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## Estimating the Supply and Demand for Child Care in Philadelphia

High-quality early learning experiences support positive child development and prepare children for success in school and beyond. Quality child care is also critical for families, as it allows parents to maintain employment.

In Philadelphia, 70% of all child care is provided in centers that participate in the Keystone STARS quality rating system. However, only 21% of these seats are considered high-quality according to state standards.

In order to better understand gaps in the supply of child care, and high-quality care in particular, The Reinvestment Fund (TRF) conducted a study of the supply and demand for child care in Philadelphia to identify areas that are underserved. With support from the William Penn Foundation, TRF created an interactive tool based on this analysis, accessible at [www.childcaremap.org](http://www.childcaremap.org), that identifies the neighborhoods where high-quality care is most scarce in absolute and relative terms. This tool gives funders, practitioners, and child care advocates better data on where resources and intervention are needed.

Unfortunately, there was no single data source that would adequately model the supply and quality of child care—nor was there a single source of data that indicates the demand for child care services. In order to get this information, TRF statistically estimated the supply and demand of child care by combining multiple datasets. A project advisory group, consisting of local early childhood experts in Philadelphia, vetted the data and statistical and spatial methods to ensure results showed an accurate portrait of child care in Philadelphia.

Overall, the analysis did not find a substantial gap between the total supply of child care and the demand for that care. TRF also did not find—as studies in other spheres of social and economic life have shown—that low-income areas or areas with high concentrations of racial or ethnic minorities are less well served than other areas of the city. However, there is a shortage of certified and high-quality child care options throughout the city.

### Estimating the Supply of Child Care

Across Philadelphia, TRF estimated the total supply of child care at more than 108,000 seats. Of those, roughly 70,000 seats are certified (indicating a particular level of state registration) and of those 14,600 (21%) are rated as being of high quality, STAR 3 or STAR 4 according to the Keystone STARS performance standards. Forty-four percent, or 31,000 certified seats have the lowest quality rating (STAR 1 or STAR 2) and 24,400 (35%) do not have a quality rating at all. These estimates are the

maximum potential supply of child care seats, if every center enrolled at full capacity. Overall, the highest supply of child care is found close to major public transportation routes. In addition, the availability of certified high-quality care was substantially greater than would be predicted based on overall supply in and around areas with higher rates of poverty and/or lower incomes, but that it was the lowest in and around areas where 90% or more of the population is African American. Figure 1 shows the locations of certified, high-quality centers across the city.

### **Estimating the Need for Child Care**

According to the 2010 census, 101,500 children under the age of five lived in Philadelphia. Using this fact as a starting point, TRF analyzed data from a variety of sources about where people live and work, as well as household size, income, and family composition to consider family travel patterns that may affect demand for child care. Analyses suggest that 9,900 children travel with adults to child care located outside of the city near a parent's place of work. In addition, 15,700 children who reside outside the city travel with parents to child care located in the city. This yields a maximum potential demand for 107,800 child care seats in the city of Philadelphia.<sup>1</sup>

In some ways, demand followed a very similar pattern to supply. Poorer areas and those with predominantly African American populations were much more likely to be in the higher demand categories than areas with lower levels of poverty, and areas near train stops tended to be in the higher demand.

### **Identifying Areas of Particular Child Care Needs**

After estimating the supply and demand for child care, the final step was to model places where shortages exist. This helps us understand which programmatic or investment activity would benefit the area. Details of the methods used to estimate the gaps between supply and demand can be found in a fuller version of this report at [childcaremap.org](http://childcaremap.org).

*Shortage in total supply* – The total demand for child care in Philadelphia is slightly greater than the total supply. TRF estimated an overall demand for approximately 108,700 slots in the city and a supply of approximately 101,500. Overall, this translated into a shortage across the city of 7,000 child care slots. These shortages were highest in the major employment centers (Center City, University City, near Philadelphia International Airport), along the River Wards (Kensington and Port Richmond), and throughout Northeast Philadelphia.

Areas with the largest shortage were not necessarily the poorest parts of the city, which typically have both high demand and high supply. Areas with the largest shortage were concentrated in the northeast part of the city around the Delaware River Wards and in parts of Southwest and South Philadelphia.

