

Connecting People and Place: Improving Communities through Integrated Data Systems

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Leah Hendey, Claudia Coulton, G. Thomas Kingsley

The National Neighborhood Indicators Partnership (NNIP) is launching a three-year cross-site project supported by the Annie E. Casey Foundation (AECF) to expand the relevance of integrated data systems (IDS) for local policy. The project will connect local NNIP partners, who all work to advance data-driven decisionmaking in their neighborhoods, with organizations and agencies running IDS. AECF believes IDS can be used to support better policymaking and program development and is committed to expanding access to IDS to organizations and localities working to improve low-income communities and the lives of families and children living in them.

This paper will first describe NNIP and the network's interest in IDS. It then defines IDS for purposes of this project, and presents the project's overall goals. It concludes with examples of potential projects. Details for NNIP partners on applying to participate in the project are included in a separate request for a statement of interest.

Introduction to NNIP

NNIP is a network of local data intermediaries in 37 cities organized by the Urban Institute. All NNIP partners had to meet three criteria to be accepted into the network. First, they operate information systems with recurrently updated data at the neighborhood level. Second, they promote and facilitate direct use of data by community and city leaders in community building and local policymaking. Finally, they all emphasize using the information to build the capacities of institutions and residents in distressed neighborhoods.

NNIP Partners serve as "one-stop" shops for data, obtaining administrative data from a variety of local agencies, which they clean and transform into neighborhood-level indicators. The typical range of data includes the sale and characteristics of properties, foreclosures, vital statistics, school enrollment and performance, crime, social services and public assistance. Some of the data that NNIP partners work with is publically available information, such as foreclosure filings or property characteristics, and this record-level data may be shared by the NNIP partners via their website or direct communication with local organizations. However, other data, such as education or child welfare records, cannot be shared at the record-level due to privacy regulations. NNIP partners create indicators from these protected records that are aggregated up to the neighborhood level and can be shared with a broader audience. (For example indicators on the levels of child maltreatment rates could be created for neighborhoods based on individuals' home residences). NNIP partners are experienced users of confidential records data and negotiate data use agreements to govern the use of the information and protect the privacy of individuals.

NNIP partners have the shared goal to “democratize information”. They work closely with city agencies, foundations, community groups and neighborhood residents to use the data to improve neighborhoods and the lives of residents. Through this work, they often break down silos across sectors and issue areas and help communities work together to address policy problems.

Background on NNIP and IDS

Both NNIP and its individual members have been exploring the use of integrated data systems (IDS) over the past year. The network’s interest was first sparked by the pioneering work of two NNIP partners: Providence Plan’s [Rhode Island DataHub](#) and by the ChildHood Integrated Longitudinal Data System (CHILDS) housed by the Center on Urban Poverty and Community Development at Case Western Reserve University. In Spring 2012, we conducted a survey of all of the partners to learn about the practice and interest in IDS, and the network hosted [two in-depth sessions](#) on IDS at its partners’ meeting in Providence in September 2012. The [NNIP website](#) also details other IDS-related activities.

Definition of IDS

Integrated data systems (IDS) are those that integrate individual-level data from multiple administrative agencies on an ongoing basis.¹ These systems may exist for jurisdictions at various levels, including states, counties, and cities. Records in these systems may include those from human services (such as child welfare, income supports, child care subsidies), health, employment, vital statistics, justice system and education. An IDS with data assembled across agencies and systems can be used to improve case management for individuals, or analyzed to inform advocacy, policymaking, targeting, and program evaluation. The records that are incorporated into IDS typically contain home addresses; which enables aggregation of records to the neighborhood, city, county or other jurisdiction level. While an IDS may be used for case management for a specific project covering a limited geographic area, we do not consider a management information system with solely program service data to be an IDS (for example, the Efforts to Outcomes (ETO) system used by many Promise Neighborhood grantees) unless it also links in records from outside administrative systems.²

Goals of the Cross-site Project

Connecting the NNIP network and agenda to the IDS world is a natural fit. IDS systems currently link together numerous individual administrative records on children and adults. These could be analyzed in conjunction with other neighborhood data and used to inform decision-making at the local level and to support solutions in distressed neighborhoods. As mentioned earlier, NNIP has always believed in

¹ How often data integration occurs varies considerably among IDS systems from integration that occurs in real-time as updates to data are entered to annually depending on the source of information.

² Also, for some locations and NNIP partner areas there may be multiple IDSs that incorporate different administrative data sources and exist at different jurisdictional levels that are relevant to the cross-site project discussed in this paper.

