

National Geospatial Advisory Committee

Geospatial Technology and Information Use Case:

IMPROVING FOSTER CARE OUTCOMES

Introduction

Child welfare systems in much of the country have been overburdened during the last decade. There has been an increase in caseworker attrition rates, lowered foster parent retention rates, and worsened outcomes for children and families in many states. Geospatial data and analyses, coupled with machine learning statistical methods, have great potential to improve decisions and outcomes for children and families. Oregon's Department of Human Services (DHS) presents a good use case on this topic.

Benefits of Geospatial Data

Oregon's DHS is using geospatial data, technology, and analyses, coupled with machine learning statistical methods, aimed at making dramatic improvements to their child welfare system, starting with foster care. Improving client demographic data using location has been the primary initial task. Merging data across systems within the agency and associating addresses with people can increase the likelihood of correctly matching a person with the same name, address and date of birth who is being served by different programs.

Such a master index of clients across programs at DHS and across other state agencies (e.g., Education, Housing, Employment, Corrections, etc.) can have a huge impact in connecting silos for research and analysis, ultimately improving the lives of clients. Programs and agencies use different unique identifiers (such as child welfare case number, Temporary Assistance for Needy Families number, Medicaid ID, Social Security Number, etc.), making it almost impossible to see how clients are using and moving across systems. Associating address data with names helps Oregon's social services agencies connect these disparate systems.

Once the master client index across systems is created, the enrichment of that data with historical addresses can have a big impact in research. Knowing where people who used DHS services and other state systems lived in the past several years helps in predicting risk in different areas. By using predictive analytics with good geospatial address data, along with administrative data from various agencies, the risk of child abuse, children not graduating school, etc., can be more effectively predicted and the odds of prevention significantly increased.

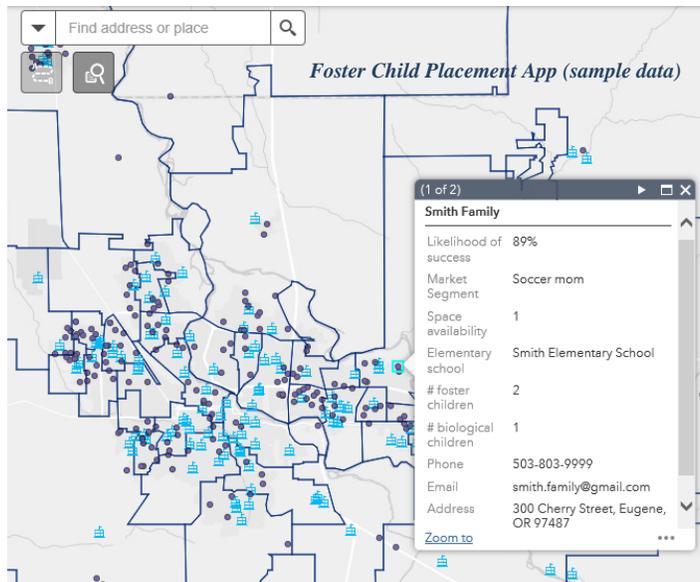
Description

Child Stability

Geospatial data are essential to determine the best placement of a foster child when a change of homes is necessary, whether it involves the initial placement or a move from one foster home to another. Such moves often happen suddenly and at odd hours, making the transition even more traumatic for the child and even more difficult for a caseworker. Research has shown that the stability offered by keeping the child in the same school results in a much lower likelihood of that child entering the juvenile justice system in the future and a much higher likelihood that the child will stay in school and graduate with their peers.

There are about 7,000 children in the Oregon foster care system at any given time. Keeping foster kids in the same school when they change homes requires consistent, state-wide, updated geospatial and administrative data to be at the fingertips of every caseworker. To select the best home for a child, the caseworker must know the location of that child's school and the school attendance boundary. Caseworkers need the ability to select another suitable home within the current school attendance area.

For each of the foster homes within a school attendance area, caseworkers need administrative data about each home, as well as the characteristics that would make a particular home a good match for that child. But



they also need the characteristics of the neighborhood, like the distance to nearby parks, certain types of businesses, etc. Some foster children have disabilities that require special equipment and easy access to certain health services, so the location of homes that can handle the equipment and are able to take a special needs child must also be known. These geospatial and administrative data should be easily accessible on a mobile device by a caseworker, often in the middle of the night.

Parent Selection

In another benefit to foster care programs, geospatial techniques and statistical modeling can be combined to perform population segmentation to improve the recruitment of foster parents. The

current recruitment systems in many states are set up to advertise, recruit, and then certify all that complete the application and training. In overburdened child welfare systems, foster parent recruitment is difficult and may not result in the best homes for the foster children. Serving a traumatized child who has been maltreated and removed from their home requires a unique and well-trained parent.

Oregon's DHS has partnered with a local group (Every Child) to recruit targeted foster parents using predictive analytics, geospatial data and analyses, and population segmentation. DHS identifies the best existing foster parents using foster child stability as the key characteristic. Stability is intended to recognize the foster parents with the patience to parent children with special needs.

Identifying the best existing foster parents and documenting their characteristics allows Every Child to target recruiting efforts. The age, income, number of biological children and lifestyle preferences of the best foster parents, combined with the number of years of foster parenting, number of children served, etc., in addition to the geographic characteristics of their homes and neighborhoods, is invaluable. These data are used in population segmentation to recognize potential foster parent effectiveness and target recruitment efforts.

The most valued prospective foster parents are then prioritized in the training process. A "service matching" algorithm is used to recognize the best available foster parents for every child entering foster care. When a child is removed, a caseworker using the algorithm will recognize the "likelihood of success" of that child with numerous foster parents. Placing the child with the best foster parent minimizes disruptions and improves the child's likelihood of success. Putting the placement choices on mobile devices allows caseworkers to make informed decisions. Monitoring the types of children entering care and monitoring the types of open beds allows recruiters to adapt their recruitment efforts to improve foster child outcomes.

Challenges

A major goal of the [US NSDI](http://www.usnsdi.gov) is to be a "critical vehicle for facilitating seamless data development, information sharing, and collaborative decision making across multiple sectors of the economy." The greatest challenge facing Oregon DHS in improving its child welfare system is the lack of seamless, state-wide geospatial and administrative data. Updated, authoritative address point data do not exist across the entire state. Rural areas in particular are very inconsistent in their capacity to provide good address point data.

The lack of a National Address Database is hampering very expensive efforts across all levels of government on projects such as development of improved emergency response using the Next-Gen 911 systems, access to broadband for every household and business, and efficient child services like state foster care programs.