Economic Impact of Health

For use in discussion and ideas with National Forum’s Value & Access Partner Spotlight Call: December 9, 2020

Presented by: Meg Guerin-Calvert, President, SMD, Center for Healthcare Economics & Policy, FTI Consulting, Inc.
ISSUES AND OPPORTUNITIES — ECONOMIC IMPACT OF HEALTH

Economic prosperity and health are linked - improved health enhances economic conditions and resiliency, and improved business and community activity supports health and quality of life.

THE SITUATION

• Poor health challenges the economic vitality, growth of businesses and cities, and reduces quality of life

• Chronic conditions such as diabetes and hypertension are directly linked to significant medical, productivity and economic costs

• Health is more than healthcare; opportunity costs of poor health for individuals, communities and the nation are high

IMPACT OF COVID-19 PANDEMIC

• COVID-19 pandemic increases health and economic costs as underlying health conditions such as diabetes and hypertension are associated with more severe illness and higher mortality risks from COVID-19

• The pandemic compounds and reveals health equity issues already confronting many cities - African American and Hispanic populations face higher chronic disease prevalence and many risk factors and higher mortality and poorer outcomes from COVID-19

URGENCY AND OPPORTUNITY

• Public-private collaboratives pivoted to address COVID-19; broke down silos and used trusted relationships to go the last mile to serve community members including most vulnerable

• COVID-19 reveals the complex inter-relationships between health, social factors and impacts on health and economic vitality and need for sustained cross-sector collaboration

• Health and economics with the pandemic are now even more intertwined; cross-sector collaborative responses to COVID-19, poor health, and social factors are critical ways by which cities and their leaders can move forward for significant gain
ROADMAP

1. THE NEED FOR ACTIONABLE DATA
2. HOW WE USE DATA — METRO AREAS
3. METRO AREA ANALYTICS AND FINDINGS
4. COLLABORATIVE RESPONSE
5. DISCUSSION
6. APPENDIX
The pandemic exposed fundamental issues and fault lines of poor health and health disparities.

**CDC Emerging Infectious Diseases, 2020**

Higher COVID-19 health risks are linked to poor health & chronic conditions. Healthcare studies link underlying chronic conditions with increased risks of serious illness from COVID-19. Certain chronic conditions (diabetes, obesity, hypertension) are associated with increased risk profiles for both younger populations (18-64) and older populations.

**New England Journal of Medicine, May 2020; Guerin-Calvert et. al. FTI Study**

Studies of health outcomes for African American and Hispanic populations show higher average rates of COVID-19 infection for these populations.. higher prevalence of chronic conditions.. which are associated with poorer outcomes from COVID-19. Data show higher mortality rates from COVID-19 among African American and Hispanic populations with much greater likelihood of death for these groups.

**Federal Reserve Bank of Minneapolis and Wilder Research, Dec. 2019**

A Federal Reserve study found linkages between poor health and metro (MSA) economic growth and vitality; and showed adverse impact on cities’ resiliency to downturns such as the 2008 recession.

**Nashville Business Journal, Nov. 2020**

“Companies looking to move or expand are judging cities on Covid-19 pandemic response, says Cushman & Wakefield site selection adviser.” Health was not on the docket before.

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FTI uses extensive proprietary claims data, public data sources and advanced analytics that leaders need to understand issues, drivers, priorities and best measures of health and economic well-being.

### Prevalence
- BRFSS SMART

### Medical Costs
- IBM® MarketScan® Research Databases

### Productivity Costs
- BLS & Literature

### Life Expectancy
- IHME County Profiles
Faith, community and government collaborative in Erie County, NY used data as key part of its activity:

- Early trends showed high percentage of African Americans fatalities as percentage of total fatalities
- Tracked COVID-19 fatalities by zip code, race
- Worked with local labor organizations to track count of essential workers by zip code
- Established testing clinic in zip code with highest case numbers in County
- Removed barriers to testing by allowing tests for those without insurance or a primary care physician
- Developed a transportation solution to test symptomatic individuals unable to physically get to the testing clinic
- Used collaborative action significantly to change trends

FTI’s Center tracks most metro areas in U.S.; and a sample of 11 metro areas (MSAs) across US with rich variation in demographics and economic conditions with populations from 800K to 2.9 Million.

Prevalence rates for diabetes, hypertension and other chronic conditions are high in most areas, and often higher for communities of color.

