THE hunt institute

THE HUNT INSTITUTE'S

EARLY CHILDHOOD LEADERSHIP SUMMIT

ISSUE BRIEF

THE SCIENCE OF BRAIN DEVELOPMENT AND EARLY LEARNING

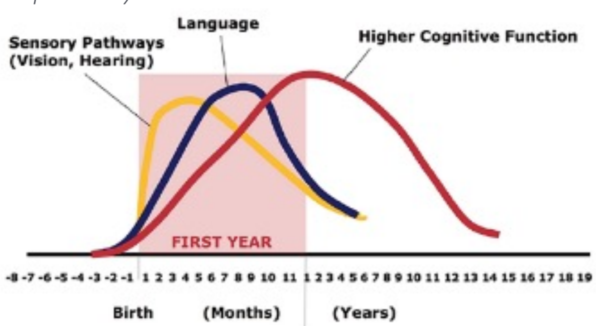
Decades of research on the developing brain provides powerful evidence on the importance early childhood investments play in children's healthy development, forming strong attachments, and setting the foundation for life-long learning and success. A working knowledge of this research is especially critical for policymakers, who have the power to dramatically influence their states' environment for young children and their families.

The Developing Brain

Learning begins in utero, with babies only hours old already able, for example, to distinguish the native language of their mothers. The earliest years of life – particularly the period from prenatal to age three – represent a unique developmental window during which the fundamental architecture of the brain is wired at an astonishing rate of one million new neural connections per second. There is no other period across the lifespan in which the process of creating connections between nerve cells in the brain occurs at this rate. Thus, it is vital to recognize that connections that form in the early years provide either a strong or weak foundation for neurological connections that support later success.

Human Brain Development

Neutral Connections for Different Functions Develop Sequentially



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Interactions are at the Core of Brain Development and Early Learning

Interactions children experience during the early years of development help shape the architecture of the brain. When an infant or young child babbles, gestures, or even cries, and an adult responds appropriately, neural connections are built and strengthened in the child's brain. These skills support further development, communication, and social skills. When caregivers are nurturing and responsive to a child's signals and needs, they provide an environment rich in the opportunity for children to learn and thrive. It is important to recognize this significance to ensure policies are established to support caregivers in creating and maintaining positive interactions with children that will lead to academic and life success.

The Impact of Adverse Early Experiences

Just as receptive the developing brain is to healthy nurturing environments, it is also susceptible to circumstances that threaten this development. Extensive research on Adverse Childhood Experiences (ACE's) and toxic stress show that healthy child development is derailed by excessive or prolonged activation of the stress response systems in the body and brain. Children exposed to frequent or prolonged stress – caused by physical or emotional abuse, or neglect– may experience developmentally toxic effects. Prolonged activation of the body's stress response systems – labeled toxic stress – can disrupt development of the brain's architecture and increase the risk of stress-related disease and cognitive impairment well into adulthood.

Adverse Experiences Can Widen the Early Achievement Gap

A child exposed to toxic stress is more likely to experience disruptions in the development of their executive function skills (i.e., inhibitory control, mental flexibility, and short-term memory), vocabulary, and language processing skills. Often resulting in an increase in challenging behavior, increased need for special education services, and the need for remedial supports.

Even though many states identify the start of formal schooling as kindergarten, as detailed through the importance of early brain development and positive early childhood experiences, achievement gaps can manifest long before children reach the schoolhouse doors.

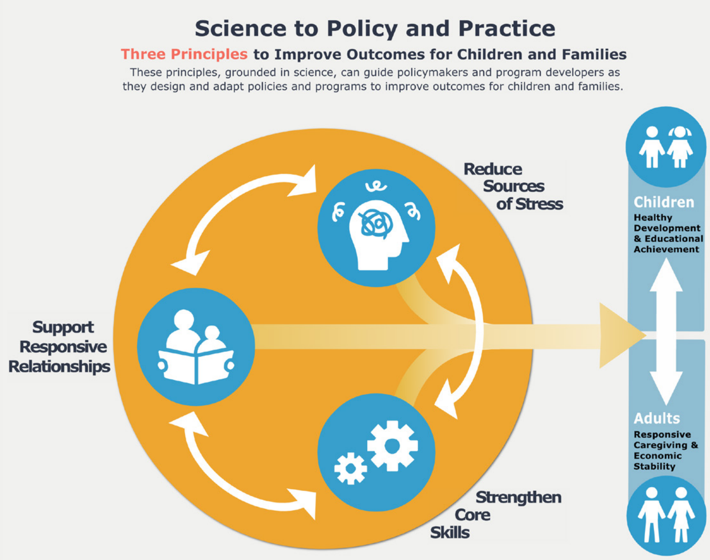
Protecting Children from the Effects of Toxic Stress

