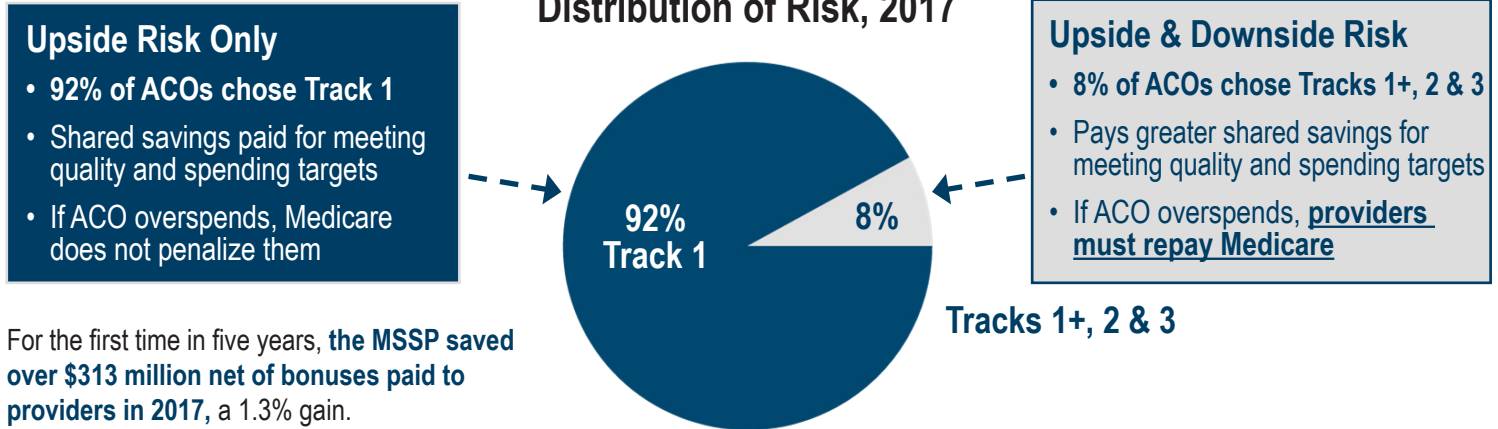
Five years in, only 8% of accountable care organizations take downside risk



The national debate

Medicare's accountable care organization (ACO) experiment was designed to transition providers away from fee-for-service to population-based payments where providers share the risk of poor health outcomes. **Five years later, few providers in the Medicare Shared Savings Program (MSSP) take downside risk.**

Medicare Shared Savings Program Distribution of Risk, 2017



For the first time in five years, the MSSP saved over \$313 million net of bonuses paid to providers in 2017, a 1.3% gain.

In 2017, five out of eight St. Louis MSSP ACOs lost money (see table below). **BJC HealthCare was the only ACO to choose downside risk. Congratulations to BJC for saving Medicare enough money to receive a bonus of \$9 million in 2017. Physician-led SLPA achieved the highest percentage savings over the two-year period** and, as mentioned earlier, earned a combined \$17 million in shared savings.

MissouriHealth+ saved 4.9% in 2017 and received a \$3 million bonus, after losing 2.4% of its benchmark the prior year. **Mercy Health's loss decreased to \$23 million, or 2.5% of its target in 2017**, down from nearly \$39 million the previous year. **Still, Mercy's loss accounted for more than half of the \$41 million in overspending in the entire region.**

Medicare Shared Savings Program Accountable Care Organizations St. Louis Metropolitan Area, 2016-2017

ACO Name	Takes Risk	Patient Count		Savings/Loss (%)		Bonus (millions)		Benchmark Spending/Patient		Actual Spending/Patient	
		2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
MissouriHealth+	No	7,418	13,362	-2.4%	4.9%	NA	\$3	\$8,537	\$9,371	\$8,741	\$8,916
Aledade	No	NA	8,239	NA	-4.2%	\$0	\$0	NA	\$9,632	NA	\$10,038
SHHS ACO, LLC	No	20,532	20,766	-2.4%	-2.8%	\$0	\$0	\$9,982	\$10,058	\$10,218	\$10,334
Mercy Health ACO, LLC	No	82,614	94,009	-5.0%	-2.5%	\$0	\$0	\$9,680	\$10,123	\$10,163	\$10,334
SLPA ACO, LLC	No	19,403	18,216	6.6%	5.0%	\$13	\$4	\$10,602	\$10,423	\$9,906	\$9,906
BJC HealthCare ACO	Yes	32,082	40,080	1.4%	3.0%	\$0	\$9	\$9,923	\$10,507	\$9,787	\$10,189
SSM ACO	No	20,710	22,482	-0.6%	-1.8%	\$0	\$0	\$9,972	\$10,798	\$10,031	\$10,988
IRCCO	No	NA	18,104	NA	-2.5%	NA	\$0	NA	\$11,496	NA	\$11,785

Source: Centers for Medicare and Medicaid Services

"We've continued the focus on post-acute care and care management. We promote the Annual Wellness Visit – which allows the provider to engage with the patient in a holistic way to discuss overall and long-term health goals," said Amy Sullivan, Executive Director, SLPA.

Success in the MSSP is better the longer an ACO participates, is physician-led and has a higher spending target.¹ For example, locally, average benchmarks per patient for ACOs that shared savings were \$11,139 compared to \$10,332 for those that that did not earn bonuses.

Management of high-risk patients not major driver of savings

For years, studies have shown that a small percentage of patients account for the largest amount of medical spending. Thus, it was presumed that better care of high-risk patients would drive the greatest amount of savings. A recent study found significant reductions in service use for ACO patients in the MSSP with about two-thirds of the **savings concentrated among low-risk patients. Savings were attributed to reductions in overused services for all patients such as skilled nursing facilities, high-priced hospital outpatient departments and home care.**²

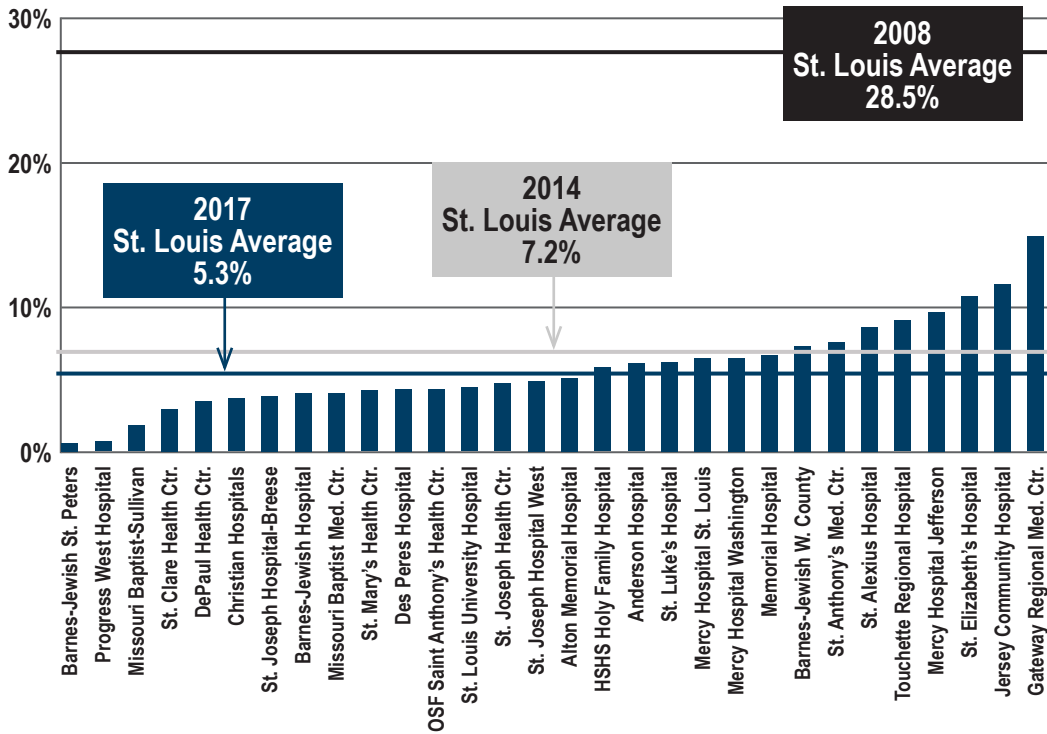
¹ R Murray, S Delbanco, "The Evidence On Shared Savings: Do We Know Enough?", Health Affairs Blog, July 17, 2018.

