



# HEALTHCARE ECONOMICS

ADVISORY SERVICES

EXPERTS WITH IMPACT™

# The Importance of **Healthcare Economics**

Healthcare economics is the application of empirical techniques and analytical theory to questions concerning how best to provide healthcare services to meet the needs of a population. In a time of resource scarcity, excess demand, risk, and uncertainty, choices must be made about strategic prioritization, resource management, and operational viability. Health economists illuminate these opportunities and provide guidance for the health sector to determine ways of judging the success of health policies.



# Our Healthcare Economic Advisory Services

---

FTI Consulting's Healthcare Economics team applies cutting-edge economics and quantitative methods to assist clients in developing and implementing market-based solutions across a wide spectrum of healthcare activity. We use "gold standard" economic and financial modeling to assist stakeholders in developing evidence-based strategies to address fundamental changes in healthcare demand and delivery within a system or community.

## ENHANCED COMMUNITY ASSESSMENTS

Our proven analytics and modeling provide sound evidence-based analysis to inform strategic healthcare transformation and interventions for local communities and employers.

## DISPUTES

Our experts have successfully testified in healthcare litigation and arbitration matters, Medicare/Medicaid audits, and settlement discussions with the Department of Justice and Office of the Inspector General.

## STRATEGIC AND MANAGEMENT CONSULTING

Our team specializes in providing evidence-based solutions for the healthcare issues clients face today as well as helping plan for an ever-changing healthcare landscape.

## MODELING AND TRANSFORMATION

We offer unparalleled analytics, benchmarking, simulation, and predictive modeling algorithms that can change the healthcare equation for our clients.

## NETWORK ANALYSIS

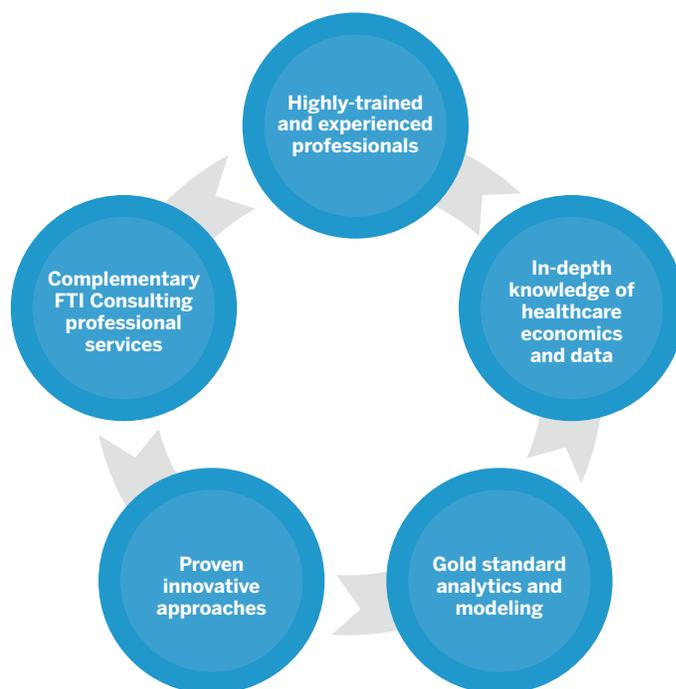
Our sophisticated network analysis techniques, such as provider/patient relationships and CPT/specialty clustering analyses, provide the ability to effectively identify and quantify data anomalies as well as other suspicious billing patterns.

## M&A, ANTITRUST AND COMPETITION

Our team brings unique insights from extensive experience working on provider and payer transactions across the healthcare continuum and contributes expert solutions to complex investigatory and litigation matters.

## POLICY AND REGULATION

We are committed to the importance of providing economically-sound, evidence-based analyses that recognize the multi-dimensional challenges of healthcare reform. Our team employs econometric and other empirical evidence-based analyses to identify and develop healthcare organizational and process reforms that deliver better outcomes at greater value for money.





The Healthcare Economics team has global reach with experts who have worked in healthcare across across North America, Latin America, the United Kingdom, Europe, Asia, the Middle East, and Africa with private sector and government clients.

# Our Expertise

---

Our team specializes in developing predictive modeling that takes into account uncertainty and risks in assessing the effects of future changes in population health, patient mix, and utilization on operations, finances, and capacity needs of healthcare stakeholders. Economic methods identify and frame the opportunities to proactively optimize resources and strategies. Our practice is international in scope, with common models and tested applications applied to locally relevant data in each country or region to yield strategies and solutions informed by both.

## DEEP AND BROAD EXPERIENCE

Our team includes PhD economists, senior staff, and research analysts with extensive expertise in economics, transformation, convergence and analytical methods. Our professionals provide critical guidance to organizations facing clinical, operational, and financial challenges.

## UNRIVALED KNOWLEDGE AND ANALYTICS

We help organizations and communities achieve implementable solutions grounded in robust data analysis to improve health and the healthcare system.

## PROVEN TRACK RECORD

We have a track record of assisting clients in achieving a clear vision of the role they can most effectively play in an evolving healthcare environment.

## THE RIGHT TEAM

As the challenges facing providers and payors continue to grow, our experts work together to provide an evidence-based, clinically driven and strategic approach to address the critical issues facing the healthcare industry.

## AREAS OF EXPERTISE

The foundation of our work is based on empirical analyses and modeling. Our areas of expertise include:

- Antitrust and Competition
- Mergers and Acquisitions
- Monopolization and Abuse of Dominant Position
- Class Certification
- Corporate Governance and Strategy
- Damages
- International Arbitration
- Public Policy
- Population Health
- Realignment, Transformation, and Convergence

## OUR TOOLS AND TECHNIQUES INCLUDE:

- Provider Service Line Reconfiguration
- Microsimulation
- Data Analytics and Statistics
- Statistical and Probabilistic Modeling
- Cost Benefit and Feasibility Analyses
- Discrete Event Simulation
- Value-based Growth Strategies
- Volume to Value Transformation
- Scale Analyses
- Capital Allocation Planning

The application of these tools has been leveraged by a range of clients across various segments of the healthcare and life sciences industry, including:

- Providers
- Payors
- Medical Equipment and Device Companies
- Pharmaceutical Manufacturers and Distributors
- Community and Regional Health Consortia
- Employers

# Enhanced Community and Employer Led Assessment

---

The ability to fundamentally improve the health of a community and its residents requires a sound, evidence-based strategy. FTI Consulting's Healthcare Economics team recognizes the importance and associated uncertainty in transforming care and population health in a local community. Communities and business leaders increasingly focus on the economic and health impacts of chronic conditions and health behaviors such as obesity, diabetes, and hypertension that lead to higher medical costs and hinder productivity, and ultimately quality of life in a community.

