

LITTLE ROCK HEALTH IMPACT OF HOUSING PROJECT

The Little Rock Health Impact of Housing Project is an initiative formed to examine the health impacts of barriers to quality, affordable and stable housing for people living south of Interstate 630 in Little Rock, Arkansas. The initiative is organized by Arkansas Community Institute (ACI) and led by ACI and the Central Arkansas Re-Entry (CARE) Coalition in partnership with Arkansas Community Organizations, University of Arkansas at Little Rock (UALR) School of Law Consumer Protection Clinic and University of Arkansas for Medical Sciences (UAMS) Fay W. Boozman College of Public Health.

www.arhealthyhousing.org

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This report was principally authored by Jake Coffey with the collective efforts of individual and organizational members of the Little Rock Health Impact of Housing Project. We would like to thank everyone who contributed to this report and to those who shared their experiences and expertise.

SUPPORT WRITERS

Ashley Bachelder, UAMS College of Public Health

Amy Pritchard, UALR School of Law Consumer Protection Clinic

Neil Sealy, Arkansas Community Institute (ACI)

STEERING COMMITTEE

 ${\it Co-Chairs:}\ \ {\it Leta}\ \ {\it Anthony,}\ \ {\it CARE}\ \ {\it Coalition}$

Neil Sealy, ACI

Ashley Bachelder Alesia Ferguson

Jason Bailey Rocky Herman

Dickson Bell Kendall Lewellan

Larry Butler Jim Lynch

Melody Branch Andrea Nunez-Garcia

Pat Brannin Lajoy Person

Jake Coffey Amy Pritchard

Robert Combs Ruby Welch

James Davis Nick Zaller

Dustin Duke

TECHNICAL SUPPOPT

Major technical support and expertise was provided by UAMS College of Public Health faculty and staff and students:

Mac Bird Alesia Ferguson

Clare Brown Rachel Jackson

UAMS service learning course participants:

Ashley Bachelder Jennifer Morales

Creshelle Nash Laura Gocio

Kate Stewart Lauren Nielsen

Camille Richoux LaTasha Moore

Dominique Hamby Myca Grant

Heather Collier Jordan Butler

James Davis Phillip Borden

Jessie Stuckey

Karrah Clark

Charice Riggins Chris Stone

Greg Forrester Caleb Kaspar

Mary Brewer

Courtney Sallings

Kristen Coffman

SUGGESTED CITATION

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For more Information, contact:

Neil Sealy Arkansas Community Institute nsealy@arkansascomm.org www.arkansascomm.org

(501) 376-7151

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I will tell you something about stories...They aren't just entertainment. Don't be fooled. They are all we have, you see, all we have to fight off illness and death. You don't have anything if you don't have stories.

Leslie Marmon Silko, Ceremony

As a general rule, people who rent residential property will have less power and be more open to arbitrary (or at least non-negotiable) exercise of social and economic power by others, unless the rental market is pointedly and specifically regulated in some way to prevent or restrict those exercises of power.

AJ van der Walt, Property in the margins

Ms. Shirley Allen and her 13-year-old daughter live in Colonial Parc Apartments in Little Rock. When they first moved in about two years ago, she noticed it looked like someone had painted over some things in the bathroom. After she and her daughter started having health problems, she noticed that the paint had started peeling and flaking. She also noticed what appeared to be mold in the bathroom and on the window sills. She began cleaning often with bleach and also noticed "pink stuff" showing up repeatedly inside the bathtub and cleaned that as well.

Ms. Allen was recently diagnosed with Bell's palsy. The first question her doctor asked was whether she and her daughter had mold in their home.

Shirley described the communication system at the apartment complex as difficult to navigate. The complex is owned by a corporation, and Shirley says the office staff is very secretive about the corporate office and how to contact them. The complex has an on-site manager who is rarely there and refused to share his phone number. Shirley said the office staff's answer to everything is to say the manager isn't here but they'll give him your message; although she never hears back from anyone. Shirley has asked repeatedly by phone and in person for someone to look at her bathroom. After she and her daughter started having health problems, Shirley took pictures to the office to show the staff.

They are working hard to find another place to live.

Shirley says if she could send one message to legislators and policy makers in Arkansas, she would say there should be laws in place that force landlords to have a reasonable system of communication in place for all residents.

Renter story

Mr. Whitaker is 30-years-old and works full time in Little Rock. He is an Arkansas native who moved to Little Rock after high school to attend the University of Arkansas at Little Rock. In October of 2015, Mr. Whitaker moved to Twin Pines, an apartment complex off Geyer Springs Road in Southwest Little Rock. Mr. Whitaker read the lease carefully and had an issue with the leave policy. The lease explained that in order to break the lease, the management would have to approve. He felt uncomfortable about this, but moved into the three bedroom apartment anyway with a friend and the friend's toddler.

When they first moved in, Mr. Whitaker personally knew the property manager and had very little trouble getting prompt responses when he needed something. However, six months into his lease the property management changed hands and things changed. The new management was slow to respond to repair requests and the on-site repair man who was with the old manager left, which contributed to the delays.

The first major issue Mr. Whitaker experienced was a sewage leak. An issue with the underground sewage system was affecting the entire complex. The sewage was backed up on the yard, creating a terrible odor that spread into all the units. Mr. Whitaker had to keep his clothes in his car to keep them from taking on the smell. Going to work with odor on his clothes was a point of frustration and embarrassment for Mr. Whitaker. At a certain point, Mr. Whitaker even kept his food in his car in order to save it from the odor. Eventually, the city intervened and corrected the issue. However, after the city came into fix the sewage, "that's when everything got worse," Mr. Whitaker stated. "The sewage was the least of the problem."

