Expanding Preschool in New York City – Lifting Poor Children or Middling Families?



University of California BERKELEY IHHD DEVELOPMENT

"If we're going to address the inequalities that we face... more than ever in our society, pre-k is one of the answers."

-Mayor Bill de Blasio in Los Angeles, August 2014

Overview - Disparities in Early Learning, Strained Family Budgets

Mayor Bill de Blasio continues to move toward free preschool for all 4 year-olds across New York City. Last fall his team created about 26,000 new full-day slots under the state-funded universal pre-kindergarten (UPK) program situated in community organizations or public schools. About one-third of the city's preschool slots now operate under the UPK banner, managed by the Department of Education. It is but one of four major funding streams that support preschool, including a growing subsector financed by parent fees.

Mr. de Blasio's initiative remains distinct when placed in the national context. Just two states support free and universal pre-k, Georgia and Oklahoma. Most governors and the federal government focus on the task of lifting the early learning of children from low-income families –



seeking to narrow disparities before youngsters enter school relative to peers from middle-class

families. Former mayor Michael R. Bloomberg similarly expanded the count of preschool slots in poor neighborhoods via the state-funded UPK



program and parallel efforts under the Administration for Children's Services (ACS), which includes Head Start centers.¹

Mr. de Blasio now departs from his predecessor by expanding pre-k opportunities in poor, middling, and affluent communities – helping to lower the cost of preschool for families who have not enjoyed public support. Last fall (2014), he allocated about two-fifths of the new pre-k slots to communities where families earn above the city's median household income. An unknown count of these children already attended preschool at 3 or 4 years of age, although at some cost to parents. The mayor's policy advisors promise to open up additional pre-k slots in middle-class and affluent parts of the city this coming fall, 2015.² Yet many 4 year-olds raised in poor families still lack affordable access to preschool, a point on which we elaborate below. The mayor's preschool effort represents tandem policy aims: To (1) narrow early disparities in learning long suffered by many children from low-income families, and (2) cushion the strained budgets of middle-class families through a public entitlement. Since each aim offers a distinct priority,



leading to subsidies for differing families and young children, UPK expansion deserves a robust debate.

While broad entitlements hold appeal in granting services to middle-class and affluent parents, such policies do not necessarily reduce inequalities, such as narrowing sharp disparities in the early learning of young children. We know that high quality pre-k programs can lift and sustain the cognitive growth, language, and pre-literacy skills of children from low-income families. But three independent studies, each tracking large samples of children, find that pre-k does not yield similar benefits for those raised in middle- class or affluent families.³ So, whether investing in a broad pre-k entitlement offers the best use of public dollars remains a pressing question, as well as whether the de Blasio strategy will close inequities in children's learning.

This research brief informs the debate by illuminating which communities and families have benefited thus far from Mr. de Blasio's expansion of pre-k. We situate this growth in the city's wider infrastructure of child-care and preschool centers into which the mayor's new slots are placed. This yields a complete picture of the early education system citywide, informing the question of whether Mr. de Blasio's effort is likely to reduce disparities in children's early learning.

The Preschool Landscape – UPK as One Building Block

This brief unfolds in four sections. We *first* back up to take stock of New York City's four-pronged preschool system – of which state-funded UPK is but one part. Mr. de Blasio has usefully centered civic discussion on this first leg of the policy chair. But his administration has yet to situate its expansion or allied efforts to raise pre-k quality within the wider institutional landscape.

Second, we trace the historical distribution of pre-k slots among neighborhoods, rich to poor. The city pioneered in building child-care centers for poor families, going back more than a century. This focus on lifting disadvantaged children sharpened and received greater public support in the 1960s and 1970s with the growth of Head Start, then with federally funded pre-k efforts.⁴ Meanwhile, economically secure families spurred the growth of fee-supported preschools as



women flocked into the labor force from the 1970s forward. Despite considerable progress in equalizing access over the past quarter-century, we show how middle-class and better-off communities have long enjoyed

richer availability of preschool slots relative to poor parts of the city.