**Hypertension Prevalence in Selected 11 Cities**

- **All**: 26%, 37%, 37%, 36%, 32%, 35%, 34%, 35%, 30%, 35%, 35%, 36%, 32%, 33%
- **African American**: 44%, 41%, 40%, 46%, 50%

**Diabetes Prevalence in Selected 11 Cities**

- **All**: 10%, 11%, 12%, 11%, 11%, 7%, 10%, 12%, 10%, 12%, 12%, 10%, 7%
- **African American**: 18%, 21%, 23%, 15%, 15%, 15%, 15%, 14%, 14%, 14%, 14%, 10%, 7%

**Sources Used:**

- Calculations and methodologies are based on Center for Healthcare Economics and Policy’s data and related proprietary work product.
Employer and employee health benefit costs are just one (yet sizeable) part of total cost equation.

**HEALTH BENEFIT COSTS**

![Bar chart showing average annual worker and employer premium contributions for family coverage, 2010, 2015, and 2020.

**KAISER FAMILY FOUNDATION**

- A recent KFF study on employer health benefits found average annual premiums for employer-sponsored health insurance for singles and family increased by 4%, compared to workers' wages increasing by 3.4% and inflation by 2.1% over the past year.¹
  
- The overall average family premium has increased by 22% over the last five years **and now averages over $21,000**.
  
- Since 2015, worker contribution to annual premiums for family coverage has increased 13% ($4,955 to $5,588) and 40% since 2010.
  
- The average annual dollar amount contributed by covered workers in 2020 are $1,243 for single coverage and $5,588 for family coverage.

Productivity costs are large and often unrecognized by employers – and in addition to health benefit costs.

**Integrated Benefits Institute, 2020 (Forbes)**

Illness-related lost productivity costs employers $575 billion last year. For every dollar of the almost $950 billion spent on health care benefits, another $0.61 of productivity is lost to illness and injury [for a total of $1.5 trillion].

METRO AREA ANALYSIS AND FINDINGS

3 PRODUCTIVITY COST AND INCREMENTAL MEDICAL COST ESTIMATES

Diabetes, hypertension and cardiac disease impose significant productivity and incremental medical costs that could be reduced across populations with interventions to limit severity or progression.


Calculations and methodologies are based on Center for Healthcare Economics and Policy’s data and related proprietary work product.

Total Annual Incremental Medical Costs of Chronic Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Buffalo MSA</th>
<th>Nashville MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>$200.4 M</td>
<td>$336.1 M</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$201.2 M</td>
<td>$349.2 M</td>
</tr>
<tr>
<td>Depression</td>
<td>$170.5 M</td>
<td>$303.0 M</td>
</tr>
<tr>
<td>Asthma</td>
<td>$ 207.6 M</td>
<td>$328.6 M</td>
</tr>
<tr>
<td>COPD</td>
<td>$ 59.1 M</td>
<td>$ 54.8 M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$838.8 M</strong></td>
<td><strong>$1.4 B</strong></td>
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</table>

Total Annual Productivity Costs of Chronic Conditions

<table>
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<tr>
<th>Condition</th>
<th>Buffalo MSA</th>
<th>Nashville MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>$157.8 M</td>
<td>$183.2 M</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$120.5 M</td>
<td>$94.8 M</td>
</tr>
<tr>
<td>Depression</td>
<td>$415.7 M</td>
<td>$701.8 M</td>
</tr>
<tr>
<td>Obesity</td>
<td>$152.5 M</td>
<td>$133.4 M</td>
</tr>
<tr>
<td>Asthma</td>
<td>$222.2 M</td>
<td>$455.5 M</td>
</tr>
<tr>
<td>COPD</td>
<td>$180.9 M</td>
<td>$157.5 M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1.2 B</strong></td>
<td><strong>$1.7 B</strong></td>
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Calculations and methodologies are based on Center for Healthcare Economics and Policy’s data and related proprietary work product.
Interventions into chronic conditions and other factors yield benefits for employers and communities.

**Surgeon General’s Call to Action to Control Hypertension** “To improve hypertension control across the U.S. and for all populations, we need broadscale, multi-sector, culturally sensitive, and diverse interventions. This future can only be realized if significant changes are made at national, state, and community levels... A growing number of success stories from across the country suggest that focused efforts can inspire rapid, far-reaching progress... Now we need to apply them more widely. This Call to Action provides targeted strategies that different sectors can take to collectively improve hypertension control across the U.S. The time to act is now. Together, we’ve got this!”


- Interventions into chronic disease conditions by leaders and multi-sector collaboratives of public health, government, business, healthcare, and community leaders yield many gains.
- Gradations in severity of chronic conditions can be associated with large variation in medical costs, morbidity, mortality; understanding drivers of increased severity is critical for preventing acute health episodes that can be debilitating, deadly, and costly.
- Early warning and action for both onset and progression can save money and lives for at-risk patients.
4 COLLABORATIVE RESPONSE TO HEALTH AND ECONOMIC IMPACT

Cross-sector collaboratives (public-private partnerships) are key to COVID-19 response and health benefit.