² J. Michael McWilliams, ME Chernew, B Landon, "Medicare ACO Program Savings Not Tied To Preventable Hospitalizations Or Concentrated Among High-Risk Patients," Health Affairs, December 2017.



10 years later, CMS payment policy has staying power

% Double CT Scans of the Abdomen St. Louis Hospital Industry, 2017



Double CT Scan Use Plummets with Change in Financial Incentives

Double CT scans of the abdomen expose patients to very high doses of radiation and are mostly unnecessary.

In 2010, dramatic nationwide increases in double CT scans of the abdomen prompted Medicare to deny payment for the second scan. Nationally and in St. Louis, rates began to decline. **By 2014, the average was 7.2%, down from 28.5% in 2008** (see graph at left)

Still, patients at some local hospitals continued to receive higher rates of scans. These hospitals implemented protocols to decrease unnecessary scans and **by 2017, average rates dropped to 5.3%**.

Source: Centers for Medicare and Medicaid Services

Advanced imaging, such as CT scans, has improved diagnosis of many medical conditions. Yet, CT scans expose patients to cancer-causing radiation. As mentioned above, to align financial incentives to reduce unnecessary scans and improve patient safety, in 2010 the Centers for Medicare and Medicaid Services (CMS) changed its payment policy and publicly reported rates of imaging not supported by clinical evidence.

In St. Louis, BJC, SSM and Des Peres hospitals saw the largest decreases in double CT scans of the abdomen. Hospitals redesigned processes and radiologists played an active role reviewing orders and educating physicians when scans were unnecessary. In 2014, rates for most local hospitals had dropped; however, utilization for **Jersey Community, St. Clare, St. Elizabeth's, St. Mary's, Mercy Jefferson and St. Anthony's hospitals remained high.** The hospitals implemented radiology protocols and provider incentives which resulted in a **more than 50% drop in the rates of double CT scans of the abdomen in 2017.**

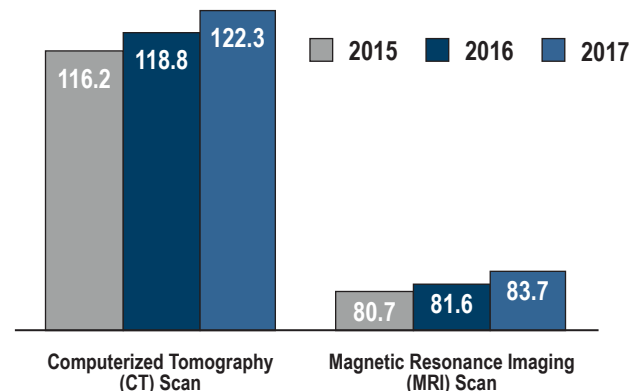
Use of imaging in St. Louis drives outpatient cost higher than other regions

In St. Louis, prices for care across settings for privately-insured patients, from inpatient hospitalizations to doctor visits and prescriptions, were lower compared to a benchmark for six regions of the U.S.¹ Yet, St. Louis patients generally received more tests and treatments than the other communities. Of note, **outpatient utilization was 29% above average, the highest among care settings, driven in part by greater use of CT and MRI scans than the average for all six regions.**

In 2017, use of advanced imaging such as CT and MRI scans increased for privately-insured patients, as shown in the graph to the right. In St. Louis, doctors ordered 9% more MRIs and CT scans compared to the benchmark for physicians across the six regions. Therefore, despite having lower prices, greater resource use drove outpatient spending above the benchmark average.

¹ "2016 Total Cost of Care Community Report," Midwest Health Initiative, 2018

Outpatient Imaging Rates per 1,000 St. Louis Region, 2015 - 2017



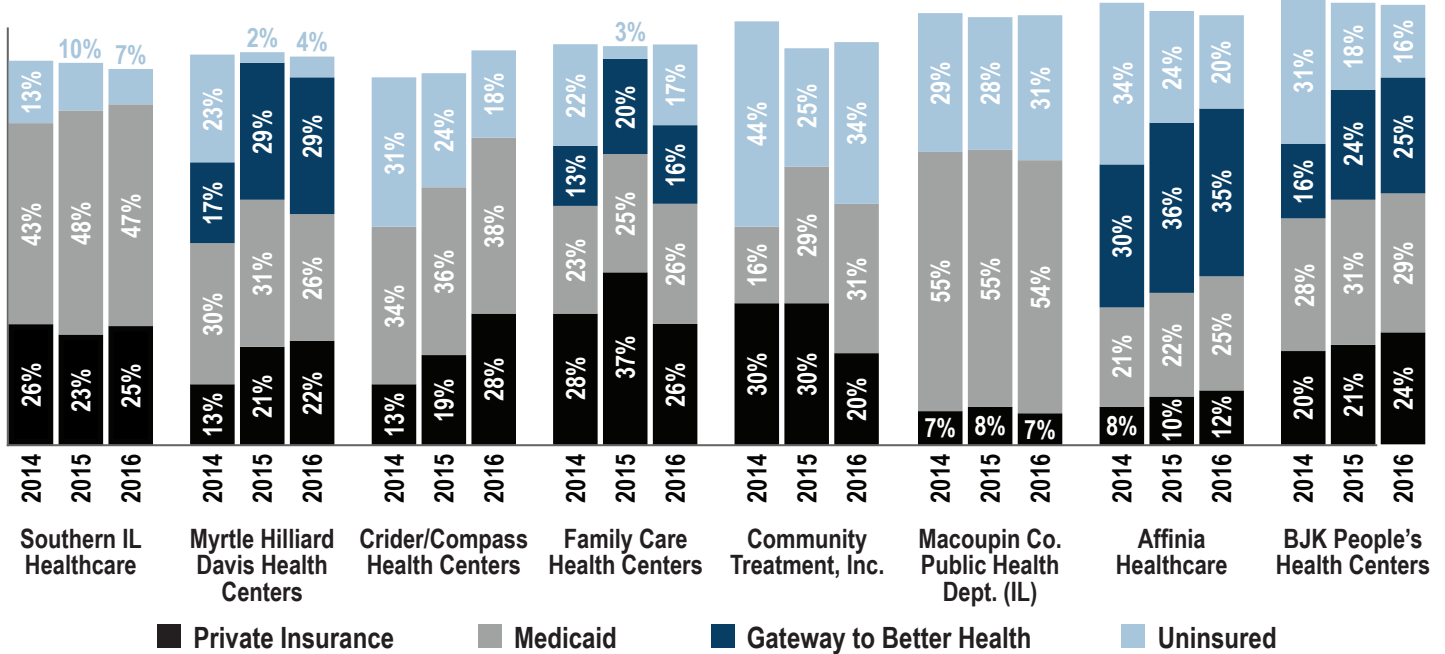
Source: Midwest Health Initiative Community Scorecard. Privately insured patients.

Section Three: Federally Qualified Health Centers

Medicaid expansion reduces uninsured adults at Metro East health centers



**St. Louis Metropolitan Area Federally Qualified Health Centers
Insurance Status Trends, Ages 18 and above
2014 – 2016**



Source: Health Resources and Services Administration, Uniform Data System. The Gateway for Better Health program is available to adult patients of St. Louis City and County health centers in Missouri, thus Community Treatment Inc. and Crider/Compass patients are not eligible. St. Louis County Health Center's 3,734 GBH patients in 2016 are not shown.

In 2016, nearly 26 million Americans living in medically-underserved areas received primary care at Federally Qualified Health Centers (FQHC). **Medicaid** was the predominant source of health benefits for FQHC patients, which **covered 74% of children**, about the same as in prior years. In 2016, 38% of adults had Medicaid coverage, up from 27% in 2013, coinciding with coverage expansions under the Affordable Care Act (ACA).

The St. Louis region is served by six FQHCs in Missouri and two in Illinois, which cared for over 274,000 people in 2016. **Medicaid covered 84% of children. Only 36% of adults had Medicaid coverage** which varied widely among centers. As shown in the graph above, the **two Illinois FQHCs had the largest adult Medicaid enrollment**; Macoupin County Public Health and Southern Illinois Healthcare Foundation. **The difference is Illinois expanded Medicaid for adults** under the ACA while Missouri opted not to expand and has a low income eligibility threshold for adults.

