The class of 2025:
What does the future hold for the children born in Shelby County in 2006?
It is critical to make the connection between children’s early experiences, their lifetime achievements, and the community we will become.
The brain’s early architectural foundations affect lifelong learning.
A baby’s brain will grow at an astonishing rate during the early years.

Neurons develop connecting synapses. Experience and repetition strengthen critical connections.

80% of the brain develops between conception and age three.
Stimulation helps a child’s brain grow in power and intelligence.

Family

Developmentally appropriate learning experiences can affect feelings and advance vision, language and movement.

Lack of family resources (nutrition, health care, developmentally appropriate stimulation) can negatively impact early childhood brain development.
Social environments lacking basic resources are the highest public health risk for serious illness and premature death.

“Legacy for Children” (Center for Disease Control and Prevention CDC 2003)
CDC 2003; Daniels et. al., 2000; Evans et. al., 1994
Insecure emotional attachment and poor stimulation can lead to
↓ readiness for school,
↓ educational attainment,
↑ problem behavior,
↑ risk of social marginalization in adulthood.

Slow or retarded physical growth in infancy is associated with
↓ cardiovascular, respiratory, pancreatic and kidney development and function,
↑ risk of illness in adulthood.

The city we will be in 2025 depends on the children born in 2006...

→ See Chapter B.
What do we know about the demographics and earliest experiences of the youngest Memphians?
The children born in 2006... → will enter kindergarten in 2012, → should graduate from high school in 2025.
15,167 children were born in Shelby County in 2006.
More than half of these children were born into families with income below the national poverty line.
What do we know about the demographics and earliest experiences of the youngest Memphians?

The Class of 2025
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- 1742 white | 390 black
  2378 children were born into wealthy families. ($75K and more)

- 1704 white | 1467 black
  3596 children were born into middle class families. ($25K-75K)

- 286 white | 847 black
  1368 children were born into low income families. ($15K - 25K)

- 167 white | 739 black
  1171 children were born into poverty. ($10K-15K)

- 438 white | 5130 black
  6654 children were born into dire poverty. ($10K or less)

Children in families below the national poverty line lack access to basic resources.
Where do young children live in Shelby County?

Children Five Years of Age and Under in Shelby County by Zip Code
Where are young children most likely to live in poverty?

Children Five Years of age and Under Below Poverty in Shelby County by Zip Code
Differences in the experiences of young children by socioeconomic status
Differences in the experiences of young children by socioeconomic status

Lee and Burkam 2002

Children in families with low SES are more likely to be raised in single-parent homes.

48.2% 29.3% 22.4% 14.7% 10.2%
Differences in the experiences of young children by socioeconomic status

Lee and Burkam 2002

20.1% 31.2% 41.7% 52.2% 65%

Children in families with low SES are \( \rightarrow \) less likely to attend high-quality center-based preschools.
Differences in the experiences of young children by socioeconomic status

Lee and Burkam 2002

Children in families with low SES are less likely to be read to frequently (3+ times a week).
Differences in the experiences of young children by socioeconomic status

Hart & Risley, 1995

Children in families with low SES are
→ more likely to lack in early vocabulary development
The effects of an unequal start in life follow children through school.

In MCS 83% of all students are from low-income families (< 185% FPL).

In 80% of schools more than 1/3 of all the students change schools each year.

↑ drop out
↑ behavior problems
↑ poverty rates
↓ lifetime earnings
↓ job stability

(Rumberger & Larson, 1998)

In every school district in the U.S., low-income students trail behind their more affluent peers.
Lacking access to basic resources will impact the chances in life for those 7825 children....
What do we know about the demographics and earliest experiences of the youngest Memphians?

Student performance:
- 7342 have access to resources
- 294 will drop out of high school
- 7825 lack access to resources

High school drop outs
Total cost to Memphis/Shelby County: $55,201,184
How would we change the life-trajectory for these children in Memphis?

→ See Chapter C.
Children in poor families lack access to basic resources.
15,167 children were born in Shelby County in 2006.
More than half of these children were born into families with income below the national poverty line.
Children in families below the national poverty line lack access to basic resources.
Does family income during Early Childhood matter?
Poverty in early childhood is strongly associated with negative adult outcomes.