“democratizing information” and hopes that this cross-site project might create a two-way exchange of information, ideas, and expertise between NNIP Partners and IDS agencies.

The overarching goal of the project is to enhance access to analyses and information from these IDS data by NNIP partners and other relevant local organizations and agencies so that they can be applied to problems at the neighborhood level. Both locally and nationally, this project will also demonstrate to IDS administrators, funders, and agencies contributing data, the benefits of working with local data intermediaries to better inform state and local policies they are already concerned with. A lot of interesting work is being done in the IDS field to look at how these systems can be used for policy research and for program improvement. However, very little of this work looks at the neighborhood context in which these clients are living and what the relationship of place is to the child or family outcomes of concern to agencies. This project will focus on connecting IDS data to place-based and neighborhood indicators.

Over the long term, we hope this project will help establish relationships between NNIP partners, local agencies and organizations and IDS, and that those relationships results in ongoing collaboration and exchange of information. NNIP partners can help identify action agendas at the neighborhood level that data from the IDS could inform, and may contribute data and findings that inform policy work conducted by the IDS. Many datasets that NNIP partners commonly hold, such as those on housing conditions and the built environment, are at the parcel or address level and can enhance the current analysis being produce with IDS data. A related goal is to spur agencies managing IDS to improve data quality overall. For example, agencies may improve record-keeping on address histories if a project could demonstrate the value of understanding the residential mobility experienced by different types of individuals living in different kinds of neighborhoods.

NNIP and AECF have reached out to other organizations and networks that are contributing to building the IDS field for advice on the design and implementation of the project, including Actionable Intelligence for Social Policy (AISP), the National League of Cities (NLC), and the Data Quality Campaign. Their expertise will be invaluable and the collaboration will ensure that ideas and innovations are shared across networks.

The lessons and insights from this cross-site effort will be disseminated in reports and briefs produced by the Urban Institute with input and review by the local sites and national stakeholders. We will also share this work with partners not participating in the project at NNIP partnership meetings and to other audiences through the NNIP websites and external presentations.

Project Criteria and Examples

Each local project will need to advance the major goal described above of demonstrating how data from an IDS can be connected with contextual information from an NNIP partner to improve local- and neighborhood-level policy and program-related decision-making. In addition, applicants should meet several specific criteria. The first criterion for a project is that it must use records from at least two data sources available in an IDS (e.g. education and child welfare, Medicaid and subsidized child care) and at

least one data element from local administrative data curated by an NNIP partner.³ Secondly, geographic location or neighborhood should be an element in the source data and in the analysis. Data from the IDS and the NNIP partner could be linked at either the address-level (e.g. property conditions) or summarized and linked at an aggregate level such as neighborhood or census tract (e.g. crime rates). Third, the projects must explain how the results can inform specific local problems, policy concerns, or program needs and should not be merely of academic value. Project participants will be expected to share their findings with relevant stakeholders in their communities and to participate in the cross-site documentation and dissemination of the projects (led by the Urban Institute).

As most projects using IDS data have not included NNIP partners, below we outline a few examples of projects to help partners and agencies and organizations that operate IDS think about how data they hold might be combined to benefit the work of both organizations.⁴ Though some of these examples are based on actual work conducted by organizations that hold an IDS, they have been tailored to fit our project criteria. We also recognize that each IDS and NNIP partner is unique and has access to different data sets, so the examples described below may not be relevant for every partner or jurisdiction.

Projects could be structured using data from the IDS and local administrative data from an NNIP partner (referred to below as “NNIP data”) in several ways: 1) add a place-based perspective with NNIP neighborhood data to an IDS data analysis; 2) link additional individual-level NNIP data to data in the IDS; and 3) link property-level NNIP data to person-level IDS data. These three types of projects are described in more depth in the examples that follow.

Type 1: Add a Place-Based Perspective with NNIP Neighborhood Data to IDS Data

This type of project examines how place affects child and family experience and focuses attention on place-based conditions that could be affect program and policy design. These projects would incorporate qualitative and quantitative knowledge of the neighborhoods with IDS data on the system involvement of individuals.

Example A

An agency operating an IDS system found that a small number of youth accounted for a large percentage of service use. These high service users were multisystem-involved youth (juvenile justice, child welfare and mental health treatment). Working with the NNIP partner, they explored what neighborhoods in city these youth are living in and found that a large portion of these youth are concentrated in several neighborhoods. The NNIP partner merged in data that they maintain on community assets, school performance, and crime rates. The community now has a more complete picture of how youth are experiencing their neighborhoods and how it might affect their involvement with various systems. The NNIP Partner uses the information gained from the IDS to create neighborhood-level indicators on multi-system youth. They present these indicators to community-

³ Data from nationally available public sources, such as the Decennial Census and the American Community Survey can be used in the analysis but the NNIP partner must contribute a data element from local administrative sources.

