Disparities in Multnomah County Kindergarten Readiness: Which Children is Our System Failing?

A data report sponsored by:







With support from The Boeing Company

By Rita Conrad Data provided by Population Research Center, PSU

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Ready For Kindergarten

A Cradle to Career Collaborative

Introduction to a Data Report on:

Disparities in Multnomah County Kindergarten Readiness: Which Children is Our System Failing?

Social Venture Partners (SVP) and the Commission on Children, Families & Community (CCFC) have been selected by All Hands Raised as the co-conveners of the Cradle to Career (C2C) Ready for Kindergarten (R4K) Collaborative. While R4K is one of *three* collaboratives, each with a different focus, they share the goals of addressing racial disparities and improving equity in academic and social outcomes for children in Multnomah County, from cradle to career. The Ready for Kindergarten Collaborative will harness the wisdom and energy of committed, cross-sector partners, to ensure that every child in the county starts kindergarten on track for academic and life success.

Cradle to Career's operating model depends heavily on data to drive action, yet the State of Oregon does *not* have a standardized Kindergarten Readiness Assessment, nor a central source for data on young children in our community. The following data report, therefore, is intended to be one of many data points that serve as a proxy for this statewide assessment. It can be utilized to inform the collaborative's scope of work and guide what actions might be undertaken to improve kindergarten readiness for all children.

SVP and CCFC commissioned Portland State University's Population Research Center and Rita Conrad, an independent researcher, to answer the following questions in this report:

- 1) What are the population characteristics of children typically entering school unprepared?
- 2) Where do children from these populations live throughout Multnomah County?

This report relies on national longitudinal data, findings from other states that have kindergarten readiness assessments, and third grade reading data from the Oregon Department of Education to identify what populations of children are frequently entering school not prepared and failing to meet the 3rd grade reading state benchmark. While this report contributes to our understanding of the kindergarten readiness problem, the common characteristics identified in this paper are not *causes* of unpreparedness; rather, causality, and which children our system needs to better support, remain significant outstanding questions. Other key unanswered questions include:

- Who is being served by existing programs?
- What needs of children and their families are unmet by our current early childhood services?
- To what extent are current services effective for the populations they are serving?

As we answer these questions, and learn from the future implementation of the state's kindergarten readiness assessment, we can better understand causality, program effectiveness and how to better serve populations identified in this report.

Addressing these questions, and many others, will be the work of the Collaborative, as we identify opportunities ripe for action so that all children receive the support and tools they need for success in kindergarten and throughout life.

Sincerely,

Mark Holloway, Executive Director Social Venture Partners

Joshua Todd, Director Multnomah County Commission on Children, Families & Community

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Preface: About the data

The analysis in this report utilizes two broad types of data: demographic data and very basic data on programs serving young children in Multnomah County. This section provides information to help readers understand the roles and limitations of both.

Demographic data

Demographic data provide statistical information about the characteristics of a population. For example, this analysis utilizes data on how many people live in the county and by census tract, particularly young children; counts of persons in each type of race and ethnicity category as defined by the Census Bureau (see section below on race and ethnicity); and percentages of persons or households in each census tract that reflect known population characteristics associated with being underprepared for school.

This analysis relies heavily on census tract data in order to gain a better understanding of where children under the age of six who are not receiving adequate



preparation for school are likely to live within the county. Census tracts are "small, relatively permanent statistical subdivisions of a county or equivalent entity that are [usually] updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program... **Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people**... Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census."¹

Data sources

Population counts for children under age six, and population by race and Hispanic origin, are from CENSUS 2010, SUMMARY FILE 1 - 100% DATA. Percent of persons and households associated with populations frequently underprepared for school (poverty, limited English proficiency, single parent, low educational attainment) are from the 2006-2010 American Community Survey (ACS). "2006-2010" means the data for these characteristics are calculated together, across the four year period, to create an adequate sample size, and as small of a margin of error as possible.

Caution: When looking at the census tract maps in the appendices, please note that the Census Bureau's American Community Survey (ACS) data for small geographic areas have larger margins of error than data for areas with larger populations. Therefore, ACS data for census tracts may have large margins of error that make the data uncertain, and should be interpreted with caution.

