Advances in Community – Clinical Linkage

The long-awaited convergence of public/population health and economics

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March 19, 2021

Independent Health

Agenda

- **Broad Perspective**
- **Buffalo Experience**
- **Independent Health next steps**

Presentation to National Forum for Heart Disease & Stroke Prevention

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

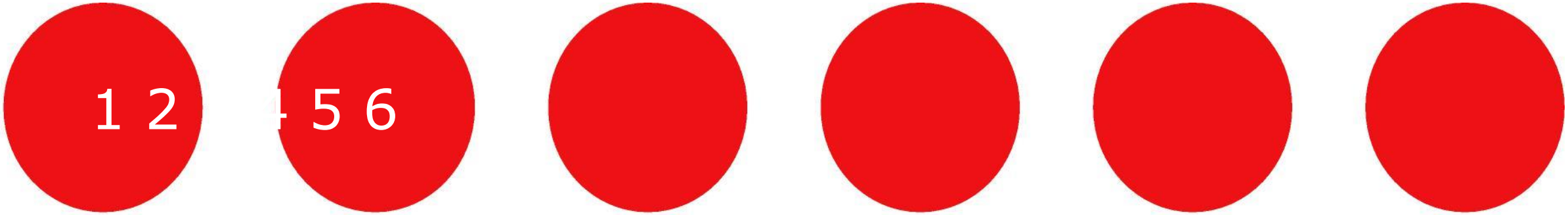
IMPACT OF COVID-19 PANDEMIC

- 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 2
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THE NEED FOR ACTIONABLE DATA
HOW WE USE DATA – METRO AREAS
METRO AREA ANALYTICS AND FINDINGS
COLLABORATIVE RESPONSE
DISCUSSION
APPENDIX

1 VIEWPOINTS AND PERSPECTIVES

The pandemic exposed fundamental issues and fault lines of poor health and health disparities.

CDC Emerging Infectious Diseases, 2020[1]

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[2]; Guerin-Calvert et. al. FTI Study[3]

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[4]

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[5]

"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.

[1] "Population-Based Estimates of Chronic Conditions Affecting Risk for Complications from Coronavirus Disease, United States." CDC Emerging Infectious Diseases, 2020; 26(8): 1831-1833, doi: 10.3201/eid2608.200679.
[2] Eboni G. Price Haywood, Jeffrey Burton, Daniel Fort, and Leonardo Seoane, "Hospitalization and Mortality Among Black Patients and White Patients with Covid-19," N Engl J Med; 382 (May 2020): 2534-43, doi: 10.1056/NEJMsa2011686.
[3] Margaret E. Guerin-Calvert, R. Kulkarni and S. Wang, "Health & Economic Impact of COVID-19: Public-Private Partnership Opportunities for Health, Equity & Economic Vitality," Center for Healthcare Economics and Policy, FTI Consulting, Inc. (October 2020).
[4] Paul Mattessich, Ela Rausch, Emma Connell, Mark Anton, Michael Williams, and Jose Diaz, "Linking Health and Economic Prosperity: A Study of U.S. Metro Areas," HEALTH AND ECONOMIC IMPACT OF COVID-19 9 Federal Reserve Bank of Minneapolis and Wilder Research (Dec. 2019).
[5] Adam Sichko, "Companies looking to move or expand are judging cities on Covid-19 pandemic response, says Cushman & Wakefield site selection adviser," Nashville Business Journal (Nov. 17. 2020). https://www.bizjournals.com/memphis/news/2020/11/18/cushman-site-selector-ecd-covid.html?ana=RSS&s=article_search&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+bizj_memphis+%28Memphis+Business+Journal%29.