Third, we review the mayor's numbers on the distribution of his new pre-k slots across the city's boroughs and neighborhoods. Mr. de Blasio's team did expand the count of slots in poor communities. In a research brief published in October 2014, our estimates understated this point. We could only access public information on additional slots to which the city's Department of Education had

committed through July 2014. The present brief replaces these estimates with the mayor's actual enrollment data by zip code, released late last year. Still, after taking into account much higher counts of young children in lower-income parts



of the city, we describe a pre-k system that now tilts toward middling and better- off neighborhoods.

Fourth, we examine the extent to which Mr. de Blasio's UPK initiative is widening preschool access for families who previously lacked affordable options, as opposed to simply drawing children out of existing programs. This appears to be an unintended consequence of the mayor's push to expand the UPK piece of the city's larger pre-k system. We heard from CBO directors that a portion of their children moved into free UPK programs in city schools or other nonprofit centers, even families that left fully subsidized programs. We present evidence on the extent of this "substitution" of new for old pre-k slots, drawing from interviews with over 100 preschool directors.

Overall, this brief digs deeper into historical shifts in the supply of pre-k slots among the city's diverse communities. We detail how Mr. de Blasio is expanding the count of pre-k slots in poor neighborhoods, while tilting the city's preschool system toward middling and affluent communities. Discovering how the mayor's program is pulling children out of existing pre-k centers also complicates how to properly gauge long-term benefits for children, since many are not new entrants, but simply shifting into the mayor's program from another local center.

The City's Four-Legged Preschool System

Mr. de Blasio has sparked a robust discussion of but one pillar of the city's vast network of neighborhood preschools. The state-funded UPK program – serving 4 year-old children – is one post that supports the four-legged stool of child care and early education. Table 1 sketches the contours of these sectors –

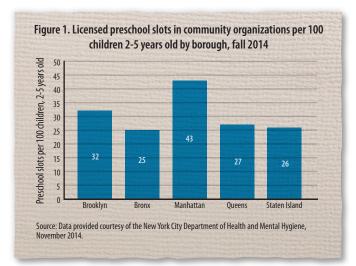
- Just over 99,000 child slots mostly situated in nonprofit community based organizations (CBOs), supported by parent fees or contracting with the city's Administration for Children's Services – that serve children 2 to 5 years of age.
- More than 2,100 seats in Head Start preschools directly funded by the federal government.
- More than 67,000 parents who receive vouchers to support child-care or preschool enrollment, including some school-age children.
- ◆ 53,230 4 year-olds served by the UPK program following the mayor's expansion.



Some double-counting occurs across these subsectors. ACS, for instance, receives a slice of UPK funding to underwrite programs for 4 year-olds. Data remain uneven across subsectors, maintained by three city agencies. We know the count of preschool slots for which CBOs are licensed to operate; but these nonprofits do not report actual enrollments or the attributes of children enrolled unless they are publicly subsidized.

	Licensed slots for children	Children enrolled
SUBSECTOR 1. Counts of preschool slots in CBOs for 2-5 years-old	children,	
Nonprofit centers (largely fee supported) ¹	71,756	
Subsidized centers contracting with Administrat for Children's Services (ACS) ³	tion 24,970	29,878²
Private firms and franchises	2,565	
Total count of slots (1,894 preschool centers)	99,291	
SUBSECTOR 2. Head Start preschools directly supported by the federal administration	2,181	
SUBSECTOR 3. Parents and children supported by child-care vouchers (includes school-age kids)		67,270
SUBSECTOR 4. Universal Prekindergarten (UPK) enrollments, 4 year-olds ⁴		53,230
Sources: Licensing data for the city's individual centers provided b Mental Hygiene (drawn in December 2014), 'Monthly Flash Indica December 2014, http://www.nyc.gov/html/acs/downloads/pdf/ JPK enrollment counts by zip code appear on an untitled spreads ournalists, November 13, 2014. Notes: I The Department of Health and Mental Hygiene refers to these co I Individual children enrolled in 'Contracted Early Learn' centers, s I Includes Head Start preschools funded via the Administration for Double counting of UPK slots may occur where the Department	tors' report published i tatistics/Flash_Decem heet provided by the rr enters as 'private' presci upported by ACS. r Children's Services (A	by ACS ber_2014.pdf); hayor's office to hools. CS).

