

The Impact of Poverty on Public Health

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Acknowledgements

For information & graphic illustrations

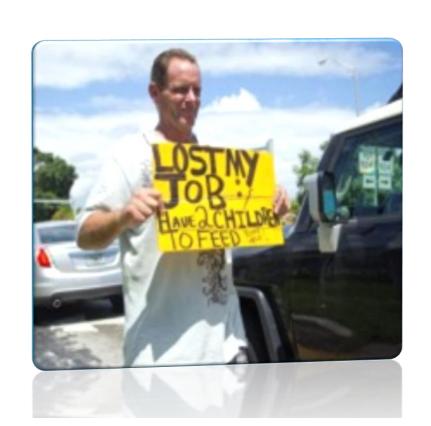
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Learning Objectives

- Identify socio-demographic characteristics associated with poverty.
- Demonstrate an increased understanding of the quality of life and health of people living in poverty.
- Identify one to two strategies that the public health system can use to impact poverty.

Increasing Poverty Rate



What is poverty?

Poverty is the state of being extremely poor.
(New Oxford American Dictionary)



County Poverty Rates DOUBLED Between 2000 and 2012: Now 19%

100% Federal Poverty Level (FPL) Definition:

Family of 4 with annual household income less than \$23,496 (2012)

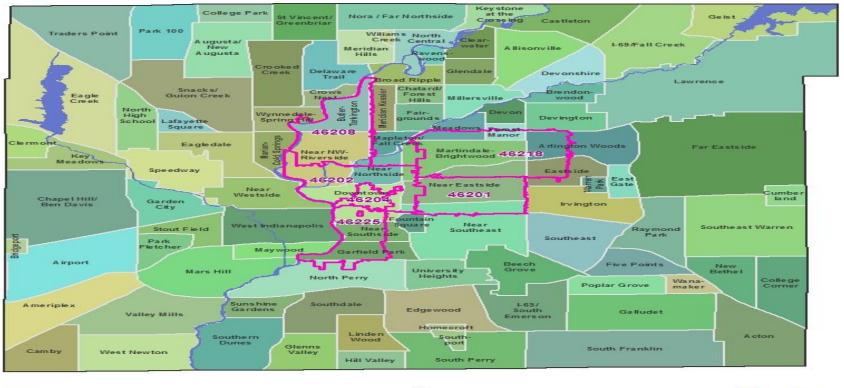
County residents meeting 100% FPL includes:

1 in 5 individuals

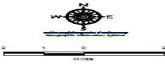
1 in 3 households with children (up from 1 in 5, 2007)

Marion County

HIGH POVERTY CONCENTRATION ZIP CODES AND MARION COUNTY NEIGHBORHOODS









Created 17MAR2015, Marion County Public Health Department, GIS 96752. Source: Indianapolis/Marion County GIS database, High poverty concentration zip codes data - SAVI Trends in Poverty 2000 to 2012.

High Poverty Concentration in 6 Central Marion County Zip Codes

➤ These zip codes have over 25% of their populations living at or	Zip Codes	% FPL
below 100% FPL	46201	36.9
	46204	33.6
They exceed County rates of	46218	33.4
Poverty 7 times	46225	32.5
Unemployment rate 3 times	46202	29.8
Violent Crime rate 5 times	46208	28.8



Built Environment

- Low-income communities have structural challenges that contribute to higher rates of obesity and chronic disease
- Less access to fresh foods
- > A higher density of fast-food restaurants
- > A built environment that is not conducive to physical activity
- Less open space and fewer parks and sidewalks



Built Environment

- More environmental pollutants, eg. lead, mold, toxic chemicals
- Higher rates of unemployment and incarceration
- Chronic stressors, including financial hardship, can lead to deleterious genetic and hormonal changes
- Diminished DNA repair mechanisms and higher cortisol and adrenaline levels increase the risk of chronic disease (negative cardiometabolic effects of poverty)



Behavioral and Environmental Factors

- Low-income Americans are influenced by more challenging home and community environments in which they live
- They have higher behavioral risk factors: smoking, obesity, substance use and low levels of physical activity
- Poorer neighborhoods have a higher density of tobacco retailers and are targeted by the tobacco industry through a variety of marketing strategies
- Many experience higher levels of chronic stress, making it more difficult to stop the smoking habit



- ➢ Poor adults are five times as likely as those with incomes above 400 percent of the federal poverty level to report being in poor or fair health
- Americans living with families that earn less than \$35,000 a year are four times as likely to report being "nervous" and five times as likely to report being "sad" all or most of the time, compared to Americans in families earning more than \$100,000 a year