1 THE NEED FOR ACTIONABLE DATA

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

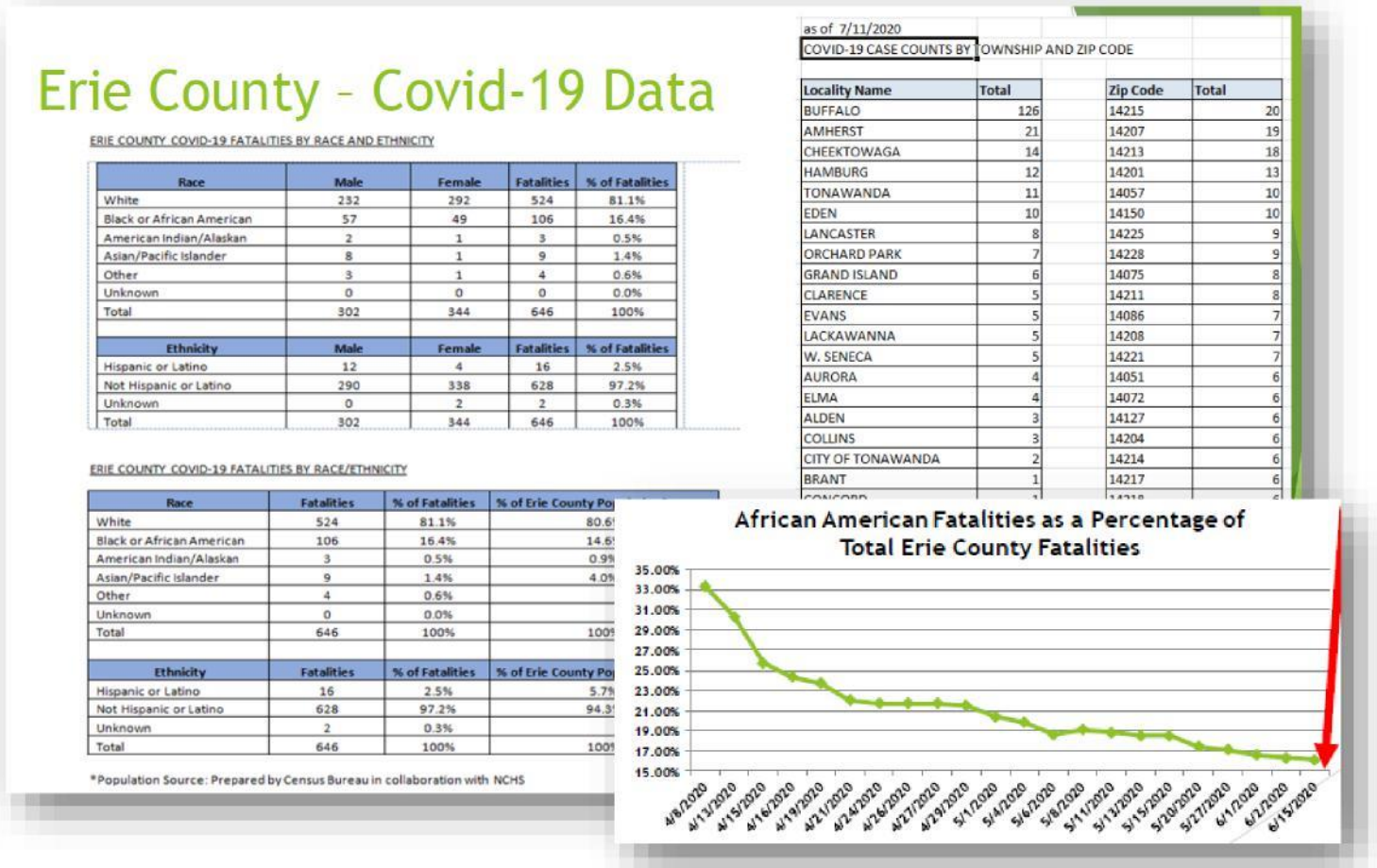
Prevalence	Medical Costs	Productivity Costs	Life Expectancy
BRFSS SMART	IBM® MarketScan® Research Databases	BLS & Literature	IHME County Profiles

1 THE NEED FOR ACTIONABLE DATA – PUBLIC HEALTH DATA

Multi-sector collaborative used public health data to address health disparities during COVID-19

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



Race	Male	Female	Fatalities	% of Fatalities
White	232	292	524	81.1%
Black or African American	57	49	106	16.4%
American Indian/Alaskan	2	1	3	0.5%
Asian/Pacific Islander	8	1	9	1.4%
Other	3	1	4	0.6%
Unknown	0	0	0	0.0%
Total	302	344	646	100%

Ethnicity	Male	Female	Fatalities	% of Fatalities
Hispanic or Latino	12	4	16	2.5%
Not Hispanic or Latino	290	338	628	97.2%
Unknown	0	2	2	0.3%
Total	302	344	646	100%

