# NORTHEAST OHIO REGIONAL DASHBOARD: INDICATORS, MEASURES AND VISUALS WITH EXAMPLE POLICIES, PRACTICES AND PILOTS

by

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## INTRODUCTION

This document is a final update to the Northeast Ohio Regional Dashboard initially presented to the Northeast Ohio Sustainable Communities Consortium (NEOSCC) Board on March 26. This final update illustrates the key vision framework indicators, measures and targets that will help Northeast Ohio gauge progress toward its preferred vision (key indicators). This final update also illustrates quality of life indicators, measures and visuals (context indicators) that provide greater context for assessing Northeast Ohio residents' quality of life. Finally, this update links both groups of indicators with recommended policy changes; implementation tools and best practices; and regional pilot projects. Feedback from participating public stakeholders significantly drove the content of this final Northeast Ohio Regional Dashboard update.

The key indicators address a full range of issues of regional concern, but they are bound by data availability and the scope of the project. The focal areas (or "buckets") of *Vibrant NEO 2040* are: strengthen established communities, increase transportation choice and protect agricultural and natural heritage. All key indicators are considered primarily at the regional scale. The key indicators derived from the spatial analysis used to illustrate four potential future scenarios for Northeast Ohio (Trend, Do Things Differently, Grow the Same, Grow Differently):

- **Trend**: Population and Job Growth until 2040 reflects 1990-2010 rates (very slow); policies and practices essentially unchanged
- **Do Things Differently**: Population and Job Growth until 2040 reflects 1990-2010 rates (very slow); policies and practices changed to prioritize compact new development in urban areas; increase transportation options and preserve open space.
- **Grow the Same**: Population and Job Growth until 2040 captures "fair share" of U.S. population (moderate); policies and practices essentially unchanged
- **Grow Differently**: Population and Job Growth until 2040 captures "fair share" of U.S. population (moderate); policies and practices changed to prioritize compact new development in urban areas; increase transportation options and preserve open space.

The values of these indicators helped stakeholders distinguish each scenario from the others, so stakeholders could more clearly differentiate the impacts of current choices on the region's future. Other indicator "buckets," such as economy, education, health and demographics, while critically important and bring regional context, are not direct measures of future scenarios.

Just as broader ecological health often reflects the health of key indicator species, improvements in almost any of the key indicators would result in improvements in economy, education, health and integration. Enhancing and diversifying transportation options would increase walking, biking and transit ridership. An integrated approach to land use and transportation planning would provide employees more options for getting to and from work and would enable more students to walk to school. More diverse housing options would likely encourage better integration of various population sub-groups. Reducing outward migration would help protect the region's sensitive ecosystems and watersheds, as well as reduce vehicle miles traveled (VMT). These changes would likely improve air and water quality, and ultimately, better health outcomes. Most of the elements of the draft regional vision relate to regional economic competitiveness, educational opportunity and achievement, public health and population integration in some way.

The indicators for the draft regional vision depend on current data availability. Existing data sources that are updated regularly are referenced where possible. Noted are possible indicators

that could be added in the future, if data were to become available. These indicators and targets draw heavily on the results from the alternative scenarios as a way to bound future possibilities. The Trend shows the likely future value of an indicator in 2040 if current development trends and patterns continue. The alternative scenarios show outcomes that might result from different policy decisions and growth trajectories. Linking the targets to scenario outputs also allowed public feedback to heavily influence target selection. Feedback gathered at the workshops shows a significant preference for the "Do Things Differently" and "Grow Differently" scenarios.

## HOW TO USE THIS DOCUMENT

This document is not a typical report. Following the Table of Contents are the Proposed "Buckets" and Indicators. The remainder of the document consists of individual pages, each dedicated to a single indicator. The reader does not necessarily have to review the document "page-by-page;" they can jump around. Each page provides: bucket, indicator, measure, why the indicator/measure matters, how we are doing (key indicators show Northeast Ohio data, context indicators generally show visual examples with data from other regions), ideas for change (policies and best practices), and vibrant initiatives (regional pilot projects). This format was developed over the past year through the establishment of a Dashboard Working Group (regional experts, many with direct experience in indicator development and dashboard production); a review of existing dashboards in Northeast Ohio and throughout the United States; and an example of successful indicator-measure-policy-practice-pilot integration from the Equinox Center's San Diego Dashboard (http://www.equinoxcenter.org/Regional-Dashboard/dashboard-publication.html).

The Health Outcomes and Health Factors pages are a bit different. These pages represent indices and indicators from an existing dashboard known as the County Health Rankings (http://www.countyhealthrankings.org/). All of the indices and indicators under Health Outcomes and Health Factors were developed through collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The final set of health indicators and measures may reflect a more granular perspective to zoom into the smaller communities and problematic hot spots that could benefit from policy decisions. Furthermore, there may be opportunities to link health indicators with economic activity indicators. Examples of potential health economics indicators include: lost productivity due to illness; average sick days; healthcare costs to individuals and businesses; and number of bankruptcies due to medical costs. Finally, there may be additional nationally significant sources of county level health data to compare Northeast Ohio counties to other Ohio and United States counties on critical health indicators. Where feasible, ideas for change and vibrant initiatives have been added. However, most health indicator topics were beyond the scope of *Vibrant NEO 2040*.

This report outlines the potential framework for an online, interactive dashboard of regional indicators for Northeast Ohio. It is the first step toward creating such a product to benefit the more than 3.8 million stakeholders who live and work here. Hopefully it provides a suitable springboard toward the next critical steps of dashboard design, implementation, operation, maintenance and improvement.

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- Housing Vacancy Rate
- Housing + Transportation Costs
- Existing Road Infrastructure Maintenance

### INCREASE TRANSPORTATION CHOICE

- Roadway Investment Balance
- Commute Mode Share
- Vehicle Miles Traveled (VMT)
- Transit Proximity: Jobs & Residents

### PRESERVE AND PROTECT NATURAL RESOURCES

- Open Space Conservation
- Riparian Corridor Protection
- Clean Water
- Clean Air
- Greenhouse Gas Emissions (future)
- Impervious Surface (future)

## BROADER "CONTEXT" INDICATORS

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- Jobs
- Gross Regional Product
- Per Capita Income
- Labor Force

### EDUCATION

- Attainment
- Expenditures
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- Professional Certifications

### HEALTH

- County Health Rankings (*Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute*)
- Health Outcomes
- Health Factors

### PEOPLE

- Distribution/Segregation
  - Race/Ethnicity
  - Income/Poverty
  - Age

**BUCKET:** STRENGTHEN ESTABLISHED COMMUNITIES
**INDICATOR:** Development Location

**WHAT DO WE MEASURE?:** The percentage of new development that occurs within or adjacent to existing urban areas, within the "urbanized and urbanizing area." The urbanized and urbanizing area includes: The urbanized land area in the region as defined by the U.S. Census Bureau (2010), ½-mile buffer around the urbanized area and areas where local governments plan to extend sewer service.

**WHY DOES IT MATTER?:** Development away from established communities: 1) requires costly investment in new infrastructure; 2) increases abandonment risk in urban areas; 3) impacts rural character and agricultural land; and 4) generally increases distances between homes, jobs, and other destinations and decreases opportunities for public transit access. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Labor Force; Health Outcomes: Physical Environment, Built Environment; and People: Distribution/Segregation "context" indicators.*

**HOW ARE WE DOING?:**

**Development in Urbanized and Urbanizing Area**

| Existing Conditions | % of Jobs in Urbanized and Urbanizing Area | % of Houses in Urbanized and Urbanizing Area |
|---|---|---|
| | 89.9 | 83.3 |
| Trend | % of New Jobs in Urbanized and Urbanizing Area | % of New Houses in Urbanized and Urbanizing Area |
| | 74.2 | 62.1 |
| Grow the Same | 73.2 | 55.7 |
| Do Things Differently | 92.6 | 87.6 |
| Grow Differently | 91.4 | 81.1 |

***Target: 81% of new housing, 91% of new jobs within the urbanized and urbanizing area***

**IDEAS FOR CHANGE:** POLICY: Rebuild the central core of the region's legacy cities
PRACTICE: Collinwood Rising (http://www.artplaceamerica.org/articles/collinwood-rising-7/)

**VIBRANT INITIATIVES:** PILOT: HarborWalk, Lorain (http://morningjournal.com/articles/2010/10/24/news/mj3533744.txt)

**BUCKET:** STRENGTHEN ESTABLISHED COMMUNITIES

**INDICATOR:** Urban and Multi-Family Housing

**WHAT DO WE MEASURE?:** The percentage of all housing units that are single family homes on lots smaller than 7,000 square feet, two or three-family dwellings, or multifamily apartments.

**WHY DOES IT MATTER?:** Urban and multifamily housing styles use land more efficiently than larger lot detached single family homes, reducing environmental impacts of development, reducing infrastructure needed to service it and supporting frequent and convenient public transit service possible. In addition to this, there is a strong central tendency in the feedback we received from the public suggesting demand for this kind of housing is not met by current supply. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Labor Force; Health Outcomes: Physical Environment, Built Environment; and People: Distribution/Segregation "context" indicators.*

**HOW ARE WE DOING?:**

**Urban and Multifamily Housing**

| Existing Conditions | % of All Housing Units that are Urban or Multifamily |
|---|---|
| | 44.8 |
| Trend | 39.0 |
| Grow the Same | 38.7 |
| Do Things Differently | 46.1 |
| Grow Differently | 46.8 |

***Target: The percentage of urban and multifamily homes in the region should increase to at least 50% of the housing supply***

**IDEAS FOR CHANGE:** POLICY: Provide incentives for people to live near work or transit
PRACTICE: Greater Circle Living Program: Housing assistance program for employees in the Greater University area and is designed as an incentive for people to live near work (www.universitycircle.org/live-here/housing).

**VIBRANT INITIATIVES:** PILOT: Uptown Cleveland (www.uptowncleveland.com)

**BUCKET:** STRENGTHEN ESTABLISHED COMMUNITIES

**INDICATOR:** Housing Vacancy Rates (Owned/Rented)

**WHAT DO WE MEASURE?:** The number of vacant housing units divided by total number of housing units. It can be calculated with data from the American Community Survey (ACS). The U.S. Census Bureau calculates (quarterly) both a "Renter Vacancy Rate" and a "Homeowner Vacancy Rate." (http://www.census.gov/housing/hvs/files/qtr313/q313press.pdf).

**WHY DOES IT MATTER?:** Currently, 10.7% of Northeast Ohio's housing stock is vacant (2007-2011 ACS). High residential vacancy negatively impacts local budgets by reducing the amount of tax revenue collected and affects quality of life for residents of neighborhoods experiencing high vacancy. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Education: Attainment, Expenditures; Health Factors: Family and Social Support, Community Safety; and Health Outcomes: Physical Environment, Built Environment*

**HOW ARE WE DOING?:**

**New Housing and Abandonment**

| Trend | Housing Units Built | Housing Units Abandoned |
|---|---|---|
| | 276,800 | 174,900 |
| Grow the Same | 546,000 | 93,100 |
| Do Things Differently | 120,700 | 19,800 |
| Grow Differently | 459,000 | 2,400 |

***Target: No more than 7% of housing units should be vacant***

**IDEAS FOR CHANGE:** POLICY: Reshape disinvested areas into green areas
PRACTICE: Thriving Communities Institute: From Vacancy to Vitality, Western Reserve Land Conservancy (www.thrivingcommunitiesinstitute.org)

**VIBRANT INITIATIVES:** PILOT: Mahoning County Land Bank (www.mahoningcountylandbank.com)

**BUCKET:** STRENGTHEN ESTABLISHED COMMUNITIES

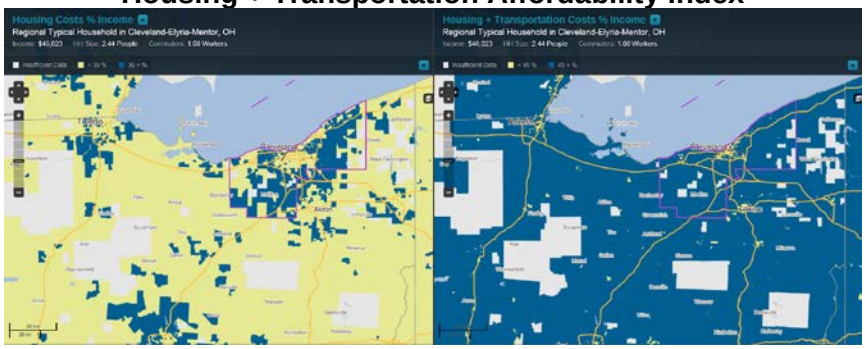
**INDICATOR:** Housing + Transportation Costs

**WHAT DO WE MEASURE?:** Housing + Transportation (H+T) Affordability Index (UNIT: Census block group level; SOURCE: The H+T Index currently covers the Metropolitan and Micropolitan Areas in the United States as defined by the Office of Management and Budget (OMB). (retrieved 6.12.2013 from http://htaindex.cnt.org/downloads/HTMethods.2011.pdf); UPDATE: (cited 2005-2009 5-Year ACS data; 2007-2011 5-Year ACS most recent))

**WHY DOES IT MATTER?:** The Housing and Transportation (H+T) Affordability Index measures the combined costs of housing and transportation as a percentage of income for most U.S. metropolitan areas.[1] Generally, combined spending that accounts for less than 45% of income is considered affordable. Today, 82% of Northeast Ohio residents spend more than 45% of their income on housing and transportation costs, higher than many other regions in the country. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Health Factors: Family and Social Support, Community Safety and Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?:**

**Housing + Transportation Affordability Index**




***Target: By 2040, reduce the percentage of residents spending more than 45% of their income on combined housing and transportation costs to no more than 65%***

**IDEAS FOR CHANGE:** POLICY: Provide incentives to encourage people to live near work or transit

PRACTICE: Toolbox for Regional Transit and Land Use Impacts (http://www.fhwa.dot.gov/planning/processes/tools/toolbox/index.cfm)

**VIBRANT INITIATIVES:** PILOT: Kent Central Gateway, Kent (PARTA) (http://www.kentcentralgateway.com/)

[1] United States Department of Housing and Urban Development, October 25, 2012. *Guidance on Performance Measurement and Flagship Sustainability Indicator Fact Sheets Version 1.2*. Washington, DC: HUD Office of Sustainable Communities, p. 16.