...cities that have robust governance and health infrastructure in place are in a better position to manage pandemics and lower case fatality rates... and excess mortality than those that do not. ... the extent of a city’s preparedness depends on its capacity to prevent, detect, respond and care for patients.

Mayors are working closely with their local public health agencies to disseminate information to the general public, schools, businesses, outgoing travelers and other.... best practices that you may want to replicate in your city. .... The Conference encourages Mayors to share their best practices as a resource to their peers across the country.

While much is still unknown about COVID-19, according to data from the CDC, we do know that certain populations—African-Americans, Hispanic Americans, and the elderly, to name a few—are bearing the brunt of infections and deaths.

A new National Academies resource, Conversations on COVID-19: Impacts on Communities of Color, includes conversations with experts on a variety of topics related to minority health and COVID-19, as well as information and resources from the National Academies on issues related to health equity.

1Robert Muggah and Rebecca Katz, How cities around the world are handling COVID19 - and why we need to measure their preparedness” WEF (Mar. 17, 2020), https://www.weforum.org/agenda/2020/03/how-should-cities-prepare-for-coronavirus-pandemics/.
4 COMPPELLING STORIES OF COLLABORATIVE SUCCESS

Cincinnati: As part of a collaboration between the Cincinnati city government, Kroger Co., and Anthem Blue Cross and Blue Shield of Ohio in 2008, 845 employees of the City of Cincinnati and of Kroger participated in one-on-one meetings with Kroger pharmacists specially trained to provide hypertension and diabetes coaching. The program was associated with decreased medical costs and increased rates of controlled blood pressure among hypertensive patients.

Rochester: This collaborative consisted of local businesses, providers, insurers, labor, community organizations, the United Way, and minority consumer coalitions. The project focused on developing a communitywide high blood pressure registry as well as equipping stakeholders with information to offer practical recommendations for blood pressure control. The result was an 11% increase in the controlled blood pressure control rate among hypertensive patients.

Live Well San Diego: County and state health agencies as well as academic and private practice medical specialists and community leaders partnered in 2011 with the goal of preventing cardiovascular disease. Through regular meetings, forums sharing best practices, and an aggregated confidential data sharing program, the county was able better control blood pressure, lipid levels, and blood sugar in the community, resulting in a 22% reduction in acute myocardial infarction hospital rates and saving $86 million.

Erie County/Buffalo: Early data trends revealed that more than 33% of COVID-19 fatalities were African Americans in Erie County, NY; about double the share of population. A partnership of leaders in Erie County Government, Live Well Erie, African American Health Equities Task Force and many partners mobilized resources to respond to the disproportionate impact of the pandemic on the African American community. They collected and shared extensive data on health conditions, risks, outcomes, and social determinants. Results of collaboration and rapid response included a reported dramatic change in the fatality trend and enhanced engagement across partners around broader health and equity issues for community benefit.

Winston-Salem: This collaborative embarked on a rapid 29-day journey to “Mask the City.” Initiated by academic medical system leaders, it evolved into a unique coalition of cross-sector leaders that coordinated activities to locate a manufacturer, funded development and design of high quality masks, and distributed over 390,000 masks with 75,000 masks for low income and senior residents.

Appendix includes sources and additional detail for each case study.
## 4 CASE STUDY: CINCINNATI, OH

Collaboration of insurer and grocery chain (pharmacists) shows opportunity, impact and replicability.

<table>
<thead>
<tr>
<th>Settings</th>
<th>Pharmacy coaching program improves Ohio health scores.</th>
</tr>
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<tbody>
<tr>
<td>• Hypertension and diabetes coaching for City of Cincinnati and Kroger Co. employees</td>
<td>The results demonstrate the value of the relationship between community pharmacists and their customers, according to Frannie McGowan, clinical development manager for Kroger. “Health care companies are now seeing the value both clinically and economically in recognizing pharmacists as accessible healthcare providers in the community,” McGowan said.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners</th>
<th>Interventions</th>
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<tbody>
<tr>
<td>• Anthem Blue Cross and Blue Shield of Ohio, City of Cincinnati, and Kroger Co.</td>
<td>• Specially trained Kroger pharmacists provided hypertension and diabetes management coaching to 845 employees</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Goals</th>
<th>Impacts</th>
</tr>
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</table>
| • Reduce blood pressure  
• Improve hypertension and diabetes management | • Among participants with hypertension, share with blood pressure above 140/90 fell from 48% to 30%  
• Cost savings per hypertensive patient of $3,000-$4,000 |

A sustained cross-sector collaborative took on hypertension in a 10+ year initiative.