Race	Fatalities	% of Fatalities	% of Erie County Po
White	524	81.1%	80.6
Black or African American	106	16.4%	14.6
American Indian/Alaskan	3	0.5%	0.9
Asian/Pacific Islander	9	1.4%	4.0
Other	4	0.6%	
Unknown	0	0.0%	
Total	646	100%	100

Ethnicity	Fatalities	% of Fatalities	% of Erie County Po
Hispanic or Latino	16	2.5%	5.7
Not Hispanic or Latino	628	97.2%	94.3
Unknown	2	0.3%	
Total	646	100%	100

Locality Name	Total	Zip Code	Total
BUFFALO	126	14215	20
AMHERST	21	14207	19
CHEEKTOWAGA	14	14213	18
HAMBURG	12	14201	13
TONAWANDA	11	14057	10
EDEN	10	14150	10
LANCASTER	8	14225	9
ORCHARD PARK	7	14228	9
GRAND ISLAND	6	14075	8
CLARENCE	5	14211	8
EVANS	5	14086	7
LACKAWANNA	5	14208	7
W. SENECA	5	14221	7
AURORA	4	14051	6
ELMA	4	14072	6
ALDEN	3	14127	6
COLLINS	3	14204	6
CITY OF TONAWANDA	2	14214	6
BRANT	1	14217	6

Source: Maria Whyte, George Nicholas, and Raul Vasquez, "Faith, Community & Government – Health Collaboration to Address Health Disparities during the COVID-19 Pandemic," (July 15, 2020), https://www.nationalacademies.org/event/07-15-2020/collaborative-webinar-faith-community-and-government-health-collaboration-to-address-health-disparities-during-the-covid19-pandemic (bullet points and graphics above sourced directly from the linked webinar presentation).

2 REPRESENTATIVE METRO AREAS

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.

MSA	Population Estimate	GDP (B)	Age 18-64 (%)	Age 65+ (%)	Median Income	Non-Hispanic White (%)	Uninsured (%)	Black (%)	Hispanic (%)
National	-	-	**62%**	**15%**	**$57,652**	**61%**	**7%**	**12%**	**18%**
Austin	2.1 M	$149	66%	10%	$62,815	53%	10%	7%	32%
Baton Rouge	0.8 M	$55	63%	13%	$51,436	57%	6%	35%	4%
Buffalo	1.1 M	$60	62%	17%	$52,831	78%	2%	12%	5%
Charlotte	2.5 M	$174	63%	13%	$53,370	62%	8%	22%	10%
Cleveland	2.1 M	$139	61%	17%	$61,137	70%	4%	20%	5%
Denver	2.9 M	$209	65%	12%	$71,049	65%	6%	5%	23%
Indianapolis	2.0 M	$144	62%	13%	$60,317	73%	6%	15%	7%
Kansas City	2.1 M	$131	62%	14%	$57,431	73%	6%	12%	9%
Louisville	1.3 M	$76	62%	15%	$53,366	77%	4%	14%	4%
Nashville	1.9 M	$133	64%	12%	$52,750	73%	7%	15%	7%
Providence	1.6 M	$83	64%	16%	$71,839	77%	3%	5%	12%

Source: Margaret E. Guerin-Calvert, R. Kulkarni and S. Wang, "Health & Economic Impact of COVID-19: Public-Private Partnership Opportunities for Health, Equity & Economic Vitality," Center for Healthcare Economics and Policy, FTI Consulting, Inc. (October 2020).