Mr. Whitaker's apartment also had issues with roaches and rats. The carpets became dirtied and they had problems trying to keep them clean. The management did not do anything to control for pests, and at one point, Mr. Whitaker's roommate had to relocate her young child to live with her grandmother because the carpets were not fit for a child to play on. The apartment also had a faulty air-conditioning unit which often stopped working. Mr. Whitaker did not want to invest his own money into buying new AC units and was frustrated when repairs weren't made.

Living in this environment affected Mr. Whitaker emotionally. "I was just uncomfortable living in a spot that was supposed to me mine," he explained. He did do some research on his own, trying to learn if he had options to improve his situation. Mr. Whitaker feels that universities and colleges should do something to help prepare students on how to rent properties and understand lease agreements. He feels that students should be getting educated about the laws and standards so that they can better navigate the system when they become independent. Mr. Whitaker believes that that there should be a standard of living supported by law that is acceptable and safe for everyone.

Renter story

A 74-year-old woman has been renting the same house in Little Rock for ten years, and for ten years she has been maintaining and repairing the property herself. "All he [the landlord] ever does is say he's gonna do something and he just lie and lie and lie and will never come and do anything. So, I end up doing it myself," she explained.

A proud woman, formerly married to a military service man and a military brat herself, she knows how to maintain a property and enjoys an orderly home. Unfortunately, due to the avoidance of her landlord, the home is in less than perfect condition. Much of her problems have stemmed from water related issues: piping issues around the kitchen sink that have caused some rotted areas, water leaking between the walls, singles falling off the house due to water related damage and great mold and mildew growth. There are also holes in the walls that let outdoor air in. She has brought all these problems to the attention of the landlord.

She noted her breathing is more troubled the last few years and she commonly has shortness of breath and fatigue, which she attributes to the amount of mildew in her home. She has a pre-existing heart condition that she worries may somehow be affected. She found relief only after placing several mildew-reducing "buckets" around her home, but not until after losing several soiled articles of clothing due to excessive mildew in her closets. In another incident her heating went out during the winter and she was forced to use her oven for heat after the landlord refused to send someone out. Then the oven went out. "We had some words then," she said, "I said, 'Now let me tell you something, I may not be white but I like to eat and I like to cook just like your wife do.' Now when I said that he went off." She feels that the landlord is very condescending to all people of color with whom she sees him interact. She also noted that he is "bad about answering and good about changing the subject" every time she asks for a repair.

This woman knows the upkeep that goes into keeping a property in good shape; before a divorce she was a homeowner for many years. However, she now lives on a fixed income as she is retired and on Medicare and without much wiggle room for excessive home repairs in her budget. Nevertheless, she estimates spending over \$1000 on repairing the property to livable conditions. Of this, the landlord has only reimbursed her \$400. At one point she told the landlord she intended to move, and he lowered her rent by \$50 to convince her to stay. After acknowledging some concern that her participation in this interview could also result in her eviction, she said she was at the end of her rope and that if telling someone about his behavior resulted in her having to move, "then it's God's will!"

She is currently looking for new housing, but worries about the expense and difficulty of moving at her age. She made it clear that keeping a property in good condition should require "mutual effort between both parties helping each other out." She thinks if the tenant treats the property well, the landlord should reciprocate. She ended by saying "my lord, what home owner wouldn't like to have a tenant like myself? I know how to take care of my things and I know how to take care of other people's things, because I'm the one that's gotta live there!"



Assessing the Health and Equity Impacts of Arkansas's Landlord-

Tenant Laws

Executive Summary



INTRODUCTION

Arkansas is the only state without an implied warranty of habitability, an essential feature of modern landlord-tenant law, which specifies that landlords provide minimum livability requirements and essential services such as heat, water, and plumbing for rental housing.

This project, informed by a Health Impact Assessment framework, was conducted to provide empirical data on the potential health and equity impacts of the adoption and enforcement of minimum rental housing standards for low-income and housing insecure individuals and families living in Little Rock. The study was conducted with the additional goals of engaging community members most directly affected by substandard housing to participate in the decision-making process and bringing together stakeholders with multiple, diverse interests to build new understandings and relationships.

All the landlord ever does is say
he's gonna do something and
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FINDINGS

The implied warranty of habitability can and does work to bring needed repairs and improvements to substandard housing that cause or exacerbate poor health. Adopting minimum standards for rental housing would strengthen renters' rights and paired with enhanced code enforcement and education-based initiatives would likely improve public health and begin to address housing inequalities in Little Rock.

Findings from focus group discussions, renter surveys and stakeholder interviews all indicated resounding support for the adoption of minimum standards for rental housing and more equitable landlord-tenant laws. Many renters associated their experiences with substandard housing with poor physical and mental health.

Through a novel data linkage partnership, we found that among Little Rock properties inspected for code violations, individuals seen at the University of Arkansas for Medical Sciences (Little Rock's public hospital) for a respiratory condition were nearly 3 times more likely to live in a property that had a mold related violation notice issued—highlighting the importance that tenant-protective measures such as the warranty of habitability could potentially have on population health.

HIA is a community engagement tool

Formative focus group discussions, a rapid assessment of landlord-tenant legislation with subject matter experts and key stakeholders, a renter screening survey, and renter and code enforcement officer interviews were not only designed to assist in determining the potential impacts of adopting an implied warranty of habitability. Just as importantly, they were developed to engage community members most directly affected by substandard housing and as part of the project's larger community engagement strategy.