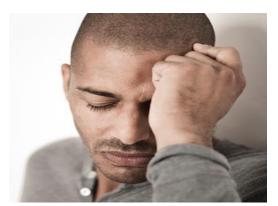


Racial and ethnic minorities living in poverty have more adverse health outcomes

- One study found more than half of the children living in poverty had cavities, compared to one third of those living above poverty level
- Almost two-thirds of parents in the above study did not obtain dental care for their children due to cost
- Mexican-American children had the highest prevalence of cavities



DEPRESSION





Poverty and Mental Health

- Poverty can endanger children's mental health
- Harmful emotional and behavioral development can occur as a result of poor housing, homelessness, multiple moves for housing (changing schools frequently) with heightened stress and tension in a foodinsecure environment
- Individuals experiencing poverty are at high risk for depression, acute anxiety, and even risk for suicide.
- Unintended consequences are that patients may self-medicate, a significant factor in our Opioid Crisis



HOMELESSNESS

- 553,000 homeless in the U.S. on a given night
- 1.5 million children homeless every year
- 37,878 homeless veterans
- Negative cash flow
- Lack of affordable housing
- Lawful eviction
- Post Traumatic Stress Disorder
- Unemployment/low-wage jobs
- Substance abuse
- Having no family or support of relatives
- Foreclosures or bankruptcies
- Divorce





Health Disparities in Indiana

- Blacks are more than twice as likely to die from diabetes, as compared to Whites
- Stroke deaths among Blacks are 1.4 times higher as compared to Whites
- Cancer and heart disease deaths among blacks are 1.2 times higher as compared to Whites
- Infant mortality rates for blacks are nearly three times higher as compared to Whites

More Than 1 in 4 Young Adults (18-34) Met 100% Federal Poverty Guidelines

CHA 2012	All	White (n>=334)	Black (n>=207)	Latino (n>=148)
Household at or below 100% FPL	31%	21.3%	35.8%	51.3%
% Unemployed	19%	12.7%	19.7%	8.5%
% Less than High School Education	20%	16.2%	11.2%	39.8%
% Households Food Insecure	29%	26.8%	30.5%	33.4%
Used food stamps, past year	33%	27.2%	42.3%	36.5%



MINIMUM WAGE in INDIANA

- > The current minimum wage in Indiana is \$7.25 an hour.
- This translates to an annual salary of \$15,080.
- ➤ The median household income for Indiana was \$54,181 in 2017, which is at least \$6,155 below the national median.
- ➤ The living wage for one adult in Tippecanoe County is \$11.45 per hour.
- ➤ The living wage of an adult and one child in Tippecanoe County is \$22.93 per hour.



Living Wage in Indiana

- A **living wage** is the pay rate a person must earn to completely support his or her family, according to an MIT study.
- A **living wage** for one adult is \$10.70 per hour. The poverty **wage** for one adult is \$5.80.
- A single parent with one child must earn
 \$22.66 per hour for a living wage in Indiana.

Poverty in Tippecanoe County

- ➤ 16% of children live in poverty (2019 County Health Rankings)
- ➤ 18% of the total population live in poverty (US Census)





Lafayette, Indiana Poverty Rate By Race

Race	Population	Poverty Rate	National Poverty Rate	Population
Black	6,051	55.5%	25.2%	8.4%
Asian	1,153	11.8%	11.9%	1.6%
Other	1,694	26.6%	23.8%	2.3%
Two Or More Races	1,627	28.3%	18.4%	2.3%
White	53,511	13.7%	10.3%	74.1%
Hispanic	8,740	25.4%	22.2%	12.1%

Poverty Among College Students

2018 survey of 43,000 college students at 66 schools, from a Temple University study:

- > 36% on U.S. college campuses are food insecure.
- ➤ 46% of community college students and 40% of four-year college students report an inability to pay for balanced meals.
- ➤ 36% of all college students were considered to be housing insecure.

Agriculture and Poverty Reduction

- Increased productivity of agriculture raises farm incomes, increases food supply, reduces food prices, and provides greater employment opportunities in both rural and urban areas."
- (University of London, https://www.soas.ac.uk/cedep-demos/000 P534
 PPM K3637-Demo/unity1/page 20.htm)
- High land costs can price out younger farmers.
- Urban farms provide fresh food for the urban poor.

What do we mean by the "social" or "societal" determinants of health?

"Life-enhancing resources, such as food supply, housing, economic and social relationships, transportation, education and health care, whose distribution across populations effectively determines length and quality of life."

