



# Opportunities Exchange

## BRIDGING THE DATA GAP: Diverse Delivery Requires 21st Century Technology

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### What is Staffed Capacity and Why Does it Matter?

Most states report child care supply by aggregating the total number of children that a facility is licensed to serve. However licensed capacity, which is typically based on such factors as square footage and number of toilets, can be a misleading number. Staffed capacity—the number (and ages) of children a program is currently staffed to serve—is a much more accurate measure of available supply. The licensed capacity of a child care site is typically greater than the staffed capacity; indeed, the difference has grown significantly during the pandemic. Due to staffing shortages many child care centers are operating at levels significantly below their maximum licensed capacity.

Early childhood education (ECE) research, practice and, most recently, the experience of families living in a pandemic, have underscored that care and learning are **inextricably linked**. Yet in the public policy arena preschool and child care are often treated as separate entities. Indeed, the Build Back Better Act, an ambitious plan designed to ensure that millions of American children and families have access to affordable early care and education, allocates separate funding for child care and preschool. Leaders are clear however that successfully scaling ECE hinges on what the field calls diverse delivery—tapping services available in a wide range of locations, including schools, community-based settings, workplaces and private homes. Implementing this important goal will require a fresh look at supply and demand, as well as creation of linked, 21st century data systems that include an online marketplace to enable families to search for, and enroll in, programs that are delivered in diverse settings. Regardless of when, or in what format, the Build Back Better framework is enacted, careful consideration of linked data is essential to attaining scaled early care and education services.

### SILOED FUNDING MEANS SILOED DATA

For decades, the supply of early care and education has been tracked using myriad systems, data bases and software, resulting in the lack of accurate, complete, actionable data. Each funding ‘silo’ has its own system and set of data definitions. Child care licensing databases count the maximum number of children (i.e. slots or seats) a center, school or family child care home is approved to serve, but rarely have data sorted by age (i.e. number of infant seats vs. number of slots for preschoolers) and lack any information on the number of children each site is staffed to serve (full or part-time) or whether available seats are actually filled.

The federal **Head Start** and **Early Head Start** program has more robust data that in addition to the number of funded seats may include enrollment and attendance information—but these numbers are tracked and reported only within the Head Start system and often duplicate data in licensing or state subsidy databases.

Public prekindergarten may be administered at the city, regional or state level and is often provided within public schools, further complicating the data landscape. Each funding source tracks the number of seats they fund, but classroom-specific information (location, enrollment, available seats, and so forth) is often not collected or shared and aggregation is challenging.

In short, child care, prekindergarten and Head Start operate in different worlds, with different data systems, making it impossible to paint a complete picture of how many early care and education establishments or seats are available, in what location, and for which ages of children.



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## UNDERSTANDING CHILD CARE SHORTAGES

While Child Care Resource & Referral (CCR&R) agencies have been collecting licensed child care supply information for years, they have been challenged to report information on regulation-exempt programs in homes, public or private schools and faith-based organizations. Part-day nursery schools, child care co-ops, and myriad other ECE options also populate the ECE landscape and impact supply and demand, yet remain largely uncounted.

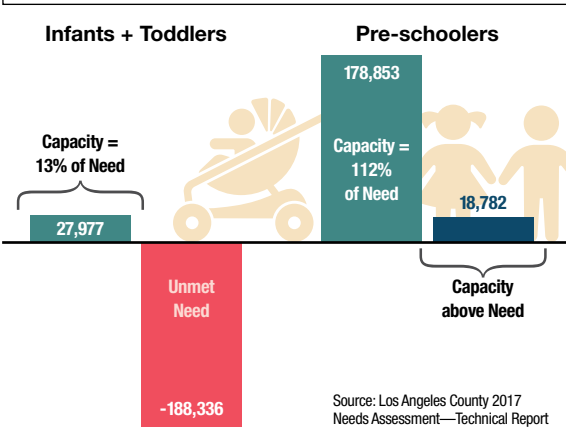
The bottom line is that the pre-pandemic focus on child care deserts coupled with current concerns about further shrinking supply—while well intended—has been based on very shaky data. Indeed, when ECE leaders engage in the laborious process of tracking and aligning all available information on spaces in early care and education programs, regardless of regulatory status, auspice or funding stream, the results often reveal that there is not a shortage of care for preschool-age children (especially four-year olds).

A pre-pandemic (2017) California analysis, [The State of Early Care and Education in Los Angeles County](#), is a case in point. When data on seats in all public and private settings was aggregated and sorted by age, the analysis revealed that the county had capacity to serve 112% of preschool-aged children (in other words, likely supply exceeded likely need) but enough availability to serve only 13% of children under the age of three (see text box at left.)