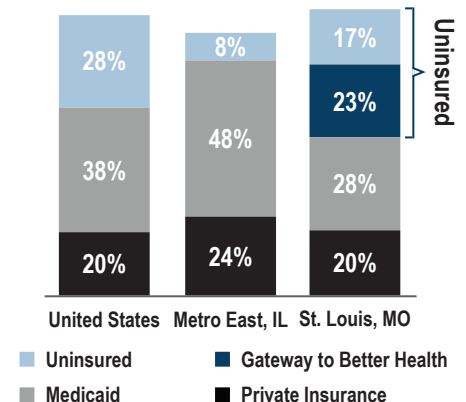
Under the ACA, states can expand Medicaid to childless adults not previously eligible for coverage with incomes up to 138% of the federal poverty guideline (FPL). To offset the cost, the ACA provides full federal funding for newly eligible adults, which phases down to 90% in 2020.

In 2016, Medicaid expansion made a significant contribution to improving access to health care for adults at health centers in Illinois. An average of **48% of adults** at the Metro East health centers **had Medicaid coverage** compared to **28% on the Missouri side**, as shown in the graph to the right. More importantly, **only 8% of adults lacked health coverage at Metro East FQHCs compared to 40% of uninsured adults** in St. Louis.

Still, the Gateway to Better Health program (GBH) helps adults living in St. Louis City and County maintain access to outpatient care, which reduced the percentage of uninsured adults to 17%. The GBH program, developed by the St. Louis Regional Health Commission, provides a limited set of benefits for uninsured adults that earn too much to be eligible for Medicaid but too little to qualify for subsidies on the exchanges. Benefits include primary care at a St. Louis City or County health center and selected outpatient services. It does not cover emergency department, inpatient hospital or mental health care.

In Missouri, to qualify for Medicaid coverage, an adult with a family of four may earn no more than \$5,460 annually, or approximately 22% of the FPL. Eligibility guidelines are more generous for children, whose families may earn up to 305% of the FPL, or \$75,030 for a family of four.

**Federally Qualified Health Centers
Adult Insurance Status
United States - St. Louis, 2016**





Missouri health centers more costly compared to Illinois

Nationally total revenue at Federally Qualified Health Centers (FQHC) grew 15% in 2016 as patient volume increased 6%, about the same as the previous year. Nationally and in Missouri, Medicaid revenue, grants and private insurance coverage accounted for 89% of FQHC revenue. Illinois garnered 92% of revenue from these sources.

Interestingly, **Missouri FQHCs received 16% more revenue per patient compared to Illinois.** Shares of Medicaid, grant and private insurance revenue varied as shown in the graph to the right. Despite Medicaid expansion, **Illinois earned a smaller share of revenue (40%) from the program** compared to Missouri (47%), yet larger shares of grant and private insurance revenue.

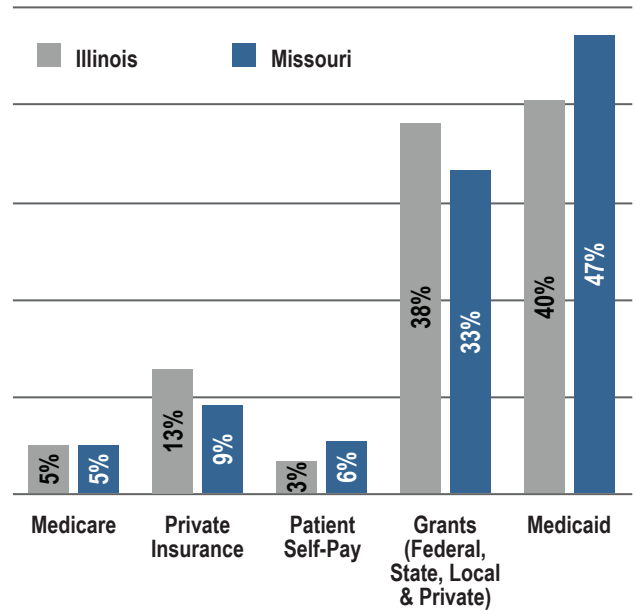
Medicaid pays FQHCs a per-visit bundled prospective payment (PPS). States may implement an alternative payment methodology (APM), which includes cost-based payment, as long as it does not pay less than the PPS.

Missouri pays FQHCs a cost-based APM with caps on the cost of some services. Illinois pays a PPS and an APM with caps and productivity screens, which are the number of visits a provider should have in a given time period, usually a year. The State pays less if provider visits are less than the "screen."

Total health care costs for FQHC patients are lower than for similar non-FQHC patients, research says.¹ **In 2016, FQHC per capita costs increased 5% nationally, 6% in Missouri and 9% in Illinois** compared to the previous year. However, Illinois' costs per patient were below the national average (22%) and below the Missouri state average (13%).

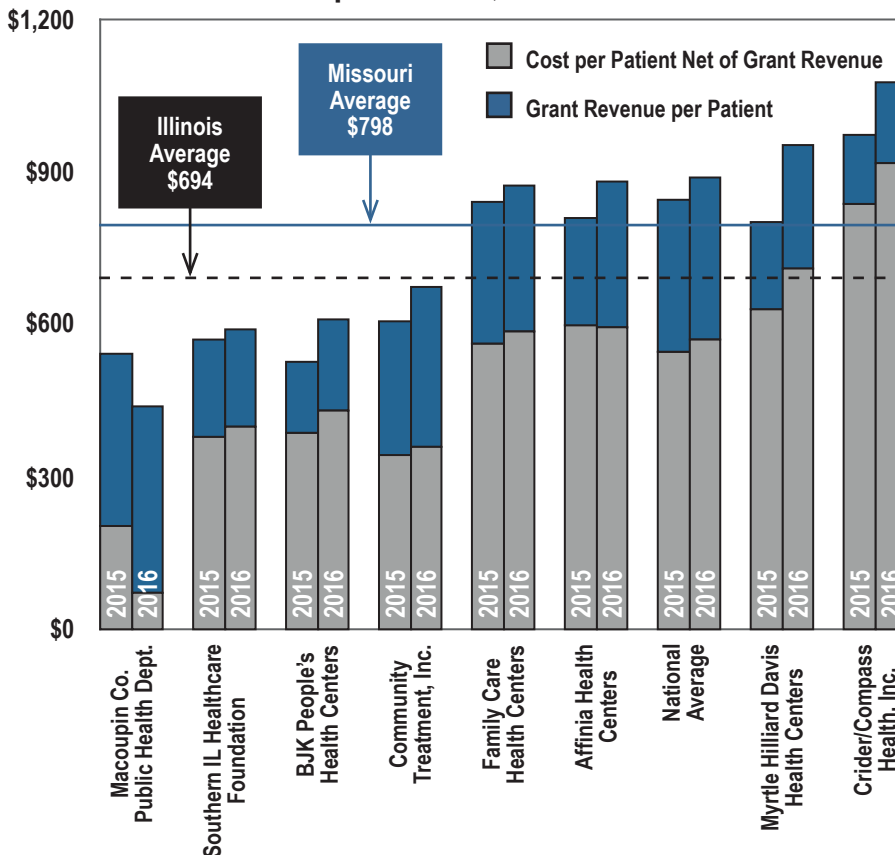
In St. Louis, cost per patient increased 9% across the region, **driven mainly by a 13% increase in costs for local FQHCs operating in Missouri.**

Illinois and Missouri Federally Qualified Health Centers % Source of Revenue, 2016



Source: U.S. Health Resources and Services Administration, Bureau of Primary Health Care Uniform Data System. Medicaid includes non-Medicaid CHIP revenue.

St. Louis Federally Qualified Health Centers Cost per Patient, 2015-2016



Source: U.S. Health Resources and Services Administration, Bureau of Primary Health Care Uniform Data System.

For the first time in this report, per capita cost information is included for **Illinois Metro East health centers which saw a modest 2% increase and were the lowest cost in the region**, as shown in the graph to the left.

Still, costs varied across centers, yet **most were less expensive on average than centers nationally.** Costs per patient were not adjusted to reflect illness burden or health status. Center-specific revenue data is not publicly available, with the exception of grant funds which offset costs an average of 30%.