Although toxic stress can play a significant role in children's development, it is not the only factor that influences future success. During the early years of development, secure caregiver relationships are at the forefront of mitigating the negative effects of adverse childhood experiences. Positive early interactions and relationships that children form with their caregivers are one of the most important influences on brain development, executive functions, and social-emotional skills.

Family engagement and support through early childhood care and education are particularly important for children and families who face multiple challenges such as poverty, homelessness, and language barriers. Supportive caregivers, even in the face of toxic stress, can help children learn coping skills and resiliency to overcome the threats to development caused by toxic stress. The Center on the Developing Child at Harvard University suggests three science-based principles to implement in an early childhood systems to better protect children from the effects of toxic stress:

- **Support responsive relationships for children and adults** to help buffer children from excessive stress and strengthen the building blocks of resilience.
- **Reduce sources of stress in the lives of children and families** to lessen the toll of adversity and make it easier for adults to provide protective relationships for young children.
- **Strengthen core skills** for planning, adapting, and achieving goals, to support children's development of resiliency and build skills that will help them succeed in school.

Science to Policy and Practice



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THE ECONOMIC CASE FOR EARLY CHILDHOOD INVESTMENT

Investing in young children has demonstrated substantial returns on investment for society, families, and children, making the case for policymakers to expand early childhood supports and funding opportunities. Nobel Prize-winning economist, Dr. James Heckman, has been studying the economic impact of quality early childhood programs. As detailed below, conclusions have been drawn about the multifaceted positive impact of quality early childhood programs.

For every dollar spent on quality early childhood education programs for children that are disadvantaged, taxpayers can expect a return on investment of at least 13 percent.

Contemporary understanding of a return on investment includes nurturing productive citizens (reduction in incarceration, and increased employment and tax-paying ability), improved health outcomes (improved healthy behaviors and increased health expenditure due to higher income), and reduced need for social services (reduction in retention, special education, and welfare supports).

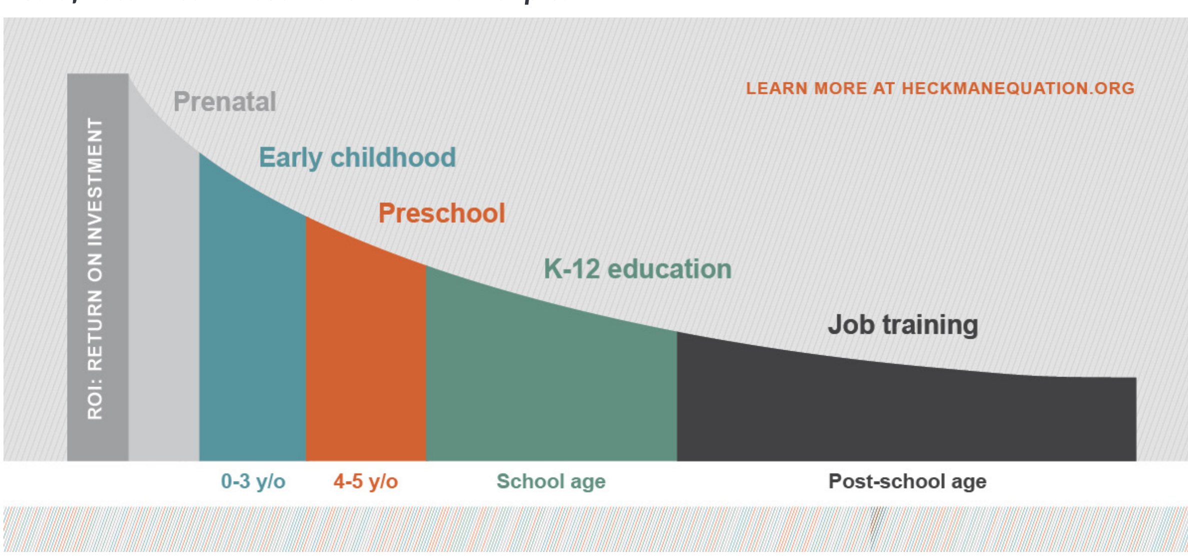
Children participating in the landmark Perry Preschool Project, on average:

- reported higher graduation rates,
- lower school suspension rates,
- reduced criminal activity,
- higher full-time employment,
- had higher earnings as a result of improved home environments.