Reference: James S. (2002)



Social Determinants of Health (SDH)

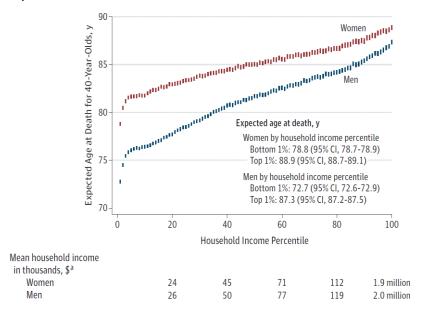
- Access to health care
- Access to resources
- Education
- Employment
- Environment

- Income/Poverty
- Insurance Coverage
- Housing
- Racism/Discrimination
- Segregation
- Transportation

Evidence of the Social Determinants of Health

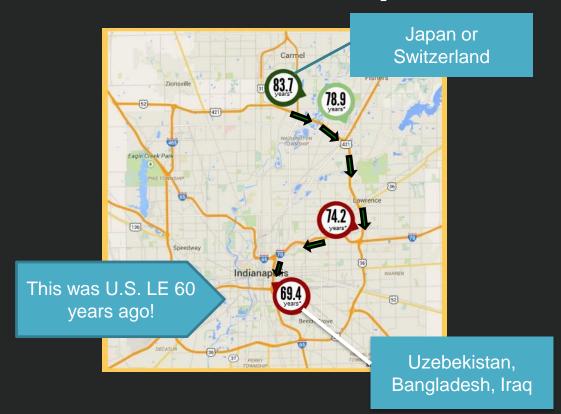
- Men in the bottom 1% of the income distribution at the age of 40 years in the United States have life expectancies similar to the mean life expectancy for 40-year-old men in Sudan and Pakistan.
- The 10-year gap in life expectancy between women in the top 1% and bottom 1% of the US income distribution is equivalent to the decrement in longevity from lifetime smoking.

Race- and Ethnicity-Adjusted Life Expectancy for 40-Year-Olds by Household Income Percentile, 2001-2014



