Webinar: Connections between education and health

February 24, 2017
Vision
To influence the improvement of the health and well-being of all Ohioans

Mission
To provide the independent and nonpartisan analysis needed to create evidence-informed state health policy
HPIO core funders

- Interact for Health
- Mt. Sinai Health Care Foundation
- The George Gund Foundation
- Saint Luke’s Foundation of Cleveland
- The Cleveland Foundation
- HealthPath Foundation of Ohio
- Sisters of Charity Foundation of Canton
- Sisters of Charity Foundation of Cleveland
- Cardinal Health Foundation
- United Way of Greater Cincinnati
- Mercy Health
- CareSource Foundation
- SC Ministry Foundation
- United Way of Central Ohio

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Our core audience

State policymakers and other stakeholders who engage in the policymaking process
1. HPIO’s work surrounding the relationship between education and health
2. Explanation of the relationship between education and health
3. Tom Lasley – Ohio’s educational attainment goal: An economic imperative
4. Laura Rooney – Healthier students are better learners
5. Q & A
Relevance to state policymakers
Ohio biennial budget appropriations
(SFY 2016-2017)

55.9% Health and human services
$39,810 million

33.4% Education (including K-12 and higher education)
$23,779 million

10.7% Other
$7,631 million

Note: Includes total state and federal general revenue fund appropriations
Source: Ohio Legislative Service Commission Budget in Brief (House Bill 64 - As Enacted)
42% of legislative bills in the 131st General Assembly were related to health and/or education.

Note: Based on an HPIO analysis of bills introduced between Jan. 1, 2015 and Nov. 4, 2016.
Current state of health and education in Ohio
Educational attainment in Ohio and the U.S. (2014)

Highest level of educational attainment for adults ages 25-64

Source: U.S. Census Bureau, 2014 American Community Survey, as reported by the Lumina Foundation

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Student educational outcomes in Ohio and the U.S. (2015)
Percent of students scoring at or above proficiency on the National Assessment of Educational Progress

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Reading</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Grade</td>
<td>38%</td>
<td>45%</td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>36%</td>
<td>35%</td>
</tr>
</tbody>
</table>


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# Ohio health indicators

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>OHIO</th>
<th>YEAR OF MOST RECENT DATA</th>
<th>OHIO’S RANK AMONG 50 STATES AND D.C.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant mortality. Number of infant deaths per 1,000 live births (within 1 year)&lt;sup&gt;12&lt;/sup&gt;</td>
<td>7.2</td>
<td>2015</td>
<td>39**</td>
</tr>
<tr>
<td>Youth all tobacco use. Percent of youth ages 12-17 who used cigarettes, smokeless tobacco, cigars or pipe tobacco during the past 30 days&lt;sup&gt;13&lt;/sup&gt;</td>
<td>9.4%</td>
<td>2013-2014</td>
<td>37</td>
</tr>
<tr>
<td>Hospital admissions for pediatric asthma. Hospital admissions for asthma, per 100,000 children ages 2-17&lt;sup&gt;14&lt;/sup&gt;</td>
<td>124.8</td>
<td>2013</td>
<td>31</td>
</tr>
<tr>
<td>Adult smoking. Percent of population age 18 and older that are current smokers&lt;sup&gt;15&lt;/sup&gt;</td>
<td>21.6%</td>
<td>2015</td>
<td>43</td>
</tr>
<tr>
<td>Adult diabetes. Percent of adults who have been told by a health professional that they have diabetes&lt;sup&gt;16&lt;/sup&gt;</td>
<td>11.0%</td>
<td>2015</td>
<td>35</td>
</tr>
<tr>
<td>Adult depression. Percent of adults who have ever been told they have depression&lt;sup&gt;17&lt;/sup&gt;</td>
<td>19.6%</td>
<td>2015</td>
<td>30</td>
</tr>
<tr>
<td>Life expectancy. Life expectancy at birth based on current mortality rates&lt;sup&gt;18&lt;/sup&gt;</td>
<td>77.8</td>
<td>2010</td>
<td>37</td>
</tr>
</tbody>
</table>

* Rank of 1 is the best and 51 is the worst
** Rank is based on 2014, the most recent year for which data is available for other states
Health Policy Brief
Connections between education and health

This brief provides an overview of the relationship between education and health. In 2017, the Health Policy Institute of Ohio will release a series of fact sheets discussing specific policy recommendations to improve health and education outcomes in Ohio.