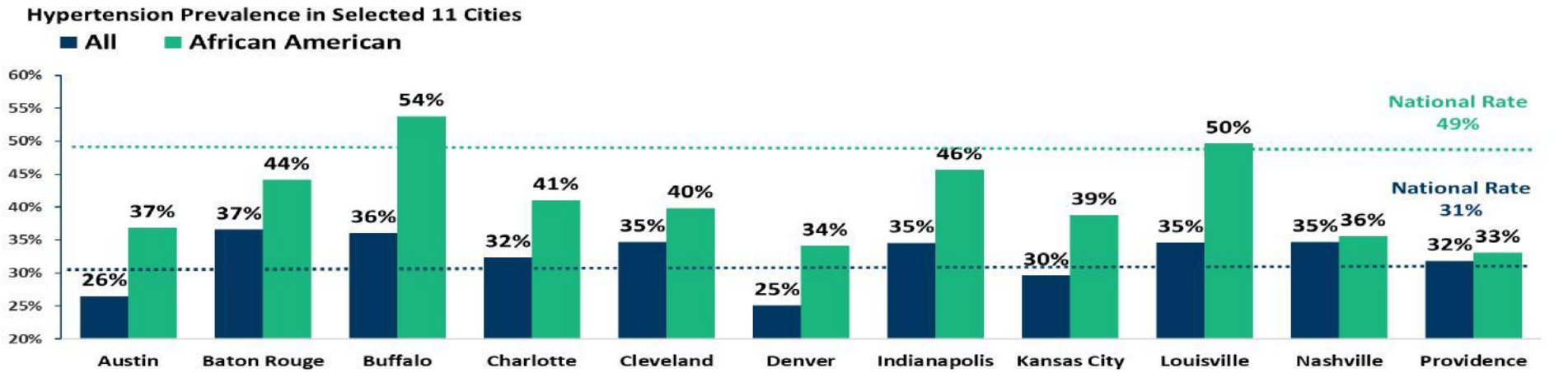
3 INSIGHTS AND FINDINGS FROM LOCALLY RELEVANT, ACTIONABLE DATA

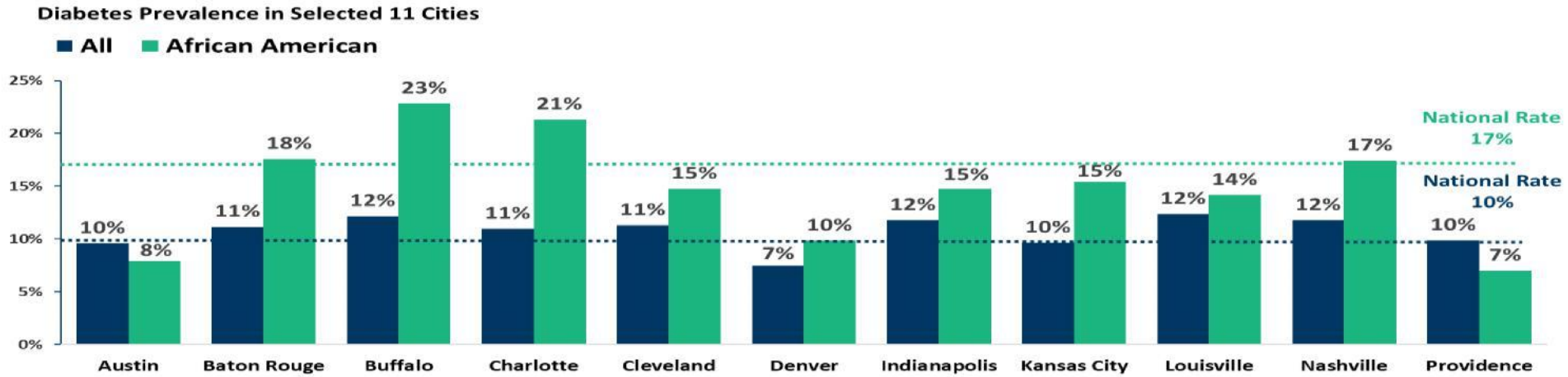
Prevalence rates for diabetes, hypertension and other chronic conditions are high in most areas, and often higher for communities of color.

SOURCES USED:

CDC

BRFSS™ Behavioral Risk Factor Surveillance System





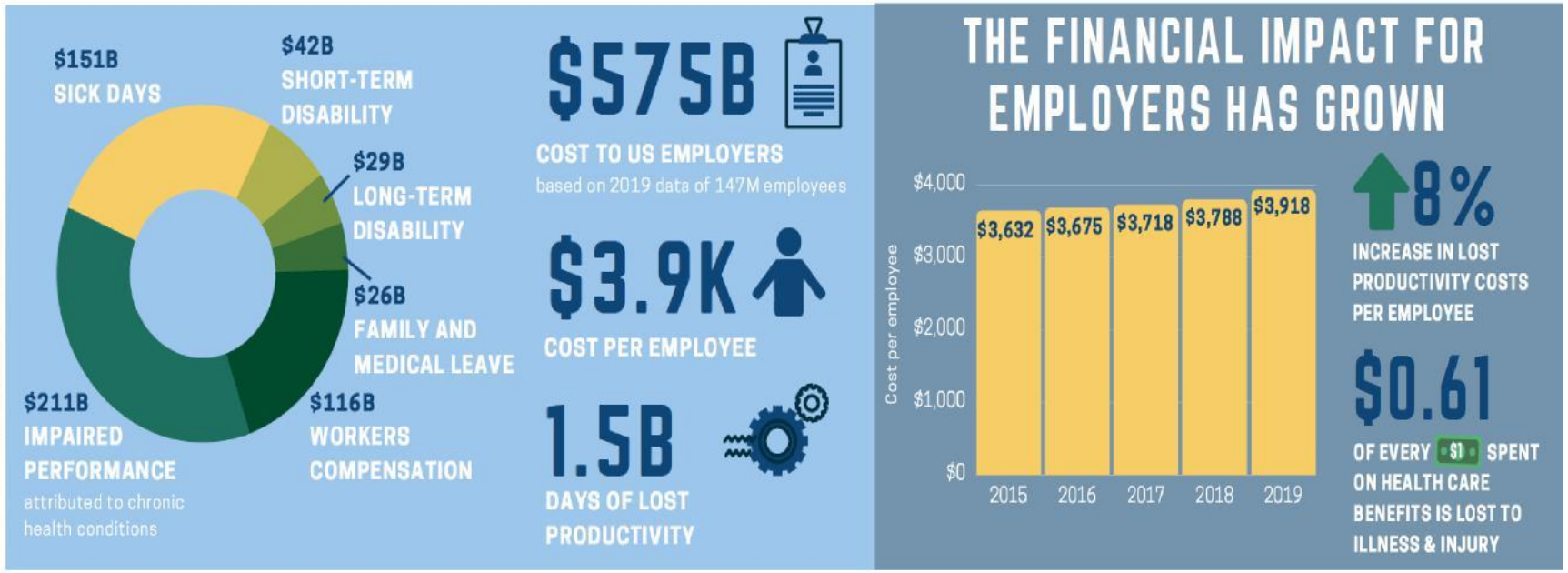
Source: Margaret E. Guerin-Calvert, R. Kulkarni and S. Wang, "Health & Economic Impact of COVID-19: Public-Private Partnership Opportunities for Health, Equity & Economic Vitality," Center for Healthcare Economics and Policy, FTI Consulting, Inc. (October 2020). Calculations and methodologies are based on Center for Healthcare Economics and Policy's data and related proprietary work product.

FTI CONSULTING
Center for Healthcare Economics and Policy

3 INSIGHTS FROM NATIONAL AND LOCALLY RELEVANT, ACTIONABLE DATA

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

Integrated Benefits Institute, 2020 (Forbes)[1] *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].***



[1]Japsen, Bruce. "Poor Worker Health Costs U.S. Employers $575 Billion A Year." Forbes Magazine, December 8, 2020.https://www.forbes.com/sites/brucejapsen/2020/12/08/poor-worker-health-costs-us-employers-575-billion-a-year/?sh=12b91a3817b2. See also, "Poor Health Costs US Employers $575 Billion and 1.5 Billion Days of Lost Productivity Per Integrated Benefits Institute." Integrated Benefits Institute, December 10, 2020.https://www.ibiweb.org/poor-health-costs-us-employers-575-billion/.

FTI ESTIMATES THESE PRODUCTIVITY COSTS AT THE METRO LEVEL BY DISEASE CONDITION FOR HUNDREDS OF CITIES

PREVALENCE × **EMPLOYED POPULATION** × **HOURS LOST** × **AVERAGE WAGE RATE** = **PRODUCTIVITY COST**

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.