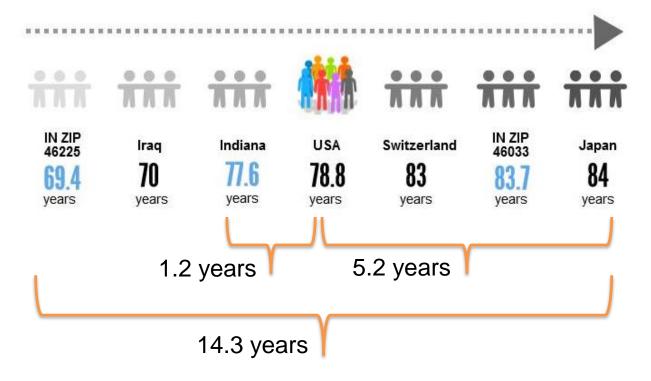


28 Miles. 14 Years. Worlds Apart.

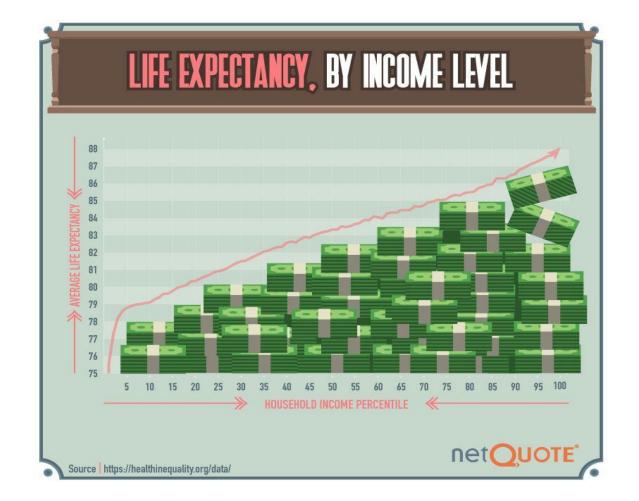




Life Expectancies: Indianapolis, Indiana and the World





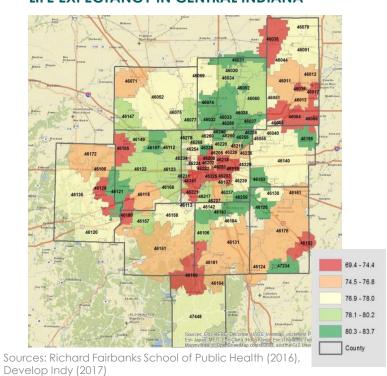


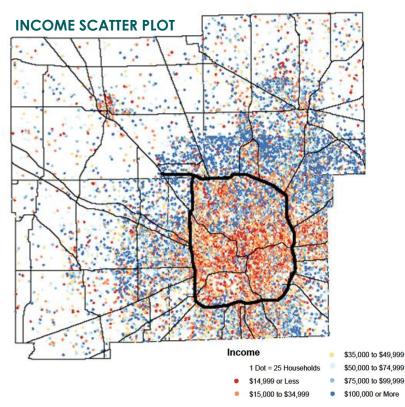


the COST of POOR HEALTH

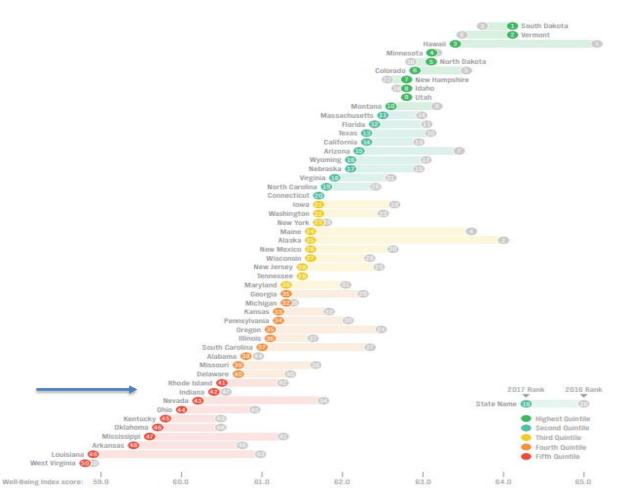
14 YEARS IN 14 MILES PROLIFERATION OF POVERTY

LIFE EXPECTANCY IN CENTRAL INDIANA

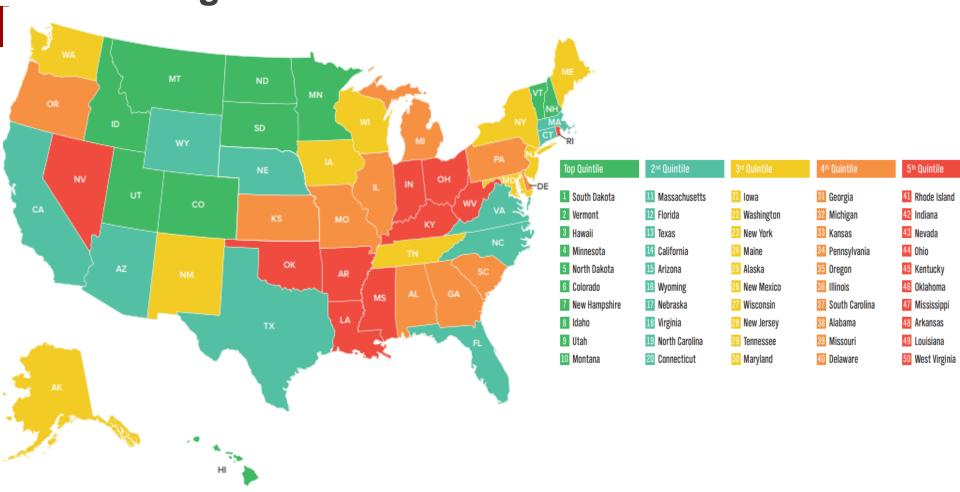




Wellbeing Index 2017 – IN #42



Wellbeing Index 2017 – IN 5th Quintile

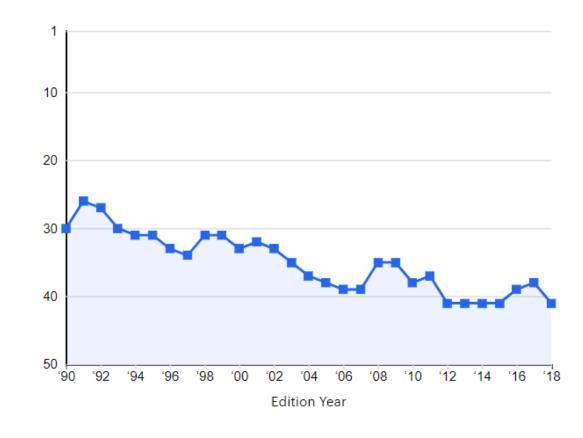


Indiana is #41

Rank has trended downward from a high of 26 in 1991.