**BUCKET:** STRENGTHEN ESTABLISHED COMMUNITIES

**INDICATOR:** Existing Road Infrastructure Maintenance

**WHAT DO WE MEASURE?:**

The Ohio Department of Public Works (DPW) evaluates roads on a five–item scale (Critical, Poor, Fair, Good, Excellent). As of 2006, approximately 17-20% of major roads in the region were in less than good condition.[2]

**WHY DOES IT MATTER?:**

Public feedback indicated a broad desire to improve the condition of existing roads. Many comments at the Open Houses suggested that road infrastructure should remain high, but the focus should be on maintaining existing roads, not building new ones. Across Ohio, 2,900 miles of roads are in poor condition and 2,750 bridges are structurally deficient. To repair these roads and bridges, approximately $2.3 billion is needed each year for the next 20 years.[3] *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Jobs, Gross Regional Product, Labor Force, Per Capita Income.*

**HOW ARE WE DOING?:**

**Target: All major[4] roads should achieve at least a 'Good' on the Ohio DPW evaluation standard**

**IDEAS FOR CHANGE:**

POLICY: Targeting local, county and state investment to areas with existing infrastructure and facilitating development in areas most suitable for redevelopment by coordinating various pools of money
PRACTICE: Stark County Area Transportation Study (SCATS) Improvement Program (http://www.co.stark.oh.us/internet/docs/rpc/Final%20SCATSFY08TIP.pdf

**VIBRANT INITIATIVES:**

PILOT: North-South Community Connection Plan for Van Buren Avenue South and 2nd Street Southwest, Barberton (http://www.amatsplanning.org/wp-content/uploads/2013/05/Barberton-Montrose-Summary-Sheets.pdf)

[2] (retrieved 10.17.2013 from *http://www.pwc.state.oh.us/Documents/CIRManual.pdf*)
[3] (retrieved 10.17.2013 from *http://www.smartgrowthamerica.org/documents/smart-transportation-ohio.pdf*).
[4] Ideally, this target would include all roads in the region, but currently condition data is not available for many non-major roads. If additional data were to become available in the future, the condition of non-major roads could be tracked as well.

**BUCKET:** INCREASE TRANSPORTATION CHOICE
**INDICATOR:** Roadway Investment Balance

**WHAT DO WE MEASURE?:** New lane miles. A multi-lane road, therefore, would be counted as the number of lanes multiplied by its length. Also, bicycle lane miles and linear miles of sidewalks built or repaired (5-foot minimum width).

**WHY DOES IT MATTER?:** The region already has a significant road network with capacity to accommodate virtually all forecasted growth to 2040. We have heard from the public strong desires to expand alternative modes of transportation and improve existing road infrastructure rather than building new roads. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Jobs, Labor Force; Health Factors: Community Safety and Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?:**

**New Road Construction**

| Trend | New Lane Miles |
|---|---|
| | 3,100 |
| Grow the Same | 6,000 |
| Do Things Differently | 700 |
| Grow Differently | 2,400 |

***Target: New road infrastructure capped at 2.75 lane miles per 1,000 additional persons for a maximum additional 2,400 lane miles throughout the region. Every new vehicle lane mile built → twice the number of bicycle lane miles built AND four times the linear miles of sidewalks (5-foot minimum width) built or repaired in the region.***

**IDEAS FOR CHANGE:** POLICY: Incorporate "Fix It First" as the central principle guiding transportation investment decisions
PRACTICE: The Ohio Department of Transportation's "Transportation Review and Advisory Committee" has adopted a fix-it first policy on review of potential projects.

**VIBRANT INITIATIVES:** PILOT: West 65th Street Corridor Plan, Cleveland (http://detroitshoreway.org/media/documents/w65_public3_02_12_13.pdf)

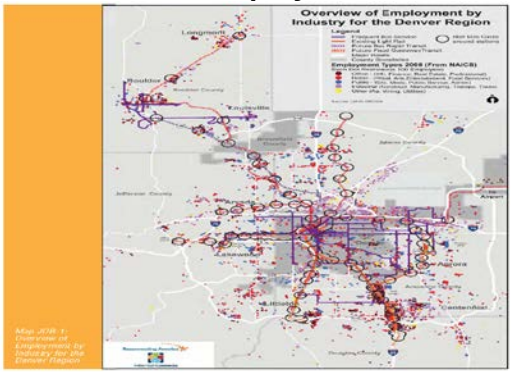
**BUCKET:** INCREASE TRANSPORTATION CHOICE
**INDICATOR:** Commute Mode Share

**WHAT DO WE MEASURE?:** The American Community Survey (ACS) includes data titled 'means of transportation to work' which is effectively commute mode share. ACS can therefore be used to measure the region's commute mode share. The area's current drive alone commute share is 84%.

**WHY DOES IT MATTER?:** One of the primary principles of sustainable communities is to provide transportation choice to balance system use. For Vibrant NEO 2040, this can be measured through mode share. The consistent best practice to start with is commute travel, which has the most consistent data sets available, and where peak trips can most frequently be shifted through policies and programs. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Jobs, Labor Force; Health Factors: Community Safety and Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?:**

**Denver Equity Atlas**[5]




***Target: By 2040, reduce region-wide drive alone commute trips to less than 67% (aim for reduction to 79% in region-wide drive alone commute trips by 2020)***

**IDEAS FOR CHANGE:** POLICY: Support an increased emphasis on public transportation, including buses, passenger rail, and other modes as a principal way to meet the mobility and access needs of Northeast Ohio
PRACTICE: Bus Rapid Transit (BRT) (Greater Cleveland RTA (HealthLine/Euclid Ave): The GCRTA refurbished 8.3 miles of historic Euclid Avenue as part of the Euclid Corridor Transportation Project ($4.7B spin-off investment; 11.4 million $ft^2$ new and planned development)

**VIBRANT INITIATIVES:** PILOT: Lakefront West Project (www.dot.state.oh.us/projects/LakefrontWest/Pages/default.aspx)

[5] (retrieved 6.24.2013 from http://reconnectingamerica.org/assets/Uploads/jobsbook-final-web.pdf)

**BUCKET:** INCREASE TRANSPORTATION CHOICE

**INDICATOR:** Vehicle Miles Traveled (VMT)

**WHAT DO WE MEASURE?:** Total Daily Vehicle Miles Traveled Per Capita[6] (SOURCE: *Ohio Department of Transportation, Division of Planning, Office of Technical Services. (1990-2011). Daily VMT reports retrieved 7.3.2013 from http://www.dot.state.oh.us/Divisions/Planning/TechServ/TIM/Pages/DVMT.aspx).*

**WHY DOES IT MATTER?:** VMT per capita has broad impacts on the environment and quality of life for residents. Transportation-related emissions contribute significantly to overall air quality in the region. Reducing VMT per capita would reduce transportation costs for households, improve air quality, reduce related health impacts such as asthma, and reduce greenhouse gas emissions. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Jobs, Labor Force; Health Factors: Community Safety and Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?**:

**People are Driving More in the Region**

| 1990 | Total Daily VMT | Population | Daily VMT per Capita |
|---|---|---|---|
| | 79,256,000 | 3,821,000 | 20.7 |
| 2000 | 91,415,000 | 3,918,000 | 23.3 |
| 2010 | 96,232,000 | 3,821,000 | 25.2 |

***Target: VMT per capita should decrease, even if population and employment increase***

**IDEAS FOR CHANGE:** POLICY: Support an increased emphasis on public transportation, including buses, passenger rail, and other modes as a principal way to meet the mobility and access needs of Northeast Ohio
TOOL: Akron Metropolitan Area Transportation Study (AMATS) Public Transportation Needs Assessment

**VIBRANT INITIATIVES:** PILOT: West Shore Corridor Transportation Project (http://www.ridewestshore.com/)

[6] VMT values calculated in the scenarios and presented at the Open Houses only included household trips; this indicator includes all trips in the region.

**BUCKET:** INCREASE TRANSPORTATION CHOICE
**INDICATOR:** Transit Proximity: Jobs & Residents

**WHAT IS THE MEASURE?:**

Transit access is measured as the percentage of total jobs or residents that are within:

- ¼ Mile (5-minute walk) of frequent local bus service (at least 1 hour frequency, all day), or
- ½ Mile (10-minute walk) of BRT stops, commuter rail stops, or express bus stops

**WHY DOES IT MATTER?:**

The current trend of lower density, dispersed development moves people and jobs away from existing transit systems and leaves many inaccessible for residents without cars. The public has expressed a desire for a greater range of transportation options, including public transportation. Ensuring that future development and transit service are considered together will help increase access. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Economy: Jobs, Gross Regional Product, Labor Force, Per Capita Income; Health Factors: Community Safety; Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?:**

**Public Transit Accessibility in Northeast Ohio**

| Existing Conditions | % of Jobs Near Transit | % of Residents Near Transit |
|---|---|---|
| | 49.6 | 32.5 |
| Trend | 40.8 | 25.5 |
| Grow the Same | 39.4 | 25.2 |
| Do Things Differently | 50.0 | 35.1 |
| Grow Differently | 52.9 | 34.3 |

***Targets: By 2040, at least 65% of jobs near transit (55% by 2020 and 60% by 2030); By 2040, at least 50% of residents near transit (38% by 2020 and 44% by 2030)***

**IDEAS FOR CHANGE:**

POLICY: Create a comprehensive regional transit plan that crosses county boundaries:
PRACTICE: ORCA Fare Card (One Regional Card For All), Seattle WA (http://www.orcacard.com/ERG-Seattle/p3_001.do)

**VIBRANT INITIATIVES:**

PILOT: AMATS Connecting Communities (http://www.amatsplanning.org/wp-content/uploads/2010/10/Connecting-Communities-Report-September-2010.pdf)

**BUCKET:** PRESERVE AND PROTECT NATURAL RESOURCES

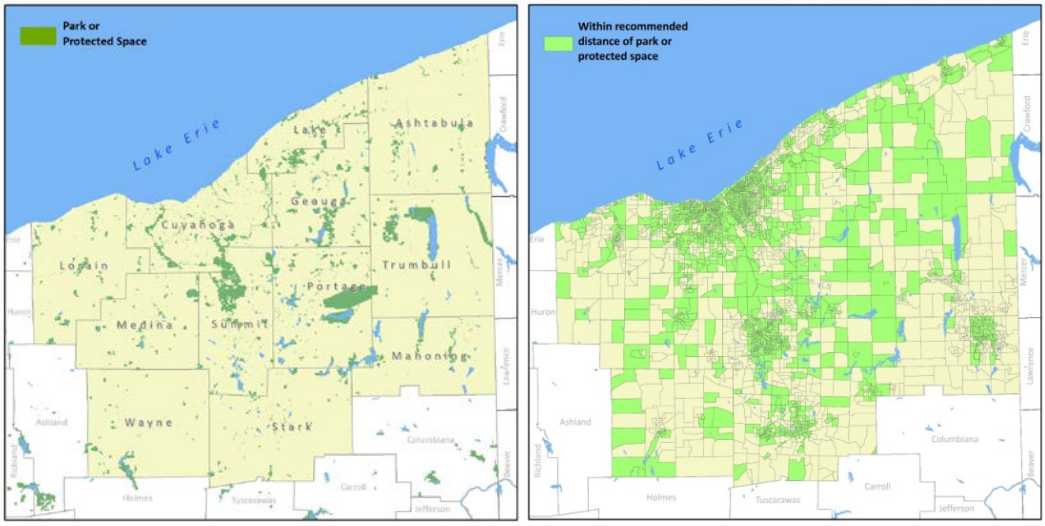
**INDICATOR:** Open Space Conservation

**WHAT DO WE MEASURE?:** Open space conservation is measured as the number of new acres of parks and open space protected each year

**WHY DOES IT MATTER?:** Approximately 7% of Northeast Ohio is currently conserved, and the trend has been to conserve an additional 1% each decade. "Common Ground: The land protection report for northern Ohio" (Dec. 2012) reported "92% of (land conservation survey) respondents said the minimum goal for preservation should be 10%; more than two-thirds believed the standard should be 15%" by 2040. The scenarios show that more conservation is possible if urbanization occurs "differently." Public feedback supports more compact urbanization that preserves rural landscapes in the region. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Health Outcomes: Physical Environment, Built Environment, Adult Obesity, Physical Inactivity*

**HOW ARE WE DOING?:**

**Parks and Open Space Conservation**




***Target: Conserve at least 10,700 new acres each year, for a total of 15% of the 12-county region conserved by 2040***

**IDEAS FOR CHANGE:** POLICY: Encourage and help local governments set and achieve land conservation goals
PRACTICE: Geauga County Nature Preserve Acquisition Project (www.cleanohiofund.org)

**VIBRANT INITIATIVES:** PILOT: Natural Resource Inventory for Northeast Ohio

**BUCKET:** PRESERVE AND PROTECT NATURAL RESOURCES
**INDICATOR:** Riparian Corridor Protection

**WHAT DO WE MEASURE?:** Riparian corridor protection is measured as the number of acres protected along river and stream corridors. Corridor widths for rivers are 210 feet from river edge or 100-year floodplain, whichever is greater; widths for streams are 75 feet from stream edge or 100-year floodplain, whichever is greater[7]

**WHY DOES IT MATTER?:** Protecting the region's water and water bodies was consistently identified through public feedback as a high priority. Workshop data also reflects a desire to limit development in sensitive areas of Northeast Ohio's watersheds. Riparian corridor protection is a key aspect of improving and protecting water quality. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Health Outcomes: Physical Environment*

**HOW ARE WE DOING?:**

**Riparian Corridor Protection in the Scenarios**

| | Acres Protected | New Acres Conserved | Annual Rate of Protection (Acres/year) |
|---|---|---|---|
| Existing* | 94,636 | n/a | n/a |
| Trend | 112,730 | 18,094 | 670 |
| Grow the Same | 112,760 | 18,124 | 671 |
| Do Things Differently | 124,979 | 30,343 | 1,124 |
| Grow Differently | 115,776 | 21,140 | 783 |

**IDEAS FOR CHANGE:** POLICY: Support action to manage stormwater runoff and water pollution risks through appropriate land uses in areas of sensitive water resources. PRACTICE: Chagrin River Watershed Partners, Inc. Model Regulations for Riparian Setbacks (http://www.crwp.org/index.php/member-services/model-regulations/riparian-setbacks)

**VIBRANT INITIATIVES:** PILOT: Stark County Storm Water Management Program (http://www.co.stark.oh.us/internet/HOME.DisplayPage?v_page=rpc_storm%20runoff)

[7] Dimensions are adapted from model ordinances from Chagrin River Watershed Partners (http://www.crwp.org/index.php/member-services/model-regulations).

**BUCKET:** PRESERVE AND PROTECT NATURAL RESOURCES
**INDICATOR:** Clean Water

**WHAT DO WE MEASURE?:** Ohio EPA is currently working towards goals to improve the quality of state water bodies by 2020. Goals are to improve quality in four beneficial uses of water bodies: aquatic life, human health, public drinking supply, and recreation.

