

## **2017 Pre-K Map Data Sources and Methodology**

### **Pennsylvania Partnerships for Children**

#### Source

- Population: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates
- Poverty: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates
- Enrollment: PA Department of Education, Division of Data Quality (2016-17 licensed nursery school, public school pre-kindergarten, school district administration)  
PA Departments of Education and Human Services, Office of Child Development and Early Learning (distinct 2016-17 enrollment by pre-kindergarten provider)  
U.S. Department of Health & Human Services, Administration for Children and Families, Office of Head Start and PA Head Start grantees (2016-17 federal preschool Head Start enrollment)  
City of Philadelphia, Mayor's Office of Education (PHLpreK enrollment)
- Accreditation: National Association for the Education of Young Children (7/7/17 accredited locations)  
National Association for Family Child Care (7/7/17 accredited locations)  
Montessori Accreditation (7/7/17 accredited locations)
- Geocoding: <http://www.findlatitudeandlongitude.com> and <https://www.doogal.co.uk/BatchGeocoding.php>
- Map boundary: Pennsylvania Department of Transportation via Pennsylvania Spatial Data Access (2017)

#### Methodology

The file containing the distinct pre-kindergarten enrollment by provider was separated into high-quality (HQ) pre-k enrollment and publicly funded, high-quality (PFHQ) enrollment. In this file, HQ enrollment includes the unduplicated count of children ages 3-4 in HSSAP, PKC and Keystone STARS 3-4. PFHQ enrollment includes the unduplicated count of children ages 3-4 in HSSAP, PKC and children participating in Child Care Works at a Keystone STAR 3-4 physical location. Although this data comes from the same source, the HQ and PFHQ enrollment comes from two different data sets.

All enrollment data was then combined into a single file by program type. Out-of-state and relative/neighbor providers were removed from the data set. Unique identifiers were applied to each provider address. Addresses using a post office box were researched and replaced with the street address of the physical provider location. Latitude and longitude coordinates with a score of 7 or higher were used (i.e. accuracy at the street-level). Coordinates with lower scores were manually researched and corrected based on the physical provider location. If missing, the county of physical provider locations was researched and entered in to the file.

When PFHQ enrollment was higher than the HQ enrollment at a physical location, the PFHQ enrollment was applied to both HQ and PFHQ categories.

When a provider/physical location had no enrollment information available, the enrollment was estimated in HQ and/or PFHQ as:

HSSAP = 18	Center = 20
PKC = 20	Group = 5

Total HQ enrollment was determined for each physical address participating in Head Start, PKC, HSSAP, Keystone STAR 3-4 child care centers and groups, licensed nursery school, public school pre-k, Philadelphia pre-k in STAR 3-4 and/or an OCDEL-recognized accredited program. Totals were adjusted to be sure a distinct count was not duplicated across PKC, HSSAP and child care since the provider locations were listed for each funding stream. The applicable program(s)/funding stream(s) of each provider location were consolidated into a HQ type field.

Total PFHQ enrollment was determined for each physical address participating in Head Start, PKC, HSSAP, Keystone STAR 3-4 centers and groups serving preschool age children in Child Care Works, public school pre-k and Philadelphia pre-k in locations that are Keystone STAR 3-4. Licensed nursery schools not receiving public funds for pre-k were excluded. Totals were adjusted to be sure a distinct count was not duplicated across PKC, HSSAP and Child Care Works in Keystone STARS 3-4 locations since the provider locations were listed for each funding stream. The applicable program(s)/funding stream(s) of each provider location were consolidated into a PFHQ type field.

High-quality pre-k provider locations were imported into ArcGIS for Desktop and added as a map layer by their HQ type. Another layer was created based on PFHQ type.

Using ArcGIS for Desktop, district poverty tables were joined to district boundary layers to determine the eligible population within each district. A spatial join appended HQ and PFHQ enrollment from the provider location layers to the district boundaries to estimate the number of children served and the number of HQ and PFHQ physical locations in each district. New fields were added to the layers to calculate the percent of eligible population enrolled, unmet need and the number of additional classrooms needed. Note: the additional classrooms needed assumes 20 children per classroom and was calculated by dividing the unmet need by 20. It does not take into consideration if the estimated enrollment of current classrooms is full. For example, if a district currently serves 10 children and 4 more children are eligible, the calculation for additional classrooms needed is 1 even though the 4 children could be added to the existing classroom.

All data was imported into ArcGIS Online to create the interactive mapping application.