Through this process, Arkansas Community Institute (ACI) and the Central Arkansas Re-Entry (CARE) Coalition have built a coalition of renters, landlords, health researchers, criminal justice reform advocates, and non-profit and legal services organizations committed to achieving fair and balanced landlord-tenant laws.

HOUSING AND HEALTH

The links between housing quality and health are well-documented. Individuals who live in substandard housing are more likely to be exposed to hazards which contribute to poor health, including:

- · Mold, dampness and water leaks
- Allergens, including pests (e.g. roaches)
- · Extreme heat or cold
- Trip and fall hazards (e.g. uneven floors, poor lighting, poorly constructed stairs, etc.)
- Disease vectors (e.g. rodents, rats, house mice)
- Fire risks (e.g. no smoke alarm, faulty electric system, etc.)
- Carbon monoxide exposure (e.g. unvented or poorly maintained gas equipment/appliances)

These and other hazards are linked to increased rates of chronic disease (e.g. asthma, cardiovascular disease, cancers, hypertension), acute and infectious disease (e.g. headaches, respiratory infection), injuries (e.g. burns and falls), and diminished mental health (e.g. depression and anxiety). Housing instability and frequent moves relate to poor health outcomes, especially for children.

In the U.S. today, over 5 million families are estimated to live in housing that poses a public health and safety hazard to the well-being of its occupants.^{1–17}

THE CONTEXT

Positive impacts of an implied warranty of habitability would be greatest in poor and low-income neighborhoods in Little Rock with a disproportionate share of the city's substandard housing. Fifty-three percent of Little Rock residents in the neighborhoods south of Interstate 630 are renters—higher than the city and state average—and the share of households that rent is increasing. Residents in these neighborhoods experience higher rates of poverty, incarceration and parole, significantly lower educational achievement, and high unemployment and deteriorating housing stock.

	Study area	City of Little Rock
Average household income	\$31,396	\$46,085
Renters	53%	43%
Renters in poverty	31%	17%
Pre-1980 rental housing stock	70%	54%

2011-2015 American Community Survey

RECOMMENDATIONS



EDUCATION

Provide education on residential landlords' and tenants' rights and responsibilities



RESOURCES

Effective enforcement of minimum standards requires dedicated resources and meaningful remedies for tenants



Strengthen local and statewide housing policies to protect tenants' health and safety



DATA

Data on housing conditions should be collected and disseminated

Based on the findings in the project's research and community engagement process, the Steering Committee developed four primary recommendations.

1. Provide education on residential landlords' and tenants' rights and responsibilities

Statewide: State agencies such as Arkansas Development Finance Authority, the Arkansas Fair Housing Commission, and the Department of Health should work together to educate landlords, tenants, and related stakeholders on:

- Healthy Home Principles (including how housing conditions can impact health and best practices for dividing maintenance obligations between landlords and tenants),
- Effective landlord/tenant communication and dispute resolution;
- · Programs and available assistance to promote affordable and energy efficient housing;
- Laws regarding fair housing (including the use of criminal records in the rental housing application process), self-help eviction, and security deposits.

Local: City government and local housing authorities should educate landlords, tenants, and related stakeholders on:

- · Minimum housing standards and landlord and tenant obligations for maintaining units;
- A landlord's obligation to register rental units and ensure compliance with housing codes:
- · A tenant's legal options when a landlord will not make needed repairs.

2. Strengthen local and statewide housing policies to protect tenants' health and safety

Statewide: Arkansas should adopt statewide minimum housing standards that ensure that premises and common areas are safe and fit for their intended use.

Because the tenant and landlord requirements in the Uniform Residential Landlord and Tenant Act (URLTA) were designed to be complementary when operating together; all elements should be implemented (and enforced) equally to achieve a healthy home.

3. Effective enforcement of minimum standards requires dedicated resources and meaningful remedies for tenants

To protect tenants living in unhealthy housing, minimum housing standard policies should provide remedies to tenants that include both the option to terminate the lease and move out and an option to require the property owner to make needed repairs.

Local: Little Rock could optimize the health promoting potential of its local ordinances by adding independent legal remedies for tenants in units that do not comply with the rental inspection ordinance. In addition, the City should assign dedicated code enforcement officers to systematic rental inspections, with a focus on nuisance properties. City officials should examine factors leading to high code inspection vacancies, such as salaries.

4. Data on housing conditions should be collected and disseminated

Local: Code Enforcement should computerize all data to allow for tracking and sharing of rental unit registrations, inspections, complaints, compliance updates, and actions taken.

ABOUT THIS STUDY

The Arkansas Community Institute (ACI) and its partners received funding to assess the health impacts of Arkansas's landlord-tenant laws to help provide information to improve policies regarding rental protections in Little Rock. The specific purpose of this study is to provide empirical data to document the housing quality concerns and their relationship to health, as well as the potential health and equity impacts of the adoption and enforcement of minimum rental housing standards for low-income and housing insecure individuals and families living south of Interstate I-630 in Little Rock. The study was conducted with the additional goals of engaging community members most directly affected by substandard housing to participate in the decision-making process and bringing together stakeholders with multiple, diverse interests to build awareness and forge new relationships.

METHODS

This report focuses on understanding the health-related housing conditions of Little Rock's rental stock, the housing-related health conditions of Little Rock renters, and the potential health impacts of the adoption of minimum rental housing standards for low-income and housing insecure individuals and families living in Little Rock. We utilized the following methods:

- Review of scientific and grey literature;
- Analysis of existing national data sources such as the American Community Survey (2011-2015) and the Comprehensive Housing Affordability Strategy (2010-2014);
- Linkage and analysis of existing local data sources from the City of Little Rock's Code Enforcement/ 311 database and the University of Arkansas for Medical Sciences (UAMS) data warehouse:
- Formative focus groups with Little Rock renters and healthcare and housing stakeholders;
- UAMS service learning course's renter screening survey, interviews with renters, and Little Rock Code Enforcement Officers; and
- · Rapid assessment meeting with subject matter experts and key stakeholders.