Limitations of existing race and ethnicity demographics

One of the issues called out by the report "Communities of Color in Multnomah County: An Unsettling Profile"², which was developed by the Coalition of Communities of Color and Portland State University,

¹ <u>http://www.census.gov/geo/www/reference.html</u>

² Curry-Stevens, A., Cross-Hemmer, A., & Coalition of Communities of Color (2010). Communities of Color in Multnomah County: An Unsettling Profile. Portland, OR: Portland State University.

is the inadequacy of traditional data collection methods in accounting for population subgroups such as Slavic and African immigrant populations. We agree. Both 100 percent count data from the 2010 census and sampled data from the American Community Survey undercount diverse populations due to issues like language barriers, fear of reporting to authorities, or uncertainty about how to count newborns and infants. The race and ethnicity data used in this report are from 100 percent count data from the 2010 Census.

Another issue raised by the Coalition of Communities of Color report is how people of various races and ethnicities are grouped and counted. This analysis uses a single grouping of all race and ethnicities that are non-white and/or Hispanic (first map in Appendix C) as recommended by the Coalition of Communities of Color. Population maps of each separate group are shown in Appendix D, for the sole purpose of providing additional perspective to readers. The census data underlying these maps categorize all who identify as Hispanic, regardless of race, in the Hispanic (ethnic) category and not in the race category; i.e., one who identifies as both Black and Hispanic is categorized as Hispanic, not Black. Based on these counts, the percentages in each race and ethnic category add up to 100 percent; there is no duplication. We recognize the limitations inherent in this data.

Program data

This paper references service data from the Project LAUNCH³ (Linking Actions for Unmet Needs in Children's Mental Health) inventory of early childhood programs. A future, more comprehensive report will incorporate program information solicited from the individuals below, regarding the number of families and children served. Additional research and analysis is needed to provide a more accurate picture of the young children who are not receiving the services they require.

Thanks go to these individuals for responding to information requests:

Allyson Yoshiwara, Portland Public Schools Annette Aylett, Child Care Policy Unit Bob Lewicki, Multnomah County Bobbie Weber, Oregon State University Community Transitional School David Andrews, MECP-PEER Pre-K Program David Brown, Multnomah County WIC David Mandell, Children's Institute Diane Ruminski, Multnomah County Elana Emlen, Multnomah Educational Service District Jeanne Lemieux, Child Care Resource & Referral Laurie Danahy, State of Oregon Head Start Meg McElroy, Portland Children's Levy Nancy Hauth, Portland Public Schools Renea Arnold, Multnomah County Library

³ Project LAUNCH (Linking Actions for Unmet Needs in Children's Health) is a grant program of the federal Substance Abuse and Mental Health Services Administration (SAMHSA), which seeks to promote the wellness of young children, birth to age eight. Using a public health approach, Project LAUNCH focuses on improving the systems that serve young children and address their physical, emotional, social, cognitive and behavioral growth. It is managed locally by Multnomah Education Service District.

Tanya Wolfersperger, Hacienda CDC

Why our youngest children matter

Volumes of social, scientific and economic evidence clearly prove that the foundation for each child's

social, emotional and mental development is established by the age of five. The implications are immense: "...we either invest in the lives of young children now, or pay more in social costs later."⁴

This white paper focuses on the state of children under six in Multnomah County, Oregon. It begins to answer:

In the first few years of life, 700 new neural connections (called synapses) are formed every second.

• What are the population characteristics of children typically entering school unprepared?

Jack P. Shonkoff, MD

• Who and where are these young children living in the county?

Despite myriad programs serving young children and their families, disparities in school achievement demonstrate that we are still not doing enough. In the future, we hope to build on this initial data by answering: what more we need to know, and to do, in order to give *all* young children in Multnomah County the supports and experiences they need for success in school and in life?

The National Association for the Education of Young Children (NAEYC) stresses that "school readiness involves more than just children. School readiness, in the broadest sense, is about children, families, early environments, schools, and communities. Children are not innately 'ready' or 'not ready' for school. Their skills and development are strongly influenced by their families, and through their interactions with other people and environments, before coming to school." ⁵

The following excerpts are from a 2003 study, sponsored by the Department of Health and Human Services.⁶

Effective early childhood intervention is important because disadvantaged children are at great risk for poor educational outcomes throughout the school years...

Achievement differences in school are greatest for children who suffer the greatest disadvantage, in particular for children whose families have **multiple risk factors** or **receive [Temporary Assistance for Needy Families (TANF)]**...