Clearly, investing in the learning and growth of young children is vital for economic development. Quality early childhood education has been proven to contribute to many short- and long-term benefits for children, including preparing them to be productive members of the future workforce.

Business leaders depend on a skilled workforce to support today's economy. Gains from quality early education extend far beyond childhood and foundational skills necessary for the workforce such as problem-solving, decision-making skills, and collaboration, are developed during early childhood. Early childhood not only yields better outcomes for young children but also can save taxpayers money and ensure future generations are prepared to enter the workforce.

Rate of return to investment in human capital



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Impact on the Business Sector

Nationwide, inadequate infant toddler care costs working parents an estimated $78 billion a year in lost income, costs businesses more than $23 billion a year in lost productivity, and costs taxpayers $21 billion a year in lower income tax and sales tax revenue, costing Americans a total of $122 billion annually. Furthermore, when child care and schools closed during the pandemic, roughly $700 billion was lost in revenue and productivity, equivalent to about 3.5 percent of the national gross domestic product (GDP).

Parent Participation in the Workforce

In the United States, nearly 15 million children under age 6 have working parents that need weekly child care. Child care is critical not only in providing families the option to return/enter the workforce, but also contributes to family members maintaining their jobs and work-life. Research has shown that inadequate child care negatively impacts family income, business profitability and productivity, state revenue and the overall economy.

During the COVID-19 pandemic, child care disruptions threatened families' ability to participate in the workforce. Specifically, more than one in three women caregivers, according to the RAPID-EC survey, were forced to leave the workforce or reduce their work hours, even though most could not afford to do so. While progress has been made to mitigate the effects of the pandemic on women's workforce participation, as of November 2022, there are still 1.8 million women who are missing from the work force since 2020.

STATE OF THE CHILD CARE INDUSTRY

As stated above, child care plays a critical role in both the economic prosperity of states, and in children's healthy development. Child care can occur in a variety of settings; while naming conventions differ slightly across states, distinct settings include:

- **Family, Friend, and Neighbor (FFN)** care occurs in the caregiver's home and is typically unlicensed. This setting offers flexibility in hours, is less expensive, and relies on individuals' social networks to provide care (including relatives, friends, neighbors, or nannies).

- **Family Child Care (FCC)** occurs in caregiver's home, with one to two providers looking after a small group of mixed-age children. These settings often reflect families' cultural and linguistic background and offer care at non-traditional hours.

- **Child Care Centers** operate out of commercial buildings, and therefore enroll a larger number of children. Centers group children by age, providing a classroom-like environment, and often have the most regulations.

- **Head Start** is a federally funded, community-based program serving infants, toddlers, and preschool-aged children from low-income families.

- **Public Preschool** is typically offered within school districts, nonprofit- or faith-based organizations, or child care centers. These programs are only open to three- and four-year-old children and focus on school readiness.

States have increasingly supported the implementation of a mixed delivery systems, which provides state funding to a diverse set of early childhood settings in order to ensure accessible, high-quality care options for families. A mixed delivery system capitalizes on the expertise of providers and existing infrastructure, making it both a cost-effective and sustainable method to deliver high-quality care to all children. Mixed delivery systems also ensure continuity of care and promote family choice, allowing parents to decide what early childhood setting is best for their child and family.

Child Care Affordability

Additionally, families struggle to find affordable child care for young children. In a licensed child care center, the average estimated monthly cost for a preschool-aged child is $904. For an infant, the cost of care rises to $1,324, largely due to smaller group sizes and higher adult-to-child ratios required for infants and toddlers. With the high expense of child care, many families experience financial instability, and often find it more cost effective to leave the workforce rather than pay for child care.