## TRANSFORMING A COMMUNITY'S APPROACH TO HEALTH

Successfully influencing the health of a community requires active and sustained collaboration among key stakeholders, such as businesses, providers, payors, community organizations, and governments. We have the proven capability to engage with key stakeholders using economically-sound analysis to develop successful collaborative approaches to needed change.

By focusing on the linkages between health, access, costs, and their implications for economic and personal well-being, our team enables private-public collaboratives to identify key issues, to evaluate actionable and locally-relevant data, and to define success. This enables business leaders to evaluate best practices for the most important priorities for an area's competitiveness. Our methods focus on metrics and analyses presented in comparative fashion to inform potential strategies that can contribute important benefits for employers, residents, and the community.

## COMMUNITY HEALTH NEEDS ASSESSMENT PROCESS

We have developed an effective analytical framework for conducting an enhanced needs assessment at the community level, one that works with local leaders to identify and acknowledge the primary factors and uncertainty affecting health within a community, and the critical importance of multiple stakeholders needed to affect change.



Engage  
Stakeholders



Identify  
Key Issues



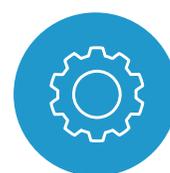
Evaluate  
Actionable and  
Relevant Data



Define  
Success and  
Priorities



Analyze Success  
Factors and  
Recalibrate

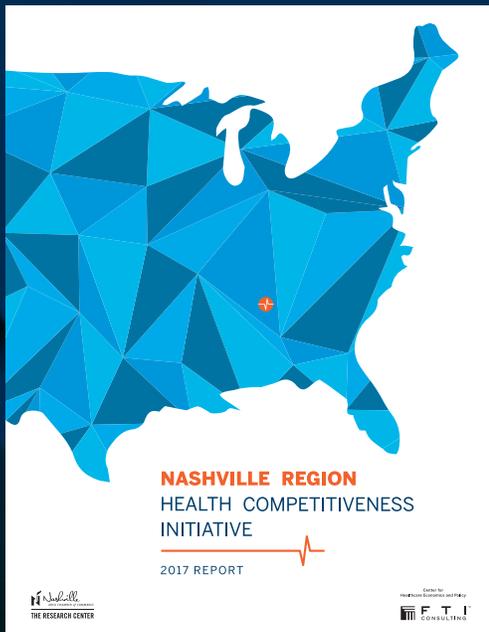


Outline and  
Implement  
Sustainable Plan

## CASE STUDY

### Employer-Led Collaborations for Health and Economic Well-Being

FTI Consulting's Healthcare Economics team has collaborated with the Nashville Area Chamber of Commerce's Research Center (Chamber) and a private-public stakeholder group to provide comprehensive and actionable data on health, access, quality and cost, and its impact on Nashville's workforce and competitiveness.



#### THE CHALLENGE

The Chamber commissioned FTI Consulting for a pilot to provide a complete profile of health status and healthcare cost for Nashville compared to 10 peer cities, including metrics on quality, costs, and utilization from chronic health conditions.

#### OUR INPUT

The Healthcare Economics team utilized extensive proprietary commercial claims data combined with large public datasets of locally-relevant data to assess the effect of chronic conditions and health behaviors on Nashville's workforce and its competitiveness.

#### THE RESULT

The pilot established a baseline of data on the health status of the Nashville area, including the chronic conditions and behaviors associated with higher medical and productivity costs. The pilot led to a renewed partnership with Nashville stakeholders culminating in a 2017 report examining specific segments of the Nashville-area workforce with a national review of employer-led strategies to address costly health conditions.

The study identified key issues for stakeholders, including annual productivity costs that exceeded \$500 million for diabetes, hypertension, and obesity in the Nashville region. We identified inventions and strategies used by businesses and communities that provide some measurable benefit (return on investment) for these three conditions. Employer-led strategies to address these conditions are critical success factors that yield important economic and health benefits and offer lessons for other regions.

# Integrated Economic Impact Analysis

The sophisticated models and analytics developed by our team inform systems, payors, and government entities of current impact, potential future demand for services, and the ability to assess the implications and outcomes of health and healthcare delivery transformation.

FTI Consulting's Healthcare Economics team has significant expertise and provides services including:

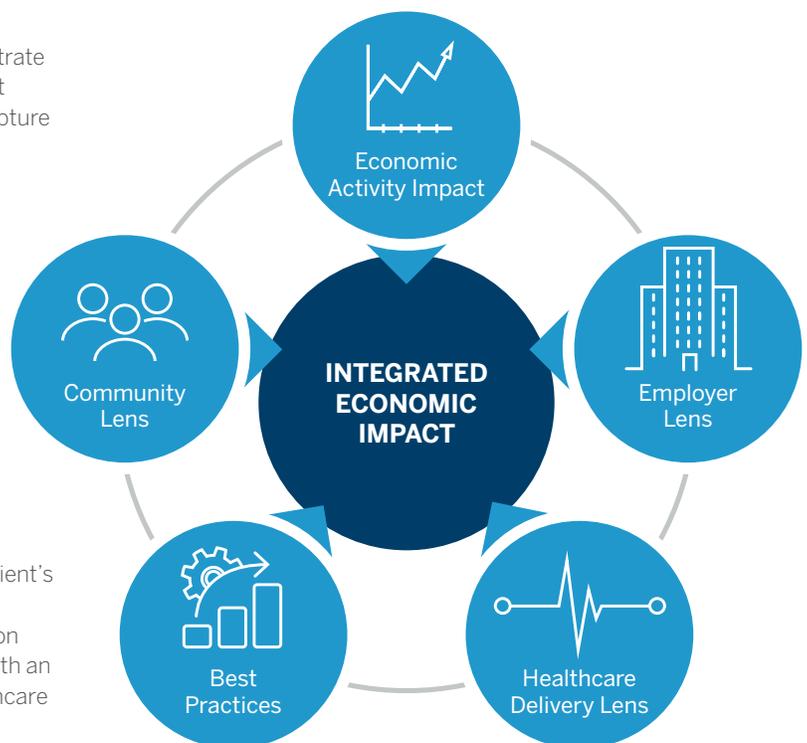
- Informing and improving major health system capital, assets, and resource allocation decisions with data analytics on population health needs and demand for services in the immediate, medium, and long term;
- Engaging and collaborating with key stakeholders and other experts, including other FTI Consulting practices, to assist in strategic clinical, financial, and delivery system assessment and reform;
- Visualizing, comparing, and executing on initiatives related to community health, economic and workforce wellness, and realignment using public, private, and geospatial data, and;
- Providing healthcare clients with expanded economic impact studies.