Changes in Health Rankings

Community & Environment							
	2017 value	2018 value	Change in value	2017 rank	2018 rank	Change in rank	No. 1 State
Children in Poverty (% of children)	13.9	18.4	↑4.5	13	29	↓16	10.3
Infectious Disease (mean z score of chlamydia, pertussis and salmonella)	-0.473	-0.443	↓0.030	6	11	↓5	-1.017
Pertussis (cases per 100,000 pop.)	3.4	2.7	↓0.7	16	13	↑3	0.2
Salmonella (cases per 100,000 pop.)	10.1	12.0	↑1.9	4	14	↓10	6.8
Community & Environment Total				27	29	↓2	

Changes in Health Rankings

Outcomes Control Contr							
	2017 value	2018 value	Change in value	2017 rank	2018 rank	Change in rank	No. 1 State
Cancer Deaths (deaths per 100,000 pop.)	210.5	210.5	-	42	42	-	150.4
Cardiovascular deaths (deaths per 100,000 pop.)	277.5	278.5	↑1.0	37	-	-	190.3
Diabetes (% of adults)	11.5	11.8	↑0.3	37	40	↓3	7.1
Disparity in Health Status (% difference by high school education)	25.5	26.1	↑ 0.6	16	17	↓1	13.1
Frequent Mental Distress (% of adults)	13.2	14.7	↑1.5	38	42	↓4	9.2
Frequent Physical Distress (% of adults)	12.6	13.4	10.8	32	35	↓3	9.2
Infant Mortality (deaths per 1,000 live births)	7.2	7.4	↑0.2	42	43	↓1	3.9
Premature Death (years lost per 100,000 pop.)	8,471	8,774	↑263	38	39	↓1	5,653
Outcomes Total				41	41	-	

Changes in Health Rankings

Behaviors							
	2017 value	2018 value	Change in value	2017 rank	2018 rank	Change in rank	No. 1 State
Drug Deaths (deaths per 100,000 pop.)	17.9	20.2	↑2.3	34	33	↑1	6.8
Excess Drinking (% of adults)	18.6	17.6	↓1.0	28	21	↑7	12.2
Obesity (% of adults)	32.5	33.6	↑1.1	40	39	↑1	22.6
Physical Inactivity (% of adults)	26.8	29.8	↑3.0	38	39	↓1	19.2
Smoking (% of adults)	21.1	21.8	↑0.7	41	44	↓3	8.9
Behavior Total				40	41	↓1	

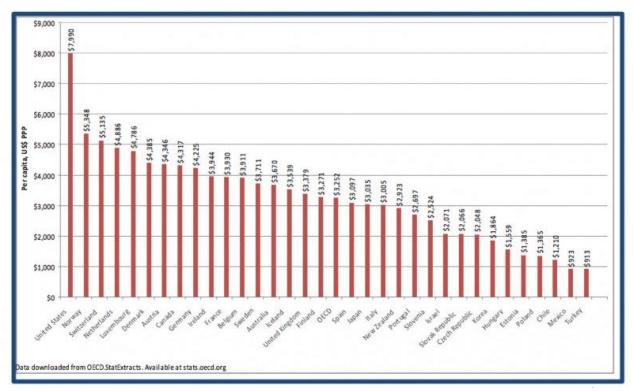
Changes in Health Rankings

	Р	olicy					
	2017 value	2018 value	Change in value	2017 rank	2018 rank	Change in rank	No. 1 State
Immunizations- Adolescents (measure of HPV, meningococcal and		0.58	↑.61	22	13	↑9	1.52
HPV Females (% of females aged 17)	13 to 43.5	48.4	↑4.9	37	35	↑2	76.8
HPV Males (% of males aged 13 to	24.7	33.5	↑8.8	46	43	↑3	78.4
Meningococcal (% of adolescents 13 to 17)	aged 88.0	93.1	↑5.1	13	8	↑ 5	95.3
Tdap (% of adolescents aged 13 to	89.5	95.1	↑5.6	22	2	↑20	96.2
Immunizations- Children (% of children aged 19 to 35 months)	ildren 68.8	66.3	↓2.5	34	46	↓12	82.1
Public Health Funding (\$ per pers	on) 49	51	†2	49	48	↑1	281



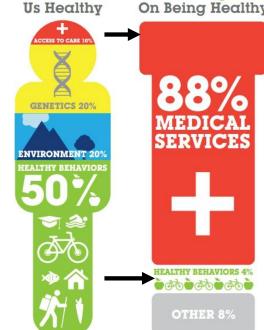
the COST of POOR HEALTH

Health Care Spending



Misalignment between what drives health outcomes and health expenditures

- The most consistent predictor of the likelihood of death in any given year is level of education...
- Poverty...has been estimated to account for 6 percent of U.S. mortality
- Behavior patterns represent the single most prominent domain of influence over health prospects in the United States....
- ...taken together, behavioral issues represent the greatest single domain of influence on the health of the U.S. population.



