

# Center for Healthcare Economics and Policy Healthcare Transformation Reform Model

FTI Consulting’s healthcare advisory services rely extensively on evidence-based analytics and statistical modeling tools to predict and transform population health, costs of care, utilization of healthcare resources, quality of care delivered, disparities in health needs and variations in the delivery of healthcare services.

## Our Unique Approach

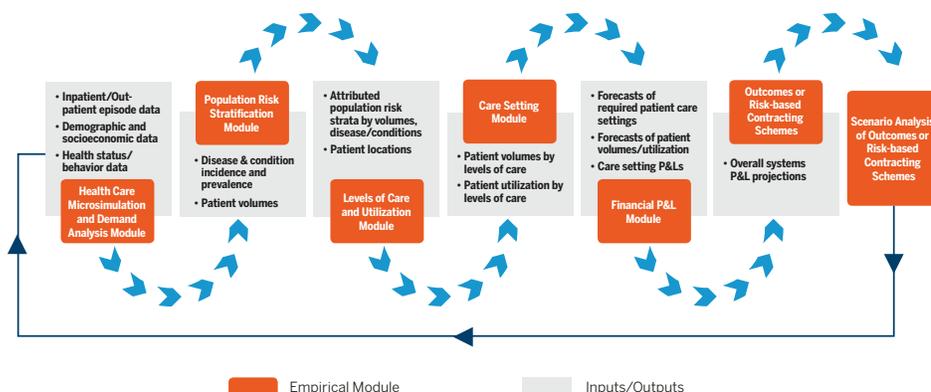
FTI Consulting’s approach to healthcare transformation is clinically-led, i.e., all change at its core must deliver improved outcomes and patient experience, thus creating better value for money expended. We recognize the challenges that change presents to the compendium of organizations that make up the U.S. healthcare system, and that while many of these challenges are similar across the healthcare delivery system, there are myriad subtleties and differences at the local healthcare economy (LHE) level that must be addressed to ensure a high likelihood of successful change for any particular organization. An economic model of the LHE can inform decision makers by empirically assessing different options and associated uncertainties and risks, taking specific account of changing demographics, epidemiology, technology, patient expectations, clinical standards and the need to deliver improved access and outcomes at better value for money. FTI Consulting has developed a modular empirical approach to modeling transformational change within a LHE to answer questions, such as those listed to the right.

FTI Consulting’s modular approach provides an ideal method for answering these and similar questions posed by regulatory authorities and providers. Our approach explicitly considers the uncertainties inherent in projecting the impact of programs designed to change the trajectory of diseases/conditions within a LHE, implementing outcomes-based or risk-based payment schemes and restructuring the funding and delivery of care across more appropriate care settings.

## QUESTIONS WE ANSWER

1. How will demographic and socioeconomic changes affect healthcare demand and resources required to meet that demand?
2. Which population health management efforts will have the greatest effect in reducing healthcare inequalities?
3. What effect will investing in particular healthcare interventions or therapies have on the needs of patients with specific chronic conditions?
4. What is the most effective approach in moving from fee-for-service to value/risk-based contracting scheme? What impact will this have on the clinical and financial viability of affected providers?
5. What payment schemes will incentivize providers to actively engage in solutions that will modify the present trajectories of disease/conditions to reduce hospital admissions, readmissions and A&E episodes?