## INTEGRATED ECONOMIC IMPACT STUDIES

Our approach to non-profit hospitals' requirement to demonstrate community benefits goes beyond traditional economic impact studies. Our healthcare economists and modelers skillfully capture the overall economic and community benefits of our clients' operations and investments.

## OUR INTEGRATED ECONOMIC IMPACT STUDY APPROACH

Our methodology recognizes the value of a comprehensive economic impact approach that evaluates healthcare organizations across a range of dimensions including care coordination, clinically-integrated networks, and the alignment of care, that yield benefits at the local or regional level. Healthcare organizations may support needed infrastructure and common systems that re-align care and incentives among providers and plans for improved patient outcomes and experience, reduced costs, and care sustainability. Our approach in place of method incorporates all aspects of the client's operations and evaluates impact on economic activity using state-of-the-art modeling. It considers traditional quantification and assessment of community benefits and expands these with an in-depth assessment of best practices and results from healthcare organizations' investments and collaboration.



## CASE STUDY

### Holistic Health System Impact Assessment

#### THE CHALLENGE

In 2013 and 2016, Novant Health commissioned FTI Consulting to estimate the health system's economic impact on the state of North Carolina, and in its two major regions of Greensboro-Winston-Salem-High Point and Charlotte-Concord Combined Statistical Areas (CSAs).

#### OUR INPUT

The study used enhanced economic modeling techniques to quantify Novant Health's economic impact in the state and in the two CSAs, and quantified its community benefits, both generally as well as compared to other health systems in the state.

#### THE RESULT

The economic impact study conducted by our Healthcare Economics team highlighted that Novant Health produced more than \$7 billion of economic activity, created more than 48,000 jobs, and generated over \$830 million in tax revenues in the state of North Carolina in 2015.

The study extended traditional economic impact studies to evaluate the broader benefits of health systems, including integrated and coordinated care, development and implementation of electronic records and interface with consumers, and investments in community activities through implementation plans.

# Healthcare Services Delivery Reform

## HEALTHCARE TRANSFORMATION REFORM MODEL

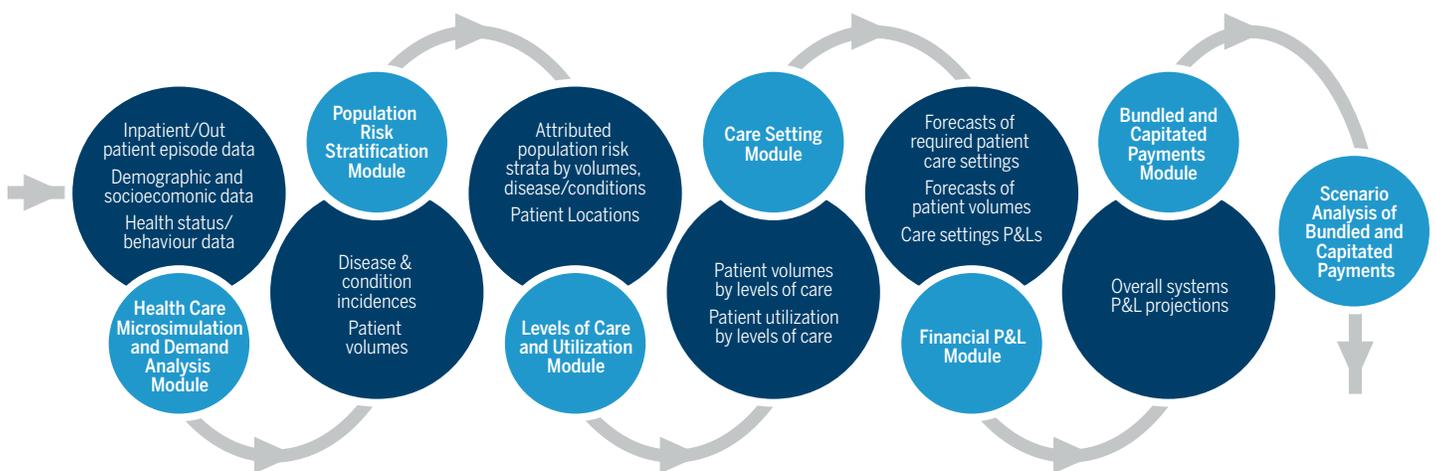
FTI Consulting's Healthcare Transformation Reform Model is an economic model that simulates demand interventions, models of care, healthcare delivery alternatives, risk- or outcomes-based reimbursement schemes, and financial outcomes. The model allows healthcare organizations to predict and evaluate likely outcomes of proposed or defined process improvements before enacting change. We apply models across geographies and countries – the model can be adapted to the many different contexts that we are called upon to assist clients and our business reflects these trends.

Microsimulation and health transformation modeling can address questions that healthcare organizations and communities need to answer to design and deliver care effectively and cost-efficiently.

For example:

- What financial impact will a particular model of care have?
- What payment scheme will incentivize providers to actively engage in a new model of care?
- How will sociodemographic changes affect supply and demand over the next 10 years?

- Which strategic efforts will have the greatest effect in reducing healthcare inequalities?
- What effect will a particular investment have on the needs of patients with specific chronic conditions?
- Will my organization or area have the health, mental, and social care resources to meet future needs?
- How will reform affect demand, utilization, and the mix and supply of providers in my area?
- How will improving out-of-hospital access to care affect in-hospital resource utilization?
- How does utilization vary within my region, and will that variation change over the next five to 10 years?
- What impact will greater provider integration have on resource utilization?
- How does the healthcare workforce in my region need to adapt in order to meet the needs of the changing populations?
- How will the prevalence of certain health issues and chronic conditions change over the next five to 10 years?