FRAMEWORK



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This study is based on a Health Impact Assessment (HIA) framework. HIA is a public engagement and decision-support tool that can be used to assess policy decisions and make recommendations to improve health outcomes associated with

those policies. The fundamental goal of an HIA is to ensure that health and health inequities are considered in decisionmaking processes using an objective and scientific approach, and engaging stakeholders throughout the process.

KEY TERMS AND CONCEPTS

We use the term 'health' expansively to mean "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." When we talk about 'health impacts' we mean any changes in the health status of individuals or populations, or changes in the physical or social environment that have bearing on health. There is an emerging consensus that health outcomes will not improve unless we address social and environmental factors not traditionally considered health issues. The 'social determinants of health'—the conditions in the places where people, live, learn, work and play—affect a wide range of health risks and outcomes. 'Health equity' is achieved when every person has the opportunity to "attain his or her full health potential" and no one is "disadvantaged from achieving this potential because of social position or other socially determined circumstances." Health inequities are reflected in differences in length of life; quality of life; rates of disease, disability, and death; severity of disease; and access to treatment.²⁰

The terms 'tenant' and 'renter' are used interchangeably to describe anyone who is paying rent or seeking to rent. While tenants, public housing residents, squatters, single room occupancy tenants, homeless families and individuals and mobile home park residents would likely all be impacted by landlord-tenant law reform, this report primary addresses renters in the private rental market who make up the majority of Little Rock's renter population. We rely on the Department of Health and Human Services' definition of 'housing insecurity', as high housing costs in proportion to income, poor housing quality, unstable neighborhoods, overcrowding, or homelessness.

Unless it is a direct quote, instead of 'Latino' or 'Hispanic' the more inclusive, gender-neutral 'Latinx' is used to describe a person of Latin American origin or descent. To avoid defining people permanently or exclusively by past experiences, this report uses the language 'justice-involved person' instead of 'offender' or 'convict' to refer to individuals who have spent time in jail or prison.

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INTRODUCTION

Today over 35 percent of the U.S. population—or 43 million households and more than 107 million residents—consists of renters, with higher proportions in many cities.²¹ Faced with a historic housing affordability crisis and increasing housing insecurity, many low-income renters are forced to live in unsafe and substandard housing. It is estimated that over 5 million families (and 4 million children) live in housing that poses a public health and safety hazard.⁶ Exposure to dangerous and unhealthy housing is not evenly distributed across populations and low-income individuals and communities of color are disproportionally affected. Nationally, 13.7 percent of low-rent units fail to meet the criteria for adequacy as defined in the American Housing Survey, compared with 9.8 percent of all rentals.²² Justice-involved individuals, in particular, encounter significant challenges obtaining safe and stable, healthy housing and the disproportionate concentration and cycle of incarceration in poor urban communities of color can exacerbate and perpetuate substandard housing.²³

Health and Housing

There is a strong and direct link between housing quality and health. Access to safe, healthy housing is a key social determinant of health and plays an important role in preventing and reducing chronic health issues and contributing to one's overall physical and mental well-being. Individuals and families living in substandard housing are more likely to encounter leaky structures, broken plumbing, broken windows, and pests that can lead to neurological disorders and psychological and behavioral dysfunction. Household deficiencies and disrepair (e.g., leaky structures, broken plumbing, broken windows, and pests) and energy insecurity are all important contributors to distress and chronic stress. Cold and damp interiors, which facilitate the growth of mold and other microorganisms can lead to respiratory diseases, such as asthma, as well as more acute health conditions like diarrhea, headaches, and fever. Allergens from pests (cockroaches, rodents, etc.) have also been shown to cause asthma. Poor ventilation, the use of cooking stoves for heating, and the incorrect installation of heating and cooking appliances can lead to carbon monoxide poisoning. Exposure to lead found in older household paints and pipes can lead to neurological damage, impaired development, reduced IQ and negative cognitive and behavioral effects such as hyperactivity, increased aggression, learning disabilities and behavioral problems. Housing insecurity is linked to a wide range of negative health outcomes, including deteriorated physical and emotional health.1-17

Renter Protections

Many U.S. jurisdictions, including Little Rock, have adopted state and local housing codes that establish minimum standards and a baseline for safe and healthy housing conditions. Through such codes, renters can in theory rely on inspection or code enforcement programs to document and enforce a range of code violations. Code enforcement serves to improve housing conditions by bringing properties up to code and deterring future offenses.

If landlords do not comply with local housing code, renters in every state but Arkansas are protected by what is called an implied warranty of habitability, a key feature of modern landlord-tenant law. The warranty is an implicit promise that every residential landlord makes to provide tenants with premises suitable for basic human dwelling. The majority of states have modeled all or part of their warranty based on model legislation known as the Uniform Residential Landlord Tenant Act (URLTA). This 1972 legislation provides a common sense, balanced list of requirements for both the landlord and the tenant. For example, landlords are responsible for maintaining safe and functioning electric, plumbing and heating systems among other responsibilities. Tenants are required to dispose of waste, avoid deliberate damage or neglect, and other duties.²⁴ Arkansas's habitability requirements enumerate all the standard requirements for the tenant, but requires nothing of the landlord.²⁵ In states that have a more balanced warranty, renters may bring repair disputes to court either offensively or defensively, under the warranty of habitability, when basic codes are breached. This threat can prompt landlords to respond to renters' housing code concerns more meaningfully and more urgently and can work hand-in-hand with housing inspection and code regimes to maintain healthy, habitable housing.