**WHY DOES IT MATTER?:** Protecting the region's water and water bodies was consistently identified through public feedback as a high priority. In fact, "We have clean air, water, and soil" was the top priority identified through ImagineMyNEO. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Health Outcomes: Physical Environment*

**HOW ARE WE DOING?:**

**2020 Ohio EPA Beneficial Use Goals Summary[8]**

*Aquatic Life Use*

- 100% full aquatic life use attainment on all Ohio large rivers by 2020
- 80% full aquatic life use attainment on Ohio's principal streams and small rivers by 2020
- Identify more high quality waters
- Maintain adequate monitoring coverage on Ohio's principal and small rivers

*Human Health Use:* More fish from Ohio's waters will be safe to eat by 2020

*Public drinking water supply use*

- All drinking water sources will obtain water quality standards by 2020
- All drinking water sources will be assessed (nitrate and atrazine) by 2020

*Recreation Use*

- Ohio beaches and canoeing streams will be safe for swimming (meet WQS) by 2020
- Maintain adequate monitoring coverage on Ohio's watersheds, large rivers and beaches

***Target: Ohio EPA's 2020 Beneficial Use Goals***

**IDEAS FOR CHANGE:** POLICY: Adopt a green infrastructure approach to open space, habitat and water resources
PRACTICE: Combined Sewer Overflow mitigation -The Northeast Ohio Regional Sewer District plans to spend $42 million over the next several years on neighborhood "green infrastructure" projects aimed at reducing flooding and the discharge of untreated waste (www.neorsd.org).

**VIBRANT INITIATIVES:** PILOT: State Scenic Upper Chagrin River Preservation, Geauga (www.cleanohiofund.org)

[8] For more information, including statics to be tracked and baseline values, see http://www.epa.state.oh.us/dsw/bioassess/BeneficialUseGoals.aspx.

**BUCKET:** PRESERVE AND PROTECT NATURAL RESOURCES
**INDICATOR:** Clean Air

**WHAT DO WE MEASURE?:** The impacts of air pollution are significant. Air pollution costs billions of dollars annually due to lost worker productivity and public health costs. Children who live in communities with high levels of pollution tend to have higher instances of asthma, often resulting in higher hospitalization rates and missed school, thereby lowering overall opportunity. Pollution related illnesses also drive up health insurance premiums for individuals and employers.

**WHY DOES IT MATTER?:** The Clean Air Act regulates maximum permissible levels of carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, large fine particulates, ground-level ozone, and small fine particulates in the air. *Improving Northeast Ohio's measure on this indicator may also improve the region's measures on Health Outcomes: Physical Environment*

**HOW ARE WE DOING?:**

**Currently Designated Nonattainment Areas for All Criteria Pollutants in Northeast Ohio (as of December 5, 2013)[9]**

- 8-Hour Ozone (2008 standard) – Marginal: Ashtabula County, Cuyahoga County, Geauga County, Lake County, Lorain County, Medina County, Portage County, Summit County
- Lead (2008 standard) – Nonattainment (not entire county): Cuyahoga County
- Sulfur Dioxide ($SO_2$) (2010 standard) – Nonattainment: Lake County

**Target: All Northeast Counties in attainment of National Ambient Air Quality Standards**

**IDEAS FOR CHANGE:** POLICY: Adopt a Complete Streets policy
PRACTICE: City of Cleveland Complete and Green Streets Ordinance (http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/OfficeOfSustainability/SustainableMobility)

**VIBRANT INITIATIVES:** PILOT: City of Cleveland Complete and Green Streets Ordinance Implementation on West 65th Street (http://www.gcbl.org/blog/2013/03/roadblock-ahead-odot-thwarts-cleveland-on-complete-streets)

[9] United States Environmental Protection Agency Green Book (retrieved 12.15.2013 from http://www.epa.gov/oar/oaqps/greenbk/ancl.html).

**BUCKET:** ECONOMY
**INDICATOR:** Jobs

**WHAT DO WE MEASURE?:** Total Job Change; Share of the Working Age Population Currently Employed (by Industry Sector) (UNIT**:** Metropolitan Statistical Area; SOURCE**:** U.S. Department of Labor, Bureau of Labor Statistics (http://www.bls.gov/); UPDATE**:** Monthly (April 2013 most recent cited on Pittsburgh Dashboard))

**WHY DOES IT MATTER?:** Total job change provides a measure of the overall health of a region. Job growth can also be measured by industry sector to provide measures of particular sectors of the regional economy.

**HOW ARE WE DOING?:** (VISUAL: Pittsburgh|TODAY: Key Indicators for Understanding Our Region (http://pittsburghtoday.org/view_economy_job_growth_view1.html))


**IDEAS FOR CHANGE:** POLICY: Support targeted investments in transportation infrastructure and services necessary to expand sustainable economic opportunity through land use planning and design. Such investments will improve the region's national and regional economic competitiveness in the global economy and foster greater economic resilience
PRACTICE: Painesville Economic Development Corridor (http://development.ohio.gov/files/redev/FY12AwardList20122004.pdf)

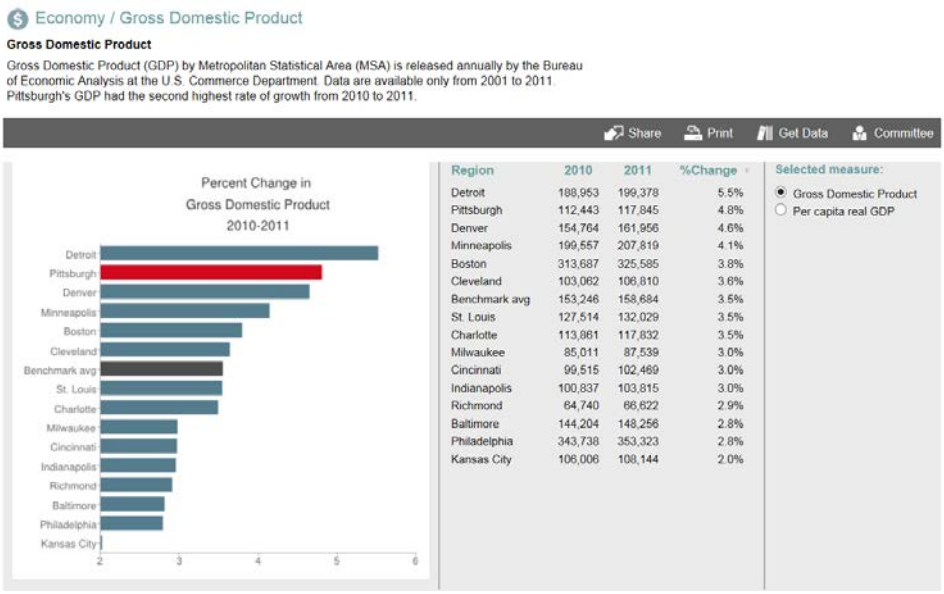
**VIBRANT INITIATIVES:** PILOT: C.A.Y. Rail Corridor (http://www.ohio.com/upublish/general-news/2013-cleveland-akron-youngstown-pittsburgh-corridor-rail-summit-1.388555)

**BUCKET:** ECONOMY
**INDICATOR:** Gross Regional Product

**WHAT DO WE MEASURE?:** Annual Percent Change in Gross Domestic Product (2005 dollars) (UNIT**:** Metropolitan Statistical Area; SOURCE**:** Gross Domestic Product (GDP) by Metropolitan Statistical Area (MSA) is released annually by the Bureau of Economic Analysis at the U.S. Commerce Department (http://www.bea.gov/); UPDATE**;** Annually (data are available 2001 to 2011))

**WHY DOES IT MATTER?:** Gross Domestic product for a region measures its overall economic productivity. The data is provided per Metropolitan Statistical Area in the Pittsburgh example, but there should be data available by county to calculate the Gross Domestic Product for the 12-county Northeast Ohio region.

**HOW ARE WE DOING?:** (VISUAL: Pittsburgh|TODAY: Key Indicators for Understanding Our Region (http://pittsburghtoday.org/view_GDP3.html))




**IDEAS FOR CHANGE:** POLICY: Support redevelopment of vacant and abandoned properties
PRACTICE: Ohio Commerce Center, Lordstown (http://ohiocommercecenter.com/home.html)

**VIBRANT INITIATIVES:** PILOT: Regional Industrial Land Bank (http://www.city.cleveland.oh.us/portal/page/portal/CityofCleveland/Home/Government/CityAgencies/EconomicDevelopment/Brownfield/Industrial-Commercial-Landbank)

**BUCKET:** ECONOMY
**INDICATOR:** Per Capita Income

**WHAT DO WE MEASURE?:**

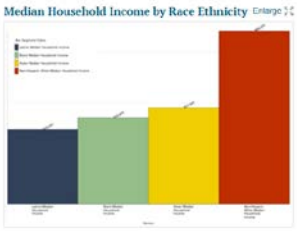
Median Household Income (by Race/Ethnicity, by Town, by Census Tract); Median Wages or Earnings (e.g. Percent Change in Average Weekly Wages) (UNIT**:** Municipality, Census Tract; Metropolitan Statistical Area (MSA); SOURCE**:** 2005-2009 and 2006-2010 5-Year American Community Survey (ACS); Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) (http://www.bls.gov/cew/); UPDATE**:** ACS data updated annually (2007-2011 5-Year most recent); QCEW data updated quarterly (most recent cited is 3rd Quarter, 2012))

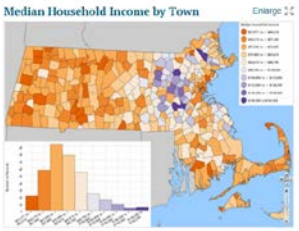
**WHY DOES IT MATTER?:**

Incomes are closely related to unemployment rates and levels of educational attainment. Tracking income by race/ethnicity provides an indication of the success of efforts to eliminate racial/ethnic disparities in access to employment and education. Tracking income by geographic unit (municipality, zip code, census tract) provides a spatial pattern of incomes across the region. Average Weekly Wages provide a different measure of income (also tracked by race/ethnicity or geographic unit).

**HOW ARE WE DOING?:**

(VISUAL**:** Boston Indicators Project (http://www.bostonindicators.org/indicators/race-and-ethnicity))





**IDEAS FOR CHANGE:**

POLICY: Nurture the Region's Industry Clusters
PRACTICE: Akron BioMedical Corridor (http://www.upakron.com/uploads/akron-core-city-vision-plan-executive-summary.pdf); Austen BioInnovation Institute (http://www.abiakron.org/)

**VIBRANT INITIATIVES:**

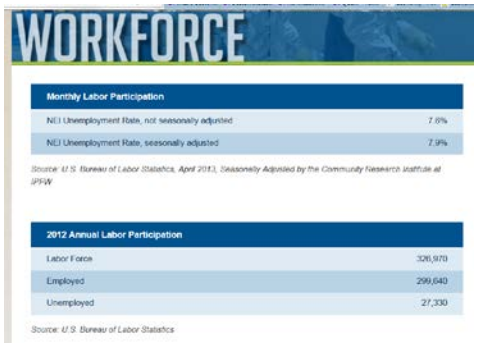
PILOT: Map of Potential Industrial Development Zones (developed by NEOSCC)

**BUCKET:** ECONOMY
**INDICATOR:** Labor Force

**WHAT DO WE MEASURE?:** Monthly and Annual Labor Participation (Total and by Industry Sector); Skills Mismatch (UNIT**:** Metropolitan Statistical Area (MSA); SOURCE: Bureau of Labor Statistics (http://www.bls.gov/), seasonally adjusted by the Indiana University-Purdue University – Fort Wayne (IPFW); UPDATE**:** Monthly and annually (April 2013 data most recent cited))

**WHY DOES IT MATTER?:** Labor Force Participation is a much broader indicator than Jobs. Labor Force Participation accounts for people who are both employed and unemployed (unemployed implies that people are still looking for a job…once they stop, they fall out of the Labor Force, an undesirable outcome). The Regional Economic Competitiveness Strategy (RECS) measures Labor Force Participation of the Working Age Population (25-64 years old) who live in Low-Moderate Income neighborhoods.[10] Skills Mismatch may be considered share of supply vs. share of demand.

**HOW ARE WE DOING?:** (VISUAL**:** Northeast Indiana Vision 2020 (http://www.neindiana.com/data/workforce))




**IDEAS FOR CHANGE:** POLICY: Develop a regional multimodal system plan
PRACTICE: Eastgate Transit Development Program (http://www.eastgatecog.org/Portals/Eastgate/Uploaded_Documents/TransportationPlanning/TransitPlanning/FY2013-2017%20TDP.pdf)

**VIBRANT INITIATIVES:** PILOT**:** Ohio City Transit-Oriented Development (http://www.cleveland.com/architecture/index.ssf/2013/06/a_new_rta_plan_for_transit-ori.html)

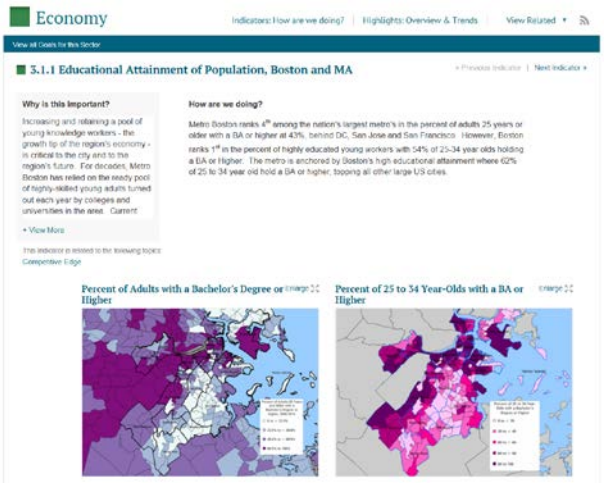
[10] Labor Force Participation in low-income or distressed neighborhoods (RECS definition: Economically distressed neighborhoods are defined as having both less than 65% workforce participation and more than 50% of the households have less than 80% of the region's median household income of $35,000. In 2009, roughly 210,000 out of 4.4 million residents lived in distressed neighborhoods.

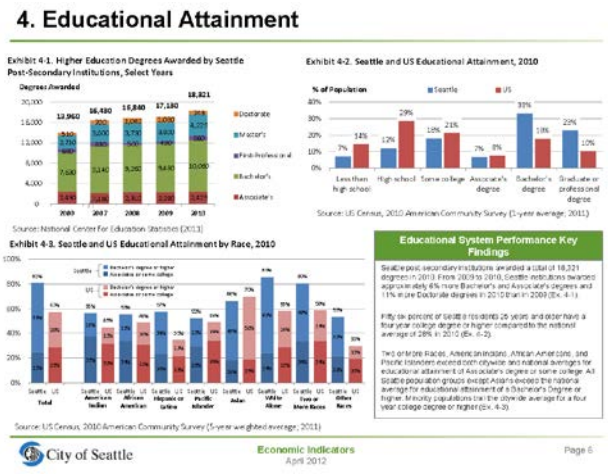
**BUCKET:** EDUCATION
**INDICATOR:** Attainment

**WHAT DO WE MEASURE?:** Percent of Adults with a Bachelor's Degree or Higher; Percent of 25-34 Year-Olds with a Bachelor's Degree or Higher; Higher Education Degrees by Race/Ethnicity (UNIT**:** 2010 Census Tracts; City of Seattle; SOURCE**:** 5-Year American Community Survey; U.S. Census Bureau; UPDATE**:** Annually (2007-2011 most recent available); every 10 years (2010))

**WHY DOES IT MATTER?:** Increasing and retaining a pool of young knowledge workers - the growth tip of the region's economy - is critical a region's future. Current challenges - including labor force growth due principally to immigration of lower skilled workers and persistent racial and ethnic disparities in education outcomes - may require more balanced strategies to grow the pool of knowledge workers.