## CASE STUDY

### Intermediate Bed Process Redesign

#### THE CHALLENGE

A Clinical Commissioning Group in the UK requested support from FTI Consulting in providing a critical analysis and forward looking priorities of bedded immediate care in their service area, and to produce a future business case and options appraisal for commissioner consideration. The environment was complex and included a financial imperative to obtain the most cost-effective model of intermediate care available, aimed at making substantial operations savings over the next several years and increase the quality of care provided.

#### OUR INPUT

We interviewed all relevant stakeholders, analyzed data on the flow of patients in and out of intermediate care beds, and examined bottlenecks and inefficiencies in the process. The analysis included a redesign of the intermediate bed flow process and projections of intermediate care bed demand and cost savings over the next several years.

#### THE RESULT

From this assessment, FTI Consulting articulated a case for change consistent with stated transformation of care objectives. We provided a qualitative assessment of the risks and benefits, focusing on mitigations to minimize risks and achieve success.

# Strategic and Management Consulting

FTI Consulting's Healthcare Economics team specializes in providing evidence-based solutions for the most pressing healthcare issues facing clients today and prepares them an ever-changing healthcare landscape. Our experts offer insights and expertise relating to how the industry is evolving and how clients can stay ahead of the frontier. Our guidance spans the spectrum of integrated solutions to individual-project recommendations.

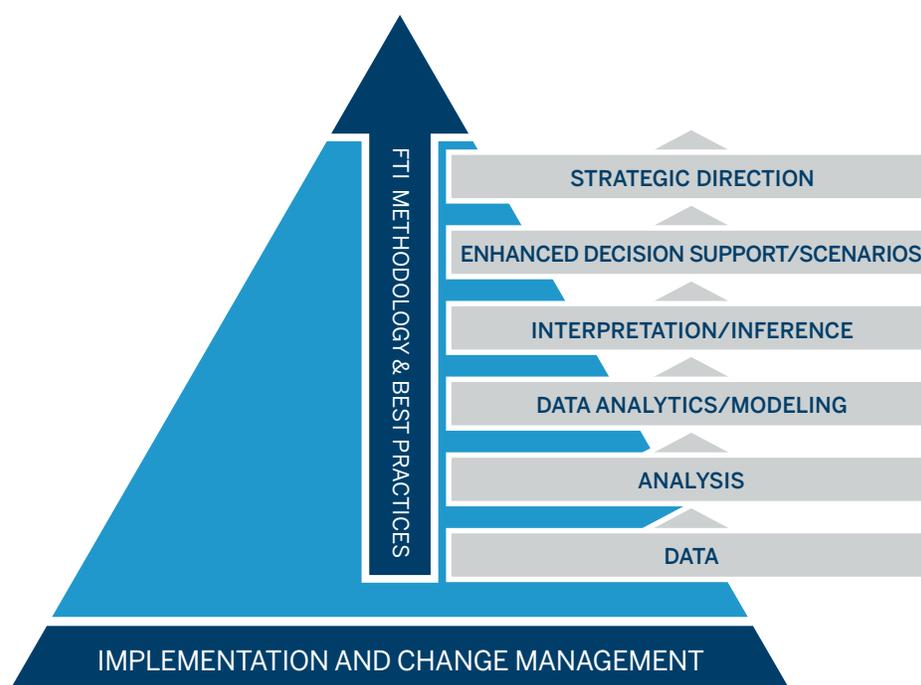
## STRATEGIC REALIGNMENT AND CAPITAL ALLOCATION

Our team's integrated-solutions approach explicitly recognizes dependencies, constraints, uncertainties, and risks in evaluating strategic realignment and capital allocation options.

Our experts understand complex healthcare delivery, where each decision can have a significant impact, either intended or unintended, on other objectives and priorities. We have the knowledge to qualitatively and quantitatively evaluate these effects simultaneously and offer solutions that produce the best-possible result while minimizing adverse effects.

## STRATEGIC ECONOMIC CONSULTING

As payors and providers grow, they seek to adjust their structure, metrics, and business strategies to compete in an ever-changing environment. Our team has extensive expertise in predictive modeling and healthcare economics, combined with in-depth knowledge of the particular issues facing payors and providers. We advise clients on operational transition strategies to compete and illustrate their mission value.





QRS Complex

R

## CASE STUDY

### Academic Medical Center Expansion

#### THE CHALLENGE

FTI Consulting was hired to assess the economics of a capital investment for a state-of-the-art treatment technology for an Academic Medical Center.

#### OUR INPUT

The Healthcare Economics team drew on multiple data sources and employed several advanced modeling techniques to develop a robust and thorough projection of likely demand and associated revenues stemming from investment in the new technology.

#### THE RESULT

This project highlighted the value proposition of the Healthcare Economics team – marrying extensive data from multiple sources with advanced, statistical methods to provide unique insights and advice.



P

PR Segment

ST Segment

PR Interval

Q

S

T

QT Interval

# Disputes

---

In today's complex healthcare regulatory climate, companies need targeted programs to prevent and detect violations, and to respond effectively when issues arise. FTI Consulting's Healthcare Economics team uses experience across the healthcare spectrum to bring unique insights and solutions to diverse investigatory and litigation matters.

Our methods provide ways to visualize and capture complex relationships in healthcare data and solutions that traditional analyses fail to capture. We bring to bear a full range of resources to incorporate important but often overlooked factors and influences. We apply proprietary tools and methodologies — data mining and mapping, microsimulation and demand modeling, electronic discovery and computer forensic capabilities – to provide comprehensive analyses.