*Shortage in certified supply* – The largest shortages in certified slots were concentrated in Center City, around the University of Pennsylvania, east of Broad Street in North Philadelphia, and throughout Northeast Philadelphia. Additionally, block groups closest to train stations were more likely to have shortages in certified child care centers.

The Oxford Circle area of the Northeast, which is quite racially diverse (52% of its population is white, 23% is African American, and 16% report Hispanic heritage) had 18 certified child care providers with a capacity of 484 slots. Two of those certified providers were high quality, with a capacity of 228 slots. Oxford Circle had a total estimated demand for 1,200 slots.

*Shortage in high-quality supply* – The shortage in high-quality supply followed a similar pattern to the total supply shortage, but affected a greater number of areas. The shortage in high-quality child care seemed particularly acute in Center City, the far Northeast, Strawberry Mansion, North Philadelphia, in the River Wards, and in Southwest Philadelphia. Contrary to what we might have expected, more affluent areas were actually more likely to have shortages in high-quality child care than high poverty areas.

Neighborhoods like Roxborough/Manayunk, Chestnut Hill, the Lower Northeast, Strawberry Mansion, and Port Richmond all showed significantly greater shortages in high-quality supply than the city as a whole. This would indicate that the certified centers in those areas were much less likely to have STAR 3 or STAR 4 ratings, and these communities had limited high-quality options. See Figure 2 for an illustration of analyses that examine shortages in child care along with a community poverty metric..

## Conclusions

Childcaremap.org and the accompanying analyses represent Philadelphia’s first opportunity to understand the availability of, and demand for, high quality early childhood education throughout the city. The analyses have highlighted the fact that while the overall supply of child care is relatively well-matched to the overall demand, different communities face very different challenges in ensuring that their children have access to quality care. This analysis provides a base for planners, policymakers, and practitioners to begin to address these needs in a evidence-informed manner.

## Data Sources

TRF used the following data sources to approximate supply and demand. For more detail see the full version of this report at [www.childcaremap.org](http://www.childcaremap.org):

### Supply:

- Pennsylvania Office of Child Development and Early Learning (OCDEL)
- Philadelphia School District Head Start and Partner Sites
- PA Department of Education (PDE) License and Enrollment data for Pre-K
- National Establishment Time Series (NETS)
- InfoUSA
- Head Start

Demand:

- U.S. Census Bureau Decennial Census
- U.S. Census Bureau American Community Survey (ACS)
- Longitudinal Employer Household Dynamics (LEHD)