Given data insufficiencies, accurate age-based information on the supply of early care and education seats is hard to come by. However, a [2018 study conducted by the Center for American Progress](#) raises some red flags. The research team examined licensed child care capacity, sorted by age of child, in nine states. Their analysis revealed that child care scarcity in these states stemmed, in large measure, from a shortage of care for infants and toddlers, not preschool age children. (See text box, at left.)

The supply of child care is typically low in rural areas across the US. Yet communities that have engaged in deeper, age-based analysis often find that supply follows a similar pattern to what is experienced in more densely populated areas. For example, a 2022 analysis of ECE supply conducted by the [South Coast Regional Early Learning Hub](#) in rural Oregon looked at available seats in all settings, including schools, Head Start and community-based child care. The analysis identified child care deserts for children under three years of age in all ten counties in the region. However, only half of the rural counties could be considered child care deserts for children of preschool age—due in large measure to public school prekindergarten services.<sup>1</sup>

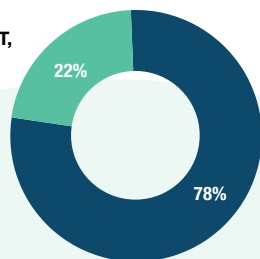
### Supply + Demand of Licensed child centers + Family Child Care Homes in Los Angeles, CA



### Licensed child care supply in a 9 state sample

States: IN, MD, MS, MT, NC, OH, OR, VT, and WV

■ INFANT-TODDLER SLOTS  
■ PRE-SCHOOL SLOTS



Source: Center for American Progress, 2018. Steven Jessen-Howard and others, "Understanding Infant and Toddler Child Care Deserts"

## PARENTS NEED ONLINE SEARCH TOOLS

Siloed data hurts everyone. In a world where virtually everything can be found online, parents seeking to enroll their child in an early childhood program often search multiple on-line systems to find the right fit. Assuming they successfully identify the names of a few potential ECE options, they must then engage in secondary search for more detailed information on program philosophy, quality rating, licensing monitoring reports, available financial assistance, and more. And in the end this whole process could be futile since information on whether any of the potential ECE sites have openings is rarely available on-line. Typically, the only way to check availability is to make a phone call to each possible option—and hope that someone with enrollment information answers the phone or calls back in a timely fashion. Families with more than one child could spend countless hours searching different sites—one for their baby, another for a preschooler, a third for a school-ager—and calling myriad programs to check availability.

Misalignment among supply and demand is a vexing issue, and one that requires precise, up-to-date information. Despite a reported shortage of child care, [many providers do have open seats](#). Indeed, a single provider might have availability for a four year old and also a waiting list for babies. The key is effectively matching an available seat with a child (of the right age, in the right location) and a funding source (public, private or parent fees sufficient to cover the cost of that seat). And to be effective, the match needs to be based on a broad data set that includes every potential seat option and every potential funding source.



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## PROGRAMS NEED A BETTER WAY TO FILL EMPTY SEATS

Data silos also create serious challenges for program operators. Indeed, many center- and home-based ECE programs are not enrolled to staffed capacity—despite seemingly strong demand for child care—in part because they cannot inform parents or potential funders about available seats in an efficient or timely manner. When ECE programs are not **fully enrolled**, long-term sustainability is undermined. It might come as a surprise that the primary financial challenge posed by the COVID pandemic was not the cost of personal protective equipment or investments needed to maintain healthy environments (which were indeed

significant) but the impact of low and unpredictable enrollment and attendance, coupled with staffing shortages that made it difficult (if not impossible) to staff to capacity.

Without real-time information on likely demand and current supply in the broader market, child care program operators can't effectively predict future enrollment and needed staffing. In short, lack of real-time data makes the already unpredictable child care business environment even less predictable—and therefore less sustainable. To date, federal and state American Rescue Plan Act funding has helped

with ECE financial losses in the short-term, however careful attention to enrollment—and accurate and timely data—will be essential to long-term sustainability of the sector.

## Mixed Delivery Early Care and Education

This [video](#) from the Bipartisan Policy Center describes policy solutions for a mixed delivery system that supports a robust child care market and ensures families have access to ECE that works for them.

Without accurate, up-to-date data on available seats in all settings, school districts may use prekindergarten funding to open new classrooms because they are not aware of vacant preschool slots in high-quality community-based centers. If public schools siphon preschool-age children out of child care, these community-based programs won't have the revenue they need to serve infants and toddlers—where demand is greatest—or worse, could be forced to close. In short, the systems are inextricably linked.