A key set of **risk factors** has been repeatedly associated with educational outcomes, such as low achievement test scores, grade repetition, suspension or expulsion, and dropping out of high school. These risk factors include: (a) having parents who have not completed high school, (b) coming from

⁴ The early years, City Club of Portland, <u>http://www.pdxcityclub.org/content/early-years-city-club-report-care-and-education-children-birth-age-five</u>, March 2006

⁵ Where we stand on school readiness, National Association for the Education of Young Children (NAEYC), <u>http://www.naeyc.org/files/naeyc/file/positions/Readiness.pdf</u>, 2009

⁶ Strengthening Head Start: What the Evidence Shows, <u>http://aspe.hhs.gov/hsp/strengthenheadstart03/index.htm</u>

a low-income or [TANF]-dependent family, (c) living in a single-parent family, and (d) having parents who speak a language other than English in the home. **Children who have one or more of these characteristics are more likely to be educationally disadvantaged or have difficulty in school**.

Who and where are young children in Multnomah County?

How many young children live in the county?

In 2010, there were nearly 55,000 children under the age of six in Multnomah County, representing about 7.5 percent of the total population, and more than one third of all children under 18. Multnomah County's percent of children under six is higher than in Oregon or the U.S. In 14 of the 171 census tracts in the county, children under six make up more than a 10 percent share of the total population. The number of young children in each census tract ranges from about 30 to over 800.

For children under six, the estimated poverty rate for Multnomah County is 40.9 percent, or well over 22,000 children.

What are the population characteristics of children typically entering school unprepared?

The populations listed below were identified by large-sample, national longitudinal studies as populations of children entering school unprepared, and confirmed by data from Maryland and Minnesota (Appendix A). These two states have longitudinal kindergarten readiness data, and offer insights on the characteristics of children who are not prepared for kindergarten. Evaluation of third grade reading data for Multnomah County schools confirms that students of color, economically disadvantaged students and students with limited English proficiency are not adequately prepared by our existing educational and service systems, as evidenced by lower state benchmark scores than their peers. It is important to note that these variables do not identify the problems that lead to school unpreparedness; rather, they simply identify the populations that are typically not receiving what they need to be prepared for school.

Appendix C maps data on these populations by census tract. The underlying data for the population characteristics maps are based on persons and households of all ages, not just those under age six.⁷ The next section describes how we used this data to estimate Multnomah County's children under age six who we are inadequately prepared for school.

 Children of Color (non-white and/or Hispanic): The 2010 population of Multnomah County was 735,334. Over 205,000, or about 28 percent, identified as African American, Native American, Asian, mixed race and/or Hispanic. This reflects a higher rate of diversity than Oregon (22 percent), but a lower rate than the U.S. (about 36 percent). Of the County's communities of color, over 39 percent identified as Hispanic and over 25 percent as Asian.

⁷ Sources for data in this report: Population counts for children under age six and population by race and Hispanic origin are from CENSUS 2010, SUMMARY FILE 1 - 100% DATA. Percent of persons and households associated with risk factors (poverty, language, single parent, education) are from the 2006-2010 American Community Survey (ACS).

Disparities in Multnomah County Kindergarten Readiness: Which Children is Our System Failing?

- Low income: The Census Bureau's estimates for percent of all persons living in poverty in the county is 18.2 (ACS one-year estimates). Poverty rates for children tend to be higher than the overall poverty rate. Multnomah County is no exception. For children under six, the estimated poverty rate is 40.9 percent, which is well over 22,000 children.
- 3. Limited English Proficiency: Over five percent of households have no one 14 and over who is proficient in English. This is more than Oregon (3.3 percent), and slightly more than the U.S. average (4.8 percent).
- 4. Low educational attainment: About one third 32 percent of all adults (25 and over) had only a high school education or less. This is five percentage points better than Oregon (37 percent) and 12 points better than the U.S. (44 percent). This means that on the whole, Multnomah County's population is more educated (a higher share with more than a high school education), than the state or the nation.
- Single parent households: Over 35 percent of households with children are headed by single parents, both male and female. This is higher than Oregon (31 percent), and the U.S. (33 percent).

Where are these young children likely to live in the county?

Using the methodology described to the right, we identified 66 of Multnomah County's 171 tracts with significant numbers of young children from populations who are frequently not prepared to succeed academically, heretofore referred to as *priority populations*. About 30,000 (nearly 54 percent) of Multnomah County's children under age six live in areas that have large numbers of people from one or a combination of these priority populations.