Child care subsidies can mitigate issues of affordability. Funded by state and federal dollars, child care subsidies provide eligible low-income families (as defined by the state) with direct financial support for licensed center- or home-based child care expenses. In a recent survey by the Morning Consult, data indicated 73 percent of respondents support public policies designed to help families afford the cost of child care. Child care subsidies can also encourage greater workforce participation and economic growth, showcasing an average state economic growth increases $3.80 per dollar of additional federal spending on Subsidized Child Care Assistance Programs.

73%

Survey Respondents Support Public Policies Designed to Help Families Afford the Cost of Child Care

Source

Programs that make child care affordable not only help support workforce and economic growth, but also encourage families to seek the best care possible for their children. Families given the financial support needed to access high-quality child care are able to place their children in environments conducive to healthy development and learning. Research shows that high-quality child care can mitigate a variety of disparities young children may face, improving both their short- and long-term outcomes.

Child Care Quality

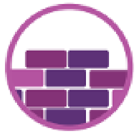
In addition to access and affordability, experts recognize that high-quality early childhood experiences are essential to achieving the short- and long-term benefits for children and families. Although the definition of quality varies by states and programs, elements are common across all definitions: physical environment, staff qualifications, interactions, developmentally and culturally appropriate curriculum, professional development, and program evaluation. States often define and measure child care quality through a Quality Rating and Improvement System (QRIS). While these programs are not typically mandatory, participating providers may receive additional resources or financial incentives; public QRIS data also allow parents to make informed decisions when selecting child care. Additionally, the National Institute of Early Education Research (NIEER) provides quality ratings for all state-funded preschool programs in their annual State of Preschool Yearbook.

EARLY CHILDHOOD SYSTEMS GOVERNANCE

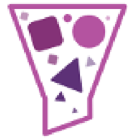
Early childhood governance refers to a state's organizational structure and its placement of authority and accountability for program, policy, financing, and implementation decisions for publicly funded early care and education for children from birth to age five.

Increasingly, states have sought to develop new governance structures that consolidate authority and oversight of programs and services into one office. Current systems of early learning governance are typically dispersed through multiple agencies and departments, often causing suboptimal messaging, effectiveness, and access by families.

State leaders and policymakers can help align agency mandates and goals and facilitate effective intergovernmental cooperation to increase and streamline quality, access, and delivery of early childhood services.



CREATION
of a dedicated early childhood agency.



CONSOLIDATION
of existing programs and divisions into one state agency.

COLLABORATION
and **COORDINATION**
across different agencies.

Source

Three approaches to early childhood governance categorize the nuanced and complicated issue of existing early childhood governance structures:

01. Creation: A new executive branch agency or department within an agency is created to have the authority and accountability for the early learning system.
02. Consolidation: Places authority and accountability for the early childhood system in one executive branch agency for development, implementation and oversight of multiple early learning programs and services.
03. Coordination: Places authority and accountability for early learning programs and services across multiple public agencies through a coordinated approach. This can be achieved in two ways:
    a. Peer agency coordination
    b. Coordination through Governor's Office

Within each of approach to governance, there is the opportunity for greater or lesser decentralization, empowering local communities or regions to initiate, implement, and monitor efforts. There is also the opportunity for states to support public-private partnerships, a mixed-delivery system, and flexibility to utilize partners to support oversight. Most importantly, the variety of governance structures provides the opportunity for each state to identify the approach best suited for their state's needs, children, and families.

Examples of state approaches to early childhood governance include:

Connecticut	The Connecticut Office of Early Childhood was created to improve the delivery of early childhood services for children in Connecticut. It's a distinct, cabinet-level agency, incorporating early childhood programs previously from the Departments of Education, Social Services, Board of Regents, Developmental Services, and Public Health.Governor Dannel P. Malloy signed Public Act 14-39 establishing the Office of Early Childhood on May 28, 2014.
Missouri	In January 2021, Governor Parson announced the consolidation of Missouri's key interagency early childhood programs into a single Office of Childhood. This consolidation integrates early learning, afterschool, home visiting, and child care into one office, housed in the state's Department of Elementary and Secondary Education. The Hunt Institute, along with other partners, came together to develop recommendations for ongoing engagement with the Office of Childhood in an effort to ensure that the needs of the state's early and after care and education stakeholders are incorporated meaningfully within its decision-making processes.
Delaware	Delaware is in the process of consolidating a number of programs (including child care and early intervention services) into the Office of Early Learning at the Department of Education. Created in 2020, this new structure and consolidation is intended to improve efficiency and promote the alignment of eligibility, monitoring, and quality improvements. The Hunt Institute facilitated an Early Childhood Advisory Committee, chaired by Lt. Governor Bethany Hall-Long, who outlined 12 key actions that will provide the Office of Early Learning the strong footing required to continue strengthening Delaware in measures of program access and quality, child well-being, and educational attainment.
New Mexico	Governor Michelle Lujan Grisham, on March 14, 2019, signed the bill that created a consolidated children's agency, the New Mexico Early Childhood Education and Care Department (ECECD) to house and oversee programs for young children previously spread across multiple agencies. These programs include the Child and Adult Care Food Program, Child Care Assistance, Child Care Regulatory and Oversight, Families FIRST (Perinatal Case Management), Family Infant Toddler (FIT) Program (Individuals with Disabilities Education Act Part C), Head Start State Collaboration Office, Home Visiting, and New Mexico PreK (public school and community-based). The Hunt Institute facilitated a Transition Committee which was created to identify key priorities to support the Department's successful launch and initial 18-months of operation.

FINANCING THE EARLY CHILDHOOD SYSTEM

Financing early childhood services typically includes the blending or braiding of federal, state, and private funding. Funding for early childhood care and education is available to states through various federally funded programs, including the Child Care Development Block Grant (CCDBG), the Every Student Succeeds Act (ESSA), and Head Start. Federal dollars typically flow to the state through a designated state agency administering federal early childhood programs such as the Subsidized Child Care Assistance program. In other cases, federal dollars may pass directly to local providers of early childhood services, often seen in programs such as Head Start.

Many states have championed innovative funding streams to supplement the support and expansion of early childhood programs, such as lotteries, taxes, fees, tobacco settlements, children's trust funds, and public-private partnerships. Below are examples of the many financing options states have used to support young children and families.

General Fund Appropriations	States often use **general revenue funds** to match federal funding, as is required for the Child Care and Development Block Grant (CCDBG), or as a needed funding base to draw down federal funds. General revenue may also be used to go beyond required matching or Maintenance-of-Effort requirements in early childhood. Maine, Oklahoma, Texas, and Wisconsin, among others, use state appropriations for their state-sponsored pre-kindergarten programs.
Lotteries	States utilize **lotteries** as a popular way to fund education. Georgia has consistently used lottery proceeds to fund a universal preschool program.
Taxes	**Sales Taxes:** Several states have dedicated a portion of sales tax income to fund initiatives or programs for early care and education systems. South Carolina established preschool for at-risk four-year-old children via a one-cent increase in the state's sales tax in 1984. **Sin Taxes**: States also use taxes on goods considered either physically or morally harmful (such as alcohol, tobacco, and gambling) which generally do not require ongoing legislative approval. Colorado voters passed a tax on tobacco and vaping products in 2020 which is used, in part, to expand the state funded pre-kindergarten program. Virginia and Nevada use marijuana proceeds for early childhood education.