## DISPUTES

Our dispute capabilities combined with our deep healthcare experience, enable us to provide valuable insight, credible expert testimony, and value and value for clients needing healthcare litigation services in diverse areas including:

- Litigation between payors and providers
- Disputes involving mergers or joint ventures
- Contracts and commercial disputes
- Qui Tam / False Claims Act Litigation
- Statistical sampling and damage extrapolation
- Working with independent coding experts on medical necessity reviews
- Econometric analyses on complex healthcare claims data
- Expert reviews of ZPIC Audits of Medicare/Medicaid Reimbursement



## CASE STUDY

### False Claims Litigation

#### THE CHALLENGE

This Qui Tam/False Claims Act litigation involved a large hospice care provider with over 490 community locations nationwide. The allegations included: (1) paying hospice workers based on their enrolment numbers, (2) having admitting nurses report to marketing directors and nursing-home doctors refer their own patients to hospice programs where they are also the medical directors, (3) Medicare paying for a patients' hospice care while Medicaid pays for the nursing home care; and (4) ineligibility of patient admissions and inappropriate patient churning.

#### OUR INPUT

We used enhanced data analytics to counter the suit's employee incentive allegations, and created visualizations of the reporting structures of nurses and marketing directors to show that such incentives did not exist. We also created survival analyses to show that the duration of a patient's stay was not correlated with admission policies or admitting physicians. FTI Consulting also constructed several important tests of representativeness to determine if the plaintiffs' sample was able to be statistically extrapolated to the much larger population of claims.

#### THE RESULT

Based on our analyses, along with several declarations and expert reports in the matter, the judge ruled that the plaintiffs were not allowed to extrapolate the alleged damages from the sample to the population of claims. Additionally, further analysis of the plaintiffs' damages expert's work papers were used to support a motion for the collection of attorneys' fees because we were able to show that the opposing expert had known of a material error prior to announcing the error. This omission caused unnecessary fees to be incurred by the defendants.

# M&A, Antitrust, and Competition Assessment

---

## **ANTITRUST EXPERTISE AND EXPERIENCE**

FTI Consulting's Healthcare Economics team regularly supports both defendants and plaintiffs in antitrust, and regulatory review and litigation, including cases involving price fixing, predatory pricing, bundling, and various forms of allegedly exclusionary conduct. We often assist in estimating lost profits or damages resulting from elevated prices and output restrictions. In the U.S., we have provided expert testimony and presentations before state and federal courts, federal regulatory agencies, state regulatory agencies, and arbitrators on mergers, business practices, and other claims. Internationally, we have provided expert testimony and analysis in a multitude of jurisdictions.

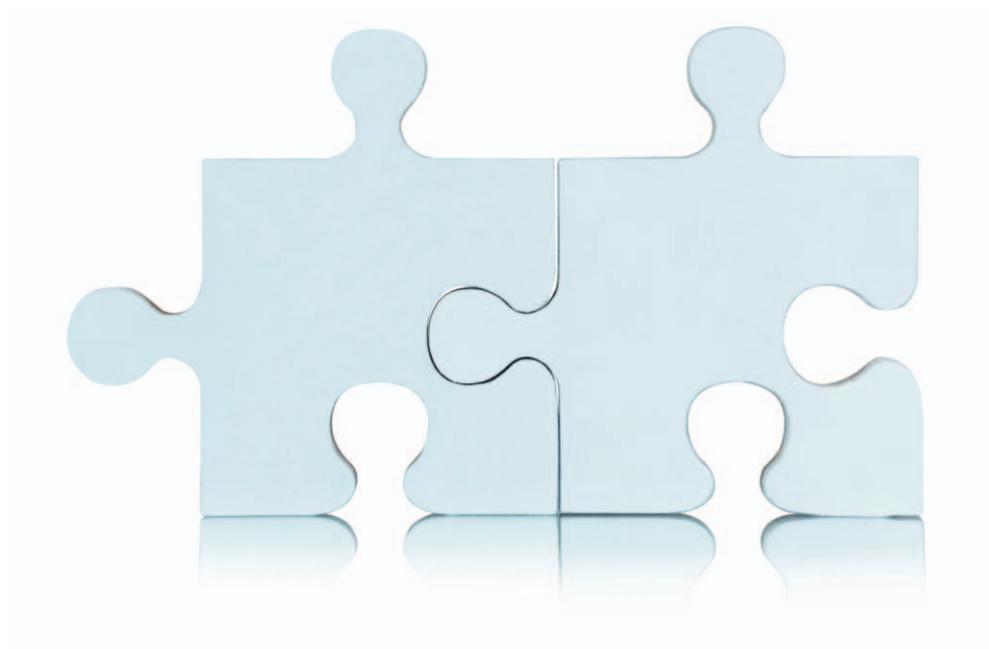
## **M&A AND COMPETITION ASSESSMENT**

FTI Consulting's Healthcare Economics team has unsurpassed expertise in analyzing and articulating the competitive effects and consumer benefits of mergers and transactions, including hospital care delivery and insurance mergers and acquisitions. Our experience spans across the healthcare spectrum to include outpatient and physician acquisitions and affiliations. Our experts have been involved in numerous hospital mergers and insurance

transactions, as well as in assessment of healthcare delivery changes in the U.S. and internationally. We serve as advisors and experts to regulatory agencies on policy matters and transactions. FTI Consulting's Healthcare Economics team's expertise includes evaluation of efficiencies and benefits from consolidation. Our expertise includes comprehensive assessments of market definition, empirical analyses, and assessment of market conditions affecting entry and involve extensive public and proprietary databases and state-of-the-art methodologies. These enable us to provide clients and agencies with comprehensive insights into the competitive benefits and effects of proposed and actual transactions.

## **BENEFITS OF TRANSFORMATIONAL CHANGE**

Our extensive M&A and competition experience provides a sound foundation for our broader work assisting clients across the healthcare spectrum. Our work also encompasses transformational changes in infrastructure, capacity and location of care, new care and payment models, integration, and cross-sector transactions (e.g., insurer-hospital transactions) that are grounded in modeling and experience from antitrust and competition work.



A close-up, blue-tinted photograph of a microscope. The objective lenses are prominent, with some text like 'Plan-ACHROM' and '100X/1.25' visible on them. The background is blurred, showing more of the microscope's structure.

## CASE STUDY

### Department of Insurance Assessment

#### THE CHALLENGE

The Pennsylvania Department of Insurance hired experts from FTI Consulting's subsidiary, Compass Lexecon to perform an economic assessment of Highmark, Inc.'s proposed affiliation with West Penn Allegheny Health System.

#### OUR INPUT

We evaluated the likelihood of the network delivering higher quality of care and cost savings and assessed whether benefits to patients from the proposed transaction and realignment of services outweighed any loss of benefits from competition.

