

Building a Transformational Data Resource to Support Housing Research: The Wisconsin Experience

Marah Curtis
Kurt Paulsen
Hilary Shager
University of Wisconsin

Abstract

This article describes recent efforts by University of Wisconsin-Madison (UW) researchers to connect federal and local housing program data with the Wisconsin Administrative Data Core (WADC). These connections create an innovative and transformational approach to support housing research that informs policy and program design. Developed and maintained by UW's Institute for Research on Poverty (IRP) in collaboration with Wisconsin state agency partners, WADC links large volumes of standardized, longitudinal administrative data from nearly all Wisconsin social welfare programs (for example, Medicaid, Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, child welfare, child support, childcare subsidies, unemployment insurance, and homelessness services), information on incarceration from the Department of Corrections, and children's educational outcomes from the Wisconsin Department of Public Instruction. The data system relies on a file known as the Multi-Sample Person File (MSPF), which contains one observation per individual, with no individual appearing twice. The MSPF can be linked with program participation data files, allowing researchers to group individuals by case or family, supporting integrated analysis of multiple program participation and individual and family outcomes over time. Leveraging recent funding opportunities, and via a data-sharing agreement with the U.S. Department of Housing and Urban Development (HUD), the authors connect federal housing program participation data with WADC. IRP is conducting two proof-of-concept studies analyzing the effects of these programs on adult health and child educational outcomes. IRP also recently incorporated the state's Homeless Management Information System into WADC and is pursuing opportunities to incorporate localized data from the Emergency Rental Assistance program established during the COVID-19 pandemic, as well as publicly available eviction data. Linking such data opens an expansive new research agenda to include the study of multiple public program participation and policy interactions; explore a wide berth of individual, family, and community outcomes; and inform actionable policy and practice recommendations. This article shares insights from UW's experience developing and maintaining agency partnerships, and this valuable data resource, which might be applied in other states, discusses the potential of linked administrative data to advance future interdisciplinary, applied housing research and evidence-based policymaking.

Introduction

Housing is one of the most fundamental needs and is critical to family and individual well-being, yet many people struggle to maintain decent, affordable, and stable housing. Low-income individuals and families face particular challenges as rising housing costs and stagnant incomes make housing unaffordable (JCHS, 2023). These families often seek aid from federal housing assistance programs. However, because housing assistance is not an entitlement, many families who need help securing or maintaining adequate, stable housing do not receive it, and others spend years on waiting lists (Acosta and Gartland, 2021; Ellen, 2020). For those who receive housing benefits, the support can be significant, typically amounting to several thousands of dollars per year, which both stabilizes housing and increases economic resources for other household needs.

Despite great interest in evaluation research to examine the effects of housing assistance on family and individual well-being, high costs and data unavailability have hampered high-quality studies. To identify the effects of housing assistance on well-being, careful empirical evaluation research needs to account for household selection into housing assistance, interaction with other income-qualified social programs, and neighborhood or housing market effects. This research can be undertaken as experiments with random selection, such as in the Family Options Study and Moving to Opportunity (MTO) experiments. Both the Family Options Study and MTO experiments involved random assignment of households to different treatment groups in several U.S. cities. Both demonstrated that housing assistance has significant and positive benefits for family and child well-being (Gubits et al., 2016; Sanbonmatsu et al., 2011).

However, because random assignment experiments in social policy evaluations are both expensive and limited, researchers have more recently focused attention on using quasi-experimental research designs with large administrative datasets. These methods expand the reach of research and evaluation to a larger number of places and policies. A number of recent studies have used U.S. Department of Housing and Urban Development (HUD) administrative data on housing program participants for program evaluation, but they are limited to the data and variables in the HUD data (Ellen, 2020; Ellen et al., 2016, 2021; Schwartz et al., 2019). Ellen et al. (2016) use the geographic locations from housing program administrative data to evaluate the school-attendance-area quality location decisions of voucher holders. Fenelon et al. (2017) combine HUD administrative data with survey data to examine adult health. Schwartz et al. (2019) merge HUD administrative data with New York City public schools' administrative data and test scores. However, as far as the authors know, no current studies integrate administrative data from housing programs with other means-tested social programs.

In an attempt to remedy this dearth of actionable evidence, researchers at the Institute for Research on Poverty (IRP) at the University of Wisconsin-Madison (UW) sought to increase the amount and quality of housing-related data available in the Wisconsin Administrative Data Core (WADC), one of the richest collections of linked administrative data on program participation in the country. This article describes how these researchers facilitated partnerships between academia, government, and practitioners and developed technical solutions to create an innovative and transformational data resource and approach to support housing research that informs policy and program design.