The methodology groups the 66 census tracts into five tiers. The map on page 9 shows the location of those tracts with the highest number of the identified characteristics and codes them by tier. Darker colors represent higher priority tiers, or those with more of the population

Methodology for estimating census tracts for children under age six from populations typically underprepared for school:

- Identify about 50 of the census tracts for each variable based on thresholds for ACS data. The thresholds used for each variable are:
 - a. <u>Race/ethnicity</u> 34 percent or more of the population identifies as one or more racial or ethnic categories, except white alone. The county average is 27.9 percent.
 - <u>Poverty rate</u> 20 percent or more. The comparable ACS county average is 16 percent (2006-2010).
 - c. <u>English proficiency</u> about 5 percent or more have no one over age 14 that is proficient in English. This is similar to the county average.
 - <u>High school or less</u> more than 42 percent of the adult population (age 25 and over) has a high school education or less. The county average is 32 percent.
 - e. <u>Single parent households</u> 44.4 percent or more of the households are headed by single parents. The county average is 35.1 percent.
- 2. Count the number of all variables associated with census tracts identified in step 1. (Where variable data is uncertain, the count was discounted.)
- Assign a weight to each census tract based on the number of children under six. This represents the "magnitude" score.
- 4. Multiply the variable count by the magnitude score to determine overall risk of not getting what they need to succeed academically, for children under six by census tract. (See map, next page.)

This methodology takes into account, and adjusts for, uncertain data based on high margins of error. (See cautionary note in the Preface, page 3.)

Related appendices:

Appendix B: Estimation of high priority census tracts

Appendix C: Five maps of priority populations

Appendix D: Race & ethnicity maps

Appendix E: Basic demographic maps, under-six population (counts) and percent of households with children under age 18

characteristics. (See Appendix B for more detail on the derivation of the tiers.)

Tier 1 - Highest Priority: 4,965 children under age six

Six census tracts received the highest score (20 to 25). They are, in order of highest number of variables and population of young children: 90, 40.01, 41.01, 92.01, 97.02 and 103.04. The map on the next page shows that census tracts 40.01 and 41.01 are in the delta where the Willamette and the Columbia rivers meet in the northwest portion of the county; tracts 90, 92.01, 97.02 and 103.04 are east of I-205. All six tracts showed high numbers of children of color, children living in poverty, low educational attainment and limited English proficiency (although two had uncertain data for language). Four of the six tracts showed at least 44 percent of households with single parents. These census tracts average 828 young children per tract.

Tier 2 – Higher Priority: 3,518 children under age six

Six census tracts received scores of between 15 and 19: 98.01, 6.02, 93.01, 96.04, 96.06 and 98.03. With the exception of 6.02, these tracts are all located significantly east of I-205. All six tracts showed high numbers of people with limited educational attainment and English proficiency (one tract with uncertain data for English proficiency), and five of the six had high numbers of people of color and people living on a low income. Three of the six tracts showed at least 44 percent of households with single parents. These census tracts average 586 young children per tract.

Tier 3 – High Priority: 7,970 children under age six

Sixteen census tracts received scores between 10 and 14. These are scattered around the portion of the county that is east of I-205. A few are right next to I-205, on the west side of the freeway. Most of these tracts have high numbers of people of color, people living on a low income, low educational achievement, and English proficiency (five tracts with uncertain English proficiency data). These census tracts average 498 young children per tract.

Tier 4 - Priority: 7,413 children under age six

There are 20 census tracts with scores of five to nine, which again are scattered east of I-205, adjacent to I-205, and with a couple tracts bordering the airport to the north. About 7,400 children under six live in these 20 tracts. These census tracts average 371 young children per tract.

Tier 5 – Still Priority: 5,783 children under age six

These 18 census tracts received a score of less than five. They are scattered throughout most parts of the county. These census tracts average 321 young children per tract.