INCREMENTAL MEDICAL COST ESTIMATES

Total Annual Incremental Medical Costs of Chronic Conditions

	Buffalo MSA	Nashville MSA
Diabetes	$200.4 M	$336.1 M
Hypertension	$201.2 M	$349.2 M
Depression	$170.5 M	$303.0 M
Asthma	$ 207.6 M	$328.6 M
COPD	$59.1 M	$54.8 M
	$838.8 M	$1.4 B

PRODUCTIVITY COST ESTIMATES

Total Annual Productivity Costs of Chronic Conditions

	Buffalo MSA	Nashville MSA
Diabetes	$157.8 M	$183.2 M
Hypertension	$120.5 M	$94.8 M
Depression	$415.7 M	$701.8 M
Obesity	$152.5 M	$133.4 M
Asthma	$222.2 M	$455.5 M
COPD	$180.9 M	$157.5 M
	$1.2 B	$1.7 B

Source: Margaret E. Guerin-Calvert, R. Kulkarni and S. Wang, "Health & Economic Impact of COVID-19: Public-Private Partnership Opportunities for Health, Equity & Economic Vitality," Center for Healthcare Economics and Policy, FTI Consulting, Inc. (October 2020). Calculations and methodologies are based on Center for Healthcare Economics and Policy's data and related proprietary work product.

3 OPPORTUNITIES FOR GREATER IMPACT

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, multisector, 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!"***

U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Control Hypertension.* Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2020. https://www.hhs.gov/sites/default/files/call-to-action-to-control-hypertension.pdf

- 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.

– "How cities around the world are handling COVID-19 - and why we need to measure their preparedness" World Economic Forum[1]

> 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.

– "COVID-19: What Mayors Need to Know" US Conference of Mayors[2]

> 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.

– "New Resource! Conversations on COVID-19: Impacts on Communities of Color" email announcement, National Academies of Sciences, Engineering, and Medicine[3]

[1] Robert 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/.
[2] "COVID-19: What Mayors Need to Know." United States Conference of Mayors. Accessed December 8, 2020.https://www.usmayors.org/issues/covid-19/.
[3] National Academies of Sciences, Engineering, and Medicine, "New Resource! Conversations on COVID-19: Impacts on Communities of Color" email received Aug. 31, 2020.

4 COMPELLING 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 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**.

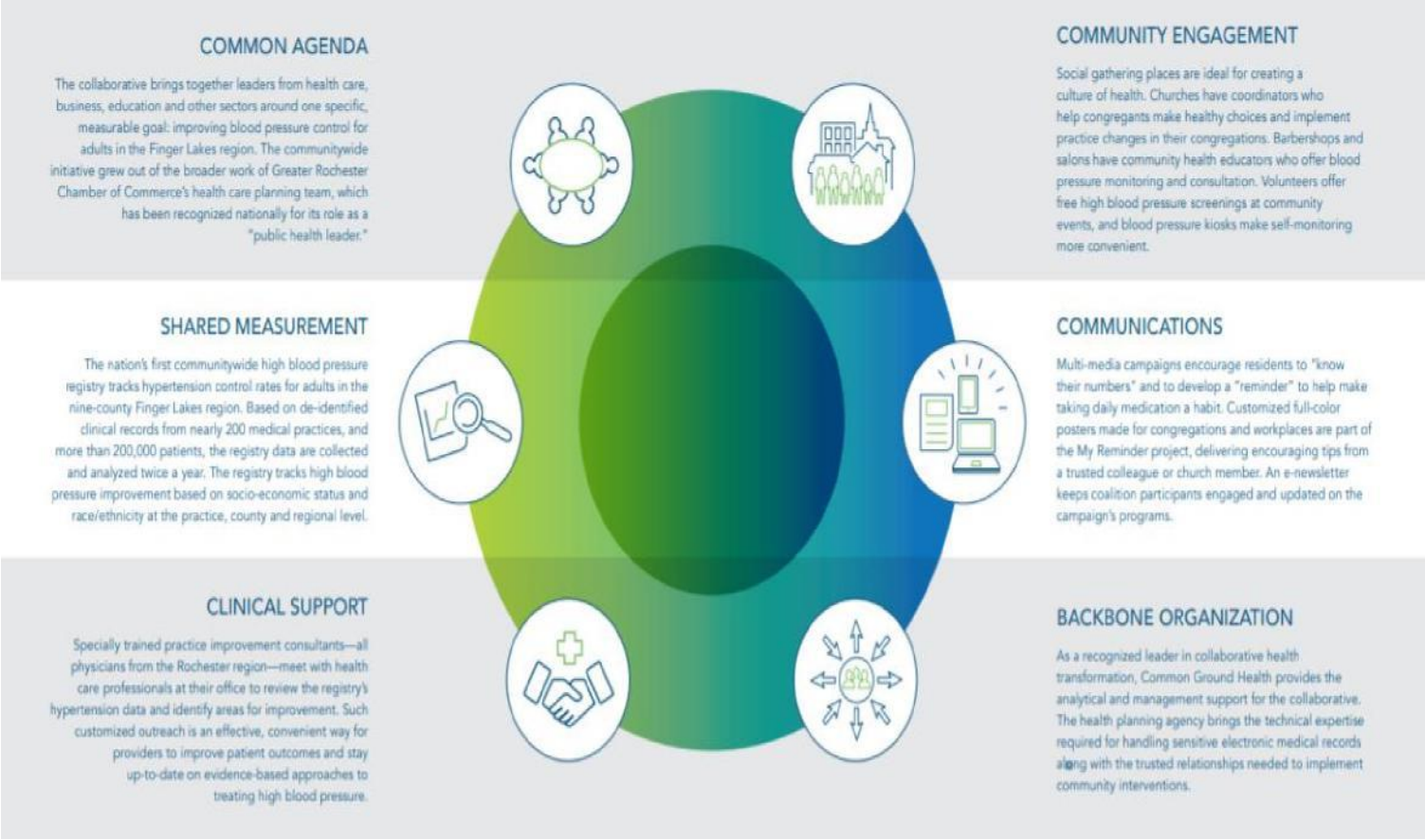
Erie County/Buffalo: Early data trends revealed that more than 33% of COVID-19 fatalities were African Americans in Erie County, NY; about double the share of population. A partnership of leaders in Erie County Government, Live Well Erie, African American Health Equities Task Force and many partners 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 MULTI-SECTOR COLLABORATIVES PROVIDE UNIQUE OPPORTUNITIES FOR ACTION