Health and education are areas of significant focus for Ohio policymakers, representing the largest share of Ohio’s biennial budget for state fiscal years (SFY) 2016-2017 (see Figure 1). Among the 97 bills introduced in the 131st General Assembly between June 1, 2015 and Nov. 4, 2016, 42 percent were related to health and/or education.

The relationship between education and health

There is widespread agreement that factors outside of the healthcare system influence health. Research consistently shows a strong relationship between educational attainment and health, even after accounting for factors such as income, race, ethnicity, and access to health care.

People with more education live in healthier communities, practice healthier behaviors, have better health outcomes, and live longer than those with less education. Among college graduates, 90 percent of workers are expected to live nine years longer than adults without a high school diploma, a gap that has been widening since the 1960s.

Chronic conditions such as arthritis, diabetes, heart disease, hypertension, and lung disease are more prevalent and tend to be more severe among individuals with lower levels of education. Consequently, individuals with less education are more likely to generate higher healthcare spending in the long run.

Figure 2. The relationship between education and health

Education can create opportunities for better health:

- Higher earnings
- Healthier behaviors
- Social and economic advantages
- Healthier neighborhoods
- Attendance
- Consumption
- Training outcomes

Health can push education of all (reverse possible)

Other factors
- Social factors
- Income inequality

Conditions throughout pregnancy can impact both education and health

Source: Adapted from Virginia Commonwealth University, "Why Education Matters to Health: Expanding the Duration, Feb. 13, 2015"
Intersections between education and health

Health and education are areas of significant focus for Ohio policymakers, representing the largest shares of Ohio's biennial budget for state fiscal years SPY 2016-2017. Among the 971 bills introduced in the 131st General Assembly between Jan. 1, 2016 and Nov. 4, 2016, 42 percent were related to health and/or education.

With support from the United Way of Central Ohio, HPIO has started to explore the intersections of education and health. In 2016, we convened an Education and Health Policy Advisory Committee, which has helped to guide this important work.

The first publication, Connections between education and health, was released in January, and we plan to release three additional publications later in 2017. We will also be updating this resource page on a continuous basis throughout the year.

Education basics for health stakeholders

Read more

Health basics for education stakeholders

Read more

How education and health are connected

Read more

Specific areas of consideration for policymakers

Read more

Promising models to integrate education and health

Read more
Connections between education and health
Ohioans reporting fair or poor health (2015)

Percent of Ohio adults ages 25 and older reporting fair or poor health, by educational attainment

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>35.5%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>21.8%</td>
</tr>
<tr>
<td>Some college or technical school</td>
<td>15.4%</td>
</tr>
<tr>
<td>College grad</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Source: SHADAC analysis of the Behavioral Risk Factor Surveillance Survey, as compiled by the RWJF DataHub

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Adult chronic disease prevalence in Ohio and the U.S. (2015)

Percent of Ohio and U.S. adults who report having one or more of the following chronic conditions: diabetes, cardiovascular disease, heart attack, stroke and asthma, by educational attainment

<table>
<thead>
<tr>
<th>Education</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>35%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>28.4%</td>
</tr>
<tr>
<td>Some college or technical school</td>
<td>26.3%</td>
</tr>
<tr>
<td>College graduate</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

Source: SHADAC analysis of the Behavioral Risk Factor Surveillance Survey, as compiled by the RWJF DataHub

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The relationship between education and health

1. Education can create opportunities for better health
   - Income/resources
   - Healthy behaviors
   - Social/psychological benefits
   - Healthier neighborhoods

2. Poor health can put education at risk (reverse causality)
   - Attendance
   - Concentration
   - Learning disabilities

3. Conditions throughout people’s lives can affect both education and health

How education impacts health
More education → Better jobs → Financial resources → Healthier communities, better access to health care, less stress
Health literacy → Healthier behaviors, better ability to navigate the health care system
Social support → Better physical and mental health
How health impacts education

Healthy students → Better attendance and ability to concentrate in class → Better educational outcomes
Several factors that impact both education and health

- Prenatal health
- Educational attainment of the mother
- Child malnutrition
- Exposure to toxins
- Parent-child relationship
- Chronic stress
- Adverse childhood experiences (ACEs)
Influence of adverse childhood experiences (ACEs)


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Policy implications

Given the many connections between education and health, policymakers should:

• Prioritize evidence-informed policies with both education and health benefits
• Consider the impacts of education policies on health outcomes, and the impacts of health policies on education
• Ensure that all Ohio students receive comprehensive, age-appropriate and consistent health information in K-12 education
• Encourage stronger partnerships and greater collaboration between the education and health sectors at the state and local levels

**Education**

State agencies
- Ohio Department of Education
- Ohio Department of Higher Education

Legislative committees
- House Standing Committee on Education and Career Readiness
- Senate Standing Committee on Education
- Joint Education Oversight Committee

**Health**

State agencies
- Governor’s Office of Health Transformation
- Ohio Department of Health
- Ohio Department of Medicaid
- Ohio Department of Mental Health and Addiction Services

Legislative committees
- House Standing Committee on Health
- House Standing Committee on Community and Family Advancement
- Senate Standing Committee on Health, Human Services and Medicaid
- Joint Medicaid Oversight Committee

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How has this information been translated into state policy?