Figure 1. State Map of Implied Warranty Laws

22 states adopted the implied warranty through statutes based on URLTA and 23 states have statutes influenced by but not based on URLTA. 4 states and the District of Columbia recognize the implied warranty as a matter of common law. The Network for Public Health Law, 2012.

Research has shown that the warranty can and does work to bring needed repair and improvement to otherwise substandard rental housing.^{26–28} Data suggest, however, that the warranty is underutilized, even in housing markets with a sizeable substandard housing stock and that for low-income renters there are considerable barriers to its assertion.^{26,27,29,30} The literature is less conclusive regarding the relationship between the implied warranty of habitability and rent rates,

a common concern raised by opponents of the warranty.³¹⁻³² While there is some evidence that suggests a relationship between higher rent rates and habitability laws, lower-income, disinvested neighborhoods where substandard housing is most often found are already vulnerable to speculative reinvestment. This only reinforces the need for greater renter protections that preserve unsubsidized affordable rental properties, prevent displacement, and also improve the habitability of neglected and substandard housing.³³

There are good landlords out there who already voluntarity include many of these recommended protections in their lease agreements. If implemented, these reforms will not only put landlords and tenants on more equal footing, but also make it more difficult for unscrupulous landlords to compete with good ones."

Commission Chair Stephen Giles

There have been many efforts in previous years

to reform Arkansas landlord-tenant law. In 2007, a bill was introduced that balanced the rights and responsibilities of both landlords and tenants. Before it could be enacted, it was amended to eliminate all landlord responsibilities and all protections for tenants. In 2011, the state legislature established a commission comprised of a broad-based group of stakeholders and experts to

study Arkansas's landlord-tenant laws. The commission recommended a comprehensive set of reforms to Arkansas's "significantly out of balance" landlord-tenant laws, including the adoption of an implied warranty of habitability. In 2015, the Arkansas Landlords Association and tenants' advocates worked together to develop a bill, House Bill 1486 (HB1486), that proposed minimum standards for rental property. Despite the recommendations of the commission and support from many allied groups, HB1486 was met with intense opposition from the Arkansas Realtors Association and ultimately failed to pass out of committee. Arguments against the bill included concerns over increasing rent prices, hindering housing development, increasing costs and liabilities for landlords, and a general dislike for increased business regulations.

In the lead-up to the 2017 legislative session, we undertook this project to contribute to current and future discussions about landlord-tenant reforms by providing Arkansas lawmakers, the City of Little Rock and its Code Enforcement Division, and state and local housing and health advocates with information about how housing conditions impact health and the possible health impacts of increased rental protections for Little Rock renters. This project seeks to provide health-based information as state and city officials and other stakeholders work to enact policy and budgeting decisions to support landlord-tenant reforms and code enforcement strategies for healthy housing.

LOCAL CONTEXT

To help understand the potential impacts of landlord-tenant reforms, this section describes Little Rock's rental housing stock, the city's neighborhoods with the disproportionate share of the city's substandard housing and the communities who live there.

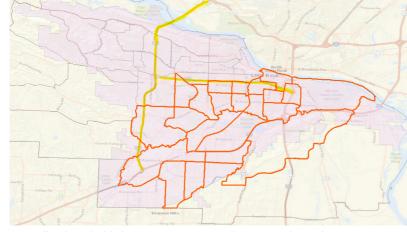
Little Rock south of I-630

Little Rock is a city starkly divided by race and class in its neighborhoods, housing, and educational and economic opportunities. The most visible geographic dividing line is Interstate I-630, built in the 1970s and early 1980s. The freeway has encouraged white flight and the growth of middle to upper income neighborhoods in west Little Rock while becoming the major barrier between the whiter, more affluent neighborhoods to the north and the blacker, poorer neighborhoods in the east, center and southwest. The majority of neighborhoods south of the interstate have high child poverty rates, high levels of incarceration and parole, significantly lower educational achievement, high

unemployment and deteriorating housing stock.

Our study focused on the Little Rock neighborhoods bounded by I-630 to the north and I-430 on the west, as demonstrated in Figure 2. Over half of the residents living in these neighborhoods are renters and a third are in poverty. On average, the neighborhood residents' household income (\$31,396) is considerably less than that of the

Figure 2. City boundaries and study area census tracts



Yellow lines highlight I-630 (East-West) and I-430 (North-South)

city as a whole (\$46,085). Neighborhoods south of I-630 have a significantly higher population of African American residents (68%) and a growing number of Latinx residents (9%) as compared to Little Rock as a whole.

Residents of these neighborhoods have limited access to decent, affordable housing. White flight began in the 1950s and quickened its pace in the 60s and 70s. I-630's construction coupled with the subsequent approval of city annexation of nearby suburban growth territories of Little Rock has resulted in the loss of thousands of homes in central Little Rock. White flight also meant the flight of capital and investment. Studies based on Home Mortgage Disclosure Act data have repeatedly shown that home loan activity is sparse in those neighborhoods. Local fair housing reports in the 1990s showed that Black and Latinx individuals faced widespread discrimination in the housing market, especially when they attempted to buy or rent in predominantly White neighborhoods. The long lasting effects of these and other events are evident in the quality of housing stock that exists today.