#### THE RESULT

Our evaluation concluded that Highmark's proposed network was likely to deliver the projected patient benefits and cost savings, if implemented as proposed. However, we noted that there were significant risks associated with efforts to align physicians, hospitals, and payors to provide more efficient care and in guiding patients to make better healthcare choices.

# Policy and Regulation

---

The need for healthcare transformation in the U.S. and internationally, particularly to rein in healthcare costs that continue to spiral out of control and to improve health and health status is widely recognized. Goals of the U.S. reform in the Patient Protection and Affordable Care Act (PPACA) include controlling healthcare costs and providing insurance coverage to the uninsured and underinsured.

Despite medical advances, new drugs, and technologies, concerns about access, lack of coordination, and rising costs of drugs and health services create the impetus for change. Changes are underway globally, with many countries focused on similar priorities and the need for fundamental changes in structures and best care models.

## **HEALTHCARE TRANSFORMATION CHALLENGES**

Many healthcare providers and payors are addressing challenges by creating new organizational structures, such as integrated delivery systems and Accountable Care Organizations to improve healthcare delivery and ensure accountability.

Federal and state governments are establishing new standards and regulations to assure change occurs, as well as funding programs such as the State Innovation Models (SIM) and Delivery Service Reform Incentive Payment (DSRIP) to effectuate such change.

FTI Consulting's Healthcare Economics team actively assists organizations participating in healthcare reform and has collaborated with many organizations across the globe to identify the drivers of high healthcare expenditures and costs, and to develop reform strategies to assess and re-align delivery with healthcare needs, thereby improving access and reducing healthcare expenditures.

## **ELEMENTS OF HEALTHCARE POLICY REFORM**

- Access to care
- Prevention and wellness initiatives
- Delivery system realignment/convergence
- Clinical network integration
- Volume to value transition
- Quality and outcome reporting and tracking
- Information system and EHR implementation

## **OUR APPROACH**

We are committed to the importance of providing economically-sound, evidence-based analyses that recognize the multi-dimensional challenges of healthcare reform. Our team employs econometric and other empirical analyses of inpatient and outpatient data, socio-economic factors, demographics, and community-based healthcare metrics to identify and develop healthcare organizational and process reforms that deliver better outcomes at greater value for money. We tailor analyses to local contexts and institutions by applying soft-tested and refined models and approaches.



## CASE STUDY Delivery System Reform Incentive Payments

### THE CHALLENGE

FTI Consulting's Healthcare Economics team was hired by the Niagara Falls Memorial Medical Center (NFMMC) to assist with their efforts on the Delivery Service Reform Incentive Payment (DSRIP) program. The overarching goals of DSRIP included improving the health outcomes while reducing costs by increasing care coordination and reducing avoidable admissions by 25%.

### OUR INPUT

FTI Consulting provided data, analysis, and materials to support NFMMC's strategic planning and its workshops with Performing Provider System (PPS) members to advance thinking surrounding the Niagara-Orleans PPS' chosen domains. This included detailed timelines for projects, background materials, preliminary data, and health profile "hot spots".

### THE RESULT

Our work demonstrated that the population served by NFMMC and its partners was especially suited to particular DSRIP health initiatives. We provided the majority of the analytical work and provided supporting information for key stakeholders.



# Network Analysis

Network analysis, the visualization and evaluation of relationships and flows between people, groups, organizations, and other connected entities, enables our team to visualize and capture the complex relationships in healthcare claims data. Understanding these relationships makes it possible to generate solutions that traditional analyses fail to capture.

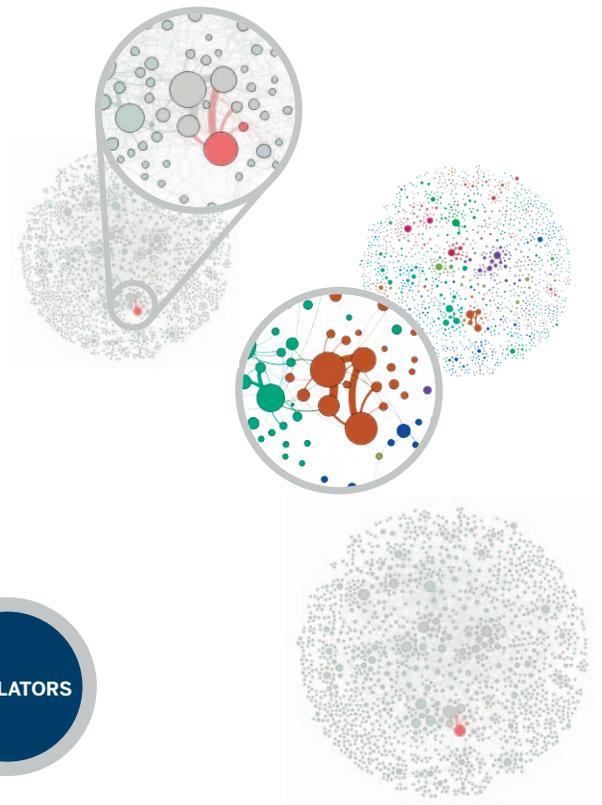
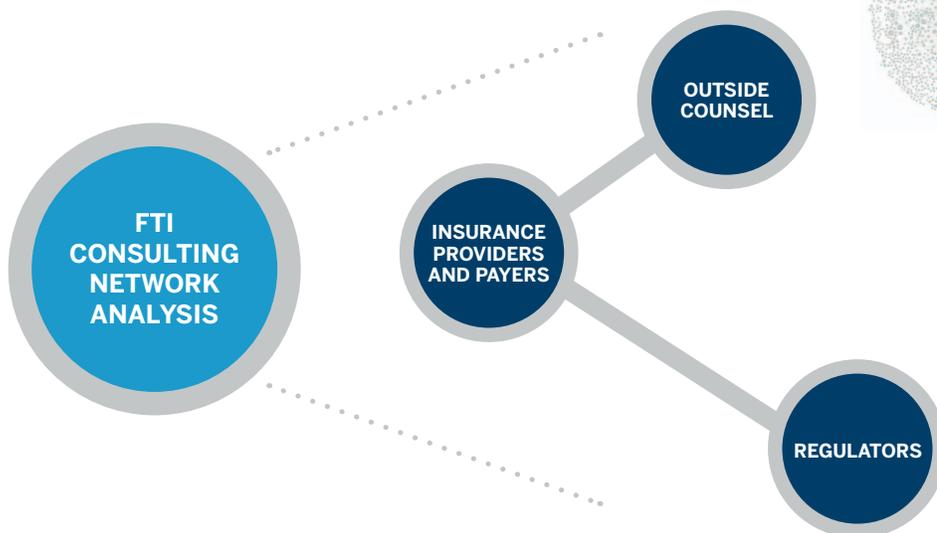
FTI Consulting's interactive network analysis website allows users to interact with real-time simulated data visualizations as a tool to help detect potential healthcare fraud and other patterns of illicit behavior in claims data. For example, one healthcare provider on their own may be flagged for overbillings using simple benchmark techniques and percentile classifications. However, finding problematic overbilling behavior that occurs only on the patient's first day at a clinic or office where the patients are passed around various providers for low-fee (but medically unnecessary) procedures, may be hard to identify through conventional techniques.