- Executive budget
- 2017-2019 State health improvement plan (SHIP)
- Ohio’s Every Student Succeeds Act (ESSA) draft plan
Ohio’s educational attainment goal: An economic imperative

Thomas J. Lasley II
Chief Executive Officer, Learn to Earn Dayton and
Professor and Dean Emeritus, School of Education and
Health Sciences at the University of Dayton
Ohio’s Attainment Goal

65% of all 25-64 year olds with some type of marketable degree or credential by 2025
Why is the GOAL critical?

• Attainment is related to economic vitality
• Attainment is related to reduced health care costs
• Attainment is related to reduced crime
• Attainment fosters family economic security and personal self-sufficiency
What are the benchmarks to enhanced attainment?

- Kindergarten readiness
- Third grade reading proficiency
- Eighth grade math proficiency
- High school graduation
- Post-secondary enrollment
- College degree or credential attainment within six years of high school graduation
What do you/we need to know to achieve the goal?

• Know the attainment data for your state
• Know the attainment data for your county
• Know the attainment data for your local school districts
What will keep Ohio from achieving the goal?

• Lack of public will
• Failure to think systemically
• Inability to deal with marginalized groups
• Failure to address the barriers to attainment such as college affordability
Healthier students are better learners

Laura Rooney, MPH
Adolescent Health Program Manager,
Ohio Department of Health
HEALTHIER STUDENTS ARE BETTER LEARNERS

Laura Rooney, MPH
Ohio Department of Health
laura.rooney@odh.ohio.gov
614.466.1335
Higher Achievement For All Students

“Every child graduates and has the knowledge to succeed in life.”

Students receive high quality instruction aligned with academic content standards

Students have the right conditions and motivation for learning

Ohio Department of Education
Whole Child Approach to School Improvement

- Students cannot not learn if they are not healthy.
- Many barriers to learning include absenteeism, discipline, violence, truancy and drop-out.
- Can be linked to students’ (families’) physical, social, and emotional health.
“Could someone help me with these? I’m late for math class.”
**Health Disparities and Education**

- Poor health and health disparities are an underlying cause of the achievement gap.
- No matter what curriculum or school management changes are made, health must be addressed.
- Educationally relevant health disparities play a significant role in the achievement gap of urban minority students.
  - “Healthier Students Are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap” by Charles E. Basch
- Equity Matters: Research Review No. 6
<table>
<thead>
<tr>
<th>Health Disparities Connection to Academic Indicators</th>
</tr>
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<tbody>
<tr>
<td>Vision</td>
</tr>
<tr>
<td>Asthma</td>
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<tr>
<td>Teen Pregnancy</td>
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<tr>
<td>Aggression and Violence</td>
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<tr>
<td>Physical Activity</td>
</tr>
<tr>
<td>Breakfast</td>
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<tr>
<td>Inattention and Hyperactivity</td>
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</table>
Academic Risk by Health Risk Factors

Percent of Students at Academic Risk by Number of Health Risk Factors
8th and 10th Graders in Washington State

- About half of students with six health risk factors reported being at academic risk.
- Fewer than ten percent of students with no health risk factors reported being at academic risk.
- Two thirds or more of students with at least nine health risk factors reported being at academic risk.

Data source: Washington State Healthy Youth Survey, 2006
What do our brains need to learn?

1) Balanced nutrition
2) Sufficient hydration
3) Sleep
4) Physical activity
5) Safety & security
Average composite of 20 students' brains taking the same test

BRAIN AFTER SITTING QUIETLY

BRAIN AFTER 20 MINUTE WALK

Research/scan compliments of Dr. Chuck Hillman University of Illinois
Physical Activity and Learning

- Higher grade-point average
- Higher scores on standardized tests
- Increased concentration
- Better memory
- Improved classroom behaviors
- Reduced school dropout rate
- Greater odds of attending college full-time
KIDS WHO EAT SCHOOL BREAKFAST...