Housing Stock

The majority of housing units in this area are rental property. From 2010-2014, 53% of occupied housing units in the project's target neighborhoods were home to renters, compared to 43% in Little Rock as a whole.³⁴ During the same time, 47% of all rental households in Little Rock reported one or more problems with their housing units, with 25% reporting severe physical problems.³⁵ Figure 3 shows a census tract-level density map illustrating the geographical concentration of rental household problems and highlights the heavy concentration of household problems in our study area.

It is challenging to find recent, local data about the rental housing conditions in Little Rock. While the American Community Survey collects some relevant housing data, Little Rock is not included in the American Housing Survey (AHS), a national survey of select metropolitan areas that asks more detailed questions about housing characteristics. AHS data from neighboring southern cities Memphis, Tennessee and Birmingham, Alabama, which are demographically and socioeconomically similar to Little Rock, may provide some insight into the likely conditions of Little

Rock's rental housing stock. Of the 45 metro areas surveyed as part of the AHS, Memphis and Birmingham's metro area 'healthy housing' rankings were 45 and 44, respectively. Compared to the national average both cities' rental housing stock had significantly more physical problems, holes in floors, open cracks or holes in the walls, broken plaster and peeling paint, signs of rats, water leaks from inside and outside, roofing problems, and window problems.³⁶ Appendix A provides detailed rates for the full list of housing problems for both cities.

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Figure 3. Rental households with at least 1 of 4 housing problems

The four housing problems are: incomplete kitchen facilities, incomplete plumbing facilities, more than 1 person per room, and cost burden greater than 30%. Cost burden is the ratio of housing costs to household income.

Renter story

Ms. Miranda Adkins is a married mother of 4 and lives in Lincoln, Arkansas in the northwest part of the state. For the past three years she has been renting a 3 bedroom, 2 bath single family home for \$600 in Lincoln Gardens Housing, a low-income housing project. She was aware of the limited protections that most renters have when she signed the lease; she remembered specifically a statement that said tenants will not be reimbursed if they make repairs. When Ms. Adkins and her husband chose to replace a thermostat that the landlord did not repair, they tried to submit receipts and request some refund despite remembering that clause in the lease. They were denied.

Timeliness of repairs for things that were addressed by the rental management company, LEDIC, was an issue. Ms. Adkins recounted a time that a bad storm took a lot of shingles off the roof and flooded the hallway and living room out. "You could see water pouring down the walls." She alerted the landlord immediately and had to ask for help for months, but the management company did nothing about it to the point that it went to black mold-- you could see rings where the mold was growing and the ceiling collapsed in one of the bedrooms. She reported that only when she threatened to call the state (who oversaw the housing project) and the local news stations did she get a response. She said after four months the repairs were made to a "livable situation," but still not back to the pre flood condition and definitely not a comprehensive fix; she said they scrapped the mold off and patched the walls but didn't fix any structural problem.

Ms. Adkins reported health impacts after the flooding. "When we had all the mold, it seemed like we were constantly sick. Allergy stuff, snotty noses. Of course I have four kids and the mold and issues were all in their end of the house. They were in it more than we were." Still, the mold did impact her personally, too. "If you get up and you're so snotty and your eyes are running to the point that you can't see, it's kinda hard to get up and go to work. It's hard to function on a daily basis like that. Since they took care of the mold issues I haven't been having these issues as much." She also shared that the management has changed at Lincoln Gardens, and the new company doesn't seem to be "as absolutely horrible" as the former one.

Ms. Adkins also experienced some minor issues with repairs to kitchen appliances and the heating and cooling system. She feels that issues like these are "wrong because if a landlord isn't gonna make a place livable, then they shouldn't be able to claim full rent on it. Why should we pay full rent if we aren't getting full use of the house?" She went on to assert "we are not trash and we shouldn't be treated like trash. We pay a fair month's rent so we should have a decent place to live." She is optimistic about the future but is unsure if anything will change anytime soon that will benefit her and others that she knows are in similar situations.

A 22-year-old single young woman in Little Rock has had an almost year-long travail with Quail Valley Apartments, now called Spanish Valley Apartments after a change in ownership. When she was apartment shopping in April of 2016, she looked at an apartment at the complex, didn't see any issues with it and agreed to a 12-month lease. When she went back to pick up the key, however, she was told there was a problem with the apartment she had looked at and she was assigned to a different unit. Mold covering the ceiling was immediately visible in the new apartment, as well as leaky plumbing, a nonfunctional air conditioner and several electrical outlets that didn't work or were cracked. There are holes along the bottom of the walls below the baseboards, including some holes "big enough to stick your hand through." She and her boyfriend have both had frequent headaches and stomachaches while staying in the apartment. When they stayed with family or avoided the apartment, the headaches and stomachaches go away.

The apartment complex changed ownership and names shortly after she began living there. It is owned by a corporation and the on-site staff are very tight-lipped about the corporate office. She and her mother have been unsuccessful in finding even basic contact information. Her 11 months in the apartment have been full of constant requests for these problems to be looked at and full of watching the office staff write down her information, promise to get to it, and then never follow up. Even after taking pictures and video from inside the apartment to show the staff, they still just put her off and procrastinated.