For the second consecutive year, **Crider/Compass had the highest cost per capita among local FQHCs.** This was in part the result of Crider's merger with a Louisiana center to form Compass Health, Inc. in 2014 and an expansion of rural clinics. **Myrtle Hilliard Davis** is noted for having **the largest cost increase.**

Interestingly, Macoupin had the lowest per capita costs, which were 84% funded by federal grants.

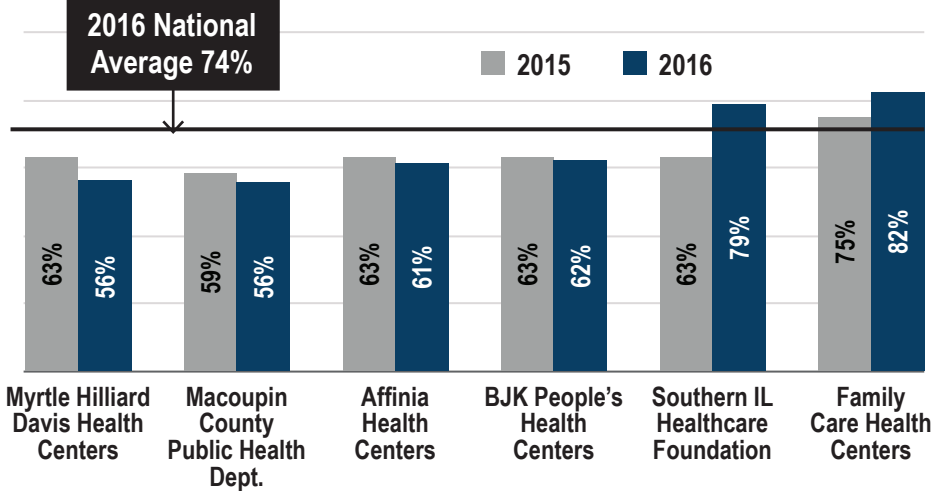
¹ E Heisler, "Federal Health Centers: An Overview," Congressional Research Service, May 17, 2017.

Guidelines, care model aim to improve pregnancy outcomes



Babies born to mothers without prenatal care are three times more likely to be born low birthweight and five times more likely to die before their first birthday.¹

St. Louis Federally Qualified Health Centers % of Women with a Prenatal Visit in the First Trimester 2015 - 2016



Source: Health Resources and Services Administration. The percentage of women that received prenatal care in the first trimester at Community Treatment, Inc. was 93% and 90% for Crider/Compass health centers. Both centers had small sample sizes and do not provide direct prenatal care, but refer patients to a variety of obstetric providers.

Centering Pregnancy

Centering Pregnancy is a group prenatal care model serving women at high risk for preterm delivery. The 10-session model starts in the second trimester. Together patients receive prenatal risk assessments and gain knowledge and skills related to pregnancy, childbirth and parenting. The group visits include a health assessment, as well as one-on-one time with the provider. Women learn to take their blood pressure at home and use growth charts for their babies. The group reunites after childbirth to encourage positive health behaviors and create a strong sense of support among the mothers.²

² A Painchaud, "Transforming Care for Moms and Babies," NACHC Blog, June 7, 2018.

In 2016, **nationally 74% of pregnant women at federally qualified health centers (FQHC) received prenatal care in the first trimester.** In St. Louis, two centers improved (see graph above). Family Care Health Centers (FCHC) increased its score to 82% and Southern Illinois Healthcare Foundation reported 79%, performing above the national average.

Rising postpartum death rates in the U.S. prompted the American College of Obstetricians and Gynecologists to issue new standards.

Women see their provider within three days postpartum for complications such as hypertension, and no later than three weeks after a normal delivery. In addition, the guideline urges providers to discuss the long-term cardiovascular risks of preterm delivery, preeclampsia and gestational diabetes. **Centering Pregnancy is a group prenatal care model that has been shown to decrease preterm birth, low birth weight and infant mortality; however, it also helps to improve care during the postpartum period** (see box above). Locally, Affinia and FCHC offer the Centering Pregnancy prenatal care model to their patients.

Table 1: Socioeconomic, Child and Women's Health Indicators, 2016

St. Louis Metropolitan Area Federally Qualified Health Centers (FQHC)	% Living in Poverty			% of Two-Year-Olds Immunized*			% of Women Having Pap Tests*			
	St. Louis 2016	MO 2016	US 2016	St. Louis 2016	MO 2016	US 2016	St. Louis		MO 2016	US 2016
							2015	2016		
Affinia Healthcare	96%	72%	70%	24%	24%	43%	56%	57%	52%	54%
Myrtle Hilliard Davis	90%			23%			42%	43%		
Crider/Compass Health	84%			52%			52%	52%		
Community Treatment	72%			9%			18%	46%		
Family Care	72%			47%			72%	57%		
BJK People's	71%	31%	63%	68%						
Metro East FQHCs		IL			IL				IL	
Southern Illinois Healthcare Fdn.	66%	73%		42%	35%		57%	46%	59%	
Macoupin Co. Public Health Dept.	36%			71%			26%	46%		

* Effective in 2016, clinical quality measures changed to align with the Centers for Medicare & Medicaid Services' electronic specified clinical quality measures (eCQMs). Childhood immunizations denominator changed to 2 years of age (formerly 3 years of age), immunizations increased and exclusions changed. Cervical cancer screening changes include patient age of 23 to 64 years and other modifications.



Vaccination is the most effective method to protect children from many life-threatening and disabling infectious diseases. In 2016, FQHCs nationally immunized 43% of children by age two. In the previous metric, the threshold was age three and there were fewer vaccines included. **In St. Louis, only three of the eight centers scored above the national average on childhood immunizations with Macoupin having the highest score of 71%** (see table above).

Cervical cancer is preventable with proper screening. Still, it may take many years to develop, thus experts recommend pap tests every three years. More frequent pap tests may prompt unnecessary treatment for abnormal cells that usually disappear on their own. Locally, the percentage of women getting a pap test every three years increased for five out of eight FQHCs.

¹ Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion

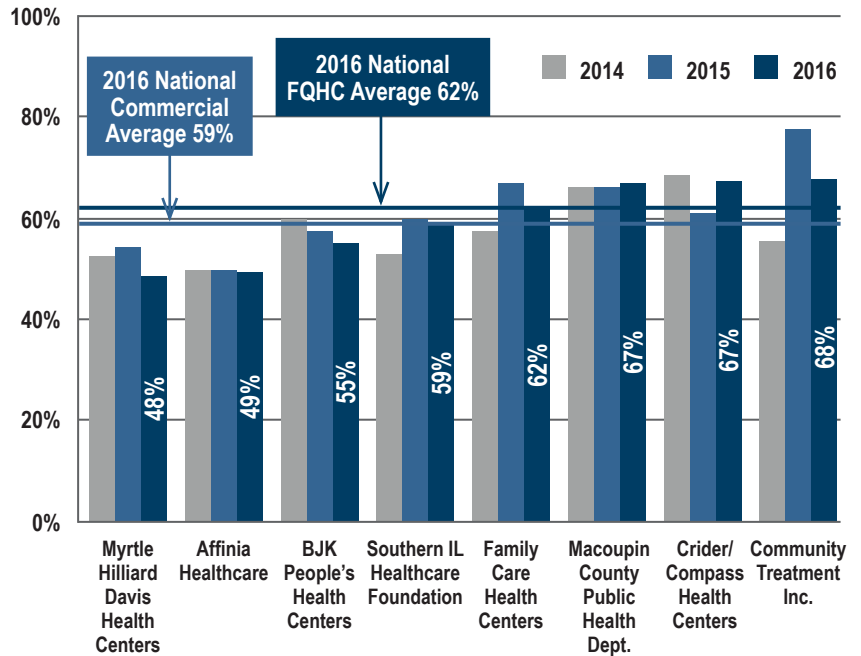
Centers earn value-based rewards for quality improvement

In 2016, federally qualified health centers (FQHC) continued to achieve better outcomes for patients with hypertension and diabetes than people with commercial insurance. **Nationally, 62% of FQHC populations had hypertension under control compared to 59% of private health plan members.**

Nationally, **the Healthy People 2020 goal is for 61.2% of the population with hypertension under control. In St. Louis, nearly half of FQHCs achieved this in 2016** (see graph at right). **Community Treatment, Crider/ Compass and Macoupin** received Quality Improvement Awards for this and other care improvements from the Health Resources and Services Administration (HRSA). In 2016, HRSA awarded over \$100.2 million to FQHCs nationally for achieving patient-centered medical home status, improving care access, quality and value and reducing disparities.

