

Mitigating SW Ohio's Health Issues through the Built Environment



who we are

our vision: Greater Cincinnati healthy by design, and everyone is connected to quality, affordable healthcare

our mission: to lead data-driven improvement that results in healthier people, better care, and lower costs.

We bring healthcare stakeholders together for the good of the community, and provide them with the actionable data they need.

Dr. Lauren Bartoszek

Senior Manager of Population Health Strategies
PhD, MCHES



Dr. Lauren Bartoszek PhD, MCHES, is the Senior Manager of Population Health Strategies and Interim Project Manager for Accountable Health Communities at The Health Collaborative. She works with the Population Health team on the region's health agenda utilizing the Community Health Needs Assessment data to drive policy, systems, and environmental strategies addressing health equity through a collaborative approach.

Yasha Ogg

Building Performance Analyst
LEED AP, WELL AP, CPHC, LFA, WELL Faculty

Yasha is an interior designer, speaker, and advocate for healthy and sustainable building design, both interior, and exterior. He leads the movement to improve health and well-being in buildings and communities worldwide. Using his expertise in WELL, Fitwel, LEED, and Living Building, along with industry research, Yasha strives to create healthy, productive environments for building occupants through the design of sustainable human-centric spaces. With a background in higher education campuses, laboratory facilities, multi-family housing, and medical office buildings, Yasha understands that the well-being of employees directly impacts the bottom line of businesses.



WE ADVANCE CLIENTS
WHO ADVANCE SOCIETY



WHAT DETERMINES THE STATE OF HEALTH?



health: “is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

wellness: “is an active process through which people become aware of, and make choices toward, a more successful existence”

Health refers to physical, mental and social well-being; Wellness aims to enhance well-being.

INVEST IN PEOPLE FOR RETURN ON INVESTMENT

90%
SALARY/
BENEFITS

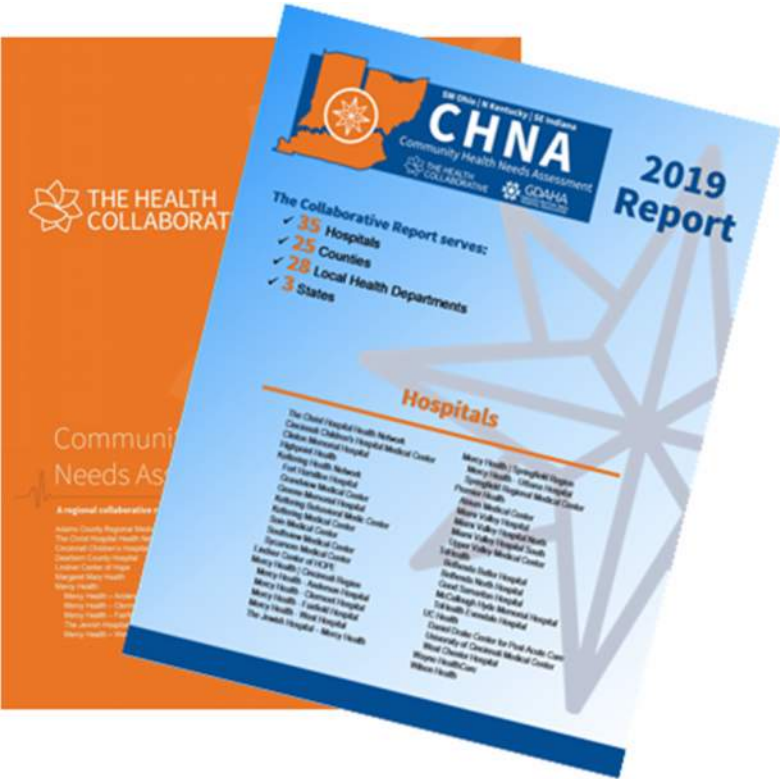
9%
RENT/
OPERATIONS

1%
ENERGY



Source: Intel Workplace Research "What's Good for People, Having from Wellness to Well Being", Q4e User 2004
Studies include those conducted by organizations including Harvard Business Review and World Economic Forum
and the American Journal of Health Promotion. Images courtesy of World Green Building Council Report
"Health, Wellbeing & Productivity in Offices"

Outlined by the Affordable Care Act in 2010, these health assessments are required for all not for profit hospitals to complete every 3 years, and should be used to inform a strategic implementation plan to address the community's top health needs.