## POLICY MAKERS NEED ACCURATE, REAL-TIME DATA

Data silos also hinder effective public policy and can lead to decisions that unintentionally weaken the field. Without comprehensive data on all ECE settings, states cannot accurately allocate resources, establish rates, identify under-resourced communities or address the real needs of children and families. Nor do they have insight into child care supply and demand data that could impact workforce development trends and inform overall economic policy. Accurate data is the cornerstone of good decision-making. If you can't measure something, you can't understand, impact or improve it. And right now, ECE policymakers are essentially flying blind.

## 21ST CENTURY TECHNOLOGY HOLDS PROMISE

The good news is that this problem has a solution. Modern technology can enable electronic marketplaces that include all available seats, sorted by age of child, location, auspice, cultural and linguistic characteristics, and much more. And these marketplaces can include information on seats in public schools, community-based settings, workplaces, public and private schools—anywhere that early care and education is delivered. [Jeffco Families](#), is an electronic marketplace spawned by Colorado's LAUNCH Together effort and supported by a [collaboration](#) of more than 10 community partners. Partners include, among others, public schools, Head Start, the Early Childhood Council, and Developmental Disabilities Council; this wide ranging representation has contributed to project success.

Cross-sector technology marketplaces also create an opportunity to aggregate demand by encouraging all families to seek available seats and enroll via one electronic door. This enables policy leaders to not only track the relationship between supply and demand, but to learn more about where families seeking care live and work, how long it takes to secure the care they need, where and how supply is challenged and much more. The robust [child care availability portal](#) that Texas launched last year, initially to support emergency workers during the pandemic and later expanded to all families, is an excellent example. Child Care Associates has created reporting capabilities within their Fort Worth [Best Place for Kids Child Care Finder](#) to track supply (by age of child) as well as information on the percentage of families able to find a placement, the industries for whom they work, and much more. This robust information empowers local organizations engaged in the Fort Worth whole-community partnership to maximize resources and make smarter policy decisions.

Myriad solutions are possible. In Summit County Colorado, Early Childhood Options, the local CCR&R, works with [LegUp](#) and [Early Learning Ventures](#) to aggregate data from

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provider waiting lists into one electronic marketplace that essentially centralizes the enrollment process. The system also provides real-time data on child care supply, availability and wait lists for each part of this rural county, while also supporting child care businesses with a host of electronic child care management tools. Several communities and states—including the [Virginia Early Childhood Foundation](#) and the Multnomah County's [Preschool for All](#)—are in the process of developing centralized early care and education enrollment systems that will tap availability in public and private settings, supported by state-of-the-art technology.

The secret sauce is harnessing the power of software-as-a-service (SaaS) technology. Modern SaaS systems are designed to accept data from myriad sources, and reach families, ECE providers and policy makers through various cloud-based applications. Unfortunately, most states are not currently tapping the power of SaaS technology. One challenge is that many public databases are maintained in custom-built, legacy technology systems that are expensive to modify. There are several potential solutions. States can 'open' Application Programming Interfaces (APIs) that enable multiple provider-based Child Care Management Software vendors (such as Procure, Brightwheel, Wonderschool, Alliance Core, etc.) to share data with public systems. Alternatively, states can purchase cloud-based 'middleware' designed to link existing technology to a range of SaaS products—both inside and outside government. States can also make the shift to modern SaaS technology via investments in new customized, state-managed tools. Federal funds for child care and prekindergarten can—and should—be used to modify or purchase new software for state-level staff and ECE providers.

Actionable and linked data often requires more than modern technology. In large measure, siloed data stems from the fact that ECE funding is provided by multiple federal, state and local agencies—each with its own set of data definitions, reports and analysis. Building a national [ECE technology ecosystem](#) will require a common framework as well as the capacity to share data across a range of public and private entities. To this end, the early care and education sector should look closely at groundbreaking work pioneered by the national Ed-Fi Alliance—a group of educators, technologists, and thought leaders shaping the future of education technology through a national [Ed-Fi Data Standard](#) and ecosystem of [Ed-Fi Technologies](#). The Ed-Fi community is creating a set of rules for the collection, management, and organization of educational data that allows multiple systems to share their information in a seamless, actionable way. To date, this work has focused on the K-12 public education sector, however, a growing number of states (including DE, IN, MI, MO, ND, NE) are beginning to explore links with public and private early care and education settings.

Forging a new approach to strategic, comprehensive, and linked data is essential. The pandemic has not only focused attention on the need for a strong early care and education system, but also demonstrated myriad ways that the field can use and benefit from technology. Modern data systems with capacity to generate real-time data, support data-driven decisions and enable streamlined program administration should be an early-stage investment in recovery. The time to build these systems is now.

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<sup>1</sup> Personal communication with Sara Stephens, Director, South Coast Regional Early Learning Hub, November 2022.