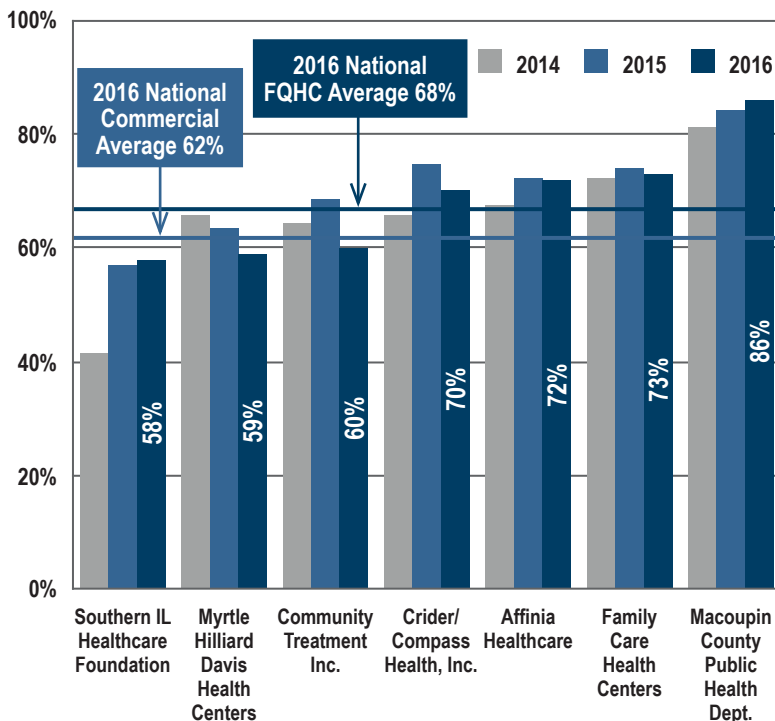
Blood pressure above 130/80 mm/Hg doubles patients' risk of heart attack, stroke, heart failure and kidney failure.¹ In 2017, heart experts redefined high blood pressure as 130/80 mm/Hg or above, down from the previous 140/90 mm/Hg threshold. Thus, more patients are likely to be diagnosed with hypertension, increasing the importance of a healthy lifestyle and medication to get patients to goal. While the lack of affordability of healthy food and medication is an issue for all Americans, it is more critical for many FQHC patients that live in poverty.

St. Louis Federally Qualified Health Centers % Hypertensive Adults with Blood Pressure in Control, 2014 - 2016



Source: U.S. Health Resources and Services Administration (HRSA), Bureau of Primary Health Care Uniform Data System (UDS). Scores are based on the total hypertensive population.

St. Louis Federally Qualified Health Centers % of Diabetic Patients with Blood Sugar in Control, 2014 - 2016



Source: U.S. Health Resources and Services Administration (HRSA), Bureau of Primary Health Care UDS.

In 2016, the percentage of people with diabetes increased to 10% of the U.S. population.² Type 1 diabetes, when the body fails to make enough insulin, accounted for 1% of cases. The majority (9%) had Type 2, which is linked to overweight or obesity. In Type 2, the body makes insulin yet does not use it properly, called insulin resistance. **In 2016, 12% of the FQHC population nationally received care for diabetes. In St. Louis, 16% of FQHC patients had diabetes, an increase over the prior year.**

Without effective treatment, uncontrolled, elevated blood glucose damages the vascular and nervous system. This increases the risk of heart attack, stroke, kidney failure, blindness and amputations. The Hemoglobin A1c (HbA1c) test estimates the level of blood glucose over the prior two to three months. An HbA1c value above 9% means glucose is out of control.

The Healthy People 2020 goal for blood sugar control for people with diabetes is 84%. Nationally, 68% of FQHC patients had blood sugar in control in 2016, compared to 62% for private health plan members. Macoupin scored 86%, the only FQHC in the St. Louis region to outperform the Healthy People 2020 goal. Half of local health centers performed better than the national FQHC and commercial averages, shown in the graph to the left.

¹ P Whelton, R Carey, "The 2017 Clinical Practice Guideline for High Blood Pressure," Viewpoint, JAMA, November 20, 2017.

² Centers for Disease Control and Prevention. Diabetes Report Card 2017.



National Committee for Quality Assurance (NCQA)

Diabetes Recognition Program (DRP)

Patient-Centered Medical Home (PCMH)

Heart Stroke Recognition Program (HSRP)

Patient-Centered Specialty Practice (PCSP)