**HOW ARE WE DOING?:** (VISUAL**:** Boston Indicators Project (http://www.bostonindicators.org/indicators/economy/how-are-we-doing/3-1competitive-edge/3-1-1educational-attainment-of-boston-and-ma); Seattle Economic Development Indicators (http://www.seattle.gov/EconomicDevelopment/indicators/images/CAI%20OED%20Indicators%20Dashboard%202012%20Jobs%20update%20DRAFT%202012%200404.pdf))




**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

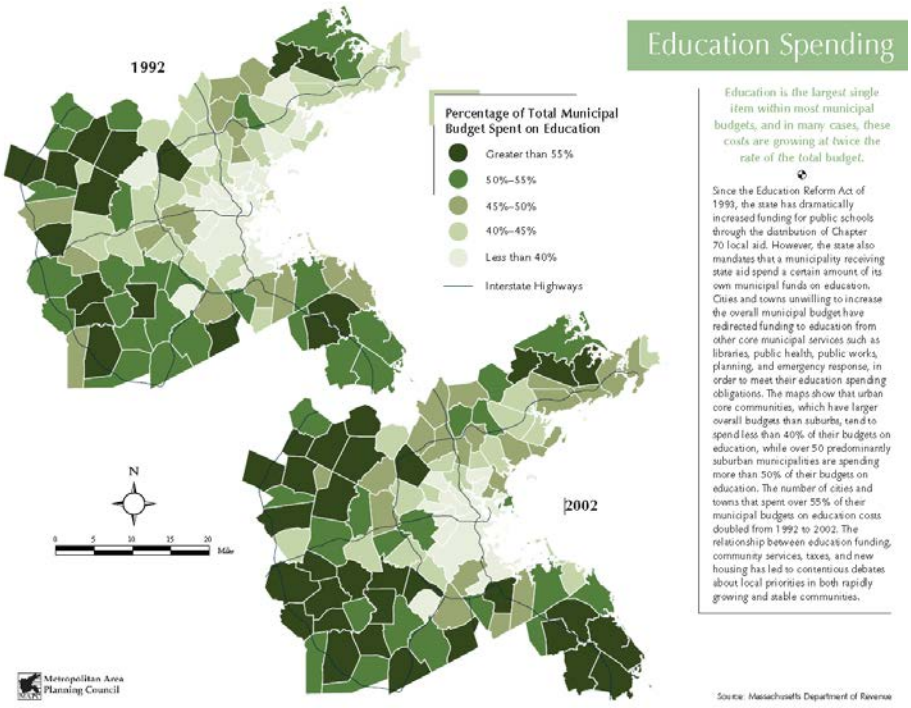
**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

**BUCKET:** EDUCATION
**INDICATOR:** Expenditures

**WHAT DO WE MEASURE?:** Percent of Total Municipal Budget Spent on Education (UNIT**:** Municipality, County, Region; SOURCE**:** Massachusetts Department of Revenue (http://www.mass.gov/dor/); UPDATE**:** (cited 1992-2002 change)

**WHY DOES IT MATTER?:** Education is the largest single item within most municipal budgets, and in many cases, these costs are growing at twice the rate of the total budget. The relationship between education funding, community services, taxes, and new housing has led to contentious debates about local priorities in both rapidly growing and stable communities.

**HOW ARE WE DOING?:** (VISUAL**:** Metro Boston Data Common (http://metrobostondatacommon.org/site_media/calendar/Calendar2006_04Apr_EducationSpending.pdf))




**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

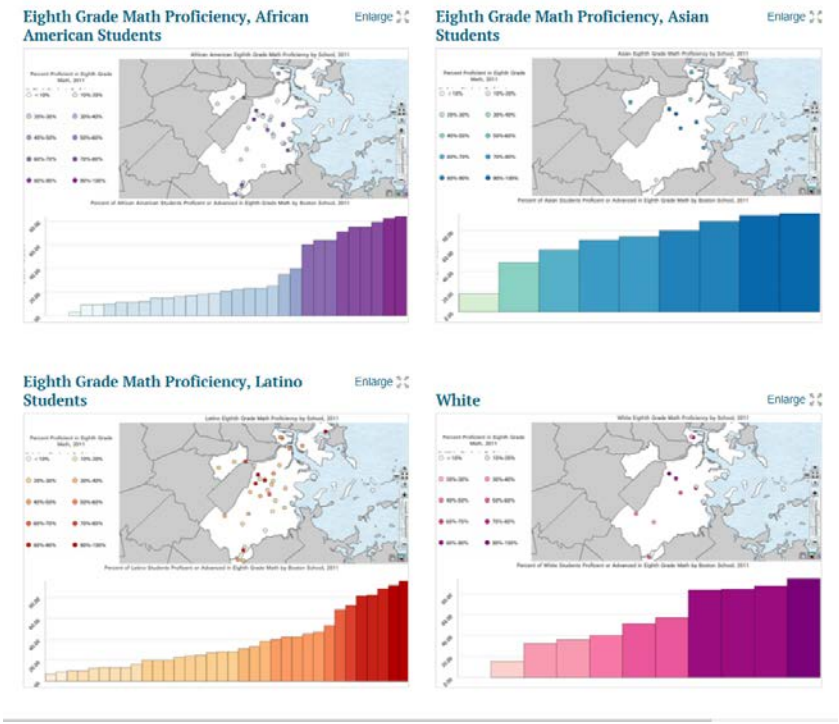
**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

**BUCKET:** EDUCATION
**INDICATOR:** School Quality

**WHAT DO WE MEASURE?:** Eighth Grade Math Proficiency by Race/Ethnicity (UNIT**:** Individual School; SOURCE**:** Massachusetts Department of Elementary and Secondary Education (http://profiles.doe.mass.edu/); Ohio Department of Education (Report Card, http://education.ohio.gov/Topics/Data/Report-Card); UPDATE**:** Annually (most recent 2012-2013 school year; 2011 for math proficiency))

**WHY DOES IT MATTER?:** There may be several different ways to measure school quality; here are a few examples that examine student discipline, attendance, graduation and proficiency. Other measures may include student/teacher ratio, success on Advanced Placement exams, college acceptance, etc.

**HOW ARE WE DOING?:** (VISUAL**:** Boston Indicators Project (http://www.bostonindicators.org/indicators/children-and-youth))




**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

**BUCKET:** EDUCATION
**INDICATOR:** Professional Certifications

**WHAT DO WE MEASURE?:** Number of Professional Certifications Obtained[11] (UNIT: Individual School, Region; SOURCE: National Center for Education Statistics (http://nces.ed.gov/), certification data comes from individual accredited schools; UPDATE: unknown (possibly annual updates…data collected 2002-2010)

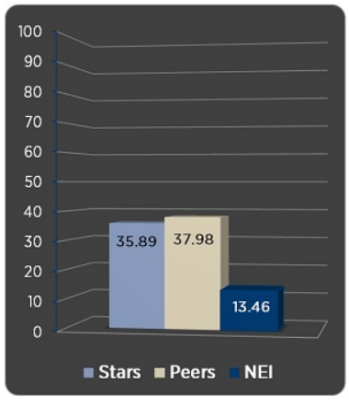
**WHY DOES IT MATTER?:** The number of professional certifications in the region provides a measure of professional education success rather than pre-baccalaureate educational success. Such a measure may also provide insight into the workforce-preparedness of the region.

**HOW ARE WE DOING?:** (VISUAL: Northeast Indiana Vision 2020 (http://www.neindiana.com/vision/resources/regional-dashboard/talent-index/21-talent-variables))

### Certifications

Additional information is provided on Certifications because it is a relatively new variable. A list of certifications was identified and then each region was researched for these particular certifications. Note that an attempt was made to acknowledge a regional specialty and to include certifications that may be very important in that particular area. The certifications which were collected are identified in Appendix F.

This data includes certifications for less than an academic year, for 1-2 years, and also a few certifications that required at least 2 years, but less than four years. No post-baccalaureate certifications were included. However, this certification data is not mutually exclusive of other educational attainment. There is no known data source which separates degree attainment from certifications.




| Certification Index | | |
|---|---|---|
| 1 | Kalamazoo MSA | 100.00 |
| 2 | Dayton CSA | 58.47 |
| 3 | Rockford CSA | 53.36 |
| 4 | Toledo CSA | 49.34 |
| 5 | Davenport MSA | 44.83 |
| 6 | Wichita CSA | 42.64 |
| 7 | Grand Rapids CSA | 41.82 |
| **8** | **Peers** | **37.98** |
| **9** | **Stars** | **35.89** |
| 10 | Peoria CSA | 33.84 |
| 11 | Roanoke MSA | 29.53 |
| 12 | Knoxville CSA | 29.02 |
| 13 | Des Moines CSA | 28.02 |
| **14** | **NEI** | **13.46** |
| 15 | Evansville MSA | 9.47 |
| 16 | Chattanooga CSA | 7.44 |
| 17 | South Bend CSA | 0.00 |

Although there is no premier data source which identifies the number of people in a given population who have a certification from an accredited school, it is possible to identify the number of certifications awarded by school by type of certification for the past eight years. There are some limitations to this method, such as not all certifications were collected using this method and not all schools report their certification through the National Center for Education Statistics.

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

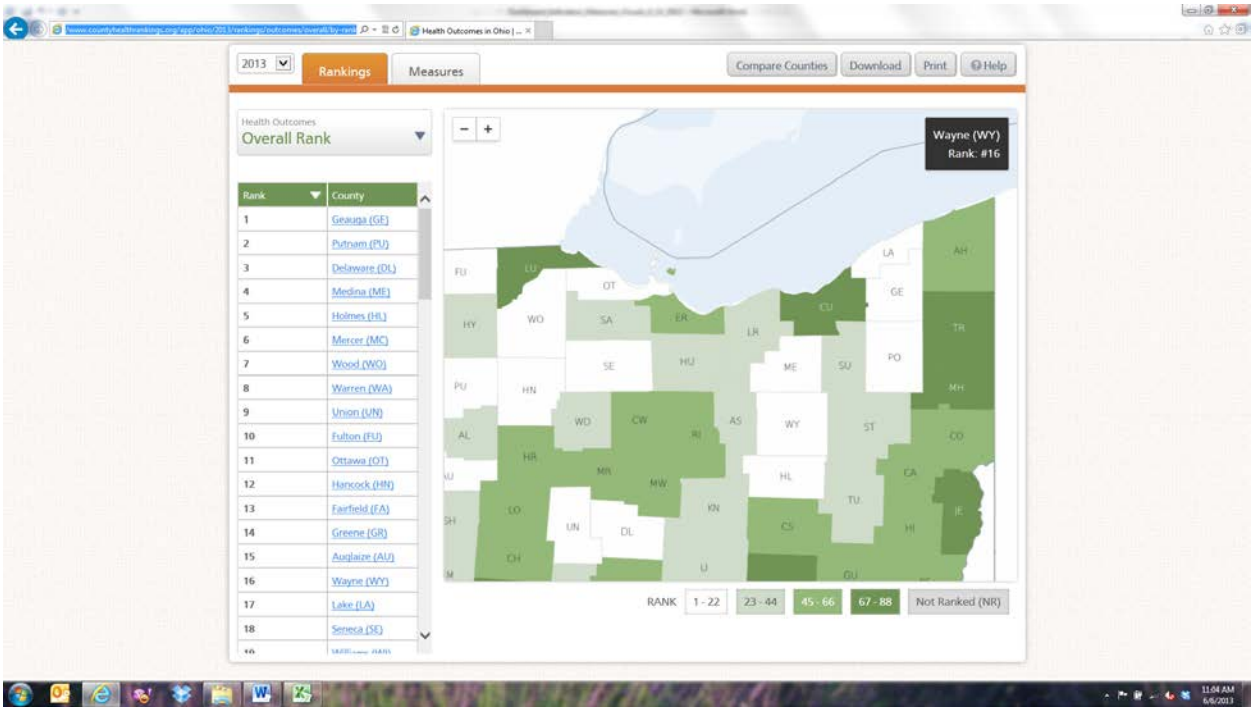
[11] Although there is no premier data source which identifies the number of people in a given population who have a certification from an accredited school, it is possible to identify the number of certifications awarded by school by type of certification for the past eight years. There are some limitations to this method, such as not all certifications were collected using this method and not all schools report their certification through the National Center for Education Statistics (retrieved 6.12.2013 from http://www.neindiana.com/vision/resources/regional-dashboard/talent-index/21-talent-variables).

**BUCKET:** HEALTH OUTCOMES
**INDEX:** HEALTH OUTCOMES

**WHAT DO WE MEASURE?:** Mortality (50%) + Morbidity (50%) (UNIT: County; SOURCE and UPDATE: see Mortality and Morbidity pages)

**WHY DOES IT MATTER?:** Health outcomes in the *County Health Rankings* represent how healthy a county is. We measure two types of health outcomes: how long people live (mortality) and how healthy people feel while alive (morbidity). Please refer to the Mortality and Morbidity pages for more information on those measures.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/outcomes/overall/by-rank)




**IDEAS FOR CHANGE:** (see Mortality and Morbidity pages)

**VIBRANT INITIATIVES:** (see Mortality and Morbidity pages)

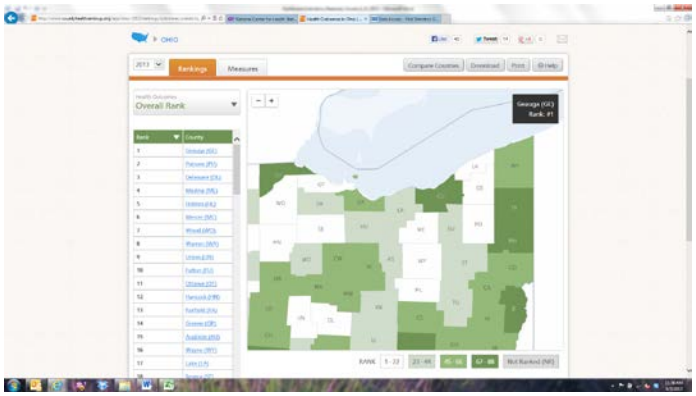
**BUCKET:** HEALTH OUTCOMES

**INDICATOR:** Mortality (length of life) = 50% HEALTH OUTCOMES

**WHAT DO WE MEASURE?:** Years of Potential Life Lost (YPLL) (UNIT: County; SOURCE: YPLL rates are calculated from data in the National Vital Statistics System and are provided by the CDC's National Center for Health Statistics (http://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm); UPDATE: Annually (most recent 2010))

**WHY DOES IT MATTER?:** Years of Potential Life Lost (YPLL) emphasizes the processes underlying premature mortality in a population. The concept behind YPLL involves using the number of years of life (life-years) lost due to premature death, defined by a standard cut-off age in a population, to obtain a total sum of the life-years lost before the cut-off age. The *County Health Rankings* report YPLL as its measure of premature death based on all deaths occurring before the age of 75. Each of these deaths contributes to the total number of years of potential life lost. For example, a person dying at age 50 would contribute 25 years of life lost to the YPLL index. The YPLL is age-adjusted to the 2000 U.S. population to allow comparison between counties and is reported as a rate per 100,000 people.[12] Three-year averages are used to create more robust estimates of mortality.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/outcomes/overall/by-rank)



**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

[12] Dranger, E. and Remington, P. (2004). YPLL: A summary measure of premature mortality used in measuring the health of communities, *Issue Brief 5(7).* Madison, WI: University of Wisconsin Population Health Institute.