⁴ Several NNIP partners do hold and operate their own IDS, while others are helping on emerging systems or building partnerships with those with existing systems.

based organizations and school officials in these neighborhoods where multi-system youth are concentrated and facilitate a discussion of appropriate interventions to bring additional assistance for youth in these neighborhoods.

Example B

An NNIP Partner obtains data from the county IDS on child welfare and juvenile court records on children who aged out of foster care in their city in the previous five years. Using the children's address histories they summarize the data by neighborhoods. The partner uses information from neighborhood-based organizations and their own neighborhood indicators to rate the neighborhood assets available for youth and examine how neighborhood assets and crime rates affect the delinquency risk of youth transitioning in the child welfare system. They use the results of this work to engage neighborhood-based organizations and improve their program planning efforts.

Type 2: Link Additional Individual-Level NNIP Data to IDS Data

The purpose of this type of project is to enhance the data holdings of the IDS by linking records at the person-level that the NNIP partner already holds. The two groups could use this more complete set of integrated records to examine an issue of local concern. For example, often information about children and families found in IDS is captured at several jurisdictional levels, and the NNIP partner could help obtain data for programs administered by a different level of government. State agencies managing IDS may find it difficult to include records from juvenile justice or child welfare systems that are run by county agencies.

Example C

An NNIP Partner has records on enrollment in early childhood education settings linked to those from after-school programs for children in the city. They obtain K-8 records and public assistance records from the state's IDS and perform an analysis to examine the effect of these programs and public assistance use on proficiency test scores and also examine how neighborhood conditions influence these outcomes. The NNIP partner shares these results with community residents and organizations in neighborhoods that are underserved to assist them in advocating for additional early education and after-school programming for low-income children.

Type 3: Link Property-Level NNIP Data to IDS Data

Many NNIP partners hold detailed property records in a parcel-based data system that could be matched with the residential addresses of people in the IDS system to examine the influence of the housing events and conditions on a variety of outcomes.

Example D

An NNIP Partner obtains child-level records from the IDS on homeless services and school attendance. They link information from their data holdings on foreclosure auctions, housing vacancy, and housing code violations to the child's address history in the IDS. The linked data are used to examine the influence of events like foreclosure on their homeless episodes and school mobility and attendance rates. The results are used by the local community to develop prevention programs to reduced housing

instability and school mobility, focusing particular attention on the neighborhoods where foreclosure and vacancy rates are highest.

Example E

An NNIP Partner has property-level information on code enforcement, housing inspections and property conditions. They link records to children's address histories in a state-level IDS with linked health and education records to study the impact of various poor housing conditions on asthma incidence and chronic absenteeism. The partner works with county officials to target their limited housing rehabilitation resources to neighborhoods with the oldest housing stock and where the most affected children are living. This partner also helps make neighborhood teachers, principals, and parents aware of the implications of living in unhealthy housing and help foster connections for families to subsidies for dealing with lead and mold remediation.

Conclusion

After the local projects have been selected and the cross-site project begins, we will be communicating the success and challenges of the projects, not only on the analyses but also on the process behind setting up the needed partnerships to get the work done. Annual briefs will be produced by the Urban Institute and external project advisors and will be disseminated via the NNIP website and the Annie E. Casey Foundation. In addition, we will work to share important lessons throughout the year through less formal means on the NNIP website, webinars, and during our regular NNIP Partnership meetings.

The IDS field has shown tremendous capacity for innovation around data, technology, program management, and policy research over the last two decades. For some agencies operating IDSs, to date their focus on policy evaluation and research has been for largely internal purposes, which was needed to justify the development of the systems. Now that many systems are more mature, it is our hope that these agencies will welcome the opportunity to continue to innovate in several ways. Indeed, a few leaders in the IDS field have begun exploring work on along similar lines of these proposed projects. We hope this cross-site project will demonstrate across a variety of contexts two things: 1) how IDS agencies can utilize an existing community resource (the NNIP partner) to complete the picture for individuals represented in their data by adding in contextual information on place, and 2) how expanding access to information from an IDS can help organizations solve neighborhood and local policy problems. The results of these projects will be of use to many people and institutions, both across sectors (nonprofit, government, philanthropy, and advocacy) and jurisdiction levels. These projects will help further demand and support for IDS in cities where they already exist as well as communicate the benefits of IDS to places who do not yet have one.