Pre-read materials for Oct. 17 Social Determinants of Infant Mortality Advisory Group meeting
HPIO 10/12/17

Contents:
• Summary “pathway” diagram
• Education “pathway” diagram
• Education evidence inventory
• Education policy goals and potential policy recommendations

For background on how these materials were developed, see the Agenda and overview of pre-read materials for October 17 Advisory Group meeting document posted on the project webpage.
Summary of relationships between housing, transportation, education, employment and infant mortality

Cross-cutting factors

- Poverty
- Racism* and discrimination
- Toxic and persistent stress, trauma and violence

Challenges and inequities in the social, economic and physical environment**

- Housing
- Transportation
- Education
- Employment

Negative effects on health and equity

- Inadequate pre-conception, prenatal and post-natal care
- Poor maternal health
- Inadequate access to healthy foods and opportunities for physical activity
- Limited education and employment opportunities
- Poverty
- Toxic and persistent stress
- Other topic-specific factors***

Leading causes of infant mortality

- Poor birth outcomes
- Sudden unexplained infant death
- Accidents, injuries and violence

* Structural, institutional, interpersonal and internalized racism
** Topics specified for study by SB 332
*** See figures 2-5 for details
Relationship between education and infant mortality

Education challenges and inequities

- Educational attainment
  - Grade-level reading
  - High school graduation
  - Post-secondary education

- Health literacy
  - Limited access to credible and culturally appropriate health information
  - Difficulty navigating the healthcare system

- Social capital and social support
  - Low rank in society
  - Social network norms

- Income
  - Limited employment opportunities
  - Low earnings potential

Education system quality

- Early childhood
- K-12
- Post-secondary
- Racial discrimination

Negative effects on health and equity

- Poverty
- Inadequate access to healthy foods and opportunities for physical activity
- Toxic and persistent stress
- Disrupted, uncoordinated and inadequate pre-conception, prenatal and post-natal care, including access to contraception
- Unhealthy behaviors such as alcohol, tobacco and other drug use
- Lack of breastfeeding
- Unhealthy relationships, abuse and violence
- Poor maternal health
  - Physical health
  - Mental health

Leading causes of infant mortality

- Birth outcomes:
  - Preterm birth
  - Low birth weight
  - Birth defects
  - Maternal complications of pregnancy

- Unplanned pregnancies, including teen pregnancies and inadequate birth spacing
- Birthday outcomes:
  - Preterm birth
  - Low birth weight
  - Birth defects
  - Maternal complications of pregnancy

- Toxic and persistent stress

- Sudden unexplained infant death
- Accidents, injuries and violence
EDUCATION evidence inventory
Effective policies and programs to address education challenges and inequities relevant to infant mortality
HPIO draft: 10/12/17

Key
Green = 2017-2019 State Health Improvement Plan strategy
Red = Leading causes of infant mortality
Italics = Outcomes also relevant to housing, education, employment, poverty, racism, stress or violence

Educational attainment¹
Relevant policy goals²:
• Increase high school graduation rates through programs geared toward the highest risk students
• Strengthen dropout prevention and recovery schools and programs
• Increase the number of Ohio adults who take and pass high school equivalency exams or pursue other paths to earn a high school diploma
• Improve college preparation and college entry programs and services for low-income Ohioans
• Strengthen career-technical education programs
• Reduce financial barriers to post-secondary education
• Reduce other barriers to high school completion programs and post-secondary education for students

