How Can Big Data Impact Affordable Housing?

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Big data is the next step in developing affordable housing programs into sustainable, efficient systems.\textsuperscript{1} By harnessing big data and providing the necessary tools to housing authorities and policy makers, housing decisions can be made based on the most specific, evidence-backed method available.\textsuperscript{2}

While organizations like Google and Facebook have been using big data for decades as a means of analyzing their methods and improving their results, the policy making, legislation, and law fields are just now developing tools enabling them to use big data in a way that is both safe and effective.\textsuperscript{3}

Public interest is a traditionally under-funded and under-regarded sphere, but using big data and big data tools to help reach public interest goals can directly cut down on costs and allow people to glean more pertinent information in the little time they have to focus on each problem.\textsuperscript{4}

THE LEGAL AND POLITICAL ISSUES OF BIG DATA USE

As the use of big data grows, the judicial system has had to reevaluate and clarify consumers' rights against data collection organizations. The Supreme Court recently announced that individuals have standing to bring a complaint against a data collection company for disseminating false information.\textsuperscript{5} But what if big data could prove the solution to gentrification?\textsuperscript{6} What if the processes for collecting big data could also allow people on the hunt for housing to see all options in one place and apply in as little as ten minutes?\textsuperscript{7}

Some policies have directly sought the use of big data, while other policies incidentally collect it while addressing other concerns unrelated to big data.

\textsuperscript{2} Castro, Comments on the public policy implications of big data, 1, 2, CENTER FOR DATA INNOVATION (March 31, 2014).
\textsuperscript{3} Tracking the evolution of big data: A timeline, GCN (May 28, 2013) https://gcn.com/articles/2013/05/30/gcn30-timeline-big-data.aspx.
\textsuperscript{4} See generally Castro.
\textsuperscript{5} Robins v. Spokeo, Inc., 867 F.3d 1108, 1118 (9th Cir. 2017).
such as segregation. The Affirmatively Furthering Fair Housing ("AFFH") rule, issued by the U.S. Department of Urban Development ("HUD") under the Obama administration, requires municipalities that receive funding to report details assuring that their housing policies do not promote segregation. The information disclosed in the reports has allowed municipalities to begin collecting data within maps and other analytic tools. Moderate Republicans in the Senate have expressed their support of the rule. However, others have expressed the desire to repeal it, citing expense and the difficulty of using such tools. Opposition also claims that the rule is a disguised way to force states to act. Diane Yentel, president and CEO of the National Low Income Housing Coalition, stated that city leaders like the rule because "it requires them to look at and unwind what might have been decades of segregated communities. It requires them to take a look at their community and find where there are high concentrations of segregation and poverty and disparity of opportunities."

USES OF BIG DATA WITHIN CHICAGO'S BOUNDS: LAF'S MEDICAL LEGAL PARTNERSHIP

Medical legal partnerships ("MLPs") have proven to be one of the most fundamental mechanisms in collecting housing and health information. MLPs "embed lawyers as specialists in health care settings" by allowing physicians to refer patients directly to lawyers. While one side of an MLP is a hospital or medical center, the other side of the partnership is a legal organization, such as the Legal Assistance Foundation of Metropolitan Chicago ("LAF"). LAF is an organization that provides free legal services to people living in poverty in Chicago.

"[Big data] helps us make the case that legal services [have] a great [return on investment] in terms of addressing issues associated with poverty," says Al-

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9 Id.
10 Id.
11 Id.
12 Id. (stating that dissenters believe the rule is an "overreaching federal mandate")
13 Id.
14 See generally Andrew F. Beck, et al., Identifying and Treating a Substandard Housing Cluster Using a Medical-Legal Partnership, 130 PEDIATRICS 5 (Nov. 2012).
ice Setrini, MLP Project Supervisory Attorney, LAF Chicago. Setrini oversees referrals from Erie Family Health Hospital, manages the MLP with Cook County Health and Hospitals System (CCHHS) and Chicago Department of Public Health ("CDPH"). She also serves as the head of LAF's steering committee which makes decisions about the partnerships.

In LAF's MLP office, a case management system tracks referrals, interventions, and outcomes. While LAF is not currently using big data to the same extent as other organizations, they have a project coordinator whose focus is on data collection and analysis. They hope to continue moving in this direction because big data and its analytic outcomes help "make the case that legal services [have a great return on investment] in terms of addressing issues associated with poverty."

Data mapping can be one solution to areas at issue today that are usually only addressed after the fact. Common data mapping for housing issues include "segregation trends, areas of concentrated poverty, disparity in housing needs and access to opportunity, and location and tenant characteristics of publicly supported housing."

A trait being mapped and already resulting in an effect is lead poisoning. Lead poisoning responses are "reactive by their nature," meaning that a child is already poisoned with irreversible damage before anyone is alerted to the problem. Lead poisoning is just one example of an intersection between health, law, and racial justice. By mapping data, new insights such as contamination locations could allow places like LAF to focus educational resources in those areas and try to prevent poisoning and "all of the ripple effects that this devastating health condition entails."

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17 Email interview with Alice Setrini, MLP Project Supervisory Attorney, LAF Chicago (Oct. 4, 2017).
18 Id.
19 Id.
20 Id.
21 Id.
22 Id.
23 Id.
25 Email interview with Alice Setrini, MLP Project Supervisory Attorney, LAF Chicago (Oct. 4, 2017).
26 Id.
27 Id.
When LAF designed the medical legal partnerships with CCHHS and CDPH, they looked at aggregated data to discover the best geographic areas of focus, the legal issues those community members were most often facing, and how the agency could best apply their services to the missions and goals of the CCHHS and CDPH.  

While approaching the addition of big data applications in their office, LAF had discussions with their partners to develop guidelines to protect privacy and security. Institutional leadership signed off on these guidelines. The MLP at LAF does not currently use any new tools for big data analysis that they did not already have in place, lending to the idea that application is achievable without a large overhaul of current procedure. However, Setrini did note that if the office wanted to implement new systems for data collection and analysis, economic factors would be a consideration in that decision. She cites not only the cost of the new system, but the cost of time required to enter the data into the new system. LAF’s case management system, which is likely similar to many other Chicago-area organizations, is already gathering most of the relevant information that LAF is seeking. As a result, the process of implementing new big data analysis does not require an overhaul of established office procedures or computer processes.

The future of big data use in the public sphere to help housing issues looks promising, but Setrini still believes that “there is some inertia to overcome in changing how we practice to allow for data collection. I think there is definitely a balance between spending more and more time on administrative tasks, like gathering and memorializing data points, and actually practicing law. But there is no longer the option of foregoing data collection all together.”

While the benefits of big data grow strong with compelling implications, no field will be left behind, even in the public sector.

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28 Id.  
29 Id.  
30 Id.  
31 Id.  
32 Id.  
33 Id.  
34 Id.  
35 Id.  
36 Id.