Tax Credits	A variety of tax credits exist to support early childhood education, including personal income tax credits, business income tax credits, and investment and incentive tax credits. **Personal income tax credits** are most often used for early childhood: Twenty-five states have a dependent care tax credit to help parents with the cost of child care. Louisiana established a School-Readiness Child Care Expense tax credit for taxpayers with children under the age of six who attend a child care facility that participates in the state's Quality Rating Improvement System (QRIS). **Business income tax credits** are also available to support the early childhood system: Maine established tax credits for providers who spend funds to significantly improve the quality of care. States also utilize **investment or incentive tax credits**: The Oregon Child Care Investment tax credit was designed as an investment strategy that uses tax credits to generate private sector contributions to child care. The Oregon credits are marketed and sold to an investor. Invested funds are then drawn into a single pool that is used to help fund the child care industry. Eighteen states created an employer child care tax credit or employer tax incentive for child care that incentivizes employers to build child care supports for their employees.
Gambling or Related Fees	States have designated funds from gambling opportunities for early childhood: Louisiana's 2021 legislation dedicates 20 percent of **sports betting revenue** to early childhood education. Missouri uses a portion of **riverboat gambling fees** to fund early care and education services. Missouri considers these fees levied on gamblers and not gambling proceeds.
Tobacco Settlement Funds	The **Tobacco Master Settlement Agreement** was entered in November 1998. Several states use a portion of the state's share of the tobacco settlement to fund early care and education. Kentucky allotted 25 percent of its settlement, or $56 million over two years, in 2000, and continues to use tobacco settlement funds to support early learning.
Children's Trust Fund	**Children's Trust Funds** are used for child abuse and neglect prevention. However, states can also use these funds to support the overall early childhood system. The Kansas Children's Cabinet and Trust Fund administers private funds from the Tobacco Master Settlement Agreement to early childhood programs focused on child and family well-being. Maryland collects gambling fees that go into the Maryland Education Trust Fund to support pre-kindergarten programs as well as the K–12 system.
Public- Private Strategies	**Private resources** and expertise can be leveraged in many ways to increase the quality and availability of programs. Hawaii leveraged private resources with state and federal dollars to fund Learning to Grow, which provides statewide education outreach to families and license-exempt child care providers to support children. Minnesota raised $20 million in private funding to learn about and plan ways to improve its early education system to set the foundation.

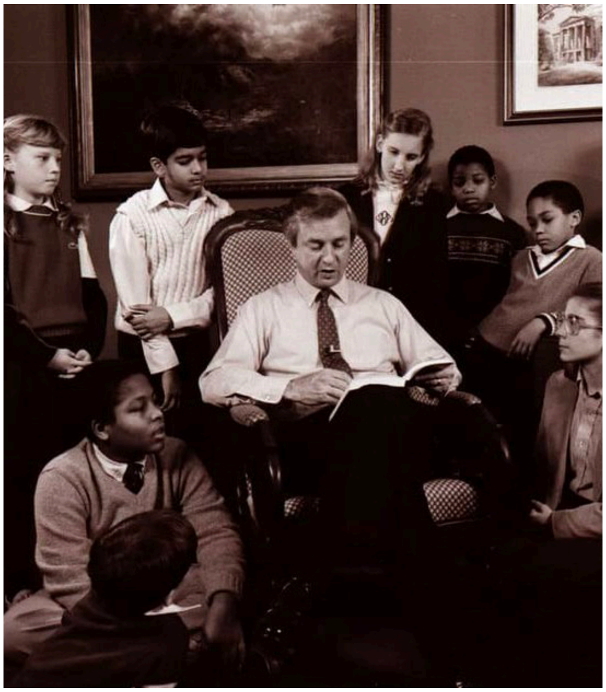
LOOKING AHEAD

It is the hope and intent that the Early Childhood Leadership Summit provides participants with the knowledge and resources to support early childhood policy goals, drive change to improve early childhood systems within their sphere of influence and to serve as a starting point for collaboration among fellow participants across state teams and the country.

Decades of research have demonstrated that the first five years of a child's life represent a crucial period of growth, and that children's experiences and opportunities during this five-year window serve as the foundation for future learning, behavior, and health. While a child's genes provide a "blueprint" for future brain development, the exact trajectory of a child's development – their unique brain architecture and developmental path – depends on both nature and the quality of their early childhood environments and experiences. Investing in early experiences of young children is vital to their development and to economic success. We encourage you to continue to reflect on the Summit content, reference the resources, and unpack your state's challenges and opportunities. Your roles are critical in shaping the future of early childhood investments, policies, and systems within your states.

If you would like to learn more about your state's growth and impact in early learning, please visit here.

Website goes live at the ECL Summit on 9/4.



Established in 2001, The Hunt Institute honors the legacy of James B. Hunt, Jr., the former governor of North Carolina who distinguished himself as an ardent champion of education.

The Hunt Institute brings together people and resources to inspire and inform elected officials and policymakers about key issues in education, resulting in visionary leaders who are prepared to take strategic action for greater educational outcomes and student success.

In 2016, The Hunt Institute became an independent, nonprofit entity and joined forces with Duke University's Sanford School of Public Policy to pursue research, educational partnerships, and events related to improving education policy.

Learn more at www.hunt-institute.org.

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4000 Centregreen Way | Suite 301 |
Cary, NC 27513 | 984-377-5200