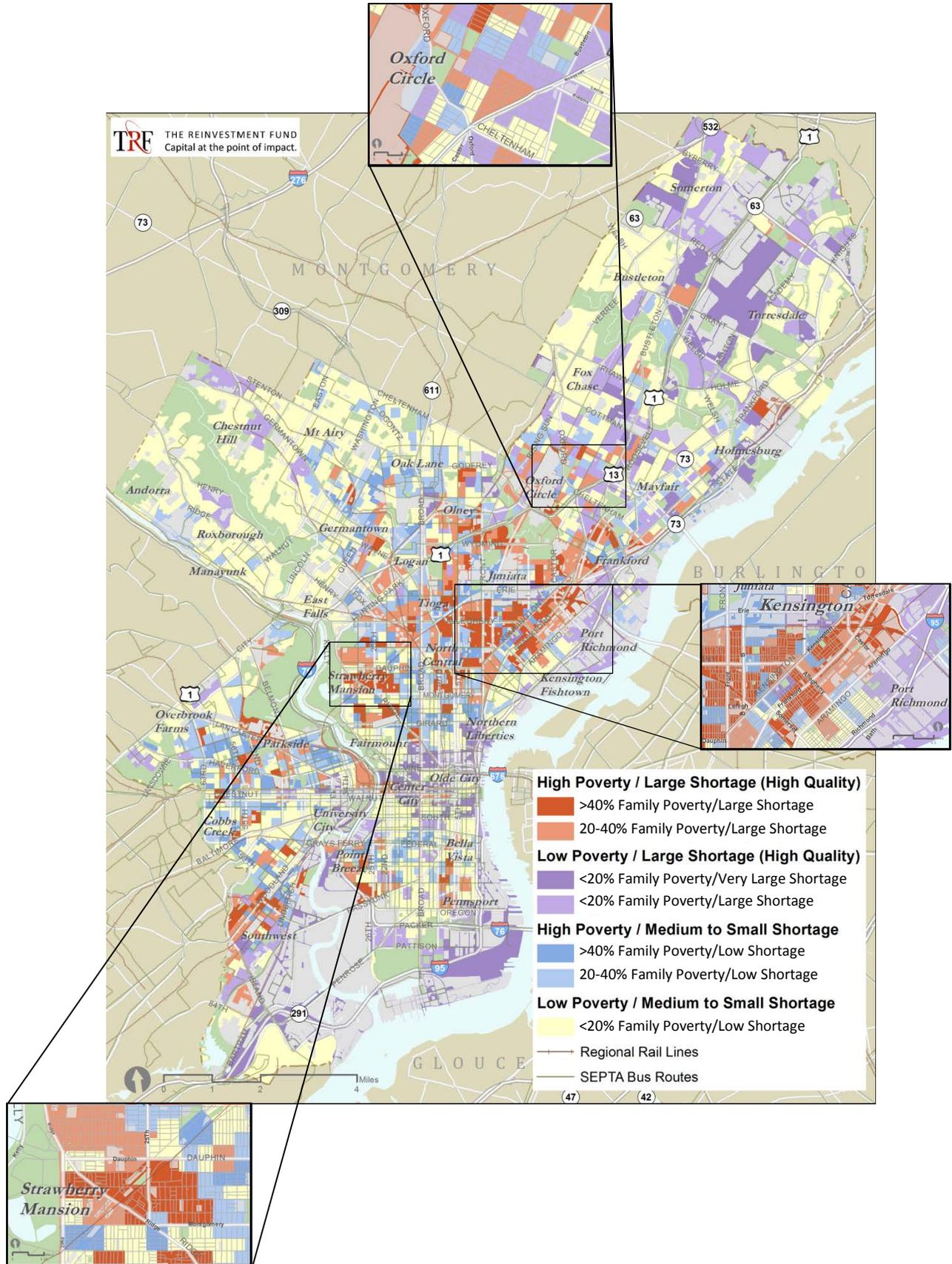
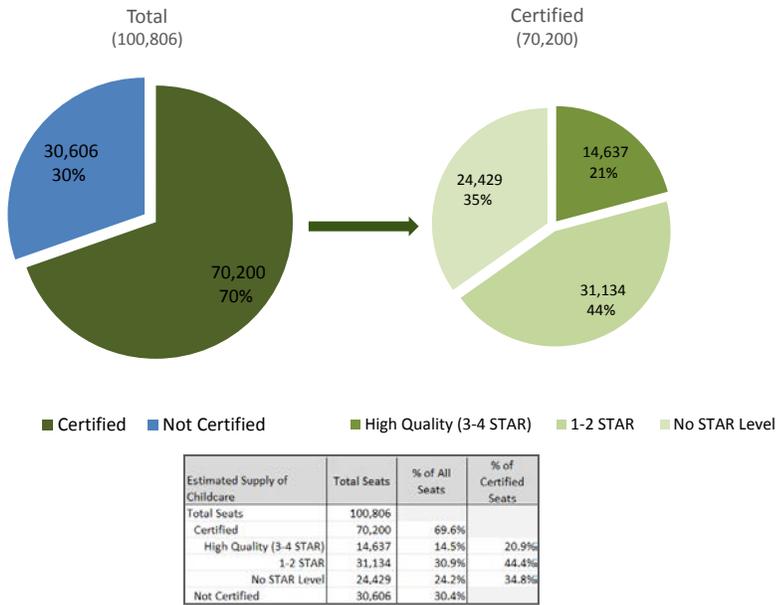


Figure 2: Degree of Absolute Shortage of High Quality Child Care and Level of Poverty

Figure 3: Proportion of child care seats in Philadelphia that are certified and STAR rated



<sup>1</sup> We estimated that 33% of children of working parents in a given block group will seek child care services near their place of work. This estimate was informed by two studies, a report from the U.S. Census Bureau using the Survey of Income and Program Participation, and a report on the child care arrangements of working parents in Cook County Illinois.