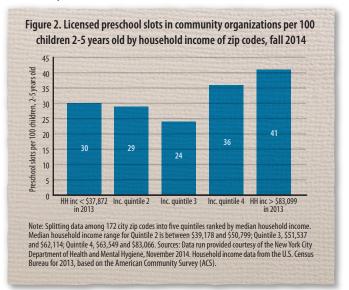
Still, when policy leaders pitch UPK, they often fail to place this program in the wider organizational landscape. For example, if middling and affluent parts of the city already enjoy a strong count of preschool seats, then creating additional UPK slots does not necessarily widen access for these children. It may lower the private cost of preschool faced by better-off parents – but this differs from reducing disparities in children's early learning.



Preschool supply varies among boroughs. Figure 1 illustrates how the supply of preschool slots –

at least those situated in the city's 1,895 CBOs licensed to serve young children – was distributed among boroughs last fall, prior to the mayor's pre-k expansion. Manhattan families benefit from 43 slots for every 100 children, age 2-5 years, compared with just 25 slots per 100 children in the Bronx. These data capture all preschool slots – whether subsidized by government or financed through parental fees – operated by CBOs.

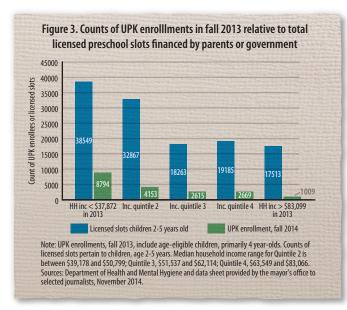
These counts of total slots or 'licensed capacity' do not include UPK slots located in city schools, a count yet to be made public. Numbers on licensed capacity by preschool pertain to available slots for children 2-5 years of age. Ideally we could distinguish between the count of slots and child enrollments, and for 3 and 4 year-olds. Yet no city agency collects or has released the count of 4 year-olds enrolled in all licensed preschools. We do know that 4 year-old children, and then 3 year-olds, make up the bulk of enrollments. And the majority of CBO preschools fill their available slots.⁵



Better-off neighborhoods enjoy richer preschool supply. We can also map the distribution of preschool slots across New York's neighborhoods, rich to poor (Figure 2). This takes into account the wide range of wealth and poverty that operates within each New York borough. Much of the policy discussion pertains to the publicly financed part of the preschool system. But as Mr. de Blasio expands free pre-k in better-off communities, we must consider the current supply of slots filled by children whose families can already afford to express demand in their local markets.

We ranked each of the city's zip codes by the median household income of its residents, then split these 172 zips into five quintiles. This allows us to compare preschool supply for the one-fifth of zips with the lowest incomes, to the highest fifth, as estimated by the Census Bureau for 2013. We see that in the most affluent zip codes (where median household income averages over \$83,099 yearly), families enjoy 41 preschool slots for every 100 children, 2-5 years old. This compares with 30 slots per 100 children in the city's poorest zip codes, where median household income falls below \$37,872.

The true middle class – the third quintile of zip codes in which median household income ranges between \$51,537 and \$62,114 – experiences the lowest per capita supply of preschool slots, just 24 per 100 children. The upper two quintiles enjoy the richest supply of preschool slots.