The staff's attitude changed when her mother suggested that she call Little Rock Code Enforcement. Their inspection resulted in what she described as a "whole list" of code violations that the complex had seven days to fix. After Code's visit, she reported that the majority of problems got fixed, though some of those fixes have proven to be temporary. The mold was simply painted over and quickly came back—the new paint soon started to crack and peel off due to the mold's growth underneath. After the air conditioner was fixed, the heat stopped working. Right around the same time as the inspection, she learned that ownership changed again when the new management changed the date that rent money was due and began issuing \$10 late fees to many tenants. The new management informed her that any further repairs they would make to her apartment would be considered "renovations" and they would have to increase her rent. She feels confident that the unfair treatment she has been shown is because she has tried to hold the apartment complex accountable for the conditions of the building and because she called Code Enforcement. She finds the tenant laws in Arkansas to be "ridiculous" in the extent to which they favor landlords over tenants. Her opinion is that renters should be responsible for keeping the property clean, maintaining their own belongings, and obeying the rules; but landlords should be required to maintain the property to be in the same condition as when the renters moved in. It shouldn't take appealing to Code Enforcement to make landlords make repairs that are critical for being able to live in the apartment.

Little Rock's Code Enforcement Division tracks its rental housing inspections, but limitations exist in its efficacy and meaningful use of data, including the complaint-driven nature of the inspections program, the high job vacancy rate of the program's code enforcement officers, and the limited functionality of the database itself. Despite the city's enactment of Ordinance 16,659 in 1994 which requires inspection of all rental units on a systematic basis, current efforts remain complaint-driven and are estimated to have only reached 8 percent of the total rental housing stock mandated for the five-year period between 2012 and 2016. Data show a five-year code enforcement officer vacancy rate of 32.2 percent (See Appendix B), explaining, at least in part, why the program struggles to operate in a proactive manner. Finally, the database lacks a comprehensive description of each violation. A recorded case includes descriptive information about the property, property type (rental/ owner occupied/mobile), problem type (sanitation/pests, mechanical, electrical, etc.), additional notes, and whether a citation was issued. While one might surmise the specific housing standard that was violated based on the nature of the complaint, this information is not included. Additionally, while the closing of a case implies that the violation has been resolved and that the rental unit is in compliance, there is no documentation of how violations are remedied or repaired, making it difficult to assess the extent to which health-related problems are addressed.

This project utilized a dataset from 2010-2016 which included all complaints collected from renter-occupied units. Table 1 shows the prevalence of the ten most common complaints and the associated number of citations issued. The most prevalent interior problems are sanitation/pest

Table 1. Top 10 code enforcement complaints and associated citations issued, 2010-2016

Problem type	Frequency (% of total complaints)	Citations issued
Structural issues (roof, foundation)	1296 (14%)	356
Burnout/Dilapidated/Unsecure	1124 (13%)	253
Sanitation/Pests	981 (11%)	199
Boarding	914 (10%)	260
Plumbing (water, water heater)	889 (10%)	239
Sewer Interior/Exterior Lines	644 (7%)	216
Mold-related complaints	555 (6%)	120
Electrical (exposed wires)	501 (6%)	146
Mechanical (AC/Heat, furnace)	499 (6%)	123
Criminal Activity (Transient, drugs)	433 (5%)	87

Each complaint often includes more than one 'problem type' and a citation does not specify the violation type

related, followed by plumbing. Figure 4 shows a heat map of all housing code complaints from 2010-2016. Appendix C provides more detailed information about the code complaint dataset we received from the City and how it was utilized for this project.

Figure 4. Density of all housing code complaints, 2010-2016

Housing-related health conditions

There are limited neighborhood-level outcome data for most housing-related health conditions and there are few data systematically collected that track individual's health based on housing occupancy. Later in this report we describe the linkage of Little Rock Code Enforcement data and UAMS hospital admission data that we conducted to examine the association between housing code complaints and local respiratory-related illnesses.

Data obtained from the 500 Cities Project—a collaboration among the Robert Wood Johnson Foundation, the CDC Foundation, and the Center for Disease Control and Prevention (CDC) -provide local level health related estimates that point to the existence of neighborhood-based housing-related health disparities.³⁷ Figure 5 shows that the prevalence of asthma among adults living in Little Rock (9.3%) is not distributed evenly, with neighborhoods south of I-630 enduring higher morbidity. See Appendix D for how this pattern repeats itself for other housing-related health conditions including mental health and stress. More local data are needed to determine the extent of the health impacts of carbon monoxide poisoning, trips and falls, electrical fires, pests and unsanitary conditions, and the lack of functioning utilities.

Current asthma prevalence among adults aged >18 years by census tract, Little Rock, AR, 2014

Figure 5. 500 Cities Project: Local Data for Better Health, 2014

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"I think the worst came when a limb fell through the roof...It was raining and water came pouring in, and of course with it came bugs, dirt and debris. I notified her [the landlord] at the time, but it was several days later before she had the roof patched."

Anonymous

"Fix this law, make buying a home easier and make sure rentals are up to code and more habitable."

Charles Lowe II

"I worked a hard, hot, job in road construction and I couldn't get cool enough to sleep in the summer or warm enough in the winter. I was stressed out all the time. I was miserable. I was embarrassed... It stayed cold all the time and I was sick a lot in the winter."

Anonymous

PROJECT ACTIVITIES

This section describes activities undertaken to illustrate the specific housing problems individuals and neighborhoods south of I-630 face, how they may impact individual and community health, and examples of landlord-tenant relationships. The findings from focus group discussions; a health and housing data-linkage project; a class project comprised of in-depth key informant and stakeholder interviews; and a rapid assessment of a landlord-tenant bill are presented.