The network analyses used by our Healthcare Economics team quantitatively identify the social relationships between medical providers by examining which providers work on the same patients on the same day. In this way, providers are connected through their common billing behavior and common patient base. By using network analysis, we are able to create simple yet powerful tools and models for understanding the behavior of complex and interconnected data, which is critical to providing insight on complex investigations into social networks, detecting fraud, or spotting hidden data trends.

## PREDICTIVE ANALYTICS

FTI Consulting's Healthcare Economics team excels in knowing the appropriate type of predictive modeling to inform decisions in the healthcare sector.

From predicting false or fraudulent claims using electronic claims data, to predicting the incidence and prevalence of particular conditions or diseases, the associated demand and supply of healthcare services is challenging, particularly in a dynamic, highly uncertain environment. This requires a solid knowledge base not only of healthcare economics and financial analysis, but also in high-level predictive modeling under uncertainty. Our healthcare modelers excel in both and have exceptional experience in how to effectively model these uncertainties and risks.



## CASE STUDY Overpayments Deep Dive

### THE CHALLENGE

A large health insurer knew it was paying too much to providers and facilities after FBI stings revealed systematic fraud among its participants.

### OUR INPUT

FTI Consulting provided quantitative analysis to find the overpaid claims and quantify the total overpayments. Our Healthcare Economics team constructed over one million patient episodes from the claims data and performed advanced regression analysis using more than 1,000 explanatory variables. Both time series and cross-section techniques were used to predict the appropriate amount of payment that should have been made. Predictions varied from actual amounts by less than 0.5%, validating the model's reliability.

### THE RESULT

Based on FTI Consulting's reliable regression results, our client was able to negotiate a much better settlement than it otherwise would have. The client was also able to partition liability and seek different settlements from different entities for different amounts that were each quantified by the regression analysis.

# Our Team

---

FTI Consulting's Healthcare Economics team has experience bringing unique insights and solutions to the complex problems across the entire healthcare spectrum. We use sophisticated data analysis to deliver solutions that enable providers, payors, employers, counsel, and community groups to address current challenges, detect hidden problems, or capitalize on forecasted opportunities. Our practice is global with common principles and modeling applied across varied local healthcare contexts.

## OUR TEAM MEMBERS COME FROM A RANGE OF BACKGROUNDS, INCLUDING:

### PhD Economists

- Deep expertise delivering testimony, expert reports, publications, and thought leadership to an array of audiences and stakeholders.

### Econometricians

- Skilled in the advanced application of quantitative methods to analyze large, disparate datasets.

### Healthcare Leaders

- Experienced in process improvement and healthcare transformation management.

### Forecasting and Demand Modelers

- Intuitive in operational modeling and financial performance brought about by policy change.

### Former Department of Justice Senior Economists

- Equipped with contextual regulatory perspectives and robust examination of critical dispute components.

### Data and Health Policy Analysts

- In-depth qualitative analyses cut through complex issues, and present findings in a manner that is most impactful for our clients.



### MARGARET E. GUERIN-CALVERT SENIOR MANAGING DIRECTOR

Meg is widely recognized for her economic and healthcare expertise and cogent economic analyses in the U.S. and globally, where she has advised on a broad range of regulatory, merger, and litigation matters. Meg is also a founding director of Compass Lexecon.



### SUSAN H. MANNING, PhD SENIOR MANAGING DIRECTOR

Susan has over 30 years of economics and litigation consulting experience, including extensive expertise in antitrust, mergers and acquisitions, international trade, and regulatory policy analysis.