UPK within the larger preschool system. Figure 3 shows the raw counts of UPK slots for 4 year-olds in Fall 2013 (one year prior to the mayor's expansion) in the context of all preschool slots for 2-5 year-olds. Care must be taken in comparing these counts, given that they apply to children of differing ages. That said, we see that available preschool capacity (predominately populated by 3 and 4 year-olds) ranges far higher than the UPK program per se. The total count of preschool slots is higher in the two lower-income quintiles, compared with the upper three – middling and better-off – quintiles of zip codes. At first glance, this seems to verify the claim made by the mayor's staff that the



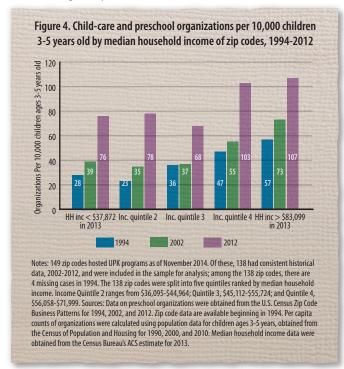
existing system is weighted toward lower-income families, given the rise in subsidized slots going back to the 1960s. Yet raw counts of pre-k slots by zip code fail to take into account much higher child counts in lower-income parts of the city, tied to greater housing density, relative to economically secure and affluent parts of the city. Three times as many 4 year olds (954) on average reside in zips situated in the poorest quintile, relative to the average zip code in the best-off quintile (304 children, age 4), according to Census Bureau estimates for 2013.⁶

Historical Trends in Pre-K Supply

Placing this contemporary distribution of preschool supply in historical context yields additional lessons. It turns out that the spread of preschool opportunity had become more equitable over the past two decades, especially as former mayor Bloomberg targeted fresh UPK dollars from Albany and new federal funding on poor and blue-collar parts of the city.

The 1960s sparked concern over disparities in children's early learning and health, spurring civic action not seen since New York's settlement house movement in the late nineteenth century. The Civil Rights Act of 1966 prompted the creation of Head Start preschools, run from Washington, then rising investment in young children by state and municipal agencies. Welfare reform, approved by President Clinton in 1996, accelerated federal aid for a variety of child-care options, including quality preschool. Every president since Lyndon Johnson has expanded Head Start. President Obama has done the same, along with expanding the Child Development Block Grant and funding via the U.S. Department of Education – sharpening the federal priority of narrowing early developmental gaps before children enter kindergarten.

Equalizing preschool access, 2002-2012. In New York City, then-mayor Bloomberg concurred with Washington's pro-equity priority, focusing new state UPK dollars on poor and working-class neighborhoods, along with shifting the program from ACS to the education department, aiming to improve quality and school readiness. Figure 4 shows the results of these concerted efforts, revealing an escalating count of child-care and preschool organizations in the poorest two-fifths of the city's zip codes.



We see how the count of child-care and preschool organizations climbed from 28 to 76 per 10,000 children, age 3-5 years, in the city's poorest quintile of zips between 1994 and 2012. These data pertain to CBOs that file for nonprofit status with the IRS, information that's then aggregated by the Census Bureau as Zip Code Business Patterns in 1994, 2002, and 2012.⁷ These federal data do not include preschool slots in city schools. Complete historical data were available for 138 city zip codes, not for the complete set of 172 contemporary zips included in Figures 1-3.

While communities in all five quintiles experienced growth in the number of centers, 1994-2002, this expansion accelerated between 2002 and 2012. The count of child-care and preschool organizations doubled in the poorest two quintiles in the 12 years prior to Mr. de Blasio's expansion. We also see that communities in the middle quintile – zips in which the true middle class tend to reside – display the lowest count of children's organizations per capita in 2012. This is consistent with the contemporary pattern seen above in Figure 2. A portion of this historical growth citywide may be attributable to nonprofits that provide after-school care for older children.

Robust organizations historically serve better-off communities. Another key finding stemming from Figure 4 is that the economically best-off quintiles have long enjoyed the strongest count of child-care and preschool programs per capita. Many families living in these zips pay significant portions of their household budgets for preschool. But their vibrant levels of expressed demand have long sustained the highest count of children's organizations.