The Wisconsin Administrative Data Core

In 2008, stemming from a series of previous evaluation partnerships between IRP and government entities dating back to the 1980s—and the realization that ongoing integration of state administrative data could facilitate rigorous and actionable research—IRP partnered with the newly formed Wisconsin Department of Children and Families (DCF) to propose a set of integrated data development, analysis, and evaluation activities. The initial project, titled Building an Integrated Data System to Support the Management and Evaluation of Integrated Services for Temporary Assistance for Needy Families (TANF)-Eligible Families, was funded under the Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services’ funding opportunity—Federal-State Partnerships to Build Capacity in the Use of TANF and Related Administrative Data. The project’s ultimate goal was “... to create a data resource to support the integrated analysis of the earnings, income, and multiple program participation trajectories of Wisconsin families participating in TANF and other income and work support programs” (Brown et al., 2020: 2). The expectation was that such a resource could facilitate important contributions to program evaluation and administration, as well as basic research. As IRP’s technical report on lessons learned in the development of WADC noted, a number of existing strengths facilitated the successful execution of the project:

- (1) A new administrative structure that brought TANF, child welfare, childcare, and child support administration within a single department, DCF, as of July 2008;
- (2) substantial prior experience using administrative data for research, program monitoring, and management improvement and high-level commitment to expanding these efforts;
- and (3) a long-term collaborative relationship between Wisconsin State agencies and researchers at IRP. (Brown et al., 2020: 2)

During the past 15 years, with substantial investment from researchers working through IRP, additional funding opportunities, and expanded partnerships with state and local agencies, these initial efforts have grown into the WADC of today.

The current WADC links a large array of cleaned and standardized administrative data covering decades of program history, including data from nearly all Wisconsin social welfare programs (for example, Medicaid, Supplemental Nutrition Assistance Program (SNAP), TANF, child welfare, child support, childcare subsidies, unemployment insurance (UI), homelessness services), as well as information on incarceration from the Department of Corrections and children’s educational outcomes from the Department of Public Instruction (exhibit 1).¹

¹ Exhibit 1 reflects data available in the most recent version of WADC. WADC is rebuilt annually. The next completed version is expected to be released in the fall of 2023 and will include 2022 data for most sources, plus an expansion of two additional data sources: circuit court criminal records (for example, felony, misdemeanor, and traffic cases) and the universe of UI wages (versus wage records only for those in WADC attached to other programs). The latter expansion will likely significantly increase the overall *N* in the WADC sample to approximately 13 million individuals.

Exhibit 1

What Data Are Available in the Wisconsin Administrative Data Core?

Agency or Program	Data [Years Complete Data Available]
Wisconsin Department of Health Services	<ul style="list-style-type: none"> • FoodShare (Supplemental Nutrition Assistance Program or food stamps) [1989–2021]. • BadgerCare (Medicaid/State Children’s Health Insurance Program) [1990–2021]. • Medicaid Claims and Encounters [2009–21]. • Caretaker Supplement [1998–2021].
Wisconsin Department of Children and Families	<ul style="list-style-type: none"> • W-2 Wisconsin Works (Temporary Assistance for Needy Families) [1997–2021]. • Wisconsin Shares (childcare subsidies) [1997–2021]. • Aid to Families with Dependent Children [1989–98]. • Child Support [1996–2021]. • Child Welfare and Child Protective Services [2005–21].
Wisconsin Department of Workforce Development	<ul style="list-style-type: none"> • Quarterly wage records [1988–2021]. • Unemployment insurance benefits [2007–21].
Wisconsin Department of Corrections	<ul style="list-style-type: none"> • Incarceration in state prison facilities [1990–2021].
Milwaukee County	<ul style="list-style-type: none"> • Incarceration in Milwaukee County jails [1994–2019].
Circuit Court Records	<ul style="list-style-type: none"> • Public court records [1998–2021]. • 21-county sample of divorce and paternity cases [1980–2019].
Wisconsin Department of Public Instruction	<ul style="list-style-type: none"> • 4K–12 public school enrollment and school records [2006–21].
Homeless Management Information System	<ul style="list-style-type: none"> • Homelessness services [2010–21].

4K–12 = 4-year-old kindergarten through 12th grade.