Key informant

Formative focus groups with Little Rock renters (n=38) and healthcare and housing stakeholders (n=34)

UAMS service learning course's renter screening survey, interviews with 26 renters, and 6 Little Rock Code Enforcement Officers



Linkage and analysis of existing local data sources from the City of Little Rock's Code Enforcement/ 311 database and the UAMS data warehouse



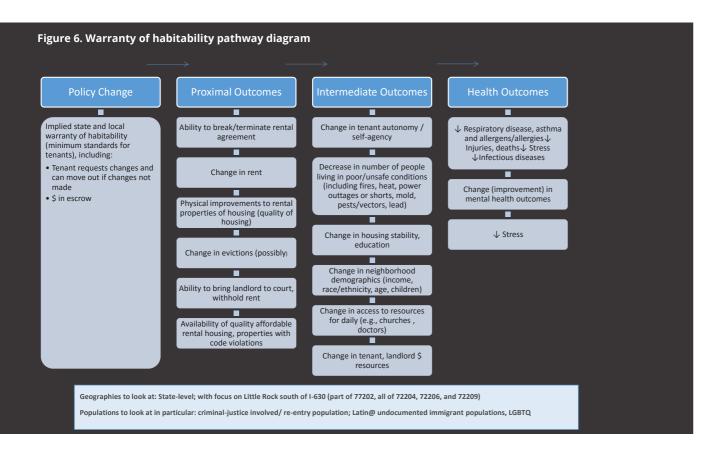
Rapid assessment of HB 1166

Rapid assessment meeting of House Bill 1166 with subject matter experts and key stakeholders

Focus groups

In the summer of 2016 we conducted nine focus group discussions with renter constituencies and key stakeholders to better understand the individual and community impacts of existing landlord-tenant laws. These formative focus groups were used to capture participants' knowledge of Arkansas's landlord-tenant laws and their experiences with rental housing; inform the development of the study; and strengthen the coalition of renters and other key stakeholders supportive of landlord-tenant reforms. The findings from the focus groups helped shape the direction of the study and identify the health pathways and equity effects of interest illustrated in Figure 6.

Participants in the focus groups included 38 renters and 34 stakeholders. The key stakeholder groups included City of Little Rock agencies and government officials, landlords, community leaders, and healthcare professionals. The demographic profile of the renter focus group discussions mirrored those of the study area, with greater participation from African American participants, people living in poverty or on limited incomes, and criminal justice involved individuals. Specific renter constituent groups were identified that might be particularly vulnerable to existing landlord-tenant laws. For example, in a previous report of local renters' experiences navigating the state's landlord-tenant laws, survey findings indicated that Latinx respondents were more likely to report problems with their landlord, experience verbal abuse and be threatened with eviction at significantly higher rates than non-Latinx respondents. They also moved more frequently as a result.³⁸ Based on these findings, the project made a special effort to recruit this population and provide Spanish-language only focus group discussions. Appendix E provides a summary of stakeholder and renter group participants and renter demographics.



Qualitative data analysis revealed

Six overarching themes across the nine focus groups

- 1. Asymmetry in the knowledge of landlord-tenant laws. All of the landlords, healthcare professionals (several of whom were landlords), city officials and most community leaders were familiar with the implied warranty of habitability. Nearly none of the renter focus group participants, on the other hand, had any knowledge of Arkansas's lack of an implied warranty of habitability. While few were familiar with the landlord-tenant laws, the majority understood from experience that they have few protections or legal recourse against landlords who provide uninhabitable premises, refuse to make repairs or illegally evict.
- 2. Inhospitable, unsanitary and unsafe living conditions. Renters provided rich descriptions of their experiences living in substandard housing. The most common issues included mold, pests and rodents, plumbing issues and electric and heating problems. For many participants, repair needs remained unaddressed over time, resulting in unacceptable living conditions. Many participants described spending their own money to make repairs.
- 3. Housing as a key determinant of health. Renter participants associated their challenging housing experiences with poor physical and mental health. Many of the health concerns renters attributed to poor housing echo existing public health findings and the expertise of the other stakeholder group participants.
- 4. Barriers to trust. In both the renter and landlord focus groups, participants discussed a variety of factors that impeded the development of trust and an amicable landlord-tenant relationship. Justice-involved participants described being discriminated against and the cost of non-refundable screening fees. In the Spanish-speaking focus group, participants indicated that most of their landlords spoke English exclusively and that the attendant language barriers contributed to feelings of frustration and anger. Many renters discussed refraining from requesting inspections for fear of landlord retribution.
- 5. Arkansas's landlord-tenant laws are unfair and unjust. There was overwhelming agreement between the renter and stakeholder focus groups that basic standards are needed in rental housing. Even the majority of landlords were supportive of a statewide warranty of habitability.
- 6. Renter and stakeholder recommendations. In all focus groups, respondents offered a range of recommendations that clustered in several different areas including: 1) Education on landlord-tenant rights and duties; 2) Enhancement of local code enforcement; 3) Expansion of housing/health cross sector collaborations like the medical-legal partnership at the Arkansas Children's Hospital.

Housing Violation and Respiratory Health Data Linkage

While the literature establishes a strong and direct link between housing and health, this study examined the relationship between local code complaints and healthcare utilization for specific health conditions. While national data sets such as those from the US Census and variables such as the percentage of vacant or renter-occupied homes within a geographic area have been used to understand variability in health outcomes across populations, local data sets may provide additional granularity. Linking housing code inspection data with hospital and emergency department admission data can identify at-risk geographical areas for health and housing interventions.

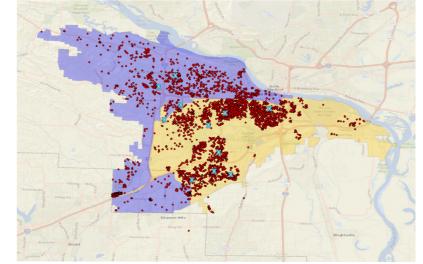
Through a partnership with researchers at the UAMS College of Public Health and the City of Little Rock's Code Enforcement Division we examined the association between City housing code complaints and