Interconnection of Human and Environmental Health

West Michigan USGBC Annual Event
Kenneth Fawcett, M.D.
January 16th, 2019
Agenda

- What is health
- Current *health* status of our community
- Social Determinants of Health
- Anchor Institution
What is Health?

THE DRIVERS OF HEALTH ARE COMPLEX AND INTERCONNECTED

Image from: https://www.sycamoreinstitutetn.org/drivers-of-health/
Factors that Impact your Health

### Social Determinants of Health

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

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

Changing Times

- Host of Drivers
  - Moral, Ethical and Principle
  - “Of all the forums of inequality, injustice in healthcare is the most shocking and inhumane”. Dr. Martin Luther King

- Changes in Payment
  - Funds historically limited for provision of care
  - Healthy Homes Coalition and Priority Health Collaboration focused on home remediation and asthma reduction
Disparity in Prosperity of Community

- Forbes in 2016
  - Best place for raising a family
  - Second worst city for African American economic advancement

- In our backyard
  - Quantitative: 18 year life expectancy within Grand Rapids
  - Zip Code > Genetic Code

- Qualitative
  - Connection between wealth and health
Grand Rapids Disparities

A CITY WITHIN A CITY
The Black Freedom Struggle in Grand Rapids, Michigan
TODD E. ROBINSON

Grand Rapids ranks among worst economically for African-Americans
January 22, 2015 | By Mike Nichols
Climate Change Impact on Health

Climate Change and Health

**CLIMATE DRIVERS**
- Increased temperatures
- Precipitation extremes
- Extreme weather events
- Sea level rise

**ENVIRONMENTAL & INSTITUTIONAL CONTEXT**
- Land-use change
- Ecosystem change
- Infrastructure condition
- Geography
- Agricultural production & livestock use

**EXPOSURE PATHWAYS**
- Extreme heat
- Poor air quality
- Reduced food & water quality
- Changes in infectious agents
- Population displacement

**SOCIAL & BEHAVIORAL CONTEXT**
- Age & gender
- Race & ethnicity
- Poverty
- Housing & infrastructure
- Education
- Discrimination
- Access to care & community health infrastructure
- Preexisting health conditions

**HEALTH OUTCOMES**
- Heat-related illness
- Cardiopulmonary illness
- Food-, water-, & vector-borne disease
- Mental health consequences & stress

Environment and Health: Vector-Borne Disease


Figure 1. Number of ticks submitted to the Michigan Tick Identification and Testing Program from 1999-2018. From 1999-2016 the program was administered by the Michigan Department of Agriculture and Rural Development, MDHHS assumed responsibility for the program beginning in 2017.

Michigan Tick Identification and Testing Program: 2018 Summary Michigan Department of Health & Human Services (MDHHS) Emerging & Zoonotic Infectious Disease Section (EZID)

Environment and Health: Lead Poisoning

There were more children lead poisoned in one zip code in Grand Rapids than in all of Flint.

<table>
<thead>
<tr>
<th>Year</th>
<th>Flint</th>
<th>49507</th>
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</thead>
<tbody>
<tr>
<td>2014</td>
<td>122 children</td>
<td>145 children</td>
</tr>
<tr>
<td>2015</td>
<td>111 children</td>
<td>186 children</td>
</tr>
</tbody>
</table>

*(Flint Water Crisis begins April 2014)
*(Flint reconnects to Detroit water November 2015)

*48501 - 48507 zip codes

Source: MDHHS data warehouse and Healthy Homes Coalition of West Michigan.
Environment and Health: Life Expectancy by Zip Code

- Average life expectancy at birth of 78.7
- Zip code-Census Track  Life Expectancy
  - 49506-24        73.2
  - 49525-118.01    87.4
- 14 year difference within the same city

Source: https://www.cityhealthdashboard.com/mi/grand%20rapids/metric-detail?metric=16
What drives health outcomes?

The Social Determinants of Health

To address health inequalities, you must address social and economic inequalities.

Social & Economic Factors

- Education
- Employment
- Income
- Family & Social Support
- Community Safety

Data from "County Health Ranking & Roadmaps," University of Wisconsin Population Health Institute

HealthcareAnchor.Network
Theory of Change: wealth as Foundation

- Economic Self-Sufficiency
  - Increases access to Education
  - Enhances choices for Transportation
  - Strongly correlated to Jobs

- Health
  - Housing
  - Nutrition
  - Physical Activity

- Public Safety
- Environmental Health
- Social Support

*Developed by Dave Fife, 2019 Fellow at Spectrum Health*
What are Anchor Institutions?

- Nonprofit or public institutions
- Rooted in place- “sticky capital”
- Economic engines- large purchasers, employers & investors
The Anchor Mission

A commitment to intentionally apply an institution’s long-term, place-based economic power and human capital in partnership with community to mutually benefit the long-term well-being of both.
Healthcare Anchor Network

Drivers of Community Wealth Building

PLACE
- Develops under-utilized local assets of many kinds for benefit of local residents

OWNERSHIP
- Promotes local, broad-based ownership as the foundation of a thriving economy
- Encourages institutional buy-local strategies to keep money circulating locally

MULTIPLIERS
- Brings many players to the table: nonprofits, anchors, philanthropy, and cities

INCLUSION
- Aims to create inclusive, living wage jobs that help all families enjoy economic security

WORKFORCE
- Links training to employment and focuses on jobs for those with barriers to employment

SYSTEM
- Develops institutions and supportive ecosystems to create a new normal of economic activity
Anchor Assets

**Functional assets**
- Community planning & leadership
- Business & financing
- Partnering capacity
- Communications
- Government relations
- Public policy
- Healthcare services
- Research, Data, and Technology
- Diversity & Inclusion
- Labor-Management Relations
- Reputation

**Discretionary assets**
- Community Benefit Grants
- Community Health Initiatives
- Social & Economic Support Services
- Foundation & Philanthropic initiatives

**Economic assets**
- Hiring and Workforce
- Procurement/Purchasing
- Treasury/Investment
- Construction
- Real Estate/Facilities
Collective Community Action