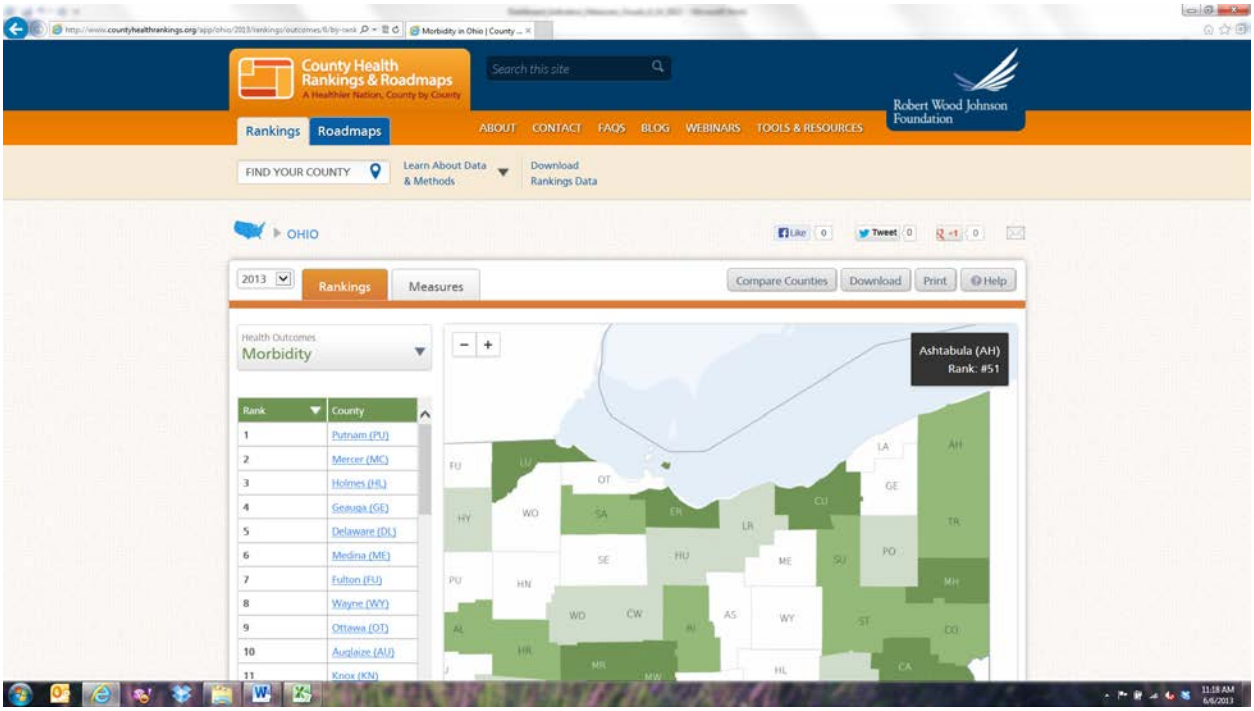
**BUCKET:** HEALTH OUTCOMES

**INDEX:** Morbidity (quality of life) = 50% HEALTH OUTCOMES

**WHAT DO WE MEASURE?:** Low Birthweight (20%) + Health-Related Quality of Life (30%) (Poor or Fair Health (10%) + Poor Physical Health Days (10%) + Poor Mental Health Days (10%)) (UNIT: County; SOURCE and UPDATE: see Low Birthweight and Health-Related Quality of Life pages)

**WHY DOES IT MATTER?:** Morbidity is the term that refers to how healthy people feel while alive. Specifically, we report on the measures of birth outcomes (in this case, babies born with a low birthweight) and people's health-related quality of life (their overall health, their physical health, their mental health). Please refer to the Low Birthweight and Health-Related Quality of Life pages for more information on those measures.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/outcomes/6/by-rank




**IDEAS FOR CHANGE:** (see Low Birthweight and Health-Related Quality of Life pages)

**VIBRANT INITIATIVES:** (see Low Birthweight and Health-Related Quality of Life pages)

| | |
|---|---|
| **BUCKET:** | HEALTH OUTCOMES |
| **INDEX:** | Morbidity = 50% HEALTH OUTCOMES |
| **WHAT DO WE MEASURE?:** | Low Birthweight (LBW) = 20% HEALTH OUTCOMES (UNIT: County; SOURCE: LBW is calculated from data in the National Vital Statistics System and provided by the CDC's National Center for Health Statistics (http://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm); UPDATE: Annually (most recent 2010); 2004-2010 data cited by County Health Rankings) |
| **WHY DOES IT MATTER?:** | LBW is unique as a health outcome because it represents two factors: maternal exposure to health risks and the infant's current and future morbidity, as well as premature mortality risk. From the perspective of maternal health outcomes, LBW indicates maternal exposure to health risks in all categories of health factors, including her health behaviors, access to health care, the social and economic environment the mother inhabits, and environmental risks to which she is exposed.[13] In terms of the infant's health outcomes, LBW serves as a predictor of premature mortality and/or morbidity over the life course.[14] LBW has also been associated with cognitive development problems. The *County Health Rankings* use the measure of low birthweight (less than 2,500 g). |
| **HOW ARE WE DOING?** | **No separate map provided for Low Birthweight rankings; downloadable table from *County Health Rankings* website** |
| **IDEAS FOR CHANGE:** | (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040) |
| **VIBRANT INITIATIVES:** | (pilots for this indicator are beyond the scope of VibrantNEO 2040) |

[13] Bailey, B., Byrom A. (2007). Factors predicting birth weight in a low-risk sample: The role of modifiable pregnancy health behaviors. *Maternal Child Health Journal (11)*: 173-179.
[14] Paneth, N. (1995). The problem of low birth weight. *Future Child (5)*: 19-34.

**BUCKET:** HEALTH OUTCOMES
**INDEX:** Morbidity = 50% HEALTH OUTCOMES

**WHAT DO WE MEASURE?:** Health-Related Quality of Life (Poor or Fair Health (10%) + Poor Physical Health Days (10%) + Poor Mental Health Days (10%)) = 30% HEALTH OUTCOMES (**UNIT:** County; **SOURCE:** The *County Health Rankings* use three county-level measures from the Behavioral Risk Factor Surveillance System (BRFSS) data provided by the CDC as measures of the health-related quality of life: the percent of adults reporting poor or fair health and the average number of physically and mentally unhealthy days reported per month (http://www.cdc.gov/brfss/data_documentation.htm); **UPDATE:** Annually (most recent 2011); 2005-2011 data cited by County Health Rankings)

**WHY DOES IT MATTER?:** Health-Related Quality of Life (HRQoL) is a multi-dimensional concept that includes domains related to physical, mental, emotional and social functioning. It goes beyond direct measures of population health, life expectancy and causes of death and focuses on the impact health status has on quality of life.[15] The Center for Disease Control (CDC) has defined HRQoL as "an individual's or group's perceived physical and mental health over time."[16] Health-related quality of life is viewed in the *County Health Rankings* framework as an outcome of the health factors included in the *Rankings*. People not only care about the length of their life, but also its quality. Measuring HRQoL helps characterize the burden of disabilities and chronic diseases in a population.

Self-reported health and the number of physically and mentally unhealthy days per month are both widely used measures for overall health and HRQoL of a population. Self-reported health has been used in numerous studies since the 1950s. The "healthy days" questions—those that ask about the number of physically and mentally unhealthy days per month—have been part of the core Behavioral Risk Factor Surveillance Survey (BRFSS) questionnaire since 1993.

**HOW ARE WE DOING?:** **No separate map provided for HRQoL rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

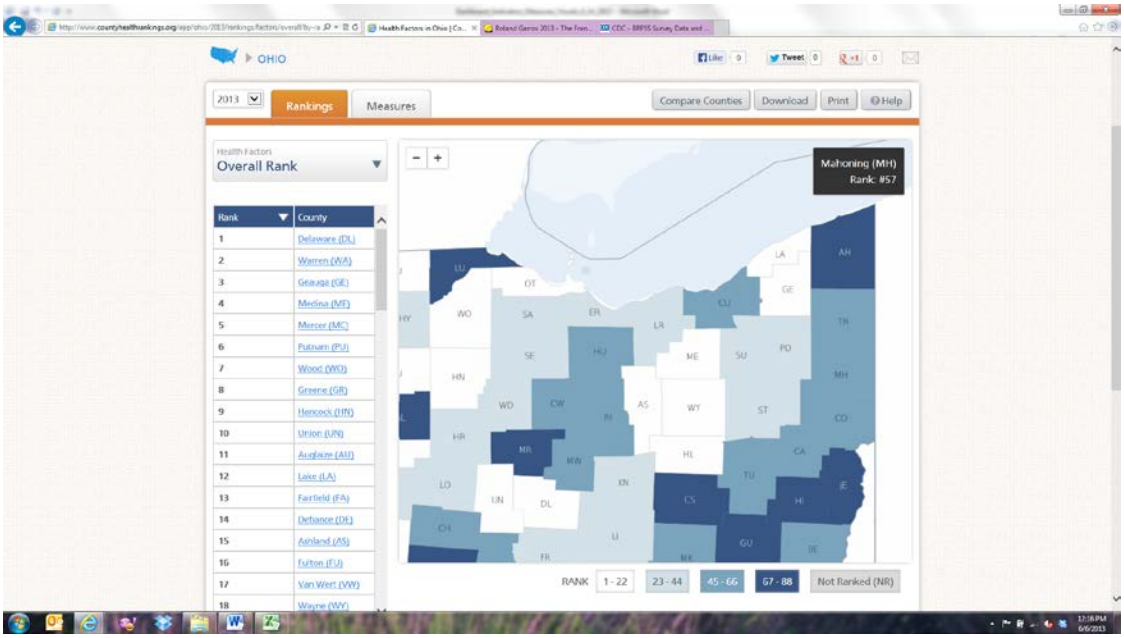
[15] Centers for Disease Control and Prevention. (2000). Measuring healthy days: Population assessment of health-related quality of life. Atlanta, GA: Centers for Disease Control and Prevention.
[16] Ibid.

**BUCKET:** HEALTH FACTORS
**INDEX:** HEALTH FACTORS

**WHAT DO WE MEASURE?:** Social and Economic Factors (40%) + Health Behaviors (30%) + Clinical Care (20%) + Physical Environment (10%) (**UNIT:** County; **SOURCE and UPDATE:** see Social and Economic Factors; Health Behaviors; Clinical Care and Physical Environment pages)

**WHY DOES IT MATTER?:** Health factors in the *County Health Rankings* represent what influences the health of a county. We measure four types of health factors: social and economic, health behaviors, clinical care and physical environment. In turn, each of these factors is based on several measures. A fifth set of factors that influence health (genetics and biology) is not included in the *Rankings*. Please refer to the Social and Economic Factors; Health Behaviors; Clinical Care and Physical Environment pages for more information on those measures.

**HOW ARE WE DOING?** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/factors/overall/by-rank




**IDEAS FOR CHANGE:** (See the Social and Economic Factors, Health Behaviors, Clinical Care, and Physical Environment pages)

**VIBRANT INITIATIVES:** (See the Social and Economic Factors, Health Behaviors, Clinical Care, and Physical Environment pages)

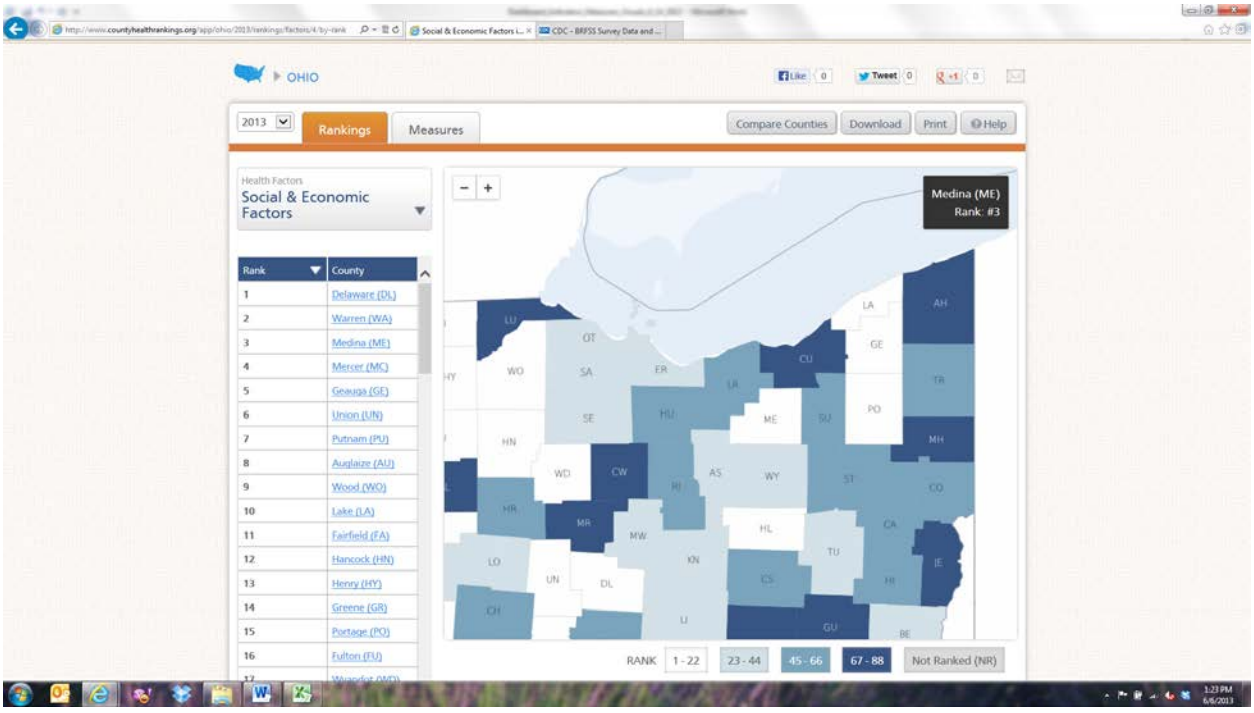
**BUCKET:** HEALTH FACTORS

**INDEX:** Social and Economic Factors = 40% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Education (10%) + Employment (10%) + Income (10%) + Family and Social Support (5%) + Community Safety (5%) (UNIT: County; SOURCE and UPDATE: see Education; Employment; Income; Family and Social Support and Community Safety pages)

**WHY DOES IT MATTER?:** Please refer to the Education; Employment; Income; Family and Social Support and Community Safety pages for more information on those measures.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/factors/4/by-rank)




**IDEAS FOR CHANGE:** (See the Education, Employment, Income, Family and Social Support and Community Safety pages)

**VIBRANT INITIATIVES:** (See the Education, Employment, Income, Family and Social Support and Community Safety pages)

**BUCKET:** HEALTH FACTORS

**INDEX:** Education = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** High School Graduation (5%) + Some College (5%) (UNIT: County; SOURCE: "High School Graduation" is the percent of the ninth grade cohort that graduates high school in four years. This year, the *Rankings* team collected high school graduation data from state Department of Education websites when available (http://webapp2.ode.state.oh.us/reportcard/archives/NEOH.asp). "Some College" estimates the percentage of the population age 25-44 with some post-secondary education based on the 2007-2011 5- Year American Community Survey (ACS), Table S1501, *Educational Attainment*; UPDATE: Both updated annually. Most recent Ohio "High School Graduation" data (2011-2012). Most recent "Some College" data (2007-2011))

**WHY DOES IT MATTER?:** The relationship between educational attainment and improved health outcomes is well known.[17] Better-educated individuals live longer, healthier lives than those with less education, and their children are more likely to thrive. (1) Education often results in higher incomes, on average, and more resources than a job that does not require education. Access to health care is a particularly important resource.[18] (2) Health literacy can help explain an individual's health behaviors and lifestyle choices. Only 3% of college graduates versus 49% of adults who have not completed high school have below basic health literacy skills. [19][20] (3) Evidence links maternal education with the health of her offspring. The education of parents affects their children's health directly through resources available to the children, and also indirectly through school quality.