(Dahl & Lochner 2008; Duncan 2009; Duncan et al. forthcoming; Milligan & Stabile 2008).

Low family income → creates disadvantaged conditions in a poor household → impacts adult outcomes

Earlier childhood is most critical (prenatal to age 5).
Compared to children in families above twice the poverty line, children who grow up in poverty will have more negative adult outcomes.

As adults, poor children:

- Completed **two fewer years** of school
- Worked 451 **fewer** hours / yr.
- Received $826 more in food stamps / yr.
- Are nearly **3-times more likely** to report poor health
- Poor males are **more than twice as likely** to be arrested
- Poor females are **more than five-times as likely** to bear children out of wedlock before age 21.
For children in poverty, a $3,000 increase in family income during early childhood corresponds with:

↑ 1/5 standard deviation increase in children’s achievement:
   ↑ Evident in both reading and math scores (Milligan & Stabile 2008).
   ↑ Approx. 3 IQ point gain.
   ↑ 4 pts. Gain on Bracken Test of School Readiness (61 pt.)
↑ 19% higher annual earnings as adults
↑ 135 additional hours worked x yr.

Income effects are non-linear and stronger at lower income levels.
Duncan et al. forthcoming...

- 1968-2005 Panel Study of Income Dynamics
- Nationally representative sample of U.S. families and their children.
- Follows children from prenatal year until mid-30s.
- Measures income in every year of a child’s life
- Distinguishing early & middle childhood and adolescence
- Specific childhood-stage increases in family income relate to adult achievement, social assistance, health & behavior...
Differences in the experiences of young children by socioeconomic status
Differences in the experiences of young children by socioeconomic status

Lee and Burkam 2002

Children in families with low SES are more likely to be raised in single-parent homes.
Differences in the experiences of young children by socioeconomic status

Lee and Burkam 2002

Children in families with low SES are less likely to attend high-quality center-based preschools.
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Children in families with low SES are → less likely to be read to frequently (3+ times a week).
Differences in the experiences of young children by socioeconomic status

Hart & Risley, 1995

Children in families with low SES are more likely to lack in early vocabulary development.
How would we change the life-trajectory for these children in Memphis?
Changing the Life Trajectories through Interventions
What do we wish for all young children in Memphis?
All children have a rich, nurturing and stimulating environment where they feel safe, loved and wanted.
All children live in stable families, are born to parents who are not children themselves, who have finished school, who avoid crime and drugs and who delay parenting until they are emotionally and financially ready to choose parenthood.
All children reach school ready to learn, prepared for academic – and lifelong – success.
Goal-oriented results: What are the human and financial gains we’re likely to see in our community as a result of interventions?

↑ Better readers (affecting Kindergarten readiness, test scores, & school success)
↑ More high school & college graduates.
↑ More stable families
↑ More employable/employed people
↓ Fewer days of work and school lost to illness.
↓ Lower crime rates (and lower costs associated with crime)
How do we achieve these goals?
### Successful intervention program models

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abecedarian</strong></td>
<td>High risk newborns randomly assigned to center based preschool (full-day, year-round, constructivist curriculum, on-site pediatric care, home visiting, parental support, school-age intervention)</td>
</tr>
<tr>
<td><strong>Chicago Child Parent Centers</strong></td>
<td>ages 3-9, low-income children, struggling in school, provided pre-K and after school care, parent training and coordination of services</td>
</tr>
<tr>
<td><strong>High/Scope Perry</strong></td>
<td>High-quality early childhood education for 3 and 4-year old disadvantaged children (all scored low on intelligence tests), 2.5 hrs a day, for 30 weeks, monthly small group meetings for parents; teacher home visits to model adult-child activities</td>
</tr>
<tr>
<td><strong>Nurse Family Partnerships</strong></td>
<td>single women pregnant with their first child, in poverty, lacking a high school diploma, provided home visitation, training in healthy behaviors and parenting skills</td>
</tr>
<tr>
<td><strong>Seattle Social Development</strong></td>
<td>low-income children ages 6-11, school-based program, coached in problem solving/conflict resolution training, teacher and parent training</td>
</tr>
</tbody>
</table>

Successful intervention program models encompass more than one aspect of child development strategy.
“Targeted interventions for young children, particularly between the ages of 0 and 3, can make a real difference in the lifetime outcomes of poor and low-income children”.