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

Source: Common Ground Health and Greater Rochester Chamber of Commerce. "The High Blood Pressure Collaborative." Common Ground Health, February 26, 2019. https://media.cmsmax.com/ravk3pgz5ktlujs1r08ci/high20blood20pressure20collaborative201020year20retrospective-20190107011804.pdf.

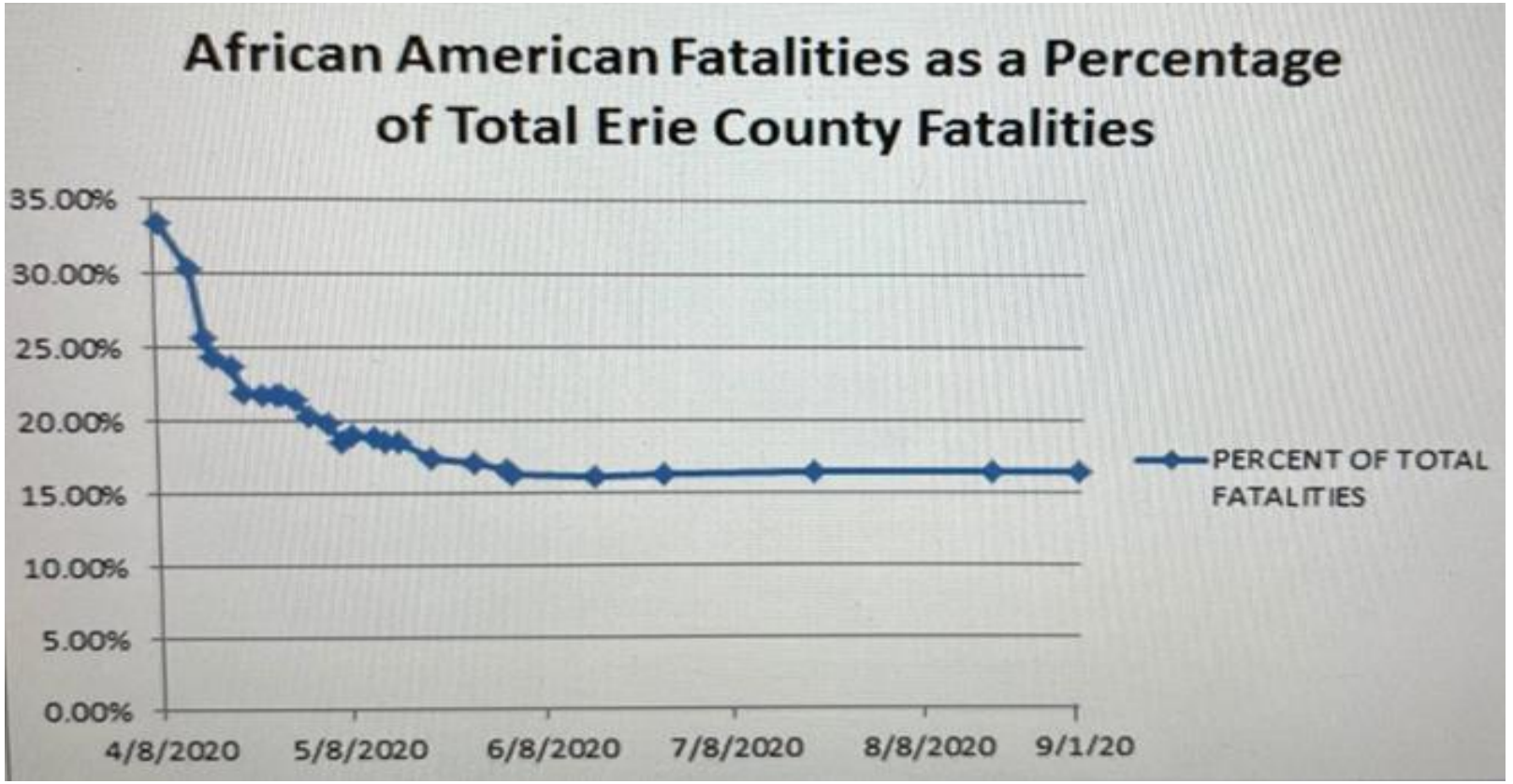
5 SUMMARY

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

- 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

BUFFALO EXPERIENCE

Response to Disparate COVID Mortality Rates



Independent Health

Partners Engaged to Change the Trend

- Erie County Government (Department of Health ,Emergency Services, Public Works and More)
- Live Well
- African American Health Equities Task Force
- Eric Count Legislature
- City of Buffalo
- Kaleida Health
- Buffalo and Erie Niagara Public Library
- Jericho Road Medical Center
- Urban Family Practice
- Community Health Center of Buffalo
- Millennium Collaboration Care
- SEIU 1199 and other local labor organizations
- Many Congregations in the African American Faith Community

Actions Taken to Change the Trend

- **Tracked COVID-19 fatalities by zip code and race.**
- **Worked with local labor organizations to track the number of essential workers by zip code.**
- **Established a testing clinic in the zip code with the highest number of cases in Erie County.**
- **Removed barriers to testing by allowing tests for those without insurance and without primary care physician.**
- **Developed a transportation solution to test symptomatic individuals unable to physically get to a testing clinic.**