- **CHNA:** hospital requirements by IRS
- **Community Health Assessment (CHA):** health department requirements by Public Health Accreditation Board (PHAB)
- **Ohio Department of Health (ODH)** has specific alignment requirements for hospitals/LHDs to coordinate with each other and the state health assessment (SHA)

This regional CHNA informs an actionable community health improvement plan (CHIP) that addresses prioritized health needs through a shared vision of health for the region.

2021 CHNA Preliminary Results

Top Health Conditions:

- Cardiovascular Disease
- Mental Health
- Chronic Disease (arthritis, osteoporosis, and diabetes)
- Lung Conditions

The social determinants of health (SDOH) that most impact these poor health conditions:

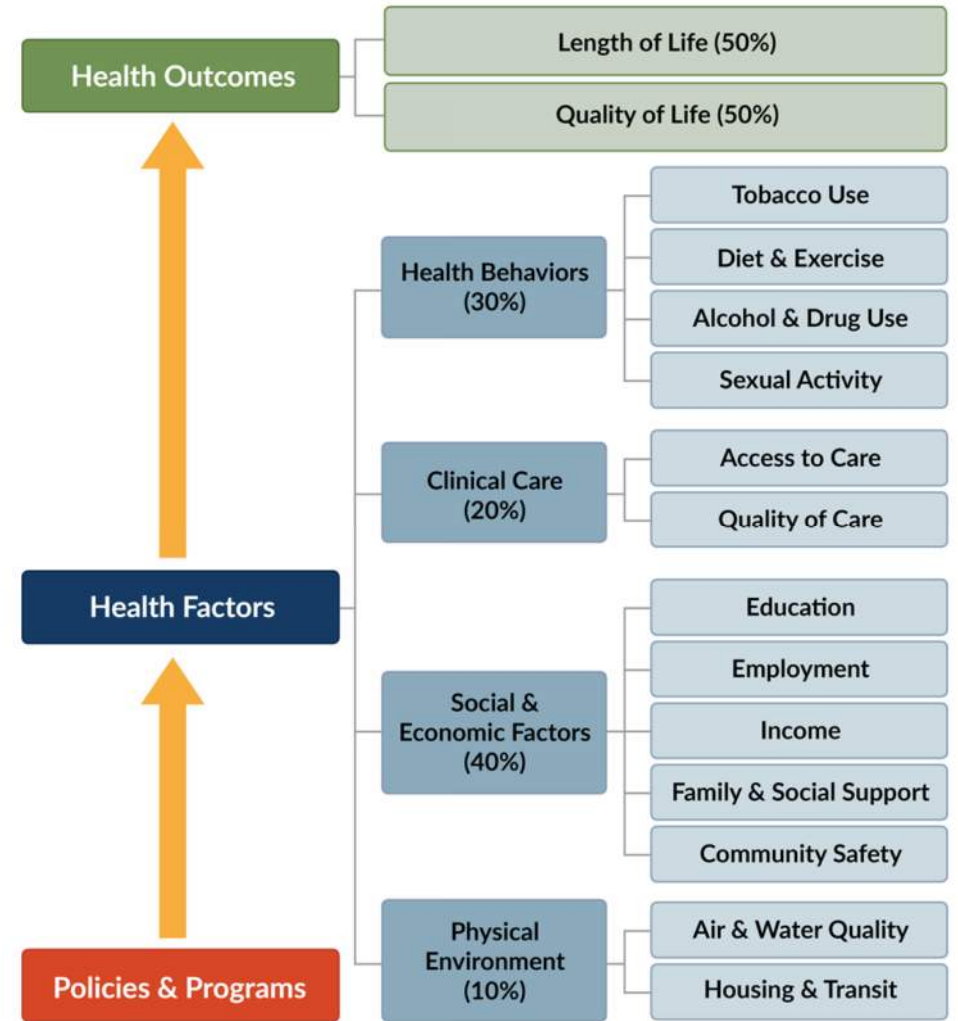
- Economic Stability
- Healthcare Access and Quality
- Education Access and Quality
- *Social Connectedness and Neighborhood and Built Environment*

Figure 1

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education			
Support	Walkability				
	Zip code / geography				

Health Outcomes
 Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations



County Health Rankings model © 2014 UWPHI

54% of non-catastrophic medical spend is driven by these 5 diagnosis chapters.



Musculoskeletal



Other Conditions



Maternity



Digestive



Circulatory

HEALTH INSURANCE CLAIM FORM

Insured/Subscriber Name (Last, First, Middle Initial)

ZIP Code

Year of Retirement: Day / Year

Group Number

Insured/Subscriber

Patient's Full Name (Last, First, Middle)

Patient's Sex

Patient's Relationship to Insured

Self Spouse Other

Injury - Date

Illness - Date

Prepaid

Other

Please use this form for all health insurance claims.