↓ Tangible costs such as special education, foster care, welfare, medical care, law enforcement, social security and social services.

↓ Intangible costs such as physical and emotional pain experienced by children with developmental delays and their families.
What do we know about the potential ROI for Memphis and Shelby County?

→ See Chapter D.
Return of Investment for Best Practice Interventions
Rates of return to investments in human capital

Investing in human capital – especially early on – shows great returns.

Heckman and Masterov. The Productivity Argument
Per participant in 2000 constant dollars discounted 3% annually.

Source: High/Scope Perry Preschool Study

Model preschool programs show large returns on investment.

$258,888 Benefits

- $77,163 Crime Victims
- $94,310 Criminal Justice System
- $14,078 Taxes Paid
- $7,303 Education
- $2,768 Welfare
- $77,163 Earnings

$258,888 total return
$17.07 per $1 invested
$12.90 to the public
$4.17 to participants

-$15,166 Cost
Cost to Memphis/Shelby County without intervention: $28,958,351

7825 LACK ACCESS TO RESOURCES

Will receive TANF: 2739

Children receiving TANF
Cost to Memphis/Shelby County without intervention: $28,958,351

Net savings to Memphis/Shelby County after intervention: $14,477,854

Reducing the number of children receiving TANF

7825 LACK ACCESS TO RESOURCES

Will receive TANF: 2739

With intervention: 1369
Cost to Memphis/Shelby County without intervention: $25,979,000

7825 LACK ACCESS TO RESOURCES

Will be a victim of child abuse: 783

Children who will be victim of child abuse
Cost to Memphis/Shelby County without intervention: $28,958,351

Reducing the number of children who will be victim of child abuse

7825 LACK ACCESS TO RESOURCES

Will be a victim of child abuse: 783

With intervention: 391

Net savings to Memphis/Shelby County after intervention: $22,861,520
Cost to Memphis/Shelby County without intervention: $27,280,502

- 7,825 children lack access to resources
- 2,974 children will fail a grade
- 1,279 children will fail a grade with intervention

Each dot represents 25 children.
Cost to Memphis/Shelby County without intervention: $27,280,502

Reducing the number of children who will fail a grade:

7825 lack access to resources

2974 will fail a grade

1279 with intervention

Net savings to Memphis/Shelby County after intervention: $15,551,858

= 25 children
Cost to Memphis/Shelby County without intervention: $55,201,185

7,825 lack access to resources. 4,045 will drop out of high school.

High school drop outs
Cost to Memphis/Shelby County without intervention: $55,201,185

- 7825 LACK ACCESS TO RESOURCES
- Will Drop Out of High School: 4045
- With intervention: 2218

Reducing the number of high school drop outs

Net savings to Memphis/Shelby County after intervention: $24,926,810
Cost to Memphis/Shelby County without intervention: $81,575,625

7825 LACK ACCESS TO RESOURCES

Children who will be arrested: 3991

= 25 children
Cost to Memphis/Shelby County without intervention: $81,575,625

7825 LACK ACCESS TO RESOURCES

Will be arrested: 3991

With intervention: 2426

Net savings to Memphis/Shelby County after intervention: $81,575,625
Total program costs for gold standard interventions for the 7,825 most at-risk children in the class of ’25:

- Home Visiting Program $84,136,573
- Early Childhood Care and Education $107,585,824
- Pre-Kindergarten $149,612,827

Total investment $341,335,224

Projected Savings and Benefits $2,048,011,344

ROI: 6:1
There are significant gains to be realized on other dimensions as well ...

Particularly gains for the parents of children involved, and much longer-term returns...

- Reductions in arrest rates
- Reductions in numbers of future pregnancies
- More stable employment
- Higher levels of education
Investing in children and families now will help to build the future we want for Memphis and Shelby County.
• How much are we willing to invest?
• What return do we need to realize on our investment?
• How long are we willing to wait to see a return on our investment?
• In what areas do we want to make a difference – and where is the public likely to demand action – when it comes to children and families?