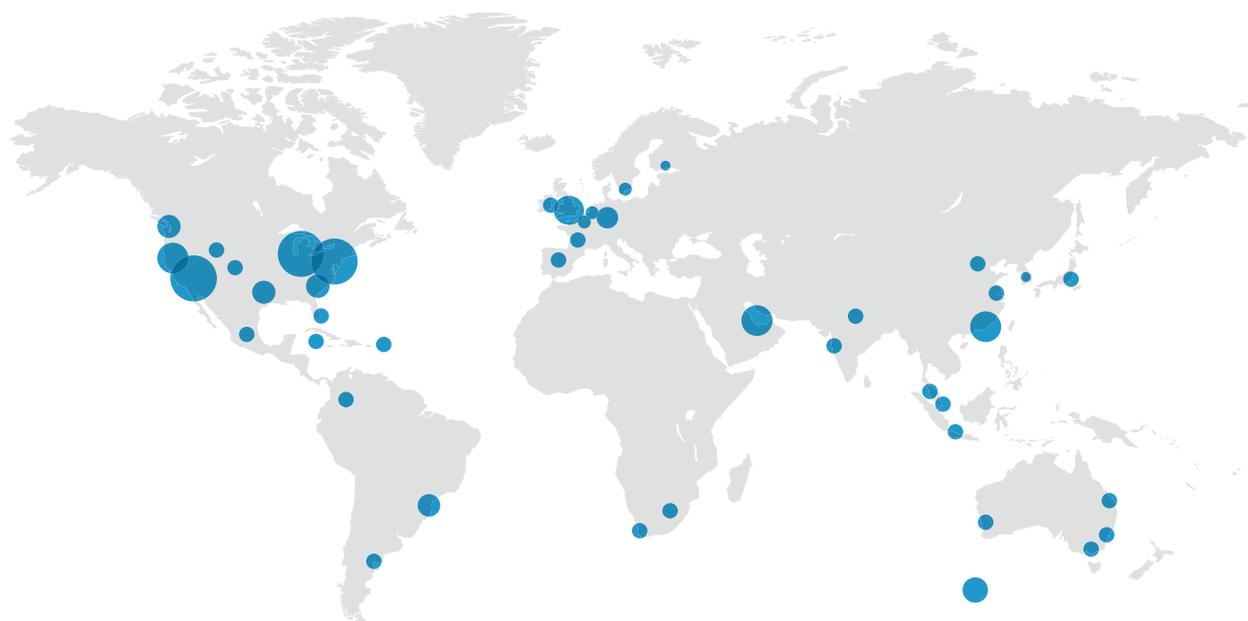


### MICHAEL P. SALVE, PhD SENIOR MANAGING DIRECTOR

Michael is an applied economist with experience in advanced quantitative methods, statistical studies, healthcare claims sampling, False Claims Act matters, econometric modeling, ZPIC audits, network analysis, and commercial disputes. He has extensive experience in designing statistical samples, developing complex extrapolation and benchmarking models, and evaluating achieved precision levels for clients in the healthcare industry.

# About FTI Consulting

FTI Consulting is an independent global advisory firm dedicated to helping organizations manage change, mitigate risk and resolve disputes.



|  |   |   |  |   |   |
|--|---|---|--|---|---|
| <p><b>100+</b></p> <p>MOST PROMINENT<br/>A MCS/HEALTH<br/>SYSTEMS IN U.S.</p>  | <p><b>56</b></p> <p>56 OF GLOBAL 100<br/>CORPORATIONS<br/>ARE CLIENTS</p>   | <p><b>FCN</b></p> <p>PUBLICLY<br/>TRADED</p>  | <div> <p><b>Forbes</b></p> <p>AMERICA'S<br/><b>BEST</b><br/>MANAGEMENT<br/>CONSULTING<br/>FIRMS</p> <p><b>2016</b></p> </div> <p>RANKED IN TOP 10% OF<br/>AMERICA'S BEST MANAGEMENT<br/>CONSULTING FIRMS</p> <p><b>HIGHLY RECOMMENDED<br/>BY CLIENTS</b></p> |   |   |
| <p><b>97/100</b></p> <p>ADVISOR TO 97<br/>OF THE WORLD'S TOP<br/>100 LAW FIRMS</p>   | <p><b>10/10</b></p> <p>ADVISOR TO WORLDS<br/>TOP 10 BANK HOLDING<br/>COMPANIES</p>  | <p><b>\$1.4bn</b></p> <p>EQUITY MARKET<br/>CAPITALIZATION</p>   |  |   |   |
| <table border="0"> <tr> <td> <p><b>GLOBAL REACH</b></p> <p>WITH 3,550+ PROFESSIONALS AND OFFICES IN 28 COUNTRIES, OUR BREADTH AND DEPTH EXTEND ACROSS EVERY MAJOR SOCIAL, POLITICAL AND ECONOMIC HUB ACROSS THE GLOBE.</p> </td> <td> <p><b>INDUSTRY EXPERIENCE</b></p> <p>WE ARE TRUSTED ADVISORS WITH DIVERSE EXPERTISE AND EXCEPTIONAL CREDENTIALS SERVING CLIENTS GLOBALLY.</p> </td> <td> <p><b>EXPERTS WITH IMPACT</b></p> <p>WE COMBINE UNPARALLELED EXPERTISE AND INDUSTRY KNOWLEDGE TO ADDRESS CRITICAL CHALLENGES, IN BOTH EVENT-DRIVEN AND LONG-TERM SCENARIOS.</p> </td> </tr> </table> |   |   |  | <p><b>GLOBAL REACH</b></p> <p>WITH 3,550+ PROFESSIONALS AND OFFICES IN 28 COUNTRIES, OUR BREADTH AND DEPTH EXTEND ACROSS EVERY MAJOR SOCIAL, POLITICAL AND ECONOMIC HUB ACROSS THE GLOBE.</p> | <p><b>INDUSTRY EXPERIENCE</b></p> <p>WE ARE TRUSTED ADVISORS WITH DIVERSE EXPERTISE AND EXCEPTIONAL CREDENTIALS SERVING CLIENTS GLOBALLY.</p> |
| <p><b>GLOBAL REACH</b></p> <p>WITH 3,550+ PROFESSIONALS AND OFFICES IN 28 COUNTRIES, OUR BREADTH AND DEPTH EXTEND ACROSS EVERY MAJOR SOCIAL, POLITICAL AND ECONOMIC HUB ACROSS THE GLOBE.</p>  | <p><b>INDUSTRY EXPERIENCE</b></p> <p>WE ARE TRUSTED ADVISORS WITH DIVERSE EXPERTISE AND EXCEPTIONAL CREDENTIALS SERVING CLIENTS GLOBALLY.</p> | <p><b>EXPERTS WITH IMPACT</b></p> <p>WE COMBINE UNPARALLELED EXPERTISE AND INDUSTRY KNOWLEDGE TO ADDRESS CRITICAL CHALLENGES, IN BOTH EVENT-DRIVEN AND LONG-TERM SCENARIOS.</p> |  |   |   |



Margaret E. Guerin-Calvert  
Senior Managing Director  
meg.guerin-calvert@fticonsulting.com  
+1 202 589 3451

Susan H. Manning, PhD  
Senior Managing Director  
susan.manning@fticonsulting.com  
+1 202 589 3458

Michael Salve, PhD  
Senior Managing Director  
michael.salve@fticonsulting.com  
+1 646 453 1239

EXPERTS WITH IMPACT™

#### About FTI Consulting

FTI Consulting is an independent global business advisory firm dedicated to helping organizations manage change, mitigate risk and resolve disputes: financial, legal, operational, political & regulatory, reputational and transactional. FTI Consulting professionals, located in all major business centers throughout the world, work closely with clients to anticipate, illuminate and overcome complex business challenges and opportunities.

[www.fticonsulting.com](http://www.fticonsulting.com)

©2017 FTI Consulting, Inc. All rights reserved.