What We Spend

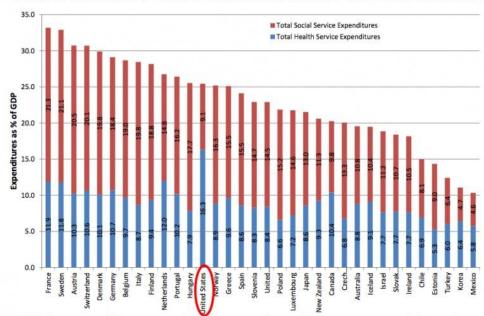
What Makes

http://content.healthaffairs.org/content/21/2/78.full



Health Care Investment in the U.S.

Total health care investment in US is less



In OECD, for every \$1 spent on health care, about \$2 is spent on social services In the US, for \$1 spent on health care, about 55 cents is spent on social services



Preventable Disease Burden and National Health Spending

- >75% of national health spending is attributable to chronic diseases that are largely preventable
 - 80% of cardiovascular disease
 - 80% of diabetes
 - 60% of lung diseases
 - 40% of cancers
- <3% of national health spending is allocated to public health and prevention

What are we doing about it?

Healthy People Objectives 2020-2030

The Healthy People 2020 approach to Social Determinants of Health includes:

- Economic Stability
- Education
- Social and Community Context
- Health and Health Care
- Neighborhood/Built Environment



Healthy People 2030 Overarching Goals

Three of the five goals are:

- ✓ Eliminate health disparities, achieve health equity, and attain health literacy to improve the health and wellbeing of all.
- ✓ Create social, physical, and economic environments that promote attaining full potential for health and wellbeing for all.

✓ Engage leadership, key constituents, and the public across multiple sectors to take action and design policies that improve the health and wellbeing for all.

TWO-SIDED ECONOMY

Top 5 for Cost of Doing Business

Corporate tax rate decreasing each year from 5.75% to 4.9% by 2021

Forbes TOP 3

States for regulatory environment

usnews #2

For longterm state iscal stability 12,500 annual deaths

from tobaccorelated illness 910,000 people go hungry in Indiana, 196k in Marion County

Indiana ranked #41

for overall state health outcomes

75% increase in opioid deaths

2011-2017

latory
Inment

AAA

State

Credit

From S&P, Moody's, and Fitch Indiana ranked #48

for state public health funding

35k Indiana students

began using e-cigarettes between 2016-2018

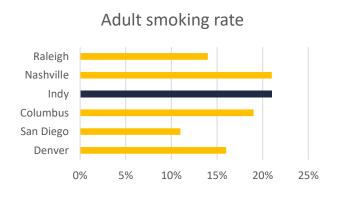
Advanced Industry

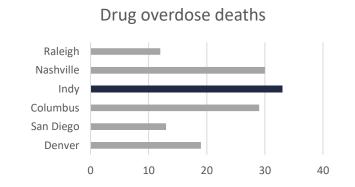
Advanced Industry employment growth

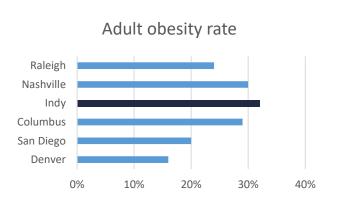
nearly 2x national average over last decade

> State Credit Rating

HEALTH IN PEER CITIES











Tippecanoe County Health Factors

Indiana

>Adult smoking rate 17% 21%

► Adult obesity rate 30% 33%

► Infant mortality rate: 7

> Drug overdose deaths: 16 23

Tobacco Use: Indiana's Largest Health Challenge

Lives Lost:

- Adults who die each year from smoking: 11,100
- Kids alive today who will die prematurely from smoking: 151,000

Financial Costs:

- For every pack of cigarettes sold in the state, Indiana state spends \$15.90 in health care costs related to smoking and lost productivity.
- Annual health care costs due to smoking: \$2.93 billion
- Medicaid costs: \$589.8 million
- State/federal annual tax burden: \$982 per household
- Smoking-caused productivity losses: \$2.6 billion
- Est. tobacco company marketing expenditures (IN): \$294.9 million



TOBACCO - INDIANA

INDIANA

State Rank	Smoking Rate
2016 - 39 th	2016 – 20.6%
2017 - 41st	2017 – 21.1%
2018 - 44 th	2018 - 21.8%

E-CIG / VAPE

- Usage increased 387% by high school students, 358% by middle school students
- CDC linked vaping to 24
 respiratory illness cases in Indiana,
 including at least one death