St. Louis Metropolitan Area

- Christopher S. Abercrombie
- Elsayed Salem Abo-Salem
- Susan E. Adams
- Susan R. Adams
- William S. Adams
- Modupe Aderibigbe
- Sabina Aderibigbe
- Affinia Healthcare - Murphy O'Fallon
- Affinia Healthcare - Soulard Benton
- Affinia Healthcare - South Broadway
- Affinia Healthcare - Water Tower
- Lisa Alderson
- Juan M. Alvarez
- Patricia J. Amato
- Renee Amato
- Scott Anderson
- Paul Angleton
- Amal F. Antoun
- Lisa L. Armbruster
- Phillip V. Asaro
- Mohammed Ashraf
- Mirha Avdagic
- Bryce A. Ayers
- Maureen Azzam
- Sheerin Badri Sturm
- Kelly J. Bain
- Erin L. Bakanas
- Fred Balis
- Byron Baptist
- Treena Bartlem
- Brian Bashman
- Aneela Bashir
- Daniel J. Bauer
- Susan Baumer
- William F. Beaman
- David K. Bean
- Amy S. Beck
- Sara Beck
- Matthew A. Beckerdite
- Nealya L. Bell, NP
- Michele T. Bellamy
- Daniel R. Berg
- Brian Bergfeld
- Betty Jean Kerr People's Health Centers - Central
- Betty Jean Kerr People's Health Centers - Lindell
- Betty Jean Kerr People's Health Centers - North Site
- Amrita R. Bhalla
- Anjan Bhattacharyya
- Asif Bhutto
- Shadab Bhutto
- Saqib Bhutto
- Joshua D. Binek
- Donald E. Binz
- Joy N. Bittle
- Andrew Bjorn
- Anita Blackwell
- James Bockhorst
- Joyce E. Boehmer
- Jamie M. Borgmann
- Tinarose M. Bosslet
- Sarah Boutwell
- Joshua P. Branham
- Matthew Breeden
- Jay Brieler
- Kenneth R. Brightfield
- Kirk E. Brockman
- Glenn T. Brothers
- David Brown
- Shawn Brown
- Damon R. Broyles
- Kathleen S. Brunts
- Sarah Bryant
- Pamela L. Buchanan
- Richard B. Buckles
- William Budd
- Tara Budetti
- Amanda M. Burkheart
- Bryan P. Burns
- Lisa Burns
- Julie E. Busch
- Jason Butler
- Robert M. Byrne
- Curt E. Calcaterra
- Janelle Carron
- CareSTL Health - Main
- CareSTL Health - Florence Hill
- CareSTL Health - Pope
- CareSTL Health - Homer G Phillips
- Kyra A. Cass
- Bernard Chaitman
- Shelly Chandler
- Shaukat Chaudhry, MD
- Edward Chen
- Danielle Chi
- Mary Beth Chitwood
- Suresh Chode
- Jeff Ciaramita
- Kathleen M. Cizek
- Terri C. Coble
- Susan R. Colbert-Threats
- Danita Cole
- Sarah Z. Cole
- Lora Pearlman Collier
- Teresita Corneta
- Community Treatment Inc. (COMTREA) - High Ridge
- Community Treatment, Inc. (COMTREA) - Hickory Ridge
- Compass (Crider) Health - Union
- Compass (Crider) Health - Warrenton
- Compass (Crider) Health - Wentzville
- Philip G. Conway
- Johnetta Craig
- Paulina Cruz
- James Cuellar
- Robert F. Curtin
- Bruce T. Czarnik
- Peter G. Danis
- Michael E. Danter
- A. Jill Davis
- Dawn M. Davis
- Sarah Davis
- Thomas E. Davis
- Caroline E. Day
- Ananda De Silva
- Lauren E. Deichmann
- Roohi Desai
- Sunny Desai
- Gerry L. Deschamps
- Jessica M. Despotovic
- Stacie Detmer
- Stephanie M. Dettlebach
- Ramadevi Devabhaktuni
- Francis Dickerson
- Kimberly R. Dickherber
- Matthew P. Dougherty
- Steven Drake
- Carla Duban
- John J. DuBois
- Gary Dumontier
- James Ebel
- Mykale R. Elbe
- Felipe Eljaiek
- Lamice El-Kholy
- Laura Huber Elliott
- John Emmons
- Katherine Endicott
- Mary Epperson
- Esse Family Focus Healthcare
- Esse Florissant Int. Med.
- Esse Health - Florissant Pediatrics
- Esse Health - Lake St. Louis
- Esse Health - Mason Road Pediatrics
- Esse Health - North County Int. Med.
- Esse Health - O'Fallon Pediatrics
- Esse Health - Office of Dr. Robert Byrne Bridgeton
- Esse Health - Office of Dr. Robert Byrne St. Peters
- Esse Health - Office of Dr. LaDonna Finch
- Esse Health - Office of Dr. Stephen Knapp
- Esse Health - Office of Drs. Knapp & Miranda
- Esse Health - Office of Drs. McLaughlin & Fisher
- Esse Health - Office of Dr. Irwin Plisco, MD
- Esse Health - Office of Dr. Jerome Williams
- Esse Health - Pediatric & Adolescent Med. at Watson Rd.
- Esse Health - Physicians at St. Clare
- Esse Health - Richmond Heights Int. Med.
- Esse Health - South County Int. Med.
- Esse Health - Southroads Int. Med.
- Esse Health - Southside Family Practice
- Esse Health - Tesson Ferry Pediatrics & Int. Med.
- Esse Health - Webster Int. Med.
- Esse Health - Esse West
- Esse Health - West Bend
- Esse Office of Ronald Wepprich, MD
- Esse Offices of Dr.'s Byrne & Launch
- Esse Offices of Sean McLaughlin, MD
- Esse Offices of Thomas F. Hastings, MD
- Esse St. Charles Internal Medicine
- Oscar Etuk
- Carol J. Evers
- Family Care Health Centers - St. Louis - Carondelet
- Family Care Health Centers - St. Louis-Forest Park Southeast
- Jeffrey C. Faron
- Mark A. Faron
- Adolphus C. Favors
- Michael Fedak
- William Feldner
- Scott Ferreira
- Ladonna Finch
- Dion Grant Fisher
- Tracy Fite
- Adam Fitzgerald
- Brett D. Foersterling
- Mark Fogarty
- Chad Fowler
- Dale A. Friesen
- Barney T. Fritz
- Kelly Gage
- Marian Gakes
- Dana C. Galbraith
- Jack A. Galbraith
- John P. Galgani
- Judith Gallagher
- Snehal R. Gandhi
- Paul Ganninger
- Rachel Meenu George
- Keith Georger
- David Glick
- Donald P. Goeller
- Julia Gold
- Bari Golub
- Alicia Gonzalez
- Andrew M. Grabowski
- Hillarie Graham
- Nicholas Greiner
- James R. Grimes
- Kathleen N. Guerrein
- Sarah Guillaume
- David P. Guss
- Thomas P. Gutmann
- Heather Halenkamp
- Donna Hall
- Robert W. Halsted
- Christopher Hamm
- David T. Hammond
- Melanie Hampton
- Jason A. Hand
- Laila G. Hanna
- John Hardeman
- Julie M. Hargraves
- Samara Harrell
- Margaret Hart, NP
- David E. Hartenbach
- Felicia L. Harvey
- Jaqueline G. Harvey
- Thomas F. Hastings
- Paul Hauptman
- Tarek Helmy
- Michael P. Hemmersmeier
- Kathryn R. Henderson
- Kimberly Henry
- Dale M. Henselmeier
- Maryjo Hernandez
- Felix E. Herrera
- Joseph T. Hilgeman
- Amanda Hilmner
- Keya Bhatt Hindia
- Rose Lee Hiner
- Mark D. Hingst
- Ha Minh Hoang

Source: <https://reportcards.ncqa.org/#/practices/list>. NCQA physician recognitions are current as of August 22, 2018.



Physician recognition programs list



National Committee for Quality Assurance (NCQA)

Diabetes Recognition Program (DRP) Patient-Centered Medical Home (PCMH)
 Heart Stroke Recognition Program (HSRP) Patient-Centered Specialty Practice (PCSP)