Source: authors

The data system relies on a file known as the Multi-Sample Person File (MSPF), which contains one observation per individual, with no individual appearing twice. The MSPF can be linked with program participation data files and complementary files, allowing researchers to group individuals by case or various definitions of family and follow them over time. The 2021 MSPF includes information for more than 8.3 million individuals.

The fundamental tasks of creating the MSPF include cleaning and standardizing variables used for linking, then match-merging individuals from all data systems with one another, un-duplicating and linking observations so that only one observation per individual remains in the final version. IRP’s data science team (currently composed of eight individuals) creates standardized versions of certain data fields, such as name and place of birth, and eliminates unusable observations. Standardization may include eliminating illegal characters from data fields, changing mixed-case character data to uppercase, changing character data to numeric data whenever possible, resolving inconsistent or conflicting information, parsing text into separate fields, and identifying or collapsing missing data codes. Unusable data to be eliminated might include observations with no identifying information, observations clearly used as test cases for training purposes, and extraneous case members (Brown et al., 2020).

Via close collaboration with data providers and learning over time, data scientists also navigate variation in quality of elements across systems. For example, coding social security numbers (SSNs) in UI data is highly accurate because the program relies on records of employment by SSN to distribute benefits. However, this data element may be less accurately coded in programs

that do not rely on it for benefit distribution. Data scientists also consider whether data fields are electronically loaded or manually entered, administrative procedural changes over time, and differences in data entry patterns by county. Open and regular communication with data providers and attention to detail on the part of data scientists are required because agencies rarely clearly and accessibly document such changes and procedures (Brown et al., 2020).

Once data are cleaned and standardized, IRP primarily uses individual identifying characteristics and demographics—preferably those that are commonly recorded, relatively uniquely identifying, and unchanging—to accomplish the match-merge. Examples of such identifiers include SSNs and SSN verification codes; personal identification numbers (PIN) cross-loaded from one data system to another; and names, sex, dates of birth and death, place of birth, and parent identifiers (first name, date of birth, and SSN of both mother and father). Race and ethnicity may be used indirectly to refine name standardization processes.

Some linkages are more challenging than others. For example, young children may be more difficult to match simply because their data have not been in WADC for long, and their information will appear in fewer data systems with fewer cross-checking opportunities. Special considerations are also considered for linking data from Hispanic, Hmong, North African, and Middle Eastern populations due to commonality of full names and common approximations of birth dates recorded in U.S. data systems. In addition, not all systems include the same linking variables.² Again, IRP data scientists rely on their experience working with the data and observing patterns over time to help improve the ability to adjust the matching algorithm to such challenges and anomalies.

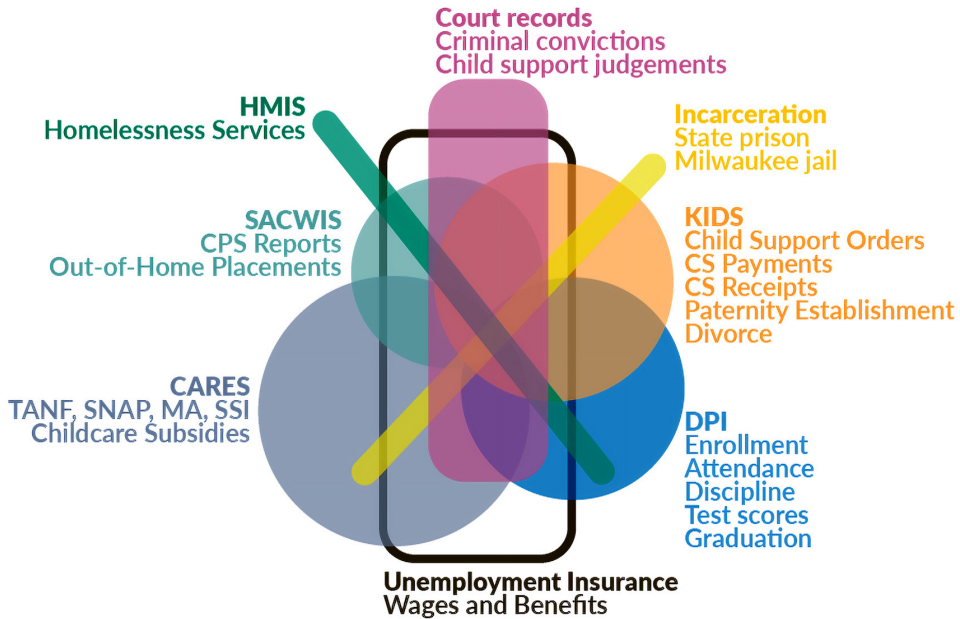
IRP rebuilds the data source annually, thus allowing for continual improvements in IRP's ability to match individuals across systems, drawing on any new data collected. On construction of the MSPF, the data science team is then able to develop additional research files, including (1) a reduced set of demographic variables (removing uniquely identifying personal information for purposes of individual anonymity), with the addition of indicators for which data source provided information, and a constructed (that is, masked) unique PIN; (2) a set of files that allow aggregation of individuals into administrative cases (as programs define) or family units; and (3) participation files that provide information on program participation during a specified period. The constructed unique PIN allows linkages between all aggregation and participation files and the MSPF.