<table>
<thead>
<tr>
<th>Policy or program</th>
<th>Evidence rating and direct outcomes documented in evidence review</th>
<th>Indirect/other potential outcomes in evidence review</th>
<th>Effectiveness to reduce inequities</th>
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</table>
| 1. Career academies | WWFH: Scientifically supported:  
Increased high school graduation  
Increased academic achievement  
Improved student attendance  
**Top Tier Evidence**: Top Tier:  
Sustained increase in annual earnings for men | WWFH: Other potential beneficial outcomes:  
Increased earnings | WWFH: likely to decrease disparities |
<table>
<thead>
<tr>
<th>What Works Clearinghouse: Potentially positive effects:</th>
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<tr>
<td>Completing school</td>
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<td>Staying in school</td>
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<th>Career and technical education for high school graduation</th>
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<td>WWFH: Other potential beneficial outcomes:</td>
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<td>Increased employment</td>
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<td>Increased earnings</td>
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<td>Reduced arrests</td>
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<td>Reduced incarceration</td>
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<td>WWFH: likely to decrease disparities</td>
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<tr>
<th>Dropout prevention programs (Also called High school completion programs)</th>
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<td>WWFH: Scientifically supported:</td>
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<td>Increased high school graduation</td>
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<td>Community Guide: Recommended</td>
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<td>Reduced absenteeism</td>
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<td>WWFH: likely to decrease disparities</td>
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<td>Community Guide – Health equity recommendation</td>
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<th>Dropout prevention programs for teen mothers</th>
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<td>Reduced teen pregnancy</td>
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<td>Improved health outcomes</td>
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<td>WWFH: likely to decrease disparities</td>
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<th>Alternative high schools for at-risk students</th>
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<td>WWFH: Scientifically supported:</td>
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<tr>
<th>High school redirection</th>
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<tr>
<td>WWC: Potentially positive effects:</td>
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<td>Progressing in school</td>
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<th>College access programs</th>
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<tr>
<td>WWFH: Scientifically supported:</td>
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<tr>
<td>Increased college enrollment</td>
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<th>H&amp;R Block College Financial Aid</th>
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<td>Top Tier Evidence: Top Tier:</td>
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<tr>
<td>Increased college attendance</td>
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<tr>
<td>Increased likelihood of attending</td>
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| Application Assistance | college for two consecutive years  
| Higher likelihood of receiving a federal need-based grant (Pell grant) |
| 9. **ACT/SAT Preparation and Coaching Programs** | WWC: Positive effects:  
| General academic achievement – high school |
| 10. **Talent search** | WWC: Potentially positive effects:  
| Completing school |
| 11. **Dual Enrollment Programs** | WWC: Positive effects:  
| Access and enrollment  
| Attainment  
| Completing school  
| Credit accumulation  
| General academic achievement – high school |
| WWC: Potentially positive effects:  
| High school attendance  
| College readiness  
| Staying in school |
| 12. **GED certificate programs** | WWFH: Some evidence:  
| Increased earnings  
| Reduced recidivism |
| WWFH: Other potential beneficial outcomes:  
| Increased GED certificate completion |
| WWFH- likely to decrease disparities |
| 13. **Health career recruitment for minority students** SHIP | WWFH: Scientifically supported:  
| Increased academic achievement |
| WWFH: Other potential beneficial outcomes:  
| Increased high school graduation  
| Increased college enrollment  
| Increased diversity of health care workforce |
| WWFH- likely to decrease disparities |
| 14. **Community schools** | WWFH: Some evidence:  
| Increased academic achievement |
| WWFH: Other potential beneficial outcomes:  
|  
| WWFH- likely to decrease disparities |
| Note: Charter schools in Ohio are referred to as “community schools” under Ohio law (see ORC 3314.01), but this is different from the community schools model referenced here. | - Improved student attendance | - Increased high school graduation  
■ Improved youth behaviors  
■ Increased access to services  
■ Increased social capital  
■ Increased parent engagement  
■ Increased community involvement | disparities |
| --- | --- | --- | --- |
| **15. School-based social and emotional instruction** SHIP | WWFH: Scientifically supported:  
■ Increased academic achievement  
■ Increased high school graduation  
■ Improved social emotional skills  
■ Increased school engagement  
■ Increased self-confidence  
■ Improved mental health  
■ Improved youth behavior | WWFH: Other potential beneficial outcomes:  
■ Reduced violence  
■ Reduced bullying |  |
| **16. School-based health centers** SHIP | WWFH: Scientifically supported:  
■ Improved access to care  
■ Improved health outcomes  
■ Increased academic achievement  
*Community Guide*: Recommended:  
Improvements in:  
■ School performance  
■ Grade promotion  
■ High school completion  
■ Delivery of vaccinations and other recommended preventive services  
■ Asthma morbidity  
■ Emergency department and hospital admissions  
■ Contraceptive use among sexually active females | WWFH: Other potential beneficial outcomes:  
■ Improved quality of care  
■ Reduced emergency room visits  
■ Reduced hospital utilization  
■ Increased vaccination  
■ Reduced health care costs | WWFH- likely to decrease disparities  
*Community Guide – Health equity recommendation* |  |
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| 17. **School-based health clinics with reproductive health services** | WWFH: Some evidence:  
- **Reduced low birthweight births**  
- Reduced teen births | WWFH: Other potential beneficial outcomes:  
- Increased use of contraception  
- Increased reproductive health care  
- Reduced teen pregnancy  
- Increased preventive care  
- Improved student attendance  
- Increased high school graduation | WWFH: likely to decrease disparities |
| 18. **Mentoring programs for high school graduation** | WWFH: Scientifically supported:  
- Increased high school graduation | WWFH: Other potential beneficial outcomes:  
- Improved academic outcomes | WWFH: likely to decrease disparities |
| 19. **Intensive case management for pregnant and parenting teens** | WWFH: Some evidence:  
- Reduced teenage pregnancy  
- Reduced rapid repeat pregnancies | WWFH: Other potential beneficial outcomes:  
- Increased use of contraception  
- Improved social networks  
- Increased academic achievement  
- Increased graduation rates | WWFH: likely to decrease disparities |
| 20. **Carrera Adolescent Pregnancy Prevention Partnership Program** | Top Tier Evidence: Top Tier:  
- Reduced likelihood of teen pregnancy  
- Increased likelihood of having some work experience  
- Improved educational outcomes (PSAT scores and college visits) | Top Tier Evidence: May be valid but need additional confirmation:  
- Increased high school graduation or GED attainment  
- Increased college enrollment | |