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	Average # of variables (1 to 5)	Average magnitude based on # of children under six (1 to 5)	Average score (# of variables x magnitude)	Estimated # of children with those variables in tier	Average number of children under six per census tract
Tier 1 Highest Priority: 6 census tracts	4.5	4.8	21.7	4,965	828
Tier 2 Higher Priority: 6 census tracts	4.1	4.0	16.3	3,518	586
Tier 3 High Priority: 16 census tracts	3.4	3.6	11.8	7,970	498
Tier 4 Priority: 20 census tracts	2.4	3.0	6.6	7,413	371
Tier 5 Still Priority: 18 census tracts	1.5	2.6	3.3	5,783	321

Summary of variable data for census tracts in each tier (derived from data in Appendix B):



Early childhood programs in Multnomah County

The most recent inventory of early childhood programs was prepared by the Multnomah Education Service District as part of their federal LAUNCH grant. It is available at: <u>http://web.multco.us/sites/default/files/ccfc/documents/final_invecsrvs.pdf</u>.

Further research needs to be done to determine whether existing early childhood programs are reaching these populations of young children who are most likely to arrive to kindergarten unprepared.

Opportunities for learning and action

This report *begins* to paint a picture of priority populations of children under the age of six, living in Multnomah County, who might benefit from additional support to ensure they succeed academically. Many unanswered questions remain. A few of them are listed below, and represent opportunities for learning, transformation and continuous improvement.

We invite dialogue and action on these and other opportunities to eliminate disparities and prepare all young children for school.

1. Who is being served by existing programs?

Research needed: Evaluate program data to find out who each of the programs is serving, including demographic data collected by programs.

2. Where are existing programs serving young children?

Research needed: Evaluate program data to find out where they are serving children. What programs are located in which tracts or neighborhoods? Where are children and families coming from to attend programs?

3. What needs of young children and their families are unmet by current early childhood services?

Answering this question is harder. It involves determining the key needs of children and their families; estimating how many children and families need these services; and determining from the program data how many are being served. This would take the inventory to the next step by building a comprehensive inventory of services offered, slots and various requirements. This information could be the backdrop for an analysis of the number of children at risk or in need, in order to try to estimate unmet need.

4. To what extent are current services and programs evidence-based or promising practices?

Beyond availability of services and reach of programs, what is the quality of services delivered and which are most effective with particular populations? This would involve an assessment of whether programs adhere to certain standards, are delivered with an acceptable degree of fidelity, and are appropriate and effective with particular racial, cultural and ethnic groups. Another opportunity lies in researching and benchmarking known evidence-based and emerging practices.

Columns indicate sources of data. Rows indicate recommended population characteristics for analysis.

This table provides the documentation for selecting the variables used in this analysis. (See page 6 for an explanation of why these data sources were chosen.)

Variable	3 rd Grade Reading in Multnomah County (2010- 2011) Oregon Dept. of Education ⁸	Maryland 2010 report shows K readiness by at-risk population (pp B7) ⁹	Minnesota 2010 report shows K readiness by at-risk population (pp 5, 20, 22) ¹⁰	"Children Born in 2001 at Kindergarten" from ECLS program longitudinal study n=10,000 (pp 3-4) ¹¹	"America's Kindergartners" from ECLS program ¹² longitudinal study of ~22,000 in kindergarten class of 1998- 99 ¹³
Poverty	The disparity in 3rd grade reading scores for those students who are economically disadvantaged is stark. 20% fewer students who are economically disadvantaged meet 3rd grade reading standards than their peers who are not economically disadvantaged.	Higher percentages of children who do NOT receive free and reduced price meals fully met: • Social and personal • Language and literacy • Mathematical thinking • Scientific thinking • Social studies • The arts Physical development (although the difference is not as great here)	 Percentage of kindergartners reaching 75%, a predictor of meeting 3rd grade standards Over 250% Federal Poverty Guideline (FPG) (N=1554) 69.2 250% FPG and under 52.3 "The odds of reaching the 75 percent standard for a student whose household income was at or above 400 percent of the FPG were more than one and a half times as great as compared to a student whose household income was less than 250 percent FPG when holding all other variables constant. The odds of reaching the 75 percent standard for a student whose household income was less than 250 percent FPG when holding all other variables constant. The odds of reaching the 75 percent standard for a student whose household income was 400 percent FPG are nearly one and halftimes as great." (p9) 	Children in households at or above the Federal Poverty Guidelines had • Higher reading and math scores Higher fine motor assessments	 Children whose families have never utilized public assistance are more likely to: Be in excellent general health (p39) Have less attention difficulty (p42) Have task persistence and eagerness to learn (p45) Be read to. <i>Singing</i> to kids is more prevalent in families receiving public assistance (p50)

⁸ <u>http://www.ode.state.or.us</u>
⁹ <u>http://www.mdk12.org/instruction/ensure/mmsr/index.html</u>
¹⁰ <u>http://www.minnpost.com/_asset/mk9tqj/readinessfullreport.pdf</u>
¹¹ <u>http://nces.ed.gov/pubs2010/2010005.pdf</u>
¹² <u>http://nces.ed.gov/ecls/</u>

¹³ http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000070

Columns indicate sources of risk factor data.