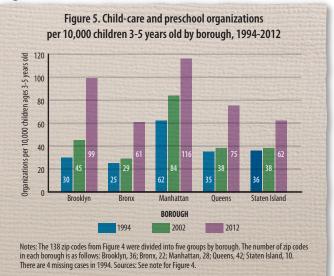
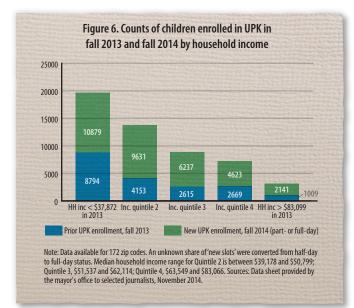


Figure 5 reports these historical patterns by borough. Growth in children's organizations has been especially robust in Brooklyn, perhaps due to gentrification and the rising count of young and better-off families. Targeting new dollars on lowincome neighborhoods during the Bloomberg era may help to explain the doubling of child-care and preschool organizations in the Bronx, a borough that houses a large share of poor families.

Tilting toward Better-off Communities – Where Pre-K Now Grows

Against this organizational landscape, how and where is Mr. de Blasio widening access to preschool? Or, when children move from one preschool to a new UPK slot, which families benefit from free pre-k? Figure 6 displays raw counts of new pre-k slots, added in Fall 2014, on top of existing slots. This focuses solely on the UPK leg of the four-legged preschool system.



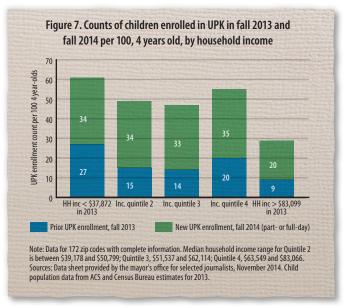
We see that the mayor's team created many seats in low-income neighborhoods that earlier hosted UPK offerings. Our October 2014 analysis reported comparatively high growth rates in middling and well-off parts of the city. Critics validly emphasized that this stemmed in part from a lower baseline number of UPK slots in better-off communities. Figure 6, for instance, shows that Mr. de Blasio boosted pre-k at the highest rate in middle-class zip codes, especially in the third quintile. This



built from a low baseline. The mayor did double the raw count of UPK enrollees in low-income parts of the city.8 He also created almost 13,000 new pre-k slots in zip codes in the upper three quintiles, mainly homes to middleclass or betteroff families.

Taking population density into

account. Raw enrollment counts fail to adjust for greater numbers of 4 year-olds in lower-income communities, where housing density is much higher than in better-off neighborhoods (see note 6 for details). Figure 7 details counts of total UPK slots – old and new – for every 100 children, 4 years of age. After Mr. de Blasio's expansion last fall, the education department now operates 55



UPK slots for every 100 children, age 4, in the upper middle-class fourth quintile – just under the 61 slots per capita in the city's poorest zip-code areas (first quintile).

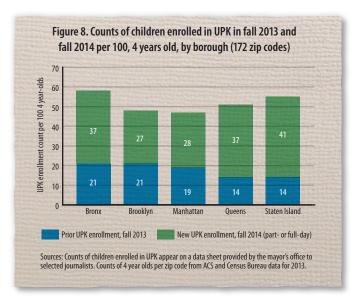
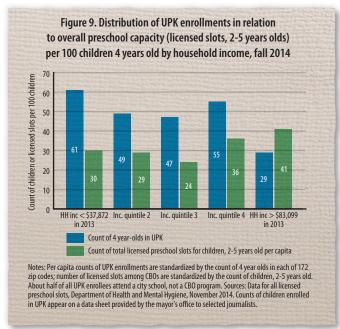


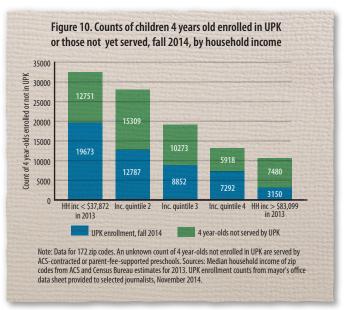
Figure 8 offers similar numbers by borough, reporting new UPK enrollments created last fall, adjusted for the population count of 4 year-olds in each borough. In the Bronx, some 58 children now attend a UPK program for every 100 youngsters, 4 years of age, where median household income equals \$32,568. In better-off Staten Island (median income, \$70,560 in 2013), UPK opportunity is essentially the same at 55 children enrolled for every 100 children, 4 years of age. The recent expansion of UPK did not widen access to preschool for children raised in low-income families, relative to better-off peers.