MISS LESS SCHOOL

They attend an average of 1.5 more days per year

DO BETTER IN MATH:

They average 17.5% higher math test scores

No Kid Hungry Campaign @ Share Our Strength
Students with a full-time nurse have ½ the illnesses & injuries vs. no nurse.

Direct Connection:
- Uninsured students
- Asthma
- Lead Exposure
- Behavioral Health Issues
- Food Insecurity
- Dental Health
- Vision
- Reproductive Health

National Association of School Nurses
Increases with each grade level and students gradually become more disengaged from school.

Begins in primary school and continues into secondary school.

Early intervention is crucial.
Effective School-based Interventions for Health and Achievement

- Handwashing
- Cognitive/social skills training
- Parent/teacher communication skills training
- Increased physical activity
- School breakfast programs
- Chronic disease management
- School-based health care centers

Journal of School Health, 2007
By the time they are in high school, as many as 40-60% of all students – urban, suburban and rural – are chronically disengaged from school.
7 Qualities that Impact School Engagement

1. Having a sense of belonging
2. Liking school
3. Perceiving that teachers are supportive and caring
4. Having good friends within school
5. Being engaged in their own current and future academic progress
6. Believing that discipline is fair and effective
7. Participating in extracurricular activities
Social /Emotional Outcomes

- Decreased behavioral problems
- Improved social and communication skills and/or relationships with others (peers, parents, teachers)
- Increased self-confidence, self-esteem, and self-efficacy
- Lower levels of depression and anxiety
- Development of initiative
- Improved feelings and attitudes toward self and school
Why School Climate is Important

**INCREASED:**
- Strengths, Abilities & Potential
- Connection and Engagement
- Social, Emotional, Behavioral Skills
- Readiness for College/Career
- Academic Achievement
- Persistence
- Leadership Skills
- Life Skills
- Life Satisfaction
- School Success

**DECREASED:**
- Mental Health & Behavioral Health Problems
- Alcohol, Tobacco, & Illicit Drug Use
- Social Disengagement & Isolation
- Violent & Anti-Social Behaviors
- Truancy/Dropping out of School
- Credit Deficiencies
- Suspensions & Expulsions
Maslow's Hierarchy of School Needs

- **Physiological**
  - Basic Needs Are Met
  - (eats breakfast, has clean clothing, safe place to go home, able to sleep)

- **Safety**
  - Emotional and Physical Safety
  - (clear school/class routines, access to counselors/nurse, ok to take risks)

- **Belonging**
  - Forming Relationships
  - (advisory, adult role models, friendship groups, peer relationships)

- **Esteem**
  - Positive Classroom Culture Present
  - (positive feedback, time for reflection, encouragement to take risks)

- **Self-Actualization**
  - Student Is Available to Learn
Building a Sustainable, Systematic Process

• Engage families and members of the community in the school improvement process,
• Systematically assess student and staff needs, assets, and strengths;
• Plan realistic and achievable strategies for school improvement that meet the needs of the whole child;
• Provide the training and resources necessary to implement best practice policies, programs and services;
• Effectively document for accountability and continuous improvement.
WHOLE SCHOOL, WHOLE COMMUNITY, WHOLE CHILD
Whole School, Whole Community, Whole Child Model (WSCC) – a collaborative approach to learning and health

**ASCD:** [www.ascd.org/learningandhealth](http://www.ascd.org/learningandhealth)

**CDC:** [www.cdc.gov/HealthyYouth/cshp/](http://www.cdc.gov/HealthyYouth/cshp/)
We challenge communities to redefine learning to focus on the whole person. We encouraged schools and communities to put aside perennial battles for resources and instead align those resources in support of the whole child. Policy, practice, and resources must be aligned to support not only academic learning for each child, but also the experiences that encourage development of a whole child—one who is knowledgeable, healthy, motivated, and engaged.

- Whole Child Commission, 2007

www.ascd.org/learningandhealth
Upcoming Education and Health Publications

1. Health services in schools that impact health and education outcomes
   (Planned release: May 2017)
   • Medicaid in schools
   • School-based health centers
   • Mental health providers in schools

2. School-based policies and programs that impact health and education outcomes
   (Planned release: July 2017)
   • Strategies to address food insecurity and improve nutrition
   • Strategies to increase physical activity
   • Strategies to prevent violence and drug/alcohol abuse
   • Strategies to improve health literacy

3. Education policies and programs that impact education outcomes in
   the short term and health outcomes in the longer term (Planned release: July 2017)
   • Early childhood education and family supports
   • Attendance/chronic absenteeism prevention
   • Social-emotional learning and strategies to improve school climate
     (including changes to suspension and expulsion policies)
Questions?