Variable	3 rd Grade Reading in Multnomah County (2010- 2011) Oregon Dept. of Education ⁸	Maryland 2010 report shows K readiness by at-risk population (pp B7) ⁹	Minnesota 2010 report shows K readiness by at-risk population (pp 5, 20, 22) ¹⁰	"Children Born in 2001 at Kindergarten" from ECLS program longitudinal study n=10,000 (pp 3-4) ¹¹	"America's Kindergartners" from ECLS program ¹² longitudinal study of ~22,000 in kindergarten class of 1998- 99 ¹³
Race and ethnicity	Data since 2004 shows that our early learning supports and education systems are consistently preparing white students to meet 3rd grade reading standards at a higher rate than students of color. 88% of white students meet the standard for 3 rd grade reading, while closer to 70% of African American, Pacific Islander, and Latino students.	Whites, followed closely by Asians and Native Hawaiian/Pacific Islanders had the highest percentage who fully met: Social and personal Language and literacy Mathematical thinking Social studies The arts African Americans and Hispanics had the lowest percentage who fully met: Social and personal Language and literacy (especially Hispanics) Mathematical thinking (especially Hispanics) Scientific thinking (especially Hispanics) Social studies (especially Hispanics)	 Percentage of kindergartners reaching 75%, a predictor of meeting 3rd grade standards: White (N=2841) 62.7 % Asian/Native Hawaiian/Pacific Islander (N=221) 62.0% Black/African/African American (N=349) 57.0% Other (N=64) 53.8% American Indian/Alaskan Native (N=203) 44.4% Hispanic/Latino (N=278) 43.6% 	 White and Asian children had: Higher reading and mathematics assessment scores Higher fine motor assessments 	 White children are more likely to score in the highest quartile than African American or Hispanic children in reading, mathematics and general knowledge. (p15) <i>Teachers</i> rate African American children as having more problem behaviors than white children. Asian parents rate their children as having fewer behavior problems than did African American, Hispanic or white parents. (p28) African American children are more likely to score higher for gross motor skills than white, Asian or Hispanic children. (p36) White children are more likely than African American Hispanic or Asian
		(especially Hispanics) Social studies (especially Hispanics)			 White children are more likely than African American, Hispanic or Asi

children to be in excellent

Columns indicate sources of risk factor data.

Variable	3 rd Grade Reading in Multnomah County (2010- 2011) Oregon Dept. of Education ⁸	Maryland 2010 report shows K readiness by at-risk population (pp B7) ⁹	Minnesota 2010 report shows K readiness by at-risk population (pp 5, 20, 22) ¹⁰	"Children Born in 2001 at Kindergarten" from ECLS program longitudinal study n=10,000 (pp 3-4) ¹¹	"America's Kindergartners" from ECLS program ¹² longitudinal study of ~22,000 in kindergarten class of 1998- 99 ¹³
English proficiency	We similarly fail to adequately prepare children with limited English proficiency (LEP). Only 58% of children with LEP meet the standard.	Kindergartners who were not English Language Learners scored higher on: • Language & literacy • Mathematical thinking • Social studies • The arts And somewhat higher on: • Social/personal • Social "studies" (see p A-4)	Primary home language was not found to be statistically significant in reaching the 75 percent standard when holding all other variables constant	 Homes of young children where the primary language is English is positively associated with: Higher reading and math scores 	 Homes of young children where the primary language is English is positively associated with: Reading, mathematics and general knowledge (p15) Prosocial behavior (p25) Not being overweight (p33)
Family type		Data are not stratified by family type.	Not addressed	Two-parent families are positively associated with:Higher reading and math scores	 Two-parent families are positively associated with: Reading, mathematics and general knowledge (p15)

- Prosocial behaviors and fewer problem behaviors (p25, 28)
- Fine motor skills (p36)
- Excellent health

assessments

Higher fine motor

- Less attention difficulty (p42)
- Task persistence and eagerness to learn (p45)
- Reading to kids; singing to kids is more prevalent with single moms (p50)

Columns indicate sources of risk factor data.