FTI Consulting Healthcare Transformational Reform Model



# Center for Healthcare Economics and Policy

## Healthcare Transformation Reform Model

### Microsimulation Demand Module

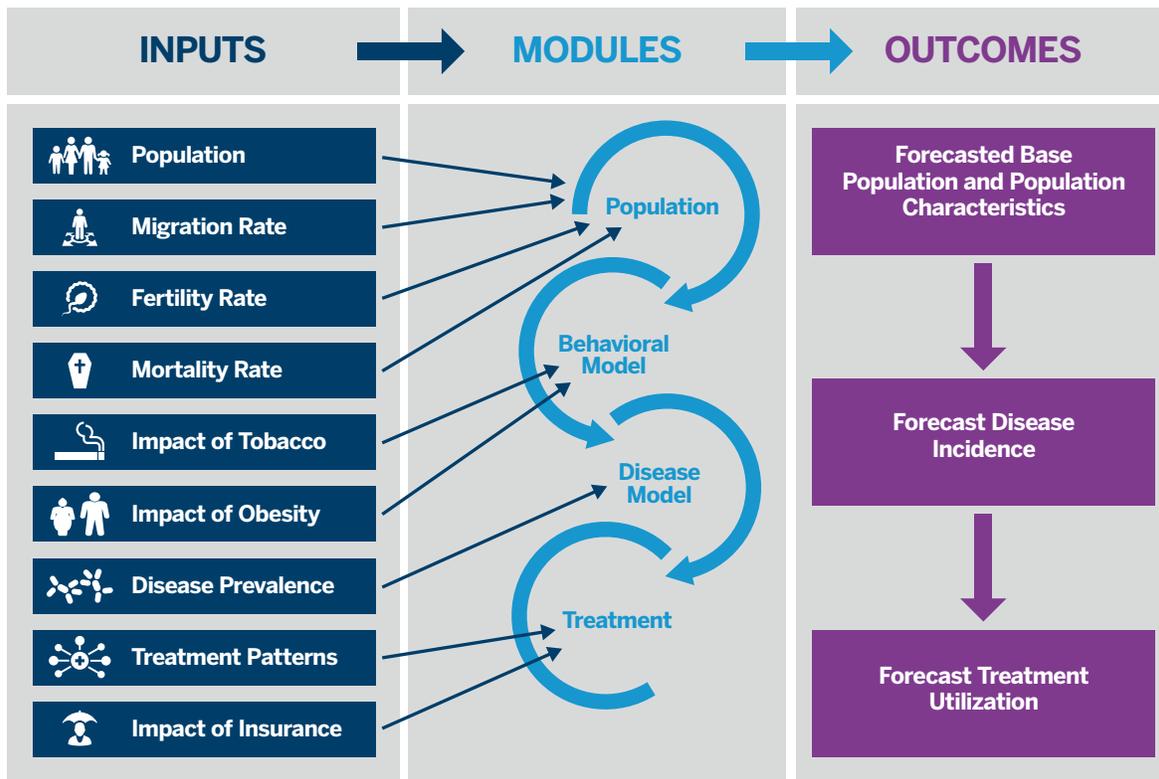
Microsimulation is at the core of FTI Consulting’s transformation reform model. Microsimulation is a dynamic modeling tool that forecasts specific conditions and disease prevalence (e.g. diabetes or cardiovascular disease) within a service area and allows for the evaluation of specific interventions to improve population health and reduce disease prevalence. Microsimulation can address two key questions:

- (1) What is the expected prevalence of a certain disease in the short- to medium-term future?
- (2) How can specific interventions change disease prevalence?

Obtaining accurate answers to these two questions is critical in both planning how to best meet patient healthcare demand and assessing the likely resource costs. However, producing accurate estimates requires a level of precision that standard techniques, which rely on aggregated data,

lack. In a microsimulation model, the unit of analysis is the individuals, and these simulated individuals are allowed to age and transition into different “states” over time (i.e. good health to poor health, low physical activity to increased physical activity, smoking to not smoking, etc.). Each person has a set of unique socioeconomic and demographic characteristics (age, gender, etc.), and the distribution of these characteristics mirrors the underlying composition of the population area.

The microsimulation process captures the characteristics of the population, accounting for socioeconomic and demographic factors as well as health behaviors. Through a series of modules, we capture how the population changes over time, how behaviors that influence health evolve, how these changes impact disease incidence and finally how disease incidence influences the demand for specific treatments.