St. Louis Metropolitan Area

- | | | | |
|-----------------------------|--|---|---------------------------------|
| Thien-An Hoang | Thomas A. Lord | Mercy Clinic Family Med. - South Lindbergh | Michelle Mullin |
| Grant S. Hoekzema | Catherine Lowder-Johnston | Mercy Clinic Family Med. - Technology Drive | Nona Mungle |
| Leonard M. Hoffmann | John Lowry | Mercy Clinic Family Med. - Union | Timothy P. Murphy |
| Craig S. Holzem | Leonard Lucas | Mercy Clinic Family Med. - Wentzville | Melissa J. Murray |
| Denise Hooks-Anderson | Barbara A. Lutey, MD | Mercy Clinic Family Med. - Winghamen - Phoenix Village Pkwy | Richard S. Murray |
| Michael K. Houser | Gary A. Maassen | Mercy Clinic Family Med. - Winghamen - Technology Dr | Robin Musselman |
| Mark T. Houston | Julie K. MacPhee | Mercy Clinic Family Med. - Zumbel Ste. 130A | Maryam Naemi |
| Howard Bon Hsu | John C. Madden | Mercy Clinic Family Med. - Zumbel Ste. 130B | Eric Nalagan |
| Raymond J. Hu | Daniel J. Maestas | Mercy Clinic Family Med. - Wildwood | John A. Nash |
| Justin Hugo | Elizabeth Mahon | Mercy Clinic Heart and Vascular - St. Louis | Tejaswini R. Nayak |
| Dawn Hui | Surajit Majumdar | Mercy Clinic Heart and Vascular - Washington | Clarice Nelson |
| Janeice R. Hukill | Nawras Makhsida | Mercy Clinic Int. Med. - Union | Stephen J. Nester |
| Susan R. Hull | William T. Manard | Mercy Clinic Int. Med. - Washington | Robert Neumayr |
| Judith L. Hustermann | Artan Markollari | Mercy Clinic Int. Med. - 1177 E. Cherry | Jessica E. Niehoff |
| Richard Ihnat | Carol Martin | Mercy Clinic Int. Med. - Calvary Church Road | Michele Niemczyk |
| Christina Guyton Ingram | Dawn Matschiner | Mercy Clinic Int. Med. - Clayton/Clarkson Suite 320 | Christopher B. Normile |
| Regina Inman | Julianne Matt | Mercy Clinic Int. Med. - Crestwood | Karen K. Norton |
| Sherill M. Jackson | Marilyn A. Maxwell | Mercy Clinic Int. Med. - Creve Coeur | John J. O'Brien |
| Anne Jacob | Ariane May | Mercy Clinic Int. Med. - Des Peres Ste. 300 | Ma Cristina Ocampo |
| Christine Jacobs | Ardell Mays | Mercy Clinic Int. Med. - Des Peres Ste. 310 | Michael D. O'Connor |
| Victoria L. Jansen | Jina L. McAtee | Mercy Clinic Int. Med. - Dunn Road | Robert Oertli |
| Florence S. Jeffreys | Judith McCaul | Mercy Clinic Int. Med. - Florissant Oaks | Becky Oetting |
| Timothy W. Jennings | Timothy McCann | Mercy Clinic Int. Med. - Gravois | Offices of W. Stephen Knapp, DO |
| Melissa D. Johnson | Amy C. McClintock | Mercy Clinic Int. Med. - Lindbergh | Thomas J. Olsen |
| Coleen R. Jones | Leslie McCrary-Etuk | Mercy Clinic Int. Med. - Medical Tower A, Suite 189 | Kyle F. Ostrom |
| Samuel Joseph | Ellen T. McDermott-Loeffler | Mercy Clinic Int. Med. - Medical Tower A, Suite 507A | Stefanie Otten |
| Julie Jost | Deryk L. McDowell | Mercy Clinic Int. Med. - New Florissant Road | Andrea S. Otto |
| Andrew M. Kazdan | Jacquelyn R. McFadden | Mercy Clinic Int. Med. - North County | Vani Pachalla |
| Karla B. Keaney | Ashleigh McGrath | Mercy Clinic Int. Med. - O'Fallon | Josey Page, Jr. |
| Elizabeth A. Keegan-Garrett | Veronica P. McGregor | Mercy Clinic Int. Med. - Old Tesson | Thomas J. Panasci |
| Mary Keegan | Bernard J. McGuire | Mercy Clinic Int. Med. - Olive-Mason | Clara Lee Parks |
| Alyssa L. Keller | Sean T. McLaughlin | Mercy Clinic Int. Med. - Sullivan | Payal R. Patel |
| L. Joseph Kennington | Orville A. Mehaffy | Mercy Clinic Int. Med. - Zumbel Ste. 120A | Radha Patmana |
| Emir Keric | Ali Akbar Mehdiraz | Mercy Clinic Primary Care Water Tower Place | Sherri Patten |
| James W. Ketchum | Nalini K. Mehta | Mercy Clinic West County Family Practice | Dennis R. Patton |
| Kevin P. King | Aravindaksha P. Menon | Richard Metsker | John Pearson |
| Gretchen E. Kluesner | Marc O. Merbaum | Marsha K. Mertens | Mark S. Pelikan |
| William S. Knapp | Mercy Clinic Endocrinology | Audrey Meyer | Gregorius Resuma Penilla |
| Shirley M. Knight | Mercy Clinic Endocrinology- Festus Calvary | Janice A. Meyer | Roberto Perez |
| Jennifer L. Knox | Mercy Clinic Family Med. - Cuba | Lucias Meyer | Cindy Perkins |
| Carolyn L. Koening | Mercy Clinic Family Med. - Eureka (Legends Pkwy) | Matthew B. Meyer | David Peter |
| Wan In L. Koo | Mercy Clinic Family Med. - Eureka (Meramec Blvd) | Lewis A. Meyerson | Tysen J. Petre |
| Daniel J. Kramer | Mercy Clinic Family Med. - Marthasville | Wendy L. Meyr-Cherry | Marcella Petzchen |
| Mark S. Krasnoff | Mercy Clinic Family Med. - New Haven | Robert B. Michaels | Kristin E. Philbrick |
| Peter Krewet | Mercy Clinic Family Med. - Piper Hill Ste. 150 | Deana Mikhalkova | Rachel Phillips |
| James Kriegshauser | Mercy Clinic Family Med. - Piper Hill Ste. 140 | Heidi Miller | Serin Phruttitum |
| Thomas P. Kuciejczyk-Kernan | Mercy Clinic Family Med. - St. Clair | Jessica A. Miller | Nicole M. Delsoin Pierre |
| Babul Ram Kulkarni | Mercy Clinic Family Med. - Sullivan | David Almon Miller, MD | Melanie N. Pilkenton |
| Peter Lamble | Mercy Clinic Family Med. - Warrenton | Dion G. Miranda | Steven Pisoni |
| John Lamping | Mercy Clinic Family Med. - Washington Patients First Drive | Matthew Miriani | Irwin S. Plisco |
| Charles S. Larsen | Mercy Clinic Family Med. - Clayton/Clarkson | Missouri Endocrine & Diabetes Center | Prasanna Ponugoti |
| Richard L. Lazaroff | Mercy Clinic Family Med. - Fenton | Ayoub Mogassbi | Nora L. Porter |
| Cindy M. Leahy | Mercy Clinic Family Med. - Gerald | Peter Montgomery | Robert J. Pozzi |
| Janelle Lee | Mercy Clinic Family Med. - Hazelwood | Audrey K. Montooth | Simeon Prager |
| Richard Lee | Mercy Clinic Family Med. - Hillsboro | Maya Moody | Carolyn Prater |
| Michael Lim | Mercy Clinic Family Med. - Imperial | Annya Moody | Fredric A. Prater |
| Meghan Linden | Mercy Clinic Family Med. - Jefferson | Kristi A. Moore | Peter J. Putnam |
| Daniel H. Lischwe | Mercy Clinic Family Med. - S. Kirkwood | Nicholas Moore | Jenna M. Putzel |
| Yan-Hua Katy Liu | Mercy Clinic Family Med. - Kirkwood - Manchester Rd. | Heather L. Morgan | Tahir Qayum |
| Steven B. Livingstone | Mercy Clinic Family Med. - O'Fallon | Robert F. Morgan | Amin Radparvar |
| Deborah Loman | Mercy Clinic Family Med. - Olive -Mason | Tyler A. Mork | Sean T. Ragain |
| Timothy P. Long | Mercy Clinic Family Med. - Olivette - Suite 100A | Kyle C. Moylan | Srinivasan Raghavan |

Source: <https://reportcards.ncqa.org/#/practices/list>. NCQA physician recognitions are current as of August 22, 2018.

Physician recognition programs list



National Committee for Quality Assurance (NCQA)

Diabetes Recognition Program (DRP)

Patient-Centered Medical Home (PCMH)

Heart Stroke Recognition Program (HSRP)

Patient-Centered Specialty Practice (PCSP)