Variable	3 rd Grade Reading in Multnomah County (2010- 2011) Oregon Dept. of Education ⁸	Maryland 2010 report shows K readiness by at-risk population (pp B7) ⁹	Minnesota 2010 report shows K readiness by at-risk population (pp 5, 20, 22) ¹⁰	"Children Born in 2001 at Kindergarten" from ECLS program longitudinal study n=10,000 (pp 3-4) ¹¹	"America's Kindergartners" from ECLS program ¹² longitudinal study of ~22,000 in kindergarten class of 1998- 99 ¹³
Education		They do break results down by poverty status (e.g., free and reduced price meals), which is closely correlated with educational attainment.	 Percentage of kindergartners reaching 75%, a predictor of meeting 3rd grade standards Less than high school (N=200) 32.4% High School Diploma/GED (N=671) 48.7% Trade school or some college (N=1013) 55.7% Associate's degree (N=581) 61.2% Bachelor's degree (N=1024) 67.6 Graduate or professional degree (N=466) 70.7% "Parent education level was found to be statistically significant in reaching the 75 percent standard. Students whose parents have a high school degree are twice as likely to reach the 75 percent standard as compared to students whose parents have a high school degree. Students with parents who have an Associate degree, Bachelor or graduate degree are approximately one and a half times as likely to reach the 75 percent standard." 	Data are not stratified by parental education.	 Level of mother's educational attainment is positively associated with children's: Performance in reading, mathematics and general knowledge (p15) Prosocial behaviors (p25) Body mass index (boys and girls whose mothers have less than a bachelor's degree are at greater risk for being overweight (p 33) Fine and gross motor skills (p36) General health levels as reported by parents (p39) Less attention difficulty (p42) Task persistence and eagerness to learn (p45) Reading to kids and # of kids' books in home (p50)

low income families.

Columns indicate sources of risk factor data.

Variable	3 rd Grade Reading in Multnomah County (2010- 2011) Oregon Dept. of Education ⁸	Maryland 2010 report shows K readiness by at-risk population (pp B7) ⁹	Minnesota 2010 report shows K readiness by at-risk population (pp 5, 20, 22) ¹⁰	"Children Born in 2001 at Kindergarten" from ECLS program longitudinal study n=10,000 (pp 3-4) ¹¹	"America's Kindergartners" from ECLS program ¹² longitudinal study of ~22,000 in kindergarten class of 1998- 99 ¹³
Early care and education		 Percentages of children who fully met domains are highest for those who attended tuition-based private nurseries or childcare centers, reflecting higher income families. Percentages of children who fully met domains are <i>lowest</i> for those who stayed at home, received informal care or attended Head Start, a program for 		 Children who participated in regular early care and educational arrangements the year prior to kindergarten had: Higher reading and math scores Higher fine motor assessments 	