**HOW ARE WE DOING?:** **No separate map provided for Education rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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**BUCKET:** HEALTH FACTORS
**INDEX:** Employment = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Unemployment Rate (UNIT: County; SOURCE: Annual Average Unemployment Rate includes persons age 16 and older (Bureau of Labor Statistics, Local Area Unemployment Statistics Map, http://data.bls.gov/map/MapToolServlet); UPDATE: updated monthly, most recent data from April 2013)

**WHY DOES IT MATTER?:** Employment measures aim to show the percentage of the population that is unemployed and seeking work. Unemployment figures shed light on a community's overall economic situation and provide information about the percentage of the population that may be at risk for various health concerns associated with unemployment. In 1987, a British study published the first convincing evidence that unemployment leads to declines in health status.[21] Numerous studies have since continued to document an association between employment and health.[22] Employment correlates positively with health and is associated with slower declines in health status over time.[23] Unemployment can lead to an increase in unhealthy behaviors related to alcohol and tobacco consumption, diet and exercise, which in turn can lead to increased risk for disease or mortality.[24]

**HOW ARE WE DOING?:** **No separate map provided for Employment rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** POLICY: Support targeted investments in transportation infrastructure and services necessary to expand sustainable economic opportunity through land use planning and design. Such investments will improve the region's national and regional economic competitiveness in the global economy and foster greater economic resilience
PRACTICE: Painesville Economic Development Corridor (http://development.ohio.gov/files/redev/FY12AwardList20122004.pdf)

**VIBRANT INITIATIVES:** PILOT: C.A.Y. Rail Corridor (http://www.ohio.com/upublish/general-news/2013-cleveland-akron-youngstown-pittsburgh-corridor-rail-summit-1.388555)

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[21] Moser, K., Goldblatt, P., Fox A., and Jones D. (1987). Unemployment and mortality: Comparison of the 1971 and 1981 longitudinal study census samples. *British Medical Journal (294(6564))*: 86-90.
[22] Mathers, C. and Schofield, D. (1998). The health consequences of unemployment: The evidence. *Medical Journal of Australia (168)*: 178-182.
[23] Ross, C. and Mirowsky, J. (1995). Does employment affect health? *Journal of Health and Social Behavior (36)*: 230-243.
[24] Dooley, D., Fielding, J. and Levi, L. (1996). Health and unemployment. *Annual Review of Public Health (17)*: 449-465.

**BUCKET:** HEALTH FACTORS
**INDEX:** Income = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Children in Poverty (UNIT: County; SOURCE: The percent of children (under age 18) living in poverty, as defined by the federal poverty threshold--based on data from the Census' Small Area Income and Poverty Estimates (SAIPE) (http://www.census.gov/did/www/saipe/data/interactive/#); UPDATE: annually; most recent data 2011)

**WHY DOES IT MATTER?:** Income and financial resources are important to health. The *County Health Rankings* provides information about a community's ability to meet basic needs necessary to maintain health through an estimate of poverty. Poverty is commonly considered insufficient income to meet the needs for food, clothing, and shelter.[25] Individuals need sufficient income so that they can obtain health insurance; pay for medical care; and afford healthy food, safe housing, and access to other basic goods - at least until a certain income threshold is achieved.[26] While negative health effects resulting from poverty are present at all ages, children in poverty face greater risks.[27] Children face greater morbidity and mortality due to greater risk of accidental injury, lack of health care access, and poor educational achievement.[28] Early (or prenatal) poverty may result in developmental damage. Children's age-five IQ correlates more with family income than with maternal education, ethnicity, and living in a single female-headed household.[29]

**HOW ARE WE DOING?:** **No separate map provided for Income rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** POLICY: Nurture the Region's Industry Clusters
PRACTICE: Akron BioMedical Corridor (http://www.upakron.com/uploads/akron-core-city-vision-plan-executive-summary.pdf); Austen BioInnovation Institute (http://www.abiakron.org/)

**VIBRANT INITIATIVES:** PILOT: Map of Potential Industrial Development Zones (developed by NEOSCC)

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[25] Brooks-Gunn, J., Duncan, G. (1997). The effects of poverty on children, *Future child 7(2)*: 55-71.
[26] Subramanian, S. and Kawachi, I. (2004). Income inequality and health: What have we learned so far? *Epidemiological Review (26)*: 78-91.
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[28] Ibid.
[29] Ibid.

**BUCKET:** HEALTH FACTORS
**INDEX:** Family and Social Support = 5% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Inadequate Social Support (2.5%) + Children in Single-Parent Households (2.5%) (UNIT: County; SOURCE: "Inadequate Social Support" is defined as the percentage of adults without social/emotional support. This county-level measure is calculated by the Center for Disease Control using BRFSS data (http://www.cdc.gov/brfss/annual_data/annual_2011.htm#datafiles). "Children in Single-Parent Households" is defined as the percent of children living in family households that are raised by a single parent (Table S1101, *Households and Families*, 2007-2011 5-year ACS); UPDATE: annually; most recent BRFSS data 2011, most recent 5-year ACS data 2007-2011)

**WHY DOES IT MATTER?:** A lack of family and social support-- defined as the quality of relationships among family members and with friends, colleagues, and acquaintances, as well as involvement in community life--is associated with increased illness and premature death. The *County Health Rankings* measure social isolation because the association between socially isolated individuals and poor health outcomes has been well-established in the literature. Socially isolated individuals typically have limited access to the types of support provided by social relationships.[30] Understanding how many individuals in a community are socially isolated also provides a more complete perspective on a community's health. This is because socially isolated individuals are more likely to be concentrated in communities with poorer community networks.[31] A study that compared Behavioral Risk Factor Surveillance Survey (BRFSS) data on health status to questions from the General Social Survey found that people living in areas with high levels of social trust were less likely to rate their health status as fair or poor.[32]

**HOW ARE WE DOING?:** **No separate map provided for Family and Social Support rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

[30] Kawachi, I., Bruce, P., Glass, R. (1999). Social capital and self-rated health: A contextual analysis. *American Journal of Public Health (89)*: 1187-1193.
[31] Ibid.
[32] Ibid.

**BUCKET:** HEALTH FACTORS
**INDEX:** Community Safety = 5% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Violent Crime Rate (per 100,000 population) (UNIT: County; SOURCE: The *County Health Rankings* use the FBI's Uniform Crime Reports (UCR) data for violent crime rates (http://www.fbi.gov/about-us/cjis/ucr/ucr). In the FBI's Uniform Crime Report, violent crime is composed of four offenses: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault; UPDATE: annually; most recent final report for 2011; 2008-2010 data cited by County Health Rankings

**WHY DOES IT MATTER?:** The health impacts of community safety are far-reaching, from the obvious impact of violence on the victim to the symptoms of post-traumatic stress disorder (PTSD) and psychological distress felt by those who are routinely exposed to unsafe communities. Community safety impacts various other health factors and outcomes as well, including birth weight, diet and exercise, and family and social support. Violence against others is a major public health problem in the U.S., accounting for the loss of 18,000 lives each year.[33] Among Americans between the ages of 15 and 24, homicide was the second leading cause of death in 2010. Many violent crimes, however, do not result in death. In the U.S., approximately 268,000 cases of hospitalized violence-related injury occurred in 2004.[34] Exposure to crime and violence has been shown to increase stress. Exposure to violent neighborhoods has been associated with increased substance abuse and sexual risk-taking behaviors as well as risky driving practices.[35] Neighborhoods with high violence are thought to encourage isolation and therefore inhibit the social support needed to cope with stressful events.[36] Additionally, exposure to chronic stress contributes to the increased prevalence of certain illnesses.[37]

**HOW ARE WE DOING?:** **No separate map provided for Community Safety rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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[33] Paulozzi, L., Mercy, J., Frazier, L. and Annest J. (2004). CDC's national violent death reporting system: Background and methodology. *Injury Prevention (10)*: 47-52.
[34] Weiss, H., Gutierrez, M., Harrison, J. and Matzopoulos, R. (2006). The U.S. national violent death reporting system: Domestic and international lessons for violence injury surveillance. *Injury Prevention (12)*: 58-62.
[35] Ibid.
[36] Ibid.
[37] Ibid.

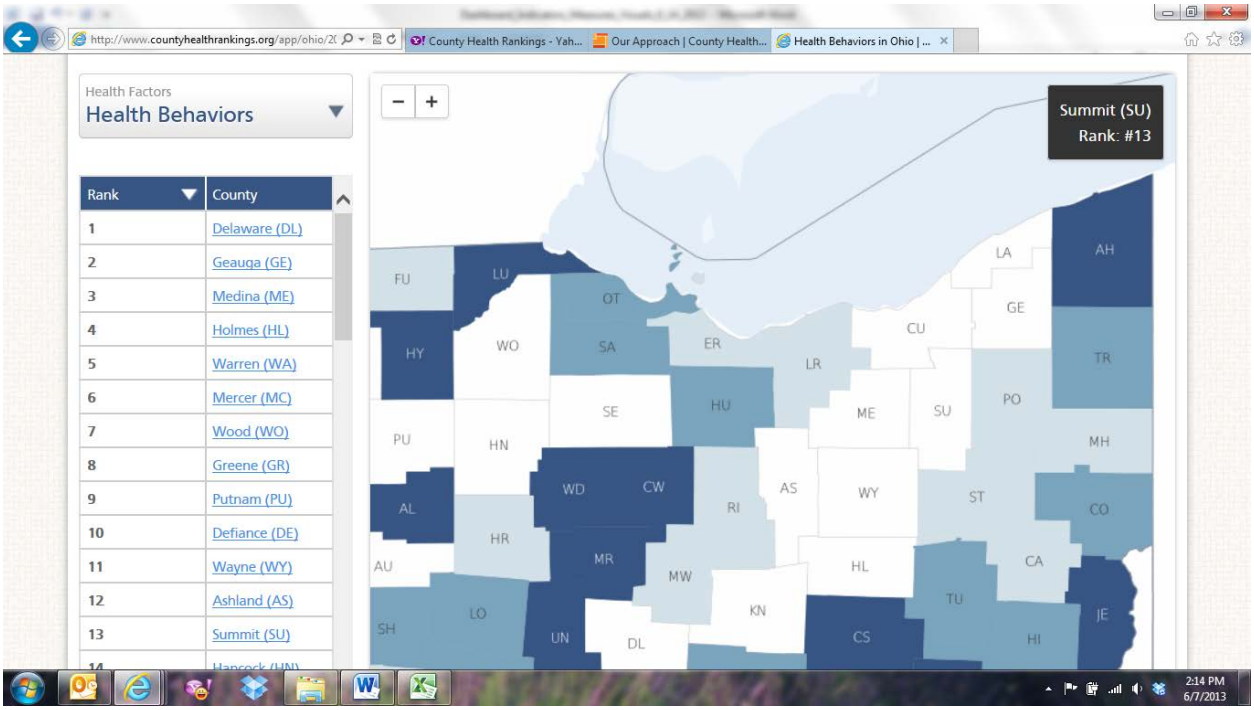
**BUCKET:** HEALTH FACTORS

**INDEX:** Healthy Behavior = 30% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Tobacco Use (10%) + Diet and Exercise (10%) + Alcohol Use (5%) + Sexual Activity (5%) (UNIT: County; SOURCE and UPDATE: see Tobacco Use; Diet and Exercise; Alcohol Use and Sexual Activity pages)

**WHY DOES IT MATTER?:** Please refer to the Tobacco Use; Diet and Exercise; Alcohol Use and Sexual Activity pages for more information on those measures.

**HOW ARE WE DOING?** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/factors/3/by-rank




**IDEAS FOR CHANGE:** (See Tobacco Use; Diet and Exercise; Alcohol Use and Sexual Activity pages)

**VIBRANT INITIATIVES:** (See Tobacco Use; Diet and Exercise; Alcohol Use and Sexual Activity pages)

**BUCKET:** HEALTH FACTORS
**INDEX:** Tobacco Use = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?**: Adult Smokers (UNIT: County; SOURCE: Percent of adult current adult smokers who have smoked at least 100 cigarettes in their lifetime (Behavioral Risk Factor Surveillance System (BRFSS), http://www.cdc.gov/brfss/annual_data/annual_2011.htm); UPDATE: annually; 2011 is most recent data)

**WHY DOES IT MATTER?:** Each year approximately 443,000 premature deaths are primarily due to smoking.[38] Cigarette smoking is identified as a cause in multiple diseases including various cancers, cardiovascular diseases, respiratory diseases, adverse reproductive effects and other adverse health outcomes.[39]The relationship between tobacco use, particularly cigarette smoking, and adverse health outcomes is well known. The *Rankings* focus on cigarette smoking, the leading cause of preventable death. Because smoking cessation can lead to immediate health benefits at any age, smoking prevalence is an important measure to include when assessing health and planning interventions at a county level.[40]

A common survey-based data source is the Behavioral Risk Factor Surveillance System (BRFSS) from the Centers for Disease Control and Prevention (CDC). Questions related to smoking behavior are included in the core questionnaire every year, and supplemental tobacco use questions are included in rotating modules. Conducted every year in all states, the BRFSS can be used to estimate smoking prevalence at the county level.

**HOW ARE WE DOING?:** **No separate map provided for Tobacco Use rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

[38] U.S. Department of Health and Human Services. (2010). How tobacco smoke causes disease: The biology and behavioral basis for smoking-attributable disease: A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention.
[39] National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. (2004). The health consequences of smoking: A report of the Surgeon General. Atlanta, GA: Department of Health and Human Services, Centers for Disease Control and Prevention.
[40] Ibid.