### Settings
- Improve high blood pressure control by targeting adherence and generic options in Rochester, NY area

### Partners
- Local businesses, providers, insurers, labor groups, community organizations, faith communities, United Way, and minority consumer coalitions

### Goals
- Reduce hospital admissions from stroke, heart attack, and heart failure
- Reduce need for kidney dialysis

### Interventions
- Developed community-wide high blood pressure registry (including data from three major health systems)
- Individual and practice-level data sharing between health systems
- Identified barriers to blood pressure targets in high-risk populations
- Wide range of community initiatives for healthy eating and blood pressure screening
- Blood pressure advocates program

### Impacts
- Blood pressure control among hypertensive improved by 11%
- 81% of patients that worked with a blood pressure advocate got their hypertension under control
- Share of adults with blood pressure above 160/100 fell by 41%

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**Creating community collaboration to improve the care of patients with high blood pressure: lessons from Rochester, New York**

“This project is unique in that the stimulus and funding for community-wide action came from the business community through the Rochester Business Alliance.”

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https://media.cmsmax.com/4yk/bpg/5t1u13bc/pgX20blood20pressure20collaborative201020year20retrospective20190107011804.pdf.


4 CASE STUDY: SAN DIEGO, CA ("LIVE WELL SAN DIEGO")

Live Well San Diego focused on cardiac disease; its partners pivoted to address COVID-19 pandemic.


Presentation to the National Forum for Heart Disease & Stroke Prevention

One in Five Fewer Heart Attacks: Impact, Savings, and Sustainability in San Diego County Collaborative

In San Diego County, where Be There San Diego thus far has primarily focused on reducing heart attacks, hospitalization rates for acute myocardial infarction decreased by 22 percent, compared to 8 percent in the rest of the state from 2007–10 to 2011–16. Nearly four thousand AMI hospitalizations were avoided and $86 million saved during the first six years of the collaborative.

Settings
- Collaboration between CA Department of Managed Health Care and the Right Care Initiative of the University of California launched in 2011

Partners
- CA Department of Managed Health Care, Right Care Initiative, San Diego County Health and Human Services Agency, medical providers, faith-based organizations, pharmacists, and community health workers

Goals
- Create a heart attack and stroke-free zone in San Diego County

Interventions
- Bring together stakeholders including clinical and community leaders
- Share best practices for controlling hypertension, lipid levels, and blood sugar ("University of Best Practices")
- Present and evaluate progress on metrics at monthly meetings
- Confidential data sharing among participating health care organizations ("Data for Quality" project)

Impacts
- AMI hospitalization rates decreased by 22% (relative to 8% in rest of CA)
- 3,826 avoided AMI hospitalizations
- $86 million savings
Successful collaboratives across the U.S. share many common features for understanding and action.

- Collaboratives align key stakeholders from public health, business, healthcare, faith-based and community leaders around common health and economic themes and priorities.
- Collaboratives break down silos – and use trusted relationships to reach all residents for engagement and benefit.
- Collaboratives with key health, economic and other data can understand critical health issues and drivers, economic costs, equity and social factors in their community – and share and use them for engagement and action.

The COVID-19 pandemic offers lessons and new opportunities for meaningful engagement and action!

DISCUSSION
• Poor health poses high costs and challenges economic vitality of businesses and cities
• Higher COVID-19 health risks are associated with poor health, with significant disparities - many communities already faced poor health and disparities
• The pandemic heightens both urgency and opportunity for collaborative efforts on health, health equity and economic benefit
• Appropriate investments in public health, actionable data and collaborative activity can yield substantial economic returns for communities
Appendix
APPENDIX — SOURCES FOR COLLABORATIVE SUCCESS/CASE STUDIES

Cincinnati, OH

Rochester, NY

San Diego, CA ("Live Well San Diego")

Erie County/Buffalo, NY

Winston-Salem, NC
Thank you!
FTI Consulting’s Center for Healthcare Economics and Policy 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 provide economic and financial modeling to develop evidence-based strategies to address fundamental changes in healthcare demand and delivery within a healthcare system or a region. Our advanced capabilities and extensive data sets can address effects of major policy, regulatory, or significant and disruptive demand changes on healthcare systems or communities. The Center’s focus on analytic domains relies on a multi-disciplinary team composed of Ph.D. Economists, analytic consultants, advanced industry experts, and predictive modelers.

- To learn more about the Center, please check us out at: https://www.fticonsulting.com/industries/healthcare-and-life-sciences/economics-and-policy

Margaret E. Guerin-Calvert
Senior Managing Director and President, Center for Healthcare Economics and Policy, FTI Consulting, Inc.
+ 1 202 589-3451
Margaret.Guerin-Calvert@fticonsulting.com


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