“How can the built environment mitigate Greater Cincinnati’s most pressing health needs?”



Category	Issues	ID #	WELL Feature	Potential Strategy	Design	Operation
Chronic Disease	Asthma / Allergies / Lower Respiratory Disease / Lung Cancer	A05, A12	Enhanced Air Quality, Air Filtration	High MERV Filters in HVAC	Higher MERV filtration in HVAC	Replace Filters frequently
		X09	Cleaning Products & Protocols	Products with no off-gassing	Building product selections (especially interior)	Use cleaning supplies with no VOCs
		V06, V11	Physical Activity Opportunities, Promotion	Workout gyms, Gym allowance	Provide Space for gym equipment	Provide employees ability to use gym equipment
	Hypertension / Lower Back Issues	V06, V11	Physical Activity Opportunities, Promotion,	Walking meetings, Yoga classes	Provide safe walking areas / exercise areas	Encourage use of walking paths and exercise areas
		V02, V07, V10	Visual & Physical Ergonomics, Active Furnishings, Enhanced Ergonomics	Sit-Stand desks, ergonomic chairs	Specify Sit-Stand desks and ergonomic chairs	Replace existing desk / chairs with ergonomic options
	Headaches / Migraines	L03, L04	Circadian Lighting Design, Glare Control	Operable Windows, Circadian Lights, Glare shields	Design for more daylight and better lighting	Replace or add glare shields to existing lighting.

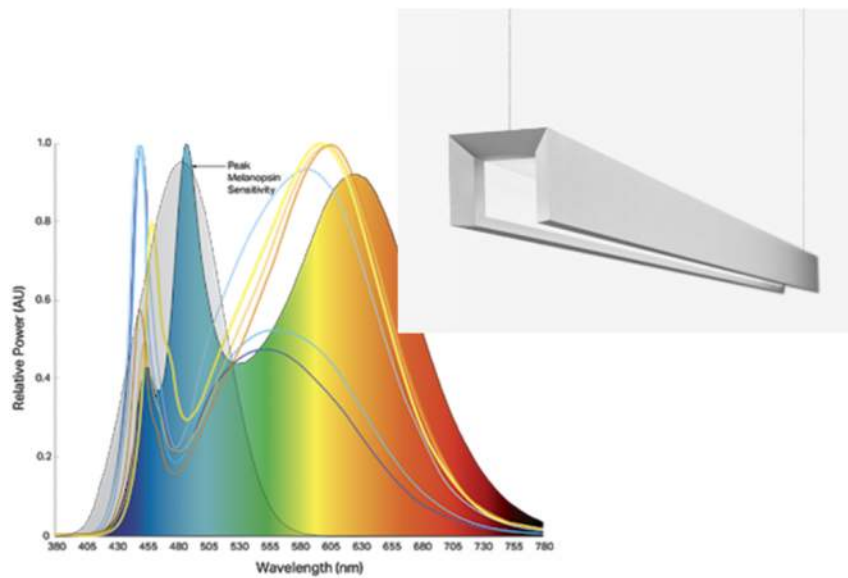


Office Exercise Facilities

Better Filter Systems

Walking Meetings

Onsite Yoga or Relaxation Activities



Height Adjustable Desks

Install Circadian Lighting

Use Certified Cleaning Products



Seek a balanced diet



Increase Physical Activity



Civic / Community Engagement



Reduce unhealthy substance use



Use Non-Toxic Cleaning Supplies



Seek out information and Health Education



A Social-Ecological Model for Physical Activity - Adapted from Heise, L., Ellsberg, M., & Gottemoeller, M. (1999)













Fitwel®
Viral Response
Certified



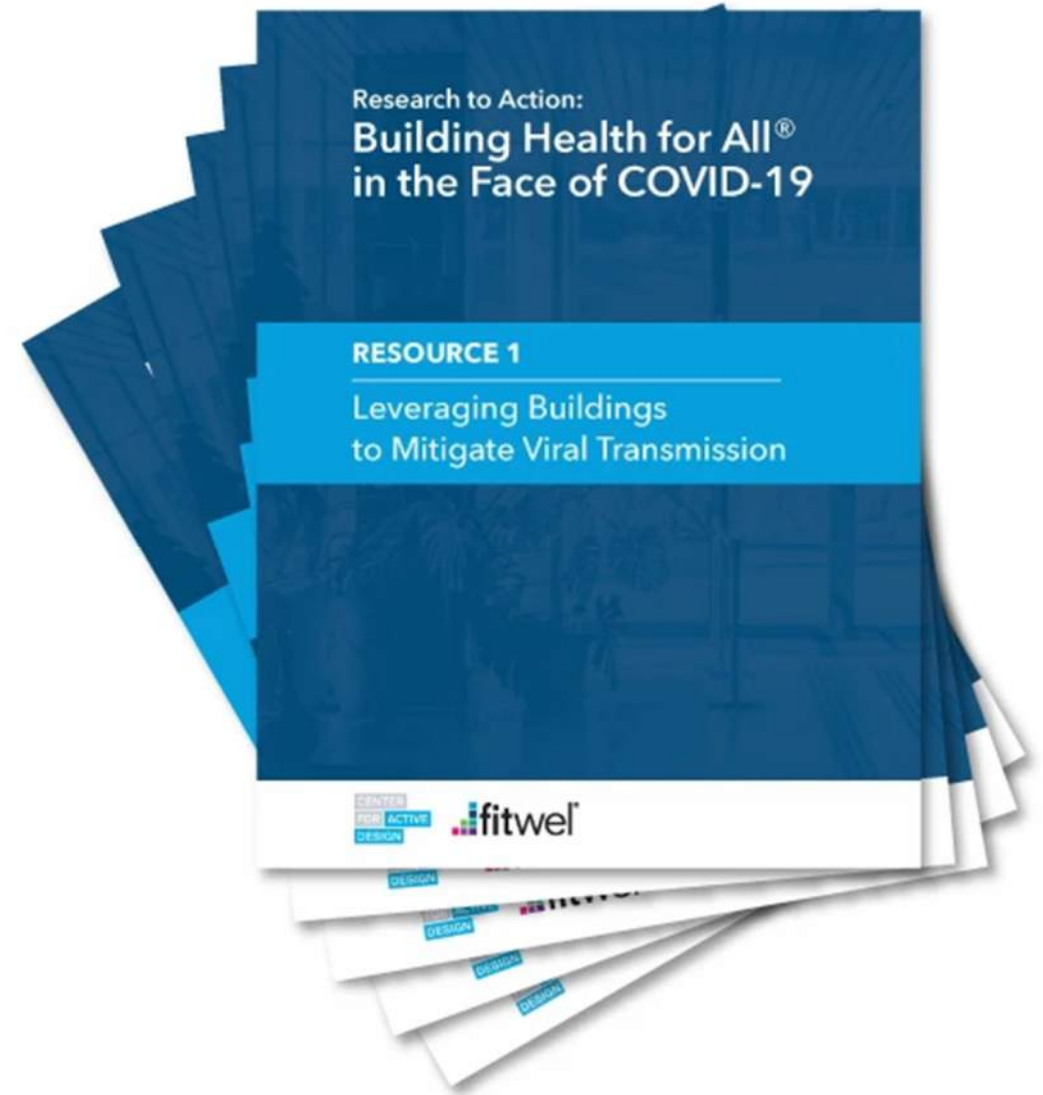
Health Impact Categories:

						
Impacts Community Health	Reduces Morbidity + Absenteeism	Supports Social Equality for Vulnerable Populations	Instills Feelings of Well-being	Provides Healthy Food Options	Promotes Occupant Safety	Increases Physical Activity

Cushman & Wakefield | Wellness in the Built Environment

 <p>AIR</p> <p>14 features 4 preconditions 10 optimizations</p>	 <p>WATER</p> <p>8 features 3 preconditions 5 optimizations</p>	 <p>NOURISHMENT</p> <p>13 features 2 preconditions 11 optimizations</p>	 <p>LIGHT</p> <p>8 features 2 preconditions 6 optimizations</p>	 <p>MOVEMENT</p> <p>12 features 2 preconditions 10 optimizations</p>
 <p>THERMAL COMFORT</p> <p>7 features 1 preconditions 6 optimizations</p>	 <p>SOUND</p> <p>5 features 1 preconditions 4 optimizations</p>	 <p>MATERIALS</p> <p>14 features 3 preconditions 11 optimizations</p>	 <p>MIND</p> <p>15 features 2 preconditions 13 optimizations</p>	 <p>COMMUNITY</p> <p>16 features 3 preconditions 13 optimizations</p>

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OCCUPANT HEALTH

OUR PURPOSE



Reduce energy 50%



Reduce water usage 50%



Reduce transportation related emissions 50%



Support building's occupant health

The Cincinnati 2030 District works with building owners and managers within the district to help them reduce energy water and transportation by 50% by 2030.

The growing movement to design buildings that promote wellness and improve the health of building occupants offers an opportunity to significantly enhance community health outcomes, while increasing the performance and capabilities of organizations and individuals.

CINCINNATI IS THE FIRST 2030 DISTRICT TO ESTABLISH A DISTRICT-WIDE HEALTHY BUILDING MODEL

This innovative model, created by the Cincinnati 2030 District, focuses on regional health needs and promotes healthy behaviors and building performance to address chronic diseases such as heart disease, cancer, asthma, and diabetes. In collaboration with the International WELL Building Institute, and using the local Community Health Needs Assessment, this program was created using the building blocks of the WELL Building Standard and has been fine-tuned to the unique health needs in the Greater Cincinnati community.

BUILDING OPTIMIZATIONS

<p>AIR Good air quality increases productivity and reduces respiratory disease.</p> <p>WATER Poor water quality can lead to gastrointestinal illness and neurological disorders.</p> <p>NOURISHMENT Proper nutrition increases mental clarity and productivity.</p>	<p>MIND The built environment can mitigate adverse cognitive health outcomes by supporting mental health.</p> <p>LIGHT Light is the main driver of circadian systems, supporting our alertness and sleep cycles.</p> <p>MATERIALS Chemicals in building materials can be harmful, causing headaches and respiratory issues.</p>	<p>MOVEMENT Regular movement increases mental clarity and decreases sick days.</p> <p>CHECKLIST Record your progress and reach your goals with our healthy buildings checklist.</p>
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FOR MORE INFORMATION ON SUPPORT OR HOW TO GET INVOLVED

Contact:
 [Elizabeth Rojas, Director](mailto:Elizabeth.Rojas@greenumbrella.org)
Elizabeth.Rojas@greenumbrella.org

 www.2030districts.org/cincinnati








SCAN ME

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HEALTHY BUILDINGS STRATEGY

AIR REQUIREMENTS

ENHANCED AIR QUAL

- Maintain Air Contamina
 - PM2.5: 12 µg/m³
 - PM10: 30 µg/m³
 - Benzene: 3 µg/m³
 - Carbon Monoxide
 - Nitrogen Dioxide

VERIFICATION

- Submit air testing report
- OR
- Provide link to continuous air quality monitoring system

ENHANCED VENTILATION

- Option 1: Maintain level of outdoor air
- OR
- Option 2: Increase Air Supply

VERIFICATION

- Option 1: Submit air quality monitoring data
- OR
- Option 2: Provide a photograph of air supply increase

AIR FILTRATION CRITERIA

- Incorporate a minimum of MERV 11 through minimum MERV 13

VERIFICATION

- Submit a photograph of air filter replacement schedule

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HEALTHY BUILDINGS STRATEGY

WATER REQUIREMENTS

DRINKING WATER QUALITY

- Maintain water contain dispensers:
 - Turbidity: 1.0 NTU
 - pH between: 6.5 - 8.5
 - Total Dissolved Solids: 500 mg/L
 - Total Chlorine: 0.5 mg/L
 - Residual Chlorine: 0.2 mg/L
 - Total Coliforms: 500 CFU/100 mL
 - Lead: 10 mg/L
 - Copper: 2 mg/L
- Display water quality information

VERIFICATION

- Submit bi-annual water test results
- Submit photograph of water quality display

DRINKING WATER PROVISION

- Provide a minimum of one drinking water fountain per 100 foot walk area
- Water delivered by direct piping to containers
- All newly installed drinking water fountains, cleaned on a daily basis
- Mouthpieces/outlets, cleaned on a daily basis

VERIFICATION

- Provide a floor plan showing the location of drinking water fountains
- Provide photograph of drinking water fountain
- Provide photograph of drinking water fountain mouthpiece/outlet

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HEALTHY BUILDINGS STRATEGY

LIGHT REQUIREMENTS

CIRCADIAN LIGHTING

- For workstations used during the day, provide 150 equivalent melatonin equivalent melanopic lux on the work-plane for all workstations

VERIFICATION


- Provide floor plan showing workstation locations
- Provide a photograph of workstation lighting


DAYLIGHT DESIGN STRATEGY

- 70% of all workstation lighting is provided by natural light
- All vertical transparent surfaces are cleaned at all times. Shades are cleaned at all times.

VERIFICATION

- Provide technical drawing of workstation lighting design
- Provide photograph of workstation lighting
- Provide a copy of cleaning schedule for vertical transparent surfaces





CINCINNATI 2030 DISTRICT

Occupant Health Guide

08.26.2021