**BUCKET:** HEALTH FACTORS

**INDEX:** Diet and Exercise = 10% HEALTH FACTORS

**WHAT DO WE MEASURE**: Adult Obesity (7.5%) + Physical Inactivity (2.5%) (UNIT: County; SOURCE: National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) in the Centers for Disease Control and Prevention. The NCCDPHP develops modeled estimates of county-level obesity rates and physical inactivity percentages using data from the Behavioral Risk Factor Surveillance System (BRFSS), http://www.cdc.gov/brfss/annual_data/annual_2011.htm); UPDATE: annually; 2011 is most recent data

**WHY DOES IT MATTER?:** In addition to genetic factors, an unhealthy diet and a lack of exercise are both key contributors to rising obesity rates.[41][42] Being overweight or obese increases the risk for a number of health conditions: coronary heart disease, type 2 diabetes, cancer, hypertension, stroke, liver disease, sleep apnea, respiratory problems, osteoarthritis, and gynecological problems.[43] Often, being overweight or obese are the result of an overall energy imbalance due to both eating too many calories and getting too little physical activity.[44] Consuming a healthy amount of calories and healthier foods is important in maintaining health, including a decreased risk of chronic diseases, such as type 2 diabetes, hypertension, and certain cancers; a decreased risk of overweight and obesity; and a decreased risk of micronutrient deficiencies. Decreased physical activity has been related to several disease conditions such as type 2 diabetes, cancer, stroke, and hypertension.[45] In addition, physical inactivity at the county level is related to higher health care expenditures.[46]

**HOW ARE WE DOING?:** **No separate map provided for Diet and Exercise rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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[41] Centers for Disease Control and Prevention. Overweight and obesity: Causes and consequences (retrieved 2.27.2013 from http://www.cdc.gov/obesity/).
[42] Hensrud, D. (2004). Diet and obesity. *Current Opinion in Gastroenterology (20):* 119-124.
[43] Mokdad, A., Ford, E., Bowman, B., et al. (2001). Prevalence of obesity, diabetes, and obesity-related health risk factors, *Journal of the American Medical Association (289)*: 76-79.
[44] Centers for Disease Control and Prevention. Overweight and obesity: Causes and consequences (retrieved 2.27.2013 from http://www.cdc.gov/obesity/).
[45] Rosenberger, R., Sneh, Y., Phipps, T. and Gurvitch, R. (2005). A spatial analysis of linkages between health care expenditures, physical inactivity, obesity and recreation supply. *Journal of Leisure Research (37)2*: 216-235.
[46] Ibid.

**BUCKET:** HEALTH FACTORS

**INDEX:** Alcohol Use = 5% HEALTH FACTORS

**WHAT DO WE MEASURE?**: Excessive Drinking (2.5%) + Motor Vehicle Crash Deaths (2.5%) (UNIT: County; SOURCE: "Excessive Drinking" is the percentage of adults engaged in "Excessive Drinking" and comes from the CDC's Behavioral Risk Factor Surveillance System (BRFSS), (http://www.cdc.gov/brfss/annual_data/annual_2011.htm). "Motor Vehicle Crash Deaths" is the mortality rate per 100,000 people due to on-road accidents involving a motor vehicle and comes from the CDC's National Vital Statistics System (NVSS) (http://www.cdc.gov/nchs/nvss.htm); UPDATE: annually; 2011 is most recent data for BRFSS (2005-2011 data cited in County Health Rankings); 2010 is most recent data for NVSS (2004-2010 data cited in County Health Rankings.

**WHY DOES IT MATTER?:** Consumption of too much alcohol is a risk factor for a number of adverse health outcomes. These include, but are not limited to, alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, fetal alcohol syndrome and interpersonal violence.[47] In 2010, 10,228 people were killed in alcohol-impaired driving crashes, accounting for nearly one-third (31%) of all traffic-related deaths in the United States.[48] Approximately 80,000 deaths are attributed annually to excessive drinking. It is the third leading lifestyle-related cause of death for people in the United States each year.[49] There is a strong association between alcohol consumption and alcohol-impaired driving. Binge/heavy drinkers account for the most episodes of alcohol-impaired driving.[50]

**HOW ARE WE DOING?:** **No separate map provided for Alcohol Use rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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[47] Centers for Disease Control and Prevention (2009). Sociodemographic differences in binge drinking among adults-14 states, *Morbidity Mortality Weekly Report (58)*: 301-304.

[48] U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA). (2012) Traffic safety facts 2010: Alcohol-impaired driving. Washington (DC): Same as author.

[49] Centers for Disease Control and Prevention, Alcohol and Public Health (retrieved 2.27.2013 from http://www.cdc.gov/alcohol/).

[50] Flowers, N., Naimi, T., Brewer, R., Elder, R., Shults, R., and Jiles, R. (2008) Patterns of alcohol consumption and alcohol-impaired driving in the United States. *Alcoholism: Clinical and Experimental Research (32)*: 639-644.

**BUCKET:** HEALTH FACTORS

**INDEX:** Sexual Activity = 5% HEALTH FACTORS

**WHAT DO WE MEASURE?**: Sexually Transmitted Infections (2.5%) + Teen Birth Rate (2.5%) (UNIT: County; SOURCE: "Sexually Transmitted Infections" is the chlamydia rate per 100,000 population (Centers for Disease Control and Prevention (CDC) (http://www.cdc.gov/std/). "Teen Birth Rate" is the birth rate per 1,000 female population ages 15-19 as measured and provided by the National Center for Health Statistics (NCHS) (http://www.cdc.gov/nchs/index.htm). Chlamydia incidence and teen birth rates provides counties with a sense of their level of risky sexual behavior compared to other counties in their state; UPDATE: annually; 2010 is most recent data for chlamydia incidence rate from CDC and teen birth rate from NCHS (2004-2010 teen birth rate data cited by County Health Rankings).

**WHY DOES IT MATTER?:** In the *County Health Rankings*, "sexual activity" is intended to reflect sexual behavior that increases the risk of such adverse outcomes as unintended pregnancy and transmission of sexually transmitted infections (STIs). Sexually transmitted infections are one of the most critical health challenges facing the nation today, costing the U.S. health care system $17 billion every year—and costing individuals even more in immediate and life-long health consequences.[51] STIs in general are associated with significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, pelvic inflammatory disease, involuntary infertility, and premature death.[52]

**HOW ARE WE DOING?:** **No separate map provided for Sexual Activity rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

[51] Centers for Disease Control and Prevention. (2011). Sexually transmitted disease surveillance 2010. Atlanta: U.S. Department of Health and Human Services.

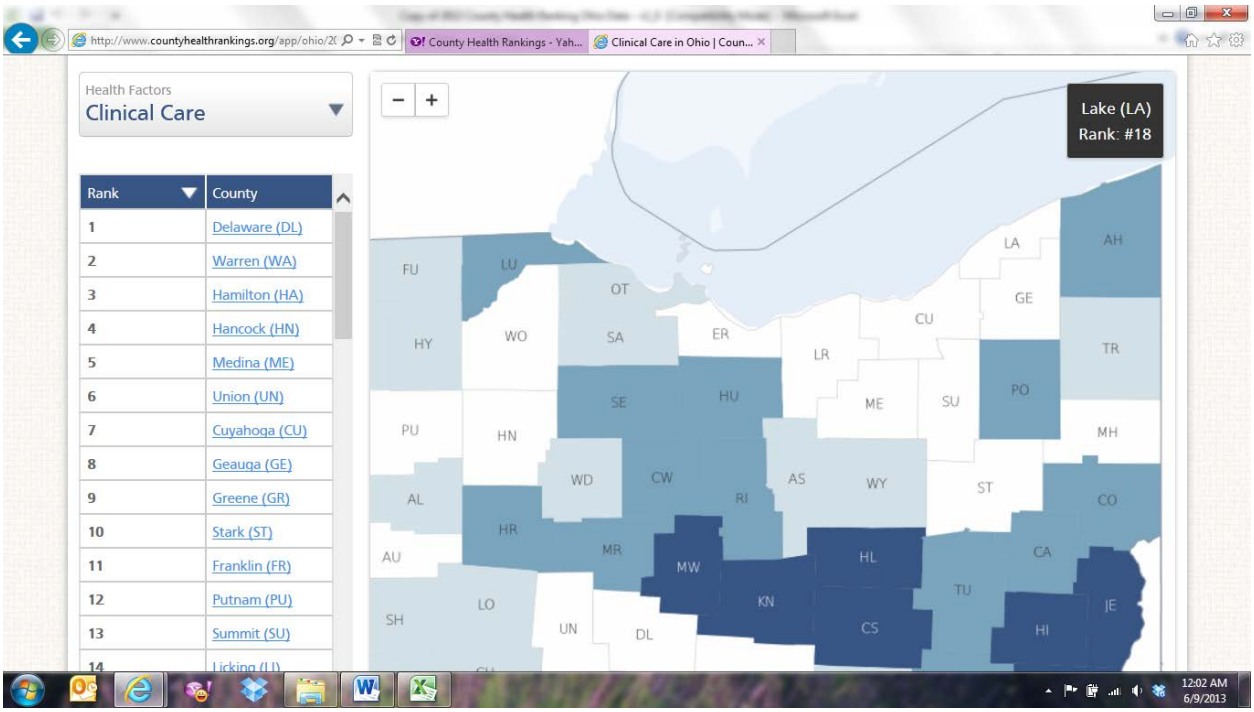
[52] Meade, C. and Ickovics, J. (2005). Systematic review of sexual risk among pregnant and mothering teens in the USA: Pregnancy as an opportunity for integrated prevention of STD and repeat pregnancy. *Social Science Medicine (60)*: 661-678.

**BUCKET:** HEALTH FACTORS
**INDEX:** Clinical Care = 20% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Access to Care (10%) + Quality of Care (10%) (UNIT: County; SOURCE and UPDATE: see Access to Care and Quality of Care pages)

**WHY DOES IT MATTER?:** Please refer to the Access to Care and Quality of Care pages for more information on those measures.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/factors/2/by-rank




**IDEAS FOR CHANGE:** (see Access to Care and Quality of Care pages)

**VIBRANT INITIATIVES:** (see Access to Care and Quality of Care pages)

**BUCKET:** HEALTH FACTORS

**INDEX:** Access to Care = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Uninsured Population (5%) + Ratio of Population to Primary Care Physicians (3%) + Ratio of Population to Dentists (2%) (UNIT: County; SOURCE: "Uninsured Population" data come from the Census Bureau's Small Area Health Insurance Estimates (SAHIE) (http://www.census.gov/did/www/sahie/). The "Ratios of Population to Primary Care Physicians and Dentists" are based on data obtained from the Health Resources and Services Administration (HRSA) (http://www.hrsa.gov/data-statistics/index.html). HRSA compiles physician and dentist data from the American Medical Association Master file and the National Provider Identification file, respectively, and from the Census Population Estimates program to report data at the county level; UPDATE: SAHIE annually (2010 most recent); HRSA annually (2011-2012 cited))

**WHY DOES IT MATTER?:** Health insurance by itself does not ensure access. It is also necessary to have comprehensive coverage, providers that accept the individual's health insurance, relatively close proximity of providers to patients and primary care providers in the community.[53] Evidence shows that: 1) The uninsured are less likely to receive preventive and diagnostic health care services, are more often diagnosed at a later disease stage and on average receive less treatment for their condition compared to insured individuals[54] and 2) The uninsured have a 25% higher mortality rate than the insured population.[55] Access to effective and timely primary care has the potential to improve the overall quality of care and help reduce costs.[56]

**HOW ARE WE DOING?:** **No separate map provided for Access to Care rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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[53] Hall, A., Harris Lemak, C., Steingraber, H., et al. (2008). Expanding the definition of access: It isn't just about health insurance. *Journal of Health Care for the Poor and Underserved (19):* 625-638.

[54] Fronstin, P. (2009). Sources of health insurance and characteristics of the uninsured: Analysis of the March 2009 Current Population Survey, *EBRI Issue Brief no. 334*. Washington, DC: Employee Benefit Research Institute.

[55] Institute of Medicine. (2003). Hidden costs, value lost: Uninsurance in America. Washington, DC: Same as author.

[56] Steinbrook, R. (2009). Easing the shortage in adult primary care -- Is it all about money? *New England Journal of Medicine (360)*: 2696-2699.

**BUCKET:** HEALTH FACTORS

**INDEX:** Quality of Care = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Preventable Hospital Stays (5%) + Diabetic Screening (2.5%) + Mammography Screening (2.5%) (UNIT: County; SOURCE: Dartmouth Atlas of Health Care documents variations in healthcare throughout the country using Medicare claims data (http://www.dartmouthatlas.org/); UPDATE: annually (2010 most recent available data)

**WHY DO WE CARE?:** The Institute of Medicine (IOM) further defines the quality of healthcare as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[57] The IOM lists six characteristics: safe, timely, effective, efficient, equitable, and patient-centered.[58]

The *County Health Rankings* use three separate measures to report healthcare quality for each county:

- "Preventable Hospital Stays" is the hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees.
- "Diabetic Screening" is the percent of diabetic Medicare enrollees that receive HbA1c screening. Regular HbA1c screening helps assess the management of diabetes over the long term by providing an estimate of how well a patient has managed his or her blood sugar over the past two to three months.
- "Mammography Screening" is the percent of female Medicare enrollees age 67-69 having at least one mammogram over a two-year period. Evidence suggests that screening reduces breast cancer mortality, especially among older women.[5960]

**HOW ARE WE DOING?:** **No separate map provided for Quality of Care rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** (policies, strategies, tools, best practices for this indicator are beyond the scope of VibrantNEO 2040)

**VIBRANT INITIATIVES:** (pilots for this indicator are beyond the scope of VibrantNEO 2040)

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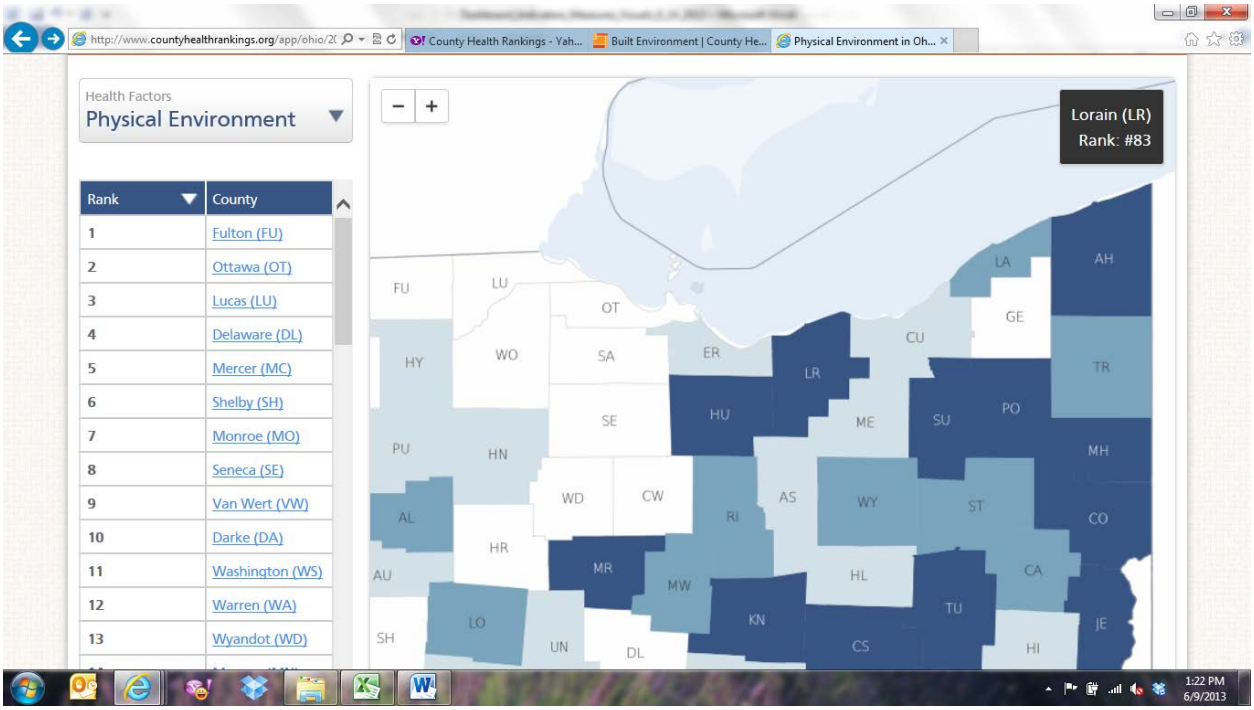
**BUCKET:** HEALTH FACTORS

**INDEX:** Physical Environment = 10% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Environmental Quality (4%) + Built Environment (6%) (UNIT: County; SOURCE and UPDATE: see Environmental Quality and Built Environment pages)

**WHY DOES IT MATTER?:** Please refer to the Environmental Quality and Built Environment pages for more information on those measures.