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## Population Risk Stratification

Working with the clinical leads team, the baseline and care transformation demand projections flow into the population risk stratification. This module relies on widely accepted algorithms for stratifying care needs of patients.

## Levels of Care and Utilization Module

FTI Consulting works closely with clinicians to develop new models of care and interventions designed to reduce the demand for healthcare services and the progression of chronic conditions/ diseases. FTI Consulting examines and analyzes care levels and utilization for specific healthcare services based on the baseline, care transformation projections and population risk stratification.

The baseline levels of care and utilization results are calibrated against patient level activity data to ensure the model is accurately capturing the current delivery of healthcare services to patients. We incorporate clinical research, epidemiology and other academic literature on the efficacy of new care models to predict the likelihood that deploying a new care model will reduce the utilization of healthcare resources, such as inpatient admissions and readmissions.

## Care Setting Module

The care setting module captures required changes in the way healthcare is delivered with the deployment of new models of care. For most care models, this means shifting of utilization away from the hospital to out-of-hospital care settings. The effects of these changes are fed into the Financial module to determine the impact on cost of care, by care setting, for both the baseline and care transformation projections. The baseline projection are calibrated against estimates provided by the Partner to ensure the model is accurately capturing costs.

## Financial P&L Module

Using financial data provided by the Partner, FTI Consulting models the change in cost of care by comparing the predicted baseline financials with those predicted under new models of care. The results project the potential cost savings associated with the new models of care.



Source: Modification of 'Risk Stratification, NSW ACI, 2014'

## Bundled and Capitated Payment Module

Working with the Partner, FTI Consulting constructs and analyzes potential alternative payment schemes that would likely provide the appropriate economic incentives to care providers for implementing the proposed new care transformation model.

By empirically linking each of these components into a single model, FTI Consulting can more robustly evaluate the impact of change undertaken by a provider, accountable care or integrated care system.

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## Healthcare Transformation Reform Model

### Case Study: West Essex Accountable Care Partnership COPD Project

#### THE CHALLENGE

Healthcare expenditures on respiratory services is one of the largest costs of service for a LHE. The objective of this project was to develop a new model of care for respiratory services, specifically COPD and asthma, and develop an outcomes-based contract that would deliver better outcomes and improved patient experience at better value for money. The task was to advance transformational change in the long term to a LHE that faces significant challenges in the short term.

#### OUR INPUT

FTI Consulting’s microsimulation and health transformation modeling provided a means to test the costs and potential savings of possible interventions designed to improve the health and health status trajectory of the population served. We used microsimulation modeling to project population growth and changes in the demographics of the population,

smoking status and subsequently COPD and asthma prevalence and incidence. Annual population counts by condition and resource utilization data received from the provider and commissioning group were used to estimate resource utilization at the inpatient, outpatient, A&E and GP practice level. Patient expenditures were calculated using both the patient-specific activity data and condition-specific epidemiology and other clinical research on COPD and asthma.

#### IMPACT

The deliverables under this project were multi-fold: (1) estimate the but-for demand for respiratory services, primarily COPD and asthma; (2) work with clinicians to develop a new model of care that would improve outcomes and patient experience at better value for money; (3) empirically estimate the impact of this new model of care on the demand for respiratory services; and (4) use the results of these analyses to assist the ACP and West Essex CCG to design and implement an outcomes-based contract.

#### FOR MORE INFORMATION, CONTACT:



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#### About FTI Consulting

FTI Consulting, Inc. is a global business advisory firm dedicated to helping organizations protect and enhance enterprise value in an increasingly complex legal, regulatory and economic environment. FTI Consulting professionals, who are located in all major business centers throughout the world, work closely with clients to anticipate, illuminate and overcome complex business challenges in areas such as investigations, litigation, mergers and acquisitions, regulatory issues, reputation management and restructuring. [www.fticonsulting.com](http://www.fticonsulting.com)