Appendix B: Estimation of high priority census tracts

POP. CHARACTERISTICS B	BY TRACT: thresholds (thr) define ~50 highest priority tracts				ts PRIORITY ESTIMATE				
Tracts coded for # of	Ethnic			Single	Limited	# of	Magnitude	# of pop.	Estimated #
kids 0-5 (using colors in	Minority	Poverty	HS or less	Parent	English	population	based on #	charact's x	of priority
the PSU map legend)	thr=34%	thr=20%	thr=42%	thr=44%	thr=5%+	characteristics	kids 0-5	magnitude	kids by tier
Darker color means more									
children under six in the			A	A shaded "x'	' indicates low	reliability based	on MOE;		
census tract.			# of po	pulation cha	aracteristics fo	or those tracts is (discounted by	.5	
Census Tract 90	х	х	<u>х</u>	х	x	5	5	25	
Census Tract 40.01	х	х	х	x	х	4.5	5	23	
Census Tract 41.01	х	х	х	x	х	4.5	5	23	
Census Tract 92.01	х	х	х		х	4	5	20	
Census Tract 97.02	х	х	х		x	4	5	20	Tier 1
Census Tract 103.04	х	х	х	х	х	5	4	20	4,965
Census Tract 98.01	х	х	х	х	х	4.5	4	18	
Census Tract 6.02	х		х	х	х	4	4	16	
Census Tract 93.01	х	х	х		х	4	4	16	
Census Tract 96.04	х	х	х		х	4	4	16	
Census Tract 96.06	х	х	х		х	4	4	16	Tier 2
Census Tract 98.03		х	х	x	x	4	4	16	3,518
Census Tract 74	х	х	x	х	х	4.5	3	14	,
Census Tract 100.01	х	х	х	x	x	4.5	3	14	
Census Tract 6.01	х	х	х			3	4	12	
Census Tract 76	х	x	х		х	4	3	12	
Census Tract 81	х		х	x		3	4	12	
Census Tract 82.02	х	х			х	3	4	12	
Census Tract 83.01	х	х	х		х	4	3	12	
Census Tract 84	х	x	х		х	4	3	12	
Census Tract 91.02	х		х		х	3	4	12	
Census Tract 92.02	х	х	х		x	4	3	12	
Census Tract 96.05	х		х		x	3	4	12	
Census Tract 97.01	х		х		x	3	4	12	
Census Tract 29.03	х	х		x	x	3.5	3	11	
Census Tract 86	х	х	х		х	3.5	3	11	
Census Tract 101		х	х			2	5	10	Tier 3
Census Tract 104.05			х	x	х	2.5	4	10	7,970
Census Tract 75	х	х		х		3	3	9	
Census Tract 79	х		х	х		7 3	3	9	
Census Tract 88		х	х		х	7 3	3	9	
Census Tract 36.02	х			х		2	4	8	
Census Tract 91.01	х	х				2	4	8	
Census Tract 85	х		х		х	2.5	3	8	
Census Tract 96.03	х		х		x	2.5	3	8	
Census Tract 16.02	х		х			2	3	6	
Census Tract 33.01	х	х		х		7 3	2	6	
Census Tract 34.01	х	х		х		7 3	2	6	
Census Tract 34.02	х	х		х		3	2	6	
Census Tract 36.01	х			х		2	3	6	
Census Tract 37.01	х			х		2	3	6	
Census Tract 87			х		х	2	3	6	
Census Tract 93.02	х				х	2	3	6	
Census Tract 95.01	х	x				2	3	6	
Census Tract 98.04			х	x	х	3	2	6	
Census Tract 9.02			х	x	х	2.5	2	5	
Census Tract 89.01	1		х			1	5	5	Tier 4
Census Tract 17.02				x	х	1.5	3	5	7,413

Appendix B: Estimation of high priority census tracts

POP. CHARACTERISTICS BY TRACT: thresholds (thr) define ~50 highest priority tracts					PRIORITY ESTIMATE				
Tracts coded for # of	Ethnic			Single	Limited	# of	Magnitude	# of pop.	Estimated #
kids 0-5 (using colors in	Minority	Poverty	HS or less	Parent	English	population	based on #	charact's x	of priority
the PSU map legend)	thr=34%	thr=20%	thr=42%	thr=44%	thr=5%+	characteristics	kids 0-5	magnitude	kids by tier
Darker color means more									
children under six in the			A	A shaded "x'	' indicates low	reliability based	l on MOE;		
census tract.			# of po	pulation cha	aracteristics fo	or those tracts is	discounted by	.5	
Census Tract 17.01				х		1	4	4	
Census Tract 38.02			х	х		2	2	4	
Census Tract 39.01	х					1	4	4	
Census Tract 51		х		х		2	2	4	
Census Tract 73	х	х	х	х		4	1	4	
Census Tract 77	х	х	х	х		4	1	4	
Census Tract 104.07			х			1	4	4	
Census Tract 104.08			х			1	4	4	
Census Tract 10		х				1	3	3	
Census Tract 41.02			х			1	3	3	
Census Tract 80.01			х		x	1.5	2	3	
Census Tract 80.02			х		x	1.5	2	3	
Census Tract 89.02			х			1	3	3	
Census Tract 103.05			х		x	1.5	2	3	
Census Tract 104.10			х			1	3	3	
Census Tract 20		х				1	2	2	
Census Tract 64.04				х		1	2	2	Tier 5
Census Tract 8.02		х				0.5	3	2	5,783

Appendix C: Five maps of population characteristics



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Appendix C: Five maps of population characteristics



Appendix D: Race and ethnicity maps (counts)



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Appendix D: Race and ethnicity maps (counts)



Appendix D: Race and ethnicity maps (counts)



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