As exhibit 2 illustrates, this data model allows analysis of the full universe of cases or individuals from one source of administrative data, including both those who are included in other systems and those who are not. Researchers can also easily focus on subsets of individuals who participate in constellations of programs or services. Thus, this full merging of multiple administrative data sources, independent of the formulation of specific research questions, significantly broadens the set of questions that can be addressed.

² The same linking algorithms are applied across all data sources except for UI benefits and wages. UI data do not contain dates of birth, and longer names are truncated. Thus, data scientists are not able to check for a match on date of birth or count on the completeness of names. Several data sources (for example, Department of Public Instruction, Department of Corrections, Milwaukee Jail, and Wisconsin Circuit Court Access Program) do not contain SSNs, and SSNs in other data systems, such as the Statewide Automated Child Welfare Information System and Computer Reporting Network /Income Maintenance Program (CRN/IMP), have quality concerns. The lack of SSNs in these sources decreases certainty in a match, although an exact match on name and date of birth enables a high degree of certainty.

Exhibit 2

Wisconsin Administrative Data Core, Data Model



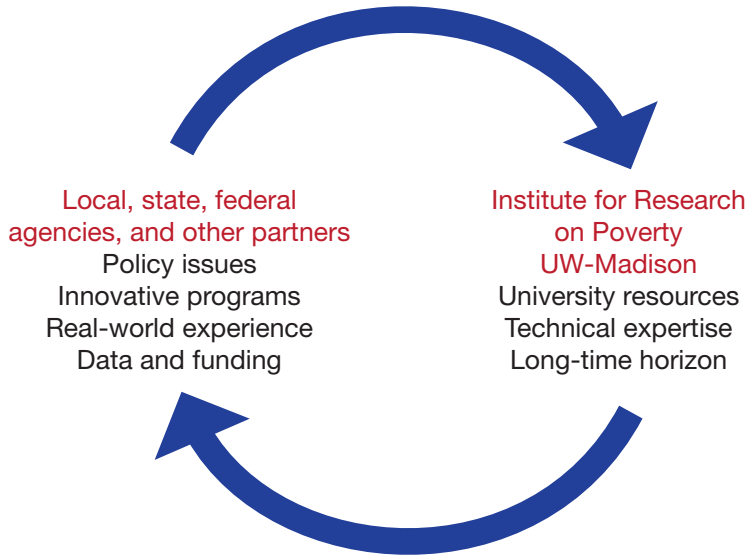
CARES = Client Assistance for Re-employment and Economic Support. CPS = Child Protective Services. DPI = Department of Public Instruction. HMIS = Homeless Management Information System. KIDS = Kids Information Data System. MA = Medicaid. SACWIS = Statewide Automated Child Welfare Information System. SNAP = Supplemental Nutrition Assistance Program. SSI = Supplemental Security Income. TANF = Temporary Assistance for Needy Families.
Source: Authors

Putting Administrative Data to Use

Although the technical challenges of developing a data resource like WADC are substantial, perhaps even more important are the development and navigation of the partnerships between data-providing agencies and research organizations. In Wisconsin, it has meant fostering a “logic of collaboration” that supports both policy development and academic research and recognizes that such partnerships require infrastructure and resources to support sustained engagement (exhibit 3). For example, to create the data system, the State of Wisconsin agencies provide data, IRP provides specialized programming and technical support staff and specialized hard- and software, and UW provides funding from federal grants and contracts (often in response to joint UW and agency proposals), state grants and contracts, and foundations. With this engagement, partnerships can develop trust and a shared understanding of useful and interesting questions, appropriate methods, and satisfactory answers. Although the authors found Wisconsin to be somewhat unique in its level of investment in and scope of such partnerships, they believe the principles guiding such work could be applied in other states and with other universities.