**Note:** Due to the extremely large number of evidence-based policies and programs related to education (relevant to the dark blue boxes on the education pathways diagram), HPIO chose to narrow the evidence inventory to only include strategies that increase educational attainment, with a specific focus on high school completion and post-high school educational programs.
**Sources and acronyms**

HPIO searched the following systematic reviews and evidence registries to develop this inventory. Search terms aligned with the pathway diagrams (dark blue boxes) and findings of the literature review.

<table>
<thead>
<tr>
<th>Systematic review or evidence registry*</th>
<th>Recommendation level(s)/Evidence rating included in this inventory</th>
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| **What Works for Health (WWFH):** Evidence registry from County Health Rankings and Roadmaps, a project of the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation | • Scientifically supported  
• Some evidence |
| **The Guide to Community Preventive Services (Community Guide, CG):** Systematic reviews from the U.S. Centers for Disease Control and Prevention (CDC) | Recommended |
| **Top Tier Evidence:** Evidence registry maintained by the Laura and John Arnold Foundation | • Top tier  
• Near top tier |
| **Campbell Library of Systematic Reviews:** Systematic reviews from the Campbell Corporation | N/A |
| **What Works Clearinghouse:** Evidence registry from the U.S. Department of Education | • Positive effects  
• Potentially positive effects |

*Also consulted Washington State Institute for Public Policy Benefit-Cost Results and Hi-5, although no relevant reviews were found for education.*

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1 Aligns with dark blue box on education pathway diagram  
2 Aligns with policy landscape and policy recommendations; relevant to infant mortality priority populations
Policy goals
1. Increase high school graduation rates through programs geared toward the highest risk students
2. Strengthen dropout prevention and recovery schools and programs
3. Increase the number of Ohio adults who take and pass high school equivalency exams or pursue other paths to earn a high school diploma
4. Improve college preparation and college entry programs and services for low-income Ohioans
5. Strengthen career-technical education programs
6. Reduce financial barriers to post-secondary education
7. Reduce other barriers to high school completion programs and post-secondary education for students

Policy recommendations

Policy Goal #1. Increase high school graduation rates through programs geared toward the highest risk students

