

Q1 Please provide your contact information below.

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Q2 Please describe your company or organizations overall goals and mission.

The Learning Disabilities Association of Western New York (LDA of WNY) was founded in 1965 as a parent support group and has grown into a participant led program and service provider for children and adults with learning and/or developmental disabilities. Today LDA of WNY provides a wide range of vocational, residential, educational, service coordination, family support, and advocacy-based services to help more than 1,200 individuals and families annually. Its mission is to provide high-quality individualized, comprehensive, and innovative services, which support, educate, and empower all individuals with learning and/or developmental disabilities.

Over the years, LDA has observed that many of the individuals in need of our services report that they were exposed to lead as a young child. In many cases this lead exposure had a profound effect on their ability to learn in school, find employment, and support themselves as an adult.

In October of 2017 LDA of WNY began an innovative program called LEAD716 which works to minimize the effects of lead on learning in preschool children in WNY so children who have been diagnosed with elevated lead can go on to live healthier, more successful lives.

Q3 Please indicate which category your organization falls under. **Community Based Organization**

Q4 Innovation Executive Summary. Please describe the innovation, and how it addresses the social determinants of health. Please identify how the innovation addresses the 6 innovation criteria (i.e. ROI, scalability, feasibility, evidence based support for innovation, relevance to the Medicaid population and speed to market).

Summary:

LEAD716 is innovative as it provides early intervention services to children based solely on their diagnosis of elevated lead. Children in New York are typically tested for lead at their one- and two-year-old well visits with their pediatrician. If a child is found to have elevated lead, the local Department of Health is notified and, if above a certain level, the health department responds to assist the child and family and identify and remediate the source of the exposure and the effects on the child's health. The child is not, however, necessarily automatically eligible for early intervention services to address the effects of lead on their brain development.

When it comes to mitigating the effects of lead on learning, legislation in the U.S. has not kept pace with brain research – and the ongoing cost to children and society is enormous. Very young children are especially vulnerable to the devastating effects of lead, which wreaks havoc on the brain and nervous system. Research shows that even low levels of lead can lower a child's IQ and cause learning disabilities, speech and hearing problems, as well as significant behavior and attention issues. Without early educational intervention, the damage can be permanent.

According to Harvard's Center on the Developing Child, in the first few years of life, more than one million new neural connections are formed every second. Of course, children and adults continue to learn throughout their lives, but when it comes to brain development – the architecture that supports all future learning – the majority of this occurs before children ever step foot in kindergarten.

In April of this year, The New York Times ran a story, "Flint School Children to Be Screened for Effects of Lead After Agreement." It was reported that an agreement had been reached allowing school children in Flint, Michigan to receive screening and in-depth health assessments to measure the effects of lead on their ability to learn. Michigan also expanded access to Head Start programs to ensure children affected by lead could be enrolled.

Relatedly, here in New York, the recently-passed budget authorizes schools throughout the state to have access to records of children's blood lead levels (BLLs). This will enable schools to monitor the educational progress of children with a history of elevated BLLs and improve their access to critically-needed services. Allowing schools access to BLLs in accordance with Centers for Disease Control (CDC) recommendations has long been a goal of child-advocates.

These recent developments in Michigan and New York are steps in the right direction for kids in kindergarten through grade 12 (K-12), as lead can have a profound impact on a child's ability to learn and behave in school. But if we really want to make progress addressing the impact of lead on a child's development, we should consider what they are doing in Illinois.

In November, The Legal Council for Health Justice in Chicago was awarded a grant to fund a pilot program dedicated to breaking systemic barriers to Early Intervention (EI) services among lead-affected children, ages 0-3. If successful, Illinois will be the first state in the nation to launch a comprehensive system of eligibility and access to these developmental services and supports for young children exposed to toxic levels of lead.

The federal special education law, the Individuals with Disabilities Education Act (IDEA), seeks to ensure children with disabilities, ages 3 to 21, receive a free appropriate public education. Part C of IDEA covers infants and toddlers from birth to age three in need of services. The federal government allows states considerable discretion in establishing Part C eligibility, and as a result, many children who are at high risk of developmental delays due to lead exposure in New York, and many other states in the country, are deemed ineligible.

According to the CDC, research demonstrates that children with developmental delays or at high risk for developmental delays benefit most from interventions that start at an early age.

Some argue that providing early intervention services to children at risk of developmental delay is too costly. However, research shows that investments in early intervention and high-quality childcare provide a huge return on investment and would actually save money in the long run.

Lead effectively changes the overall trajectory of a child's life. Without early intervention, lead exposed children are more likely to perform poorly in school, require K-12 special education services, drop out of high school, and perhaps even more likely get involved in the criminal justice system. Children who are lead poisoned are seven times more likely to drop out of school and six times more likely to become involved in the juvenile justice system. (Childhood Exposure to Lead: A Common Cause of School Failure." Needleman HL Phi Delta Kappan, September, 1992.) Early intervention can enable children to be more successful in school and thus lead more successful lives – all while saving taxpayer dollars.

According to Harvard's Center on the Developing Child, "It is easier and less costly to form strong brain circuits during the early years than it is to intervene or 'fix' them later."

This is where LEAD716 comes in.

Description of Innovation:

LEAD716 provides early intervention services to children who have been exposed to lead when they are young and their brains are still in a period of rapid development and plasticity – while the critical early architecture of the brain is being built. Our program provides ongoing one-on-one tutoring with lead-affected children. Tutors work with children on brain-building activities that work to build new

neural pathways and compensate for the damage from lead exposure.

How LEAD716 addresses the 6 innovation criteria:

1. Potential Return on Investment – Childhood lead poisoning results in an average loss of lifetime earnings of \$723,000 per child. (Centers for Disease Control and Prevention, National Childhood Lead Poisoning Surveillance Data. “Blood Lead Levels in Children Aged 1-5 Years – United States 1990-2010,” Morbidity and Mortality Weekly Report, April 5, 2013; 62 (13); 245-248.) Investments in early intervention, high-quality childcare and Head Start programs have all been shown to improve outcomes for children who receive services. Children who have been exposed to lead, arguably, are in greatest need of such services, however, are not always eligible based on current criteria. Investments in lead poisoning prevention efforts have been shown to yield a return of \$17 - \$221 or a net savings of \$181-269 billion. (Gould, E. “Childhood lead poisoning: Conservative estimates of the social and economic benefits of lead hazard control.” Environmental Health Perspectives 117: 1162-1167, July 2009.) Savings are seen in special education costs, reductions in crime and delinquency as well as increased lifetime earnings.
 2. Scalability – The LEAD716 program could be easily implemented and expanded to a larger pilot program throughout New York State and the U.S. Local departments of health are already intervening to address the health of children diagnosed with elevated lead and could easily refer children to programs designed to mitigate the effects of lead on learning.
 3. Feasibility – The LEAD716 program has been able to identify and enroll children in need of services. Children are assigned an early education professional to work with them and their family to increase opportunities for learning and enrichment, in an effort to compensate for the effects of lead.
 4. Evidence-based support for innovation – Although no other program is specifically designed to promote the brain development of children exposed to lead, early intervention such as that provided by the LEAD716 program follows the same premise as early intervention provided to children with developmental delays due to other causes. Science shows the plasticity of the young child’s brain benefits from enrichment and stimulation.
 5. Relevance to the Medicaid Population – Overwhelmingly, children who are affected by lead, live at or below the poverty line in low-income or older housing.
 6. Speed to Market (how quickly could the strategy be launched) – The strategy to mitigate the effects of lead on the brain development of young children could be launched immediately. Depending on the investment, the program could provide services to all children diagnosed with elevated lead, or could be focused on children diagnosed at or above a certain level.
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Q5 Was your innovation implemented? If so, please explain when, the number of people impacted, and the results.

Yes (please specify when and the estimated number of people impacted):

The LEAD716 program was initiated in October 2017. Our current funding aims to provide services to 90-120 children in Western New York annually. Referral systems have been established with the Erie and Niagara County Departments of Health and LEAD716 is currently working to serve over 70 children in Western New York and their families. Over the last nine months we have introduced the LEAD716 program to numerous organizations serving children in Western New York such as: the United Way Birth to Eight Coalition, Buffalo Pediatric Society, Erie County Early Intervention Service Coordination, Healthy Moms, Healthy Babies Coalition, the Buffalo Public Schools Family and Child Engagement Collaboration, Early Childhood Development Center, among others. Through a partnership with Help Me Grow of Western New York LEAD716 is providing the Ages and Stages Questionnaire to screen and monitor children participating in our program. Through the Ages and Stages Questionnaire we are able to identify potential developmental delays so that referrals and services can be obtained and the child can be helped as early as possible. Additionally LEAD716 conducts numerous outreach events on a regular basis in an effort to increase enrollment in the program and inform the community of lead poisoning prevention methods. Since the LEAD716 began approximately nine months ago, it is estimated the program has reached at least 4000-5000 families with information about the LEAD716 program and how to prevent lead poisoning in children.

Q6 Please identify the SDH Domain that your innovation addresses. (Select all that apply.)

- Education,**
- Social and Community Context**
- Health and Health Care**
- Neighborhood and Environment**
- Economic Stability**

Q7 I give the Department of Health the right to share the information submitted in this application publicly (for example: on the DOH website). I understand that there is no monetary reward/reimbursement for my submission or for attending the summit should my innovation be selected.

I consent to have my innovation shared