What's the distributional profile of UPK in relation to the spread of all preschool slots across

the city? Figure 9 pulls forward the distribution of UPK enrollments after the fall 2014 expansion, compared with total licensed capacity in CBOs, again adjusting for differing levels of child population. The overall supply of preschool slots is higher in the upper two quintiles: 41 slots per 100 children, age 4, in the most affluent quintile, compared with 30 seats per 100 in the poorest quintile. The expansion of UPK did not remedy the comparative advantage enjoyed by residents in best-off fourth and fifth quintiles. The UPK program is progressively distributed in terms of lower enrollment rates (29 per 100 children, age 4) in the top quintile.

Many poor children remain to be served. Shifting the city's preschool system toward better-off families could be defended if most low-income parents are able to find an affordable pre-k slot. Ideally, all 3 and 4 year-old children from poor households could access a high quality affordable preschool. This is not yet the case in New York City, according to data reported in Figure 10. We show, for instance, that over 12,000 children, age 4, in the lowest income quintile, remain outside the



UPK program. ACS-funded programs or federal Head Start serve a portion of these children – the exact number of which remains unknown (prompting a freedom-of-information request). And the count of 4 year- olds not yet served by UPK declines as the economic well-being of the community rises, in part because the fee-supported leg of the system remains robust, serving many middling and affluent families.

So, a key question going forward is: How to weigh the urgency of ensuring that all disadvantaged



children can enter an affordable and high-quality pre-k program versus lowering the private cost of preschool for better-off families? One first step would be to tally how many 4 yearolds are served across all four subsectors, and

what unmet need remains in low-income parts of the city.

Responding to market demand? The tilting of pre-k opportunity to middling and better-off communities may also stem from stronger parental demand, along with where affordable space exists to carve out additional classrooms. The mayor's team did consider relative scarcities of preschool slots among neighborhoods, according to officials at the Department of Education. Yet the volume of parent applications and availability of affordable space for new classrooms likely come into play as well. Parents who are more aware of the pre-k initiative, or perhaps those who face limited supply, may be more likely to apply for a new classroom slot. And how the education department responds to uneven market demand will continue to shape which families and children benefit from UPK expansion.

We examined the distribution of family demand among boroughs and found that larger shares of parents applied in boroughs with more robust household incomes. Just over half (51%) of all Staten Island parents with a 4 year-old applied for a new seat, compared with 34% of peers residing in Manhattan.⁹

Overall, city officials talk of how the preschool system is currently weighted toward low-income

families. This is certainly true for the subsidized portion of the system. But we have seen how the entire pre-k infrastructure hosts richer access for young children raised in better-off neighborhoods, when taking into account subsidized and feesupported centers.

Expanding Access or Pulling Children from Existing Preschools?

Rapidly growing preschool slots in one part of the pre-k system will likely affect family demand for seats in the other components. The mayor's team vigorously campaigned last spring to recruit 25,000 additional children into their own UPK program. The expressed policy goal was to expand access – to invite 4 year-olds who would not otherwise enroll in preschool – or pull-in families that confront high fees. The draw of free pre-k likely proved inviting for thousands of parents last fall, but it appears that many of their children would have attended preschool anyway.

One preschool director told us that she lost 43 children, previously served at 3 years of age, due to UPK expansion last fall. The city had called their parents at home, promising a nearby kindergarten slot (when turning 5) if they shifted to a new

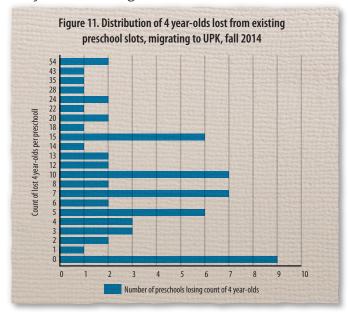


UPK program. This induced migration of families from one organization to another is sometimes called a 'substitution effect.' A parallel example is how the steady growth of charter schools across the city has eroded

enrollments in the city's parochial institutions, leading to a number of school closures.