Exhibit 3

Institute for Research on Poverty's Logic of Collaboration



Source: authors

Although all projects using this wealth of data must have core policy or practice issues and questions as a basis for research and be approved by contributing state agencies, UW works in partnership with the agencies based on a philosophy of “yours, mine, and ours.” Specifically, partners may identify questions and projects that are of primary interest to an agency but require the expertise of IRP researchers to answer (yours); projects that may result in generalizable learning but are of primary interest to IRP researchers (mine); and, optimally, a set of questions and projects that are of high interest to both researchers and agencies, relevant to each other’s missions, and responsive to the incentive systems of both academia and public policy (ours). IRP staff work with researchers to ensure the viability and appropriateness of projects before submitting them to agencies for approval and work within each data-providing agency’s unique data-governance structure and data-sharing process.

WADC, which provides a unique resource for agencies that cannot otherwise link and analyze across systems, sustains state support of data access and funding, and given its uniqueness as a resource for research that cannot otherwise be completed, sustains commitment and interest of academic researchers. Constraints also shape the partnerships. Importantly, state agencies are not permitted to provide data access for research not relevant to the agency’s mission, so researchers need to accept these limitations and understand and explain the utility of their research. From the university perspective, academic freedom demands that research results be made public. Funders do not permit IRP faculty and staff to submit research for “clearance.” However, prior to publication or presentation, a 30-day review and opportunity for feedback, which authors may address, is built into all data-sharing agreements. Also, because WADC relies partially on fuzzy matching (that

is, approximate matching that may consider transposed numbers, nicknames, and so on) and is a research dataset not meant for operational use (for example, case management or detection of fraud), IRP is not allowed to return matched data to agencies for legal reasons. Therefore, agencies must value and accept independence.

To identify questions of interest and support mutually beneficial research, IRP staff and faculty affiliates engage regularly with agency leadership and staff. For example, IRP supports a state WADC Advisory Council composed of lead agency data stewards and UW faculty and staff; participates in regular briefings and opportunities to check in with individual agencies; has developed sustained research agreements for programs (for example, child support, child welfare, Medicaid); fields contracts for specific programs, projects, pilots, and funding opportunities; participates in “Learning Exchanges” with agency leadership and staff; and provides and receives *ad hoc* technical assistance (some state-funded, some not). Although significant technical, financial, and relationship challenges are involved, investing in researcher-practitioner partnerships and developing linked data systems can lead to a culture of evidence-informed policymaking that is both beneficial to society and rewarding for researchers.

Early Housing-Related Research With WADC and Limitations

Despite being one of the richest collections of linked administrative data in the country for most of its existence, WADC included almost no data about housing. No single state agency collects housing program or homelessness data, and other benefit programs do not require, prioritize, or verify such information. In limited cases, address data for individuals in public assistance programs (Client Assistance for Re-employment and Economic Support [CARES]), child support cases (Kids Information Data System [KIDS]), and child welfare cases (the Statewide Automated Child Welfare Information System [SACWIS]) could be used for neighborhood analysis but without specific housing data. In addition, CARES contains an indicator as to whether someone reported receiving housing assistance, drawn from questionnaires administered to households during initial enrollment into or renewal of SNAP or TANF benefits.

For example, this indicator allowed for some research suggesting small positive effects of a family’s initial receipt of housing assistance on students’ subsequent academic achievement. The study by Carlson et al. (2019) used WADC to develop two analytic comparisons. First, the authors constructed a “future recipient” comparison group that measured educational outcomes for children living in households that reported receiving housing assistance compared with data for the same children up to 4 pretreatment years. The second analysis compared outcomes for children living in households that reported receiving housing assistance with those of children living in low-income families who did not receive housing assistance but received other means-tested benefits, such as SNAP, TANF, or Medicaid. Results suggested modest positive associations between reported housing assistance receipt and math achievement but not reading achievement (measured using state standardized test scores). Positive findings were concentrated among African-American students and more prominent for students whose families received vouchers versus public housing assistance. Obvious limitations of the study include issues related to reliance on self-reporting of housing assistance, a limited sample (that is, including only information for families receiving SNAP or TANF, or both), and potentially incomplete information about the type of housing

assistance received (for example, the data include no record of whether individuals are living in publicly subsidized but privately owned housing units, such as via the Low-Income Housing Tax Credit [LIHTC] program).