St. Louis Metropolitan Area

- | | | | |
|--------------------------|--|---|------------------------|
| Adam Ralko | David L. Shaw | SSM Med. Grp. - South County Pediatrics | Shaukat A. Thanawalla |
| Rimki Rana | Amanda Sherwood | SSMMG St. Clare Endocrinology | Joseph W. Thompson |
| Michael E. Rau | Athmaram Shetty | SSM Med. Grp. - St. Clare Family Practice | Jessica Thomure |
| Sheryl Ream | SLUCare Center for Comprehensive Cardiovascular Care | SSM Med. Grp. - St. Clare Internal Medicine | Jerome E. Thurman |
| Jocelin Reatiraza, MD | SLUCare Family Med. - Des Peres | SSM Med. Grp. - St. Clare Pediatrics | Matthew J. Tiefenbrunn |
| Tina Reeves, NP | SLUCare Family Med. - Doctors Office Building | SSM Med. Grp. - St. Joseph Medical Park | Elizabeth A. Tracy |
| Edward Reh | SLUCare Family Med. - University Tower | SSM Med. Grp. - St. Mary's Endocrinology | Michael C. Treisman |
| Catherine R. Remus | SLUCare Physician Group Family Community Med. - Des Peres | SSM Med. Grp. - St. Mary's Internal Medicine | Rupal Trivedi |
| Elizabeth Remus | SLUCare Physician Group General Int. Med. - Doctor's Office Building | SSM Med. Grp. - St. Mary's Pediatrics | Jane L. Tucker |
| John H. Rice | SLUCare Physician Group - Endocrine Doctor's Office Building | SSM Med. Grp. - St. Peters | Kevin M. Turner |
| David Richards | Lorinna Shniter | SSM Med. Grp. - Sunset Hills Internal Medicine | James D. Turner |
| Christy L. Richardson | Katherine Siebert | SSM Med. Grp. - Sunset Hills Pediatrics | Thomas A. Tyeer |
| Michael J. Richardson | Lori Siffer | SSM Med. Grp. - Troy | Jason B. Vangundy |
| Mark D. Rickmeyer | Christine Sigman | SSM Med. Grp. - Wall Street | Christian Verry |
| Tracy M. Riordan | Leah Silver | SSM Med. Grp. - Wall Street Pediatrics | Gary Vickers |
| Rebecca Rodriguez | Alan Silverberg | SSM Med. Grp. - Warrenton | Sasi Vinjamoori |
| Janelle A. Roethemeyer | Morton J. Singer | SSM Med. Grp. - Webster Groves Int. Med. | Mark Vogel |
| Patrick Rose | Steven Smart, MD | SSM Med. Grp. - Wentzville | Chad M. Voges |
| Eileen Rosenkoetter | Brian M. Smith | Julia Sprague | George Voumas |
| Natalya Rukhman | Chad J. Smith | St. Anthony's at Arnold Family Med. | Stanley G. Vriezelaar |
| Emily Rumora | Debra S. Smith | St. Anthony's at Eureka Family Med. | Donna Wagstaff |
| Paul G. Rutledge | Jessica Smith | St. Anthony's at Fenton Family Med. | Sanaa Waheed |
| Geraldine A. Ryan | Kenneth B. Smith | St. Anthony's at Festus Family Med. | Martin J. Walsh |
| Priya Sadhu | Kevin B. Smith | St. Anthony's at Kirkwood Family Med. | Joanne Waltman |
| Robert M. Saitz | Lavada J. Smith, ANP | St. Anthony's at Lemay Ferry Int. & Family Med. | Chezza W. Warner |
| Stephen G. Sanders | Patrick R. Smith | St. Anthony's at Southfield Family Med. | Camil L. Watkins |
| Alan R. Sandidge | Rosalind Smith | St. Anthony's Health Care Partners | Garey Watkins |
| Jaime Santos | Sarah Smith | St. Anthony's Internal & Geriatric Med. | Beth Weber |
| Gabrielle P. Satterfield | Mariea Snell | St. Anthony's Kennerly Family Med. | Kristin Ann M. Weidle |
| Samantha Sattler | Anthony T. Sonn | St. Anthony's Primary Care Consultants | Ronald K. Wepprich |
| Krishnasamy Savadamuthu | South County Pediatric Associates | St. Anthony's at Southwest Medical Center | Mattie White |
| Randa Sawaf-Hajji | Theresa Spakowski | St. Anthony's at Telegraph Family Med. | Daniel W. Whitehead |
| Joseph Schachter | Michael Spearman | St. Anthony's at Telegraph Family Med. | Ashley Whitley |
| Jennifer L. Scheer | Michael A. Specter | St. Anthony's at Telegraph Family Med. | Pamela Whitlock |
| Angela M. Schiefelbein | SSM Health Medical Group Pediatrics | St. Anthony's at Telegraph Family Med. | Chandra K. Wiewel |
| David F. Schlitt | SSMMG - Arnold Primary Care | St. Anthony's at Telegraph Family Med. | Catherine S. Wilke |
| Edwin Schmidt, III | SSM Med. Grp. - Dardenne Prairie | St. Anthony's at Telegraph Family Med. | Michael L. Williams |
| F. David Schneider | SSM Med. Grp. - DPMG Endocrinology | St. Anthony's at Telegraph Family Med. | Roy J. Williams |
| Paul Schneider | SSM Med. Grp. - Int. Med. in Richmond Heights | St. Anthony's at Telegraph Family Med. | Sarah E. Wilson |
| David M. Schoenwalder | SSM Med. Grp. - Lake St. Louis, 300 Medical Plaza | St. Anthony's at Telegraph Family Med. | Michelle Lyn Wolynski |
| Patrick Schoenwalder | SSM Med. Grp. - Lake St. Louis, 400 Medical Plaza | St. Anthony's at Telegraph Family Med. | LaToya Woods |
| Lisa A. Schultz | SSM Med. Grp. - Manchester | St. Anthony's at Telegraph Family Med. | Susan Wilson Yang |
| Suzanne Schultze | SSM Med. Grp. - O'Fallon | St. Anthony's at Telegraph Family Med. | James R. York |
| Ann Schumacher | SSM Med. Grp. - Pediatrics at Cross Keys | St. Anthony's at Telegraph Family Med. | Steven Younger |
| Kristin Scullin | SSM Med. Grp. - Primary Care at Cross Keys | St. Anthony's at Telegraph Family Med. | Delaine Yowell |
| Brian A. Seeck | SSM Med. Grp. - Primary Care at DePaul | St. Anthony's at Telegraph Family Med. | Mojdeh Zahedi |
| Sarah J. Seeck | SSM Med. Grp. - Primary Care at Dorsett Village | St. Anthony's at Telegraph Family Med. | John F. Zalewski |
| Neelavathi Senkottaiyan | SSM Med. Grp. - Primary Care at Ferguson | St. Anthony's at Telegraph Family Med. | Meng Zhao |
| Laurie D. Senol | SSM Med. Grp. - Primary Care at North County | St. Anthony's at Telegraph Family Med. | Beth Zimmer |
| Jennifer P. Sewing | SSM Med. Grp. - Primary Care at St. Charles | St. Anthony's at Telegraph Family Med. | Darryl Zinck |
| Vani Shama | SSM Med. Grp. - South County Family Practice | St. Anthony's at Telegraph Family Med. | Kimberly A. Zoberi |

St. Louis Metro East (Illinois)

- | | | | |
|------------------------------------|---|---|--|
| Bethalto Health Center | Mark D. Irwin | Jennifer Neville | Southern Illinois Healthcare Foundation |
| Thomas Bayer | Basel Katerji | Elizabeth E. O'Brien | SSM Medical Group - Maryville Pediatrics |
| Laura A. Crandall | Ashley Konneker | Miguel A. Paniagua | Christopher D. Suhre |
| Jenny V. Deyto | Dana Lakatos | Chris P. Poirat | Nanthini Suthan |
| Esse Health - Shiloh Int. Med. | Macoupin Family Practice Centers, LLP - Carlinville | Brian L. Quarton | Samantha Thomas |
| Esse Health - Swansea Int. Med. | Macoupin Family Practice Centers, LLP - Gillespie | Donna Rassmussen | Anupama Vallala |
| Esse Health - Belleville Int. Med. | Macoupin Family Practice Centers, LLP - Mt. Olive | Kelsey Reding | Bruce F. Weber |
| Heidi Fields | Maple Street Clinic | Sparta Community Hospital - Marissa Med. Clinic | Julia Wieggers |
| Erin Lane Friedman | Deborah K. McDermott | Springfield Clinic - Carlinville | Kelly A. Wood |
| | | SSM Med. Grp. - Belleville Pediatrics | Vicki Young |

Source: <https://reportcards.ncqa.org/#/practices/list>. NCQA physician recognitions are current as of August 22, 2018.



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Report Author

Karen Roth, RN, MBA, CPA
Director of Research

*For more information,
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- Millipore Sigma
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- Olin Corporation
- Panera, LLC
- Parkway School District
- Peabody
- Rockwood School District
- Saint Louis County
- Saint Louis Public Schools
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- Shelter Insurance
- Spire
- Sulzer US Holding, Inc.
- Sunnen Products Company
- Tucson Electric Power
- UniGroup, Inc.
- Watlow
- WestRock Co.
- World Wide Technology, Inc.

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- Mercer
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Health Care HR Partners

- Centene Corporation
- Express Scripts, Inc.
- Lutheran Senior Services
- Mallinckrodt Pharmaceuticals
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- University of Missouri

About the BHC

The St. Louis Area Business Health Coalition (BHC) represents leading St. Louis employers in their efforts to improve the well-being of their employees and enhance the overall value of their health benefit investments. BHC employers seek a transparent health care market where comparative information about quality, cost and outcomes is used to achieve high-quality, patient-centered, and affordable care for all people in the region.

The BHC Foundation is a separate non-profit subsidiary organization to BHC. The BHC Foundation's purpose is to provide pertinent health care information to the community.

About this Report

This report analyzes, summarizes, and presents information and trends on St. Louis area outpatient care for fiscal years 2016 and 2017. The report includes data from the following sources: ChooseWellSTL.org, Consumers' Checkbook, Centers for Medicare and Medicaid Services (CMS) Physician Compare, National Committee for Quality Assurance (NCQA) Physician Recognition Programs, U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Bureau of Primary Health Care Uniform Data System (UDS), St. Louis Regional Health Commission, and CMS Hospital Compare as well as additional information voluntarily submitted by providers. This report may be downloaded from the BHC website at www.stlbhc.org/page/HCIO.

Data Limitation and Cautions

BHC has made every effort to provide accurate information. Each facility was given the opportunity to verify its data. As with any analysis of health care industry data, a note of caution is recommended. BHC depends upon the accuracy of the data sources and cannot guarantee the complete accuracy of all the data in this report. For example, data from Medicare accountable care organizations or federally qualified health center UDS data may contain a level of error. In this case, data inaccuracies that may remain for health centers or physician practices would have minimal impact on weighted average values and virtually no impact on the overall conclusions.

Please read and become familiar with the technical discussion while reviewing or interpreting the data detailed in this report.

Acknowledgments

BHC would like to acknowledge the federally qualified health center and accountable care organization representatives who voluntarily provided BHC with financial, quality and utilization information. Federally qualified health centers and their staff worked extensively with BHC to verify the accuracy of the data. The additional time and effort spent analyzing and verifying this information was invaluable to the project's success.

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