To gauge the extent of substitution, we surveyed or interviewed a sample of preschool directors who did not receive UPK funding, asking about possible shifts in their enrollments, given rising competition from programs that expanded their count of slots with new UPK funding. We contacted 311 preschool directors (a 15% sample), randomly drawn from equal counts of zip codes distributed across the five income quintiles. Of this sample, 192 agreed to participate in our survey (62% response rate), and 103 reported they had not received UPK funding.

Figure 11 reports the counts of children that preschool directors reported losing to nearby UPK programs. This typically involved families served when their child was 3 years of age, or parents who placed a deposit for a slot, then indicated they were moving to a UPK center.



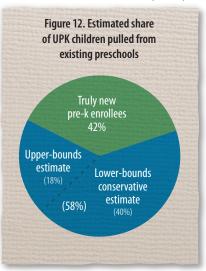
Several preschool directors reported little concern with losing families to UPK. Waiting lists commonly shrank, while demand remained sufficient to fill their classroom seats. Still, the reported loss of children ranged up to 54, and averaged 9.7 children, age 4, who otherwise would have remained enrolled. This represents a loss of 38% of their current enrollment of 4 year-olds.

Based on these survey results we can estimate with 95% confidence that the true loss of 4 yearolds ranges between 8.0 and 11.5 for all preschools that did not receive UPK funding. Extrapolating from this margin of statistical error we estimate that between 10,350 and 14,950 children migrated from existing preschools to UPK-funded slots created under Mr. de Blasio's initiative. This equals between 40% and 58% of children filling the new full-day UPK slots (26,000) last fall (Figure 12). This substitution of new pre-k slots for old slots comes with lower private costs for families that would have otherwise enrolled their child in a fee-supported program. This helps to backstop household budgets for middling and better-off families. But it does not extend access to children who fail to enroll in any pre-k program.

Moving Forward – Midcourse Corrections to Advance Fairness

Mr. de Blasio aims to slow the rate of pre-k expansion in the coming year. This may give his planners time to step back, situate UPK in the city's wider landscape of preschool organizations, and clarify the mayor's priorities. His first-year rush to deliver on his goal resulted in similar counts of seats per capita going to better-off neighborhoods, relative to low-income areas. Meanwhile, over 12,000 children, age 4, raised in the city's poorest parts remain outside the UPK program. If city officials know what fraction of these youngsters are being served by other programs, they are not readily divulging these data.

After acknowledging the historical strength of preschool availability in better- off neighborhoods, it's difficult to understand why public subsidies should further benefit these families. If the mayor aims to lower the private cost of preschool – before ensuring access to all children from lowincome families – simpler policy mechanisms,



like the state's Child and Dependent Care Credit, are available. This resembles President Obama's new plan that would channel direct support to preschools serving families earning less than about \$40,000

yearly, while liberalizing tax credits for middle class and better-off families.

Also unclear is how expanding public support of preschool for better-off families will narrow gaps in early learning that continue to disadvantage poor children.

Midcourse corrections could advance fairness -

- Provide support to pre-k programs in poor and working-class neighborhoods to rent or renovate building space, allowing them to expand classrooms serving 4 year-olds.
- Take steps toward salary parity for CBO-based preschools, relative to what pre-k teachers earn in city schools, to reduce gaps in quality.
 Focus quality-improvement dollars on programs in low-income neighborhoods.
- Move toward a unified pre-k system that serves 3 and 4 year-olds, rather than adding more patches to a colorful yet frayed patchwork of disparate programs. One first step: avoid costly competition for young children, which creates instability for children and parents, and already depletes enrollments in existing programs. Harming the existing infrastructure feels shortsighted.
- Integrate data on preschool capacity and enrollments now maintained by three different city agencies, and make this information available publicly to allow independent studies of the city's progress.