Measures of housing assistance that indicate the specific federal program (Housing Choice Voucher, public housing, and so on) and the length of time in a program are imperative to understanding population outcomes and interactions with other benefit programs. Relatedly, tracking down residential moves is a core indicator of housing stability associated with adult and child well-being outcomes. Generally, survey data from longitudinal studies are used to investigate mobility, although survey data may underestimate the most mobile households because they are more likely to be lost due to attrition (Curtis and Warren, 2015). Administrative data are more likely to be able to observe the most vulnerable families if they continue to receive any public benefits. For example, a study using WADC data to examine the regular receipt of child support income on housing outcomes used administrative address data to define mobility and found that more regular child support receipt, holding the overall amount constant, was negatively associated with any moves or multiple moves in a year (Curtis and Warren, 2015). The state keeps track of custodial parents' addresses and updates them when a parent moves or a child support order changes. Researchers could observe ZIP Code changes, although such changes may underestimate short-distance moves.

Despite such limitations, these few studies point to the potential analytic power of improving the amount and quality of housing measures in WADC data for policy-relevant analyses. Specifically, standardized data that allow for the observation of moves, the timing of those moves, participation in public benefits, release from corrections facilities, participation in child protective services, and accurate measures of participation in housing assistance programs open the possibility of a plethora of questions about how housing (stability, housing assistance, location) relates to well-being outcomes. When combined with appropriate measures of the housing context, these administrative data can be used to evaluate neighborhood- or community-level outcomes and to simulate alternative policy scenarios.

Building a Transformational Data Resource to Support Housing Research

To expand the types of applied housing research questions that integrating housing data with other administrative data could address, a group of IRP researchers acquired competitive funding from the UW Office of the Vice Chancellor of Research and Graduate Education and the Wisconsin Alumni Research Foundation. The project, titled "Building a Transformational Data Resource to Support Housing Research," sought to (1) dramatically increase the quality and amount of housing-related data available to researchers via WADC, (2) complete two proof-of-concept research projects, examining links between receipt of housing assistance and health outcomes and investigating links between housing stability and school success, and (3) develop infrastructure (that is, data sharing and expertise) to facilitate pursuit of extramural funding to support further research in these areas. The overarching goal is to generate knowledge that can evaluate and improve public policy affecting the lives of low-income families.

Two proof-of-concept papers are in progress, highlighting the value of merging WADC data with HUD Office of Policy Development and Research's (PD&R) restricted household-level longitudinal

tenant data, available through a data license agreement with HUD for these projects. HUD's administrative data cover all Wisconsin participants in public housing, Housing Choice Voucher, and multifamily housing programs. Thus, with WADC, researchers can match households that receive rental assistance under any HUD program with participation in programs such as SNAP or Medicaid. The authors examine households that received any HUD rental assistance from 2003 to 2020, several years before WADC began collecting Department of Public Instruction data used for educational outcomes, through the most recent HUD data available at the time of application. The first paper examines how housing assistance is associated with adult health outcomes in terms of diabetes management and diabetes-related emergency department visits. The sample includes all households that participated in Medicaid linked with those who received housing assistance. Thus, the authors compare those who did not receive housing assistance with those who did among the Medicaid population. The authors hypothesize that housing assistance receipt can improve diabetes management and reduce emergency department use for diabetes-related complications. Participation in HUD's rental assistance programs can be associated with housing stability and increased disposable income (because of reduced rental payments). The authors hypothesize that both the housing stability and income effects should improve health and disease management, leading to better health outcomes for tenants and systems savings through reduced emergency department visits. Stable housing reduces daily living stress, enables medication and disease management, and may also facilitate consistent healthcare use with regular providers. WADC includes Medicaid Claims data for measures of health management and diabetes-related hospital admissions and allows for repeated measures capturing income and program participation in a longitudinal framework, enabling more rigorous analytic approaches to estimate the effect of housing assistance on adult health outcomes with limited bias. Because income qualifications for HUD housing assistance and Medicaid are similar, nearly all HUD-assisted households are Medicaid eligible. However, the health outcomes data are limited to those enrolled in Medicaid and would, therefore, miss HUD-assisted households not enrolled in Medicaid.