**HOW ARE WE DOING?:** (VISUAL: http://www.countyhealthrankings.org/app/ohio/2013/rankings/factors/5/by-rank




**IDEAS FOR CHANGE:** (see Environmental Quality and Built Environment pages)

**VIBRANT INITIATIVES:** **(**see Environmental Quality and Built Environment pages)

**BUCKET:** HEALTH FACTORS

**INDEX:** Environmental Quality = 4% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Daily Fine Particulate Matter (2%) + Drinking Water Safety (2%) (UNIT: County; SOURCE: "Daily Fine Particulate Matter" is from the CDC WONDER database (http://wonder.cdc.gov/nasa-pm.html). "Drinking Water Safety" comes from EPA's Safe Drinking Water Information System (SDWIS) (http://www.epa.gov/enviro/facts/sdwis/search.html); UPDATE: Daily Fine Particulate Matter was updated annually on the CDC Wonder database 2003-2008 (2008 data for County Health Rankings).

**WHY DOES IT MATTER?:** The relationship between elevated air pollution and compromised health has been well documented.[61] The negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma and other adverse pulmonary effects.[62][63] Exposure to excessive levels of fine particulate matter is associated with compromised respiratory function along with all-cause mortality.[64][65] While drinking water safety is improving, recent studies estimate that contaminants in drinking water sicken 1.1 million a year. Public water supplies are tested to ensure they are free of contamination from toxins and bacteria according to the Safe Drinking Water Act of 1974.

**HOW ARE WE DOING?:** **No separate map for Environmental Quality rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** POLICY: Adopt a green infrastructure approach to open space, habitat and water resources
PRACTICE: Project Clean Lake: Combined Sewer Overflow mitigation - Northeast Ohio Regional Sewer District (http://www.neorsd.org/cso.php)

**VIBRANT INITIATIVES:** Ohio Lake Erie Balanced Growth Initiative (http://balancedgrowth.ohio.gov/)

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[64] Dominici, F., McDermott, A., Daniels, M., Zeger, S. and Samet, J. (2005). Revised analyses of the National Morbidity, Mortality and Air Pollution Study: Mortality among residents of 90 cities. Journal of Toxicology and Environmental Health A. (68): 1071-1092.
[65] Samet, J., Dominici, F., Curriero, F., Coursac, I. and Zeger, S. (2000) Fine particulate air pollution and mortality in 20 US cities, 1987-1994. New England Journal of Medicine (343): 1742-1749.

**BUCKET:** HEALTH FACTORS

**INDEX:** Built Environment = 6% HEALTH FACTORS

**WHAT DO WE MEASURE?:** Access to Recreational Facilities (2%) + Limited Access to Healthy Foods (2%) + Fast Food Restaurants (2%) (UNIT: County; SOURCE: "Access to Recreational Facilities" and "Fast Food Restaurants" are from County Business Patterns (http://www.census.gov/econ/cbp/index.html); "Limited Access to Healthy Foods" is measured by the U.S. Department of Agriculture Food Environment Atlas (http://www.ers.usda.gov/data-products/food-environment-atlas/data-access-and-documentation-downloads.aspx); UPDATE: County Business Patterns data updated annually (most recent is 2011, but 2010 cited in County Health Rankings). USDA Food Environment Atlas updated semi-annually (most recent November 2012).

**WHY DOES IT MATTER?:** The built environment refers to human-made (versus natural) resources and infrastructure designed to support human activity, such as buildings, roads, parks, restaurants, grocery stores and other amenities. Better information on the availability of healthy food and opportunities for exercise will enable communities to take action to reduce adverse health outcomes associated with a poor diet and lack of physical activity. There is strong evidence that access to fast food restaurants and residing in a food desert correlate with a high prevalence of overweight, obesity, and premature death.[6667] Similarly, access to places for recreation is associated with higher rates of physical activity and lower rates of obesity.[68]

**HOW ARE WE DOING?:** **No separate map provided for Built Environment rankings; downloadable table from *County Health Rankings* website**

**IDEAS FOR CHANGE:** POLICY: Encourage mixed-use neighborhood design and redevelopment to include small and mid-size grocery stores, seasonal farmers markets, community-based nutrition programs, and open space and related infrastructure for community vegetable gardens.
PRACTICE: Local Roots Market & Café, Wooster OH (http://localrootswooster.com/)

**VIBRANT INITIATIVES:** Cleveland Urban Agriculture Incubator Pilot Project (http://gcbl.org/blog/2010/10/cleveland-adds-another-six-acre-urban-incubator-farm)

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[66] Ahern, M., Brown, C. and Dukas, S. (2011). A national study of the association between food environments and county-level health outcomes. *The Journal of Rural Health (27)*: 367-379.
[67] Taggart, K. (2005). Fast food joints bad for the neighbourhood. *Medical Post (41)*: 21-23.
[68] Task Force on Community Preventive Services. (2002). Recommendations to increase physical activity in communities. *American Journal of Preventative Medicine 22(4)*: 67-72.

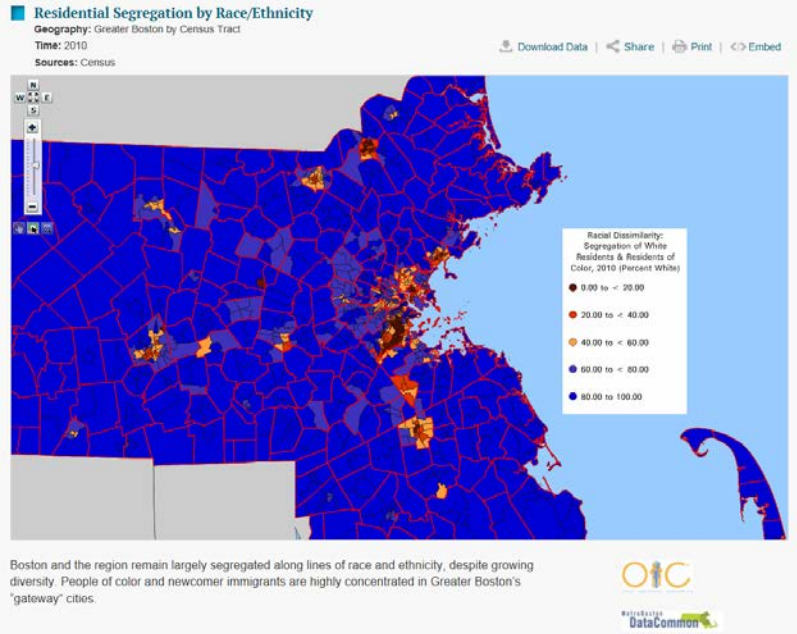
**BUCKET:** PEOPLE

**INDICATOR:** Distribution/Segregation (Race/Ethnicity)

**WHAT DO WE MEASURE?:** Degree of Residential Segregation; Percentage of Population within Particular Racial and Ethnic Categories (UNIT: Municipality; SOURCE: U.S. Census Bureau (2010) (www.census.gov); UPDATE: Census every 10 years)

**WHY DOES IT MATTER?:** Segregation/Isolation of particular racial and ethnic groups has significant implications for social cohesiveness and community health across the region. There are many different ways to measure segregation and racial/ethnic distribution; this is just one example.

**HOW ARE WE DOING?:** (VISUAL: Boston Indicators Project (Demographics) (http://www.bostonindicators.org/indicators/race-and-ethnicity))




**IDEAS FOR CHANGE:** POLICY: Ensure zoning regulations allow housing type diversity; PRACTICE: Stark County Sustainable Planning and Zoning Handbook (http://www.co.stark.oh.us/internet/docs/rpc/Sustainable%20Planning%20and%20Zoning%20Handbook.pdf, see Housing Diversity (p. 9)).

**VIBRANT INITIATIVES:** Gardens of Charleston Condominiums, Lorain (http://www.morningjournal.com/general-news/20120603/charleston-coffee-house-just-one-of-owners-downtown-endeavors?viewmode=fullstory).

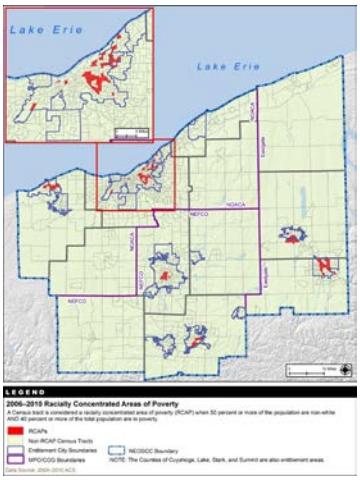
**BUCKET:** PEOPLE

**INDICATOR:** Distribution/Segregation (Income/Poverty)

**WHAT DO WE MEASURE?:** Racially Concentrated Areas of Poverty (**UNIT:** County; **SOURCE:** U.S. Census Bureau American Community Survey (2006-2010) (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml); **UPDATE:** Annually (most recent: 2007-2011 5-year ACS)

**WHY DOES IT MATTER?:** Many ways to measure the spatial distribution of income/poverty by race, ethnicity, age, etc. (e.g. Income Inequality (GINI Index)[69]; Percentage of Students in Schools where at least 70% of Student Population Qualifies for Free Lunch). These factors, when concentrated, can create social stress.

**HOW ARE WE DOING?:** (VISUAL: Northeast Ohio Regional Analysis of Impediments to Fair Housing)




**IDEAS FOR CHANGE:** POLICY: Incentivize neighborhood investments to promote various types of infill development
PRACTICE: Affordable Housing Incentives & Inclusionary Housing Requirements, City of San Luis Obispo, California (http://www.slocity.org/communitydevelopment/housing/affordableincentives.asp)

**VIBRANT INITIATIVES:** PILOT: Loft Conversions by Chuck Scaravelli, St. Clair Superior Development Corporation (http://www.freshwatercleveland.com/features/renovsdemo052313.aspx)

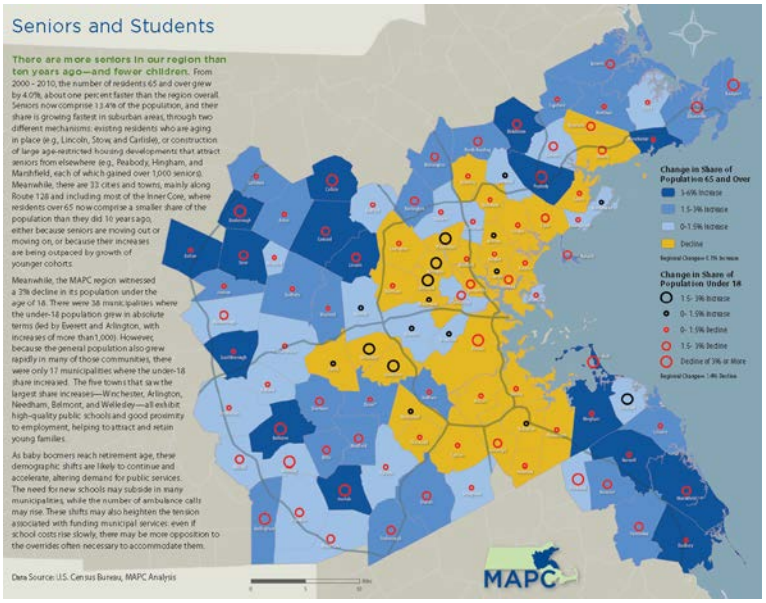
[69] The Gini ratio (or index of income concentration) is a statistical measure of income equality ranging from 0 to 1. A measure of 1 indicates perfect inequality (i.e., one person has all the income and rest has none). A measure of 0 indicates perfect equality (i.e., all people have equal shares of income) (retrieved 6.12.2013 from http://www.census.gov/hhes/www/poverty/methods/definitions.html).

**BUCKET:** PEOPLE
**INDICATOR:** Distribution/Segregation (Age)

**WHAT DO WE MEASURE?:** Change in Share of Population > 65 versus Change in Share of Population < 18 (UNIT: Municipality; SOURCE: U.S. Census Bureau (2000, 2010) (www.census.gov); UPDATE: Census every 10 years; ACS annually (most recent 2007-2011)

**WHY DOES IT MATTER?:** As with Income/Poverty, there are several ways to measure the concentration of population within a specified age range; concentrated areas of young and old may create special needs for sub-areas of the region.

**HOW ARE WE DOING?** (VISUAL: Metro Boston Data Common (Demographics) (http://metrobostondatacommon.org/site_media/calendar/MAPC_Calendar_2012_07.pdf))




**IDEAS FOR CHANGE:** POLICY: Create incentives and develop funding mechanisms and regulations to promote the rehabilitation, reuse, and maintenance of the region's cities
PRACTICE: U.S. Department of Housing and Urban Development (HUD) Hope VI Program (http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/ph/hope6)

**VIBRANT INITIATIVES:** Edgewood Village Hope VI Redevelopment, Akron Metropolitan Housing Authority (http://www.akron.com/pages.asp?aID=20335).