COST

HEALTHCARE COST

- **\$3.3 billion** Direct healthcare costs from tobacco use Indiana Medicaid program bears \$540 million of overall healthcare cost
- **\$2.2 billion** Secondhand smoke healthcare costs
- \$1,125 per Hoosier household Combined annual federal and state tax burden due to healthcare costs due to tobacco use

BUSINESS COST

- **\$2.8 billion annually** Productivity loss due to tobacco use (\$2.1 billion from unsanctioned smoke breaks, \$700 million due to higher absenteeism and lower performance while on the job)
- Additional costs to businesses include higher insurance premiums, liability risks, and drag on economic development efforts

INDY CHAMBER POSITION

RAISE IT FOR HEALTH

- Increase cigarette tax by \$2, impose tax parity for vaping products
- Invest this revenue in public health services, especially increased mental health supports

T-21

- Raise the statewide legal age to purchase tobacco and vaping products from 18-21
- At minimum, the state should allow local governments to raise the age

BAN FLAVORS

 Enact a statewide ban on flavored vaping and e-cigarette products which have been shown to encourage youth vaping

SMOKER'S BILL OF RIGHTS

 Repeal preferential treatment for smokers in the workplace

SUBSTANCE ABUSE - MENTAL HEALTH INDIANA



ADULT PREVALENCE OF ANY MENTAL ILLNESS

RATE – 20.25% RANK – 4th



NUMBER OF MENTAL HEALTH PROVIDERS PER CAPITA

RATE - 700:1 (top US performers 330:1)

RANK - 42nd

75% increase in overdose deaths between 2011-2017 across Indiana

\$43 billion in damages from opioid crisis in the past 15 years

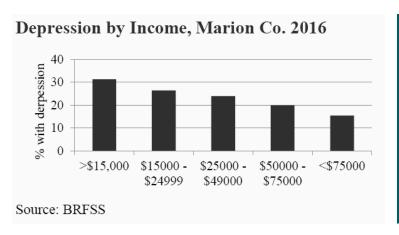
\$4.3 billion in damages from opioid crisis in 2017:

- \$1.2 billion in lost economic contributions from victims of overdose
- \$1 billion for medical, social (especially Foster care system), and criminal justice services
- \$2.1 billion in damages to the labor market, including cost of unemployment and worker shortages

58% of individuals with substance use disorder currently employed

80% of Hoosier employers report being effected by substance misuse in the workplace

SUBSTANCE ABUSE - MENTAL HEALTH INDY



RANKS / RATES

In the past 15 years:

\$7.4 billion in damages to Marion County from opioid crisis **\$7,759** per resident

Women (18% prevalence) in Marion County are nearly twice as likely as men (10% prevalence) to be depressed

Lower income and self-reported depression were directly correlated in Marion County

INDY CHAMBER POSITION

WORKFORCE PIPELINE

 Support incentives to increase pipeline of mental health professionals to provide muchneeded services

SCHOOL SAFETY & MENTAL HEALTH

 Allow public school funding for resource officers and from school safety referendums to be used to hire mental health program staff

HOMELESSNESS SERVICES

- Support comprehensive service approach and establishment of a low-barrier shelter with wraparound services
- Allow funds from Medicaid 1115 waiver to be used for homelessness intervention and prevention

IN WORKFORCE RECOVERY

 Engage employers from around the state to raise awareness of challenges & tools for combatting substance abuse in the workplace

INDY CHAMBER POSITION

WORKER ACCOMODATIONS

 Update employer guidance on reasonable accommodations for employees with medical conditions relating to pregnancy to provide needed clarity to employers, allow for expedient resolution of grievances, and improve maternal health and female workforce participation

SOCIAL DETERMINANTS

 Increase strategic investments in public health, prevention, and social determinants to support talent-based economic development.
 Continue data collection efforts by the state on social determinants of health and unmet needs of government benefit recipients

OBESITY / NUTRITIONAL HEALTH INDIANA

RANKS / RATES

Obesity rates have risen from **20% to 34%** over past 20 years:

- 1 in 3 Hoosier adults is obese
- 2 in 3 are overweight or obese

12% of Indiana adults are diabetic

Physical Inactivity:
27% of Indiana adults 20 and over reporting no leisure time physical activity

COSTS

Obesity costs the Indiana economy **\$8.5 billion** in 2017

- \$3.9 billion in labor market costs, absenteeism, lower productivity
- \$2.9 billion in healthcare costs
- \$1.7 billion in lost economic output from premature mortality

Employers face **40-48%** increase in annual healthcare costs for obese employees

SDOH

The built environment has a critical impact on behaviors that influence health. For example, in many communities, there is nowhere to buy fresh fruit and vegetables, and no safe or appealing place to play or be active.