The second paper examines how housing stability is associated with children's success in school. Housing instability may operate in several key ways to harm children's learning and school performance. First, frequent moves might necessitate frequent changes in children's schools, which produce disruptions to the continuity of curriculum and content that children are expected to learn. Moves also disrupt attachments to teachers and peers who provide a sense of belonging and foster school success. Second, housing instability is stressful for parents, and the immediate need for housing may divert attention away from engaging in the types of parent-child interactions that support children's learning both in the home and school environments. For example, parents with unstable housing may spend less time reading to and assisting their children with homework at home and be less likely to attend school events or meet with teachers compared with parents with stable housing. As in the first paper, IRP linked HUD housing assistance data to records in WADC and benefits from the ability to construct a well-matched comparison group by selecting children in the same school district using inverse probability treatment weighting based on observed household information and benefit receipt available in WADC data. WADC enables researchers to examine not just test scores but also other important dimensions of children's schooling experiences, such as grade retention, special education placement, attendance, and graduation, which can help answer nuanced mechanism and policy questions. In addition, the ability to

investigate questions using a longitudinal framework, observing children's outcomes several years after the start of public housing assistance benefits, allows for more rigorous analytic approaches and the observation of long-term outcomes.

Future Directions and Research Synergies

As the sole federally funded National Research Center on Poverty and Economic Mobility,³ IRP's research focuses on policies that affect the lives of those households that HUD's rental programs also potentially assist and are most at risk of housing instability and extreme housing cost burdens. Because housing is foundational to a family's health, well-being, and economic mobility, recent interest in housing research has increased substantially. The tremendous federal investments in stable and safe housing and safety net programs during the COVID-19 pandemic recognized the foundational role of housing. Significant increases in rents, cost burdens, and homelessness in 2022 and 2023 brought the housing crisis front and center. Thus, researchers face an unprecedented opportunity to fill the substantial gap in knowledge regarding the effectiveness of housing assistance programs, their interaction with other social welfare programs, and their effects on health and well-being.

As described previously, WADC has benefited from partnerships with state agencies that oversee specific public programs and, therefore, are able to share all program data. The challenge with capturing housing data is that no state-level equivalent to HUD exists, and data about homelessness, housing assistance programs, housing quality, and so on are spread across multiple state agencies, local public housing authorities, and nonprofit organizations—which requires investing in relationship development with multiple agencies. Long-term partnerships are vital. Data acquisition and merging are primary steps. However, researcher engagement and skill with the data and relationships grow over time.

At the interagency level in Wisconsin, bipartisan legislation in 2017 created the Interagency Council on Homelessness, modeled on the successful U.S. Interagency Council on Homelessness within the federal government. In addition to participation from the state's Housing Finance Authority (Wisconsin Housing and Economic Development Authority) and the state's Community Development Block Grant (CDBG) and HOME Investment Partnerships Program allocating agency (Wisconsin Department of Administration [DOA]), participation includes the U.S. Department of Veterans Affairs, DCF, Department of Public Instruction, Department of Health Services, and Department of Corrections in addition to all the Continuums of Care (Dane, Milwaukee, and Racine Counties and Balance of State). IRP staff and faculty have spoken about housing and homelessness data and research issues with the Interagency Council, conducted learning exchanges within its existing state agency relationships, and regularly consulted with agencies on housing-related issues. These researcher relationships existed beforehand, which allowed for a more formal engagement with support from the UW Office of the Vice Chancellor of Research and Graduate Education and the Wisconsin Alumni Research Foundation to build out housing data. The role of institutional support in fostering research collaborations is very important to acknowledge. IRP

³ IRP is currently engaged in a 5-year (2021–26) cooperative agreement with the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services to serve as the sole federally funded National Research Center on Poverty and Economic Mobility in the United States.

continues to formalize these relationships, and the following outlines two emerging housing data sources the authors are working to use and integrate into WADC.

First, IRP recently integrated the state's Homeless Management Information System (HMIS) data via a data-sharing relationship with the Institute for Community Alliances, a nonprofit organization providing HMIS training and support for multiple states, including Wisconsin. This new data partnership allows for research on the effectiveness of rapid rehousing or permanently supportive housing on client outcomes in health or employment and could also examine the interaction of housing supports with other programs, such as Medicaid or SNAP. These data could be further integrated with federal data to examine whether households participating in HUD rental assistance programs are less likely to use homeless services. These first-order questions offer needed information about how housing policies and programs interact with other systems and affect well-being. Another use of these data includes sets of questions examining trajectories of vulnerable populations over time, the role of state and federal housing, and other social welfare programs on transitions to community from correctional facilities or child welfare.