1. The Ohio Department of Education, State Board of Education, local school districts and/or local philanthropic organizations can strengthen and expand use of the following evidence-based strategies:
   - Career academies
   - Talent search programs (programs to help low-income and first-generation college students complete high school and gain access to college)
   - Community schools (Note: Charter schools in Ohio are referred to as “community schools” under Ohio law, ORC 3314.01, but this is different from the community schools model referenced here.)
   - School-based health centers
   - Mentoring and/or case management programs, specifically for pregnant and parenting teens
2. School districts can support students’ high school graduation by:
   - Establishing community partnerships to facilitate provision of support services (e.g., mental health services and supports, mentoring, child care, health care, including prenatal care) for struggling students, especially pregnant and parenting teens
   - Implementing career academies and identifying other ways to increase school engagement
   - Recognizing early warning signs of dropout (e.g., chronic absenteeism, students falling far behind academically, suspensions/expulsions, etc.) and taking appropriate preventive action early
3. The Ohio Department of Education can continue to encourage and support implementation of social-emotional learning programs throughout the state.
Policy Goal #2. Strengthen dropout prevention and recovery schools and programs

4. State policymakers can build upon the Superintendent’s Workgroup on Dropout Prevention and Recovery Summary Report (released in July 2017) by:
   • Implementing the recommendations outlined in the report, some of which focus on eligibility ages, accountability metrics and ODE oversight and support services
   • Continuing to evaluate additional aspects of accountability and alternative funding models, as recommended in the summary report

Policy Goal #3. Increase the number of Ohio adults who take and pass high school equivalency exams or pursue other paths to earn a high school diploma

5. State policymakers can take steps to improve the quality and effectiveness of the Adult Diploma Program, the Adult 22+ High School Diploma Program and ASPIRE (formerly ABLE) programs’ preparation services for high school equivalency tests, especially in infant mortality hot spot areas.
6. The Ohio Department of Education can identify ways to increase the number of people who take high school equivalency tests and participate in the adult diploma programs such as:
   • Maintaining or increasing financial vouchers for GED test-takers
   • Creating incentives for people to complete test preparation courses and take the equivalency tests or enroll in one of the adult diploma programs

Policy Goal #4. Improve college preparation and college entry programs and services for low-income Ohioans

7. Local school districts can:
   • Provide more assistance to students and families applying for financial aid
   • Offer ACT/SAT preparation services, especially for low-income students
   • Deliver more college and career advising services which includes information about Ohio Technical Centers (career-technical education programs), community colleges and other educational options outside of four-year college degrees
8. State policymakers and local educational providers can explore ways to offer remedial education services for students wanting to attend college but lacking the proper academic preparation
9. State policymakers can identify ways to expand the reach of College Credit Plus, especially in low-income and rural areas, such as providing financial support or incentives for teachers to obtain the necessary credentials to become College Credit Plus instructors in their own schools
Policy Goal #5. Strengthen career-technical education programs

10. State policymakers can explore ways to increase capacity for high-school students and adults to participate in career-technical education (vocational training) programs by:
   - Incentivizing businesses to partner with and provide support to career-technical education programs
   - Working with schools and career-technical planning districts to re-evaluate teacher credentialing requirements
   - Provide additional incentive-based resources for over-subscribed career-technical education programs, especially those in high-need career areas

11. State policymakers can develop financial incentives for businesses who offer apprenticeship programs for above normal-age graduates

Policy Goal #6. Reduce financial barriers to post-secondary education

12. The Ohio General Assembly and the Ohio Department of Higher Education can enhance access to state-funded, needs-based financial aid and scholarships for post-secondary education such as the Ohio College Opportunity Grant by:
   - Increasing funding for these programs
   - Simplifying the application process and/or exploring ways to increase FAFSA completion rates
   - Re-evaluating programs to ensure that older applicants returning to school have access equal to that of students just finishing high school

13. The Ohio Department of Higher Education can tailor financial aid and scholarship eligibility criteria to individuals who would likely not be able to attend without this financial support

14. State policymakers can increase opportunities for Ohioans to obtain quality postsecondary credentials by requiring the Ohio Department of Higher Education to reform the Ohio College Opportunity Grant so community college students can use financial aid to cover the total cost of attendance (not only tuition and fees, but other expenses such as textbooks as well).

15. State policymakers can increase state funding for community colleges and public universities to bring tuition costs down

Policy Goal #7. Reduce other barriers to high school completion programs and post-secondary education for students

16. Local educational providers can offer more flexible class options for students who work during the day or have other timing restraints such as online programs and class offerings in convenient locations and at convenient times

17. The Ohio General Assembly can increase funding for child care vouchers for parents from lower income families who are in school