Bruce Fuller and Elise Castillo conducted this analysis, based at the Institute of Human Development, University of California, Berkeley. Thao Nguyen and Allison Thai helped enormously by contributing to the interviews of 103 preschool directors. These pre-k heads spent considerable time discussing the advantages and snags that have surfaced with rapid expansion of UPK. Thanks also go to officials who generously shared data, including those at the Administration for Children's Services and Department of Health and Mental Hygiene. March 2015

NOTES

1 President Obama's current proposal to expand child care and preschool programs limits eligibility to families earning under \$40,000 annually, depending on household size. See: Office of Management and Budget (2015). President's proposed budget for fiscal year, 2015-16. Washington, D.C.

2 "A majority of the seats by far this year were created in lower-income neighborhoods," said Richard Buery, the mayor's policy advisor. "We built our prekindergarten system on top of the infrastructure that already existed. [We will] be going into communities where maybe the real estate costs are higher. We made a promise to the parents of those 4-year-olds too." Statement appears in: Klein, R. (2014). Most pre-k seat added by de Blasio are in poorer communities, city says. *Huffington Post*, November 21.

3 Bassok, D. (2010). Do black and Hispanic children benefit more from preschool? Understanding differences in preschool effects across racial groups. *Child Development, 81*, 1828-1845. Heckman, J., Moon, S., Pinto, R., Savelyev, P., & Yavitz, A. (2010). The rate of return to the High Scope Perry Preschool Program. *Journal of Public Economics, 94*, 114-128. Loeb, S., Bridges, M., Bassok, D., Fuller, B., & Rumberger, R. (2007). How much is too much? The influence of preschool centers on children's cognitive and social development. *Economics of Education Review, 26*, 52-66.

4 For historical details see: Chaudry, A. (2004). Putting children first: *How low-wage working mothers manage child care*. New York: Russell Sage Foundation. Coles, R. (1987). *Dorothy Day: A radical devotion*. New York: Harper & Row. Flippen, A. (2014). Long, slow growth of prekindergarten in New York City. The Upshot, *New York Times*, October 2, http://www.nytimes.com/2014/10/03/upshot/the-long-slow-growth-of-prekindergarten-in-new-york-city.html?_r=0&abt=0002&abg=0.

5 See Chaudry, A., Tarrant, K., & Asher, J. (2005). Rethinking child care: An integrated plan for childhood development in New York City. Administration for Children's Services.

6 Our analysis of ACS/Census Bureau population counts shows that 954 children, 4 years

of age, on average resided in the zip codes falling in the city's poorest fifth, compared with just 304 in wealthiest quintile of zip codes. The number of 4 year-olds that lived in the second, third, and fourth quintiles equaled 802, 562, and 400, respectively.

7 U.S. Census County and ZIP Code Business Patterns, http://www.census.gov/econ/ cbp/download/. The North American Industry Classification System (NAICS) defines the industry of *child day care services* as comprising "establishments primarily engaged in providing day care of infants or children. These establishments generally care for preschool children, but may care for older children when they are not in school and may also offer pre-kindergarten educational programs." U.S. Census Bureau, Industry Statistics Portal; Retrieved from http://www.census.gov/econ/isp/sampler. php?naicscode=624410&naicslevel=6#.

8 Our earlier report also relied on publicly available counts of new UPK slots made available by July 2014. This did not include additional enrollments of 4 year-olds that occurred in the subsequent four months, now reflected in the mayor's office enrollment numbers from which the present brief draws. Earlier growth estimates on partial data appear in: Fuller, B., Castillo, E., Nguyen, T., & Thai, A. (2014). Expanding preschool in New York City: Which communities benefit from gains in supply? Berkeley: Institute of Human Development, University of California.

9 Data on parental applications by borough appear on the Department of Education website: http://schools.nyc.gov/Academics/EarlyChildhood/parentfamilies/ divisionofearlychildhood.htm. Counts of 4 year-olds come from ACS/Census Bureau estimates for 2013. The shares of parents with a 4 year-old that applied for a UPK slot in fall 2014 equaled 38% in the Bronx, 39% in Brooklyn, and 44% in Queens.

10 If we drew 99 additional random samples of preschool directors, the odds are just one in 20 that the loss of children would fall outside the confidence interval of between 8.0 and 11.5 youngsters.