- **Partnered with local primary care clinics to connect patients with primary care providers and provide testing supplies and PPE to primary care clinics.**
- **Broadly communicated the ability of testing to the public using all media and social media platforms.**
- **Undertook massive phone banking efforts to conduct Wellness checks and provide COVID-19 information and resources to 10s of thousands of residents in targeted zip codes by using contact information obtained through the Board of Elections.**
- **Formal Live Well Erie statement released discussing the social determinants of health and the role they play an increased COVID-19 fatalities among African Americans in WNY. Statement formally acknowledges that African Americans in WNY "find themselves dealing with a double pandemic; the current COVID-19 crisis and the longstanding crisis of health and Wellness disparities that have ravaged minority communities four years ".**
- **All Live Well Erie partners (nearly go organizations) and work groups met to frame childcare, housing, senior meal service, paid sick leave and a host of other initiatives in the COVID-19 context.**
- **Discipline and restraint were maintained in hosting large worship gatherings even over the Easter holiday.**

Health Disparities Task Force

- Made over 50,000 telephone calls to residents of Erie County.
- Executing no-contact food delivery directly to over 400 families weekly.
- Providing fresh produce and dry goods to eight neighborhood food pantries in five Erie County municipalities.
- Providing and delivering personal protective equipment, household disinfectants, disposable undergarments two families in need.
- Providing used appliances to families in need.

INDEPENDENT HEALTH NEXT STEPS