The second type of data to integrate is Emergency Rental Assistance (ERA) data. Due to the COVID-19 emergency and fears that housing instability and mass evictions would accelerate viral transmission, the federal government imposed an eviction moratorium for nonpayment of rent and distributed \$45 billion in ERA in addition to increased investments through the Coronavirus Aid, Relief, and Economic Security Act for CDBG, HOME, Emergency Solutions Grants program, project-based rental assistance, tenant-based rental assistance, and public housing.

In contrast to HUD's Section 8 platform assistance programs, ERA assistance was not administered through public housing authorities or HUD's Office of Multifamily contracts, payment standards and Fair Market Rents were not in effect, and property owners were not required to submit to Real Estate Assessment Center inspections. ERA was designed to keep tenants in their current units, and emergency rental assistance payments did not require tenants to pay 30 percent of income in rent.

The ERA program is likely the most substantial, limited-time, new rental assistance program ever. For these reasons, careful research on how funds were distributed and the effects of ERA programs on housing markets, housing stability, and household outcomes can serve to inform future policy approaches to keep renting families safely and stably housed.

Because so many factors were changing simultaneously, larger research studies with adequate power and variables to control for household and housing market-level variation are necessary to disentangle the direct and indirect effects of ERA programs. The existing WADC institutional structures, relationships, and "know-how" mean such efforts are well positioned to bring in local-level ERA data to understand how these housing funds affected well-being and provide evidence-based research for housing policy development.

In addition to integrating HMIS and ERA data into WADC, future possibilities could include tenant household data from LIHTC units (such as from HUD form 52697), Low Income Home Energy Assistance Program recipient information from Wisconsin DOA, and eviction filings and court data from the Wisconsin Circuit Court Access Program. Each of these data sources has unique

challenges and data restrictions, and the authors have not yet negotiated data use agreements with the relevant state agencies. However, the primary reason to acquire housing data and merge it with WADC is because, without accounting for the housing environment, the authors argue that social scientists, policymakers, and community planners have an incomplete understanding of the lives, well-being, and capacities of the communities they serve. Home is the essential living space for life activities and deserves rigorous focus.

Ongoing Challenges and Opportunities

Although WADC has the potential to be a transformational resource for housing research, significant challenges to using it effectively remain. Each new housing data source the authors integrate comes with a significant learning curve as programmers, primary researchers, and students learn how to work with the new information. In addition, significant investments in developing trusting relationships with data-providing agencies remain key to maintaining functional researcher-practitioner partnerships (above and beyond the technical “know how” required to maintain the data resource). It is often a smart strategy to seek mutually agreed on, important policy-relevant questions that can begin the process of using the data. Partnerships are vital because additional funding must be identified and secured for analyses to proceed. The Institute for Research on Poverty provides the mechanism to keep all partners engaged—sometimes during very long periods—as appropriate funding mechanisms, scholars, and questions are negotiated collaboratively.

To access WADC, current data-sharing agreements require collaboration with a University of Wisconsin researcher.⁴ The authors envision potential partnerships with researchers from other states or partnering with researchers interested in using WADC data across at least three policy research categories. First, for poverty and social welfare researchers, the authors hope to demonstrate that incorporating housing data and investigating interactions with housing programs is necessary to study and affect human well-being. Second, the medical and healthcare fields show tremendous interest in understanding housing as one of the social determinants of health. The authors hope to demonstrate methods of integrating housing assistance data with program participation data such as Medicaid. Third, the authors imagine that the network of housing researchers will begin to appreciate why data linkages to other programs, such as SNAP or UI, are needed to understand and improve the multifaceted program and policy environment that economically vulnerable families experience. The authors are excited that HUD PD&R has made available restricted tenant household data for integration with other administrative data, subject to data-use agreements and privacy protections. The authors hope to encourage researchers across a range of disciplines and policy domains to consider using HUD’s data resources and develop their own data core models with state agencies. The authors are also hopeful that cross-state work can allow productive collaborations to answer pressing questions about housing and the other policies and programs that support our populations, with cities, states, and localities as policy laboratories.

⁴ See IRP’s WADC webpage for more information about partnering with UW researchers to use WADC data <https://www.irpwisc.edu/wadc/>.

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Authors

Marah A. Curtis is a Vilas Distinguished Achievement Professor of Social Work at the University of Wisconsin-Madison (UW). Kurt Paulsen is a professor of Urban Planning in the Department of Landscape Architecture at UW. Hilary Shager is the associate director for Programs and Management at UW's Institute for Research on Poverty.

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