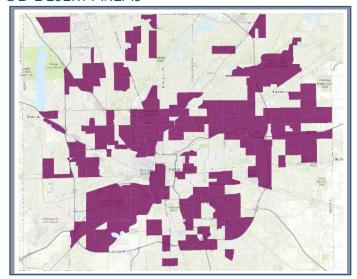
OBESITY / NUTRITIONAL HEALTH INDIANAPOLIS

MARION COUNTY

69% of adults are overweight or obese

4 in 10 (221k) Central Indiana kids are an unhealthy weight

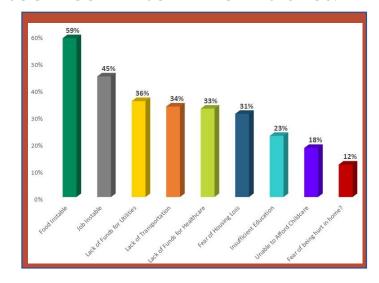
FOOD DESERT AREAS



196,000 people need food assistance in Marion County

10% of Marion County adults have diabetes

SOCIAL CONTEXT SCREENING - Marion Co.



INDY CHAMBER POSITION

FOOD ACCESS & INSECURITY

- Educate lawmakers on the connections between food access and insecurity, public health outcomes, and economic impacts
- Empower and enable innovative and proven food distribution models, alternative payment processes, and data collection on food access and insecurity

COMPLETE STREETS

 Plan, design, operate and maintain the state's road and street infrastructure in a way that facilitates multimodal public use, physical activity, and support public health



Additional Cost Factors

- Costs of healthcare are rising, creating burdens for patients, employers, insurers and providers
- Increasing costs result from a complex mix of factors, including cost of care, insurance premiums, pharmaceutical prices, intermediaries, and public utilization



Hospital Costs

- Long-term strategy for reducing health spending focused on reducing utilization – meanwhile, prices have significantly increased
- ➤ Indiana hospital prices are high relative to Medicare rates (311%) and high relative to the relative rates in nearby states: Michigan (156%), Kentucky (186%), Illinois (225%) and Ohio (241%)

Poor Health is Bad for Business

POOR HEALTH IS BAD FOR BUSINESS

Chronic disease drives health care expenditures, which cuts into company profits and productivity.



67% of our workforce is overweight or obese



1 IN 4

Americans has heart disease



1 IN 3

Americans has high blood pressure



\$73 B

annual cost of obesity among full-time employees



50% of company profits go towards health care costs



\$153 B
loss to employers annually
due to absenteeism from
workers who are overweight
or obese and have other

chronic health conditions



150 M

additional work days missed

PREVENTION PAYS AT WORK

Even small investments in health within the workplace can create big returns:







WORKPLACE WELLNESS

For every \$1 3 spent on workplace wellness programs, employers can save up to

\$6 0 0 0 0 0 0

ADDRESS HEALTH RISKS

1%



reduction in health risks would save as much as



\$83-103

annually in medical costs, per person.

SAVE MONEY



Workplace wellness programs can reduce sick leave, medical costs and worker's comp claims by as much as:



25%

HEALTHY COMMUNITIES = HEALTHY BUSINESSES

Building a healthier community saves lives and money.



BIKING SAVES MILLIONS

Do you have bike racks? Are there bike lanes on your streets? Bicycle commuters saved lowa \$13.2 million a year in health care costs and \$73.9 million for those who cycle recreationally.



SMOKE-FREE SPACES SAVE LIVES

Are your shared community spaces and workplace smoke-free? Smoke-free strategies and education prevented 800 thousand deaths related to lung cancer between 1975-2000.



HEALTHY OPTIONS. HEALTHY CHOICES.

Are healthy foods affordable and accessible at work meetings, in vending machines and in your community? Research shows that making the healthler option the default can lead to healthler choices.

WALKABLE SPACES + ECONOMIC GROWTH

Do your workplace and community make physical activity easier? In one California city, \$10 million spent on more walkable public outdoor spaces spurred a \$125 million economic investment in the local downtown area, which led to the creation of 40 new businesses and 800 new jobs.









the COST of POOR HEALTH

GOOD HEALTH IS MORE THAN MEDICINE



Accounts for 80% of Health Outcomes

Which one of these things makes more impact on poverty?

Policy development or programs?

The Answer is Policy Development

Why?

It's because policy development touches the population as a whole (most of the time) and, even though programmatic activities can be very helpful for the individuals they affect, they are affecting a much smaller group of people.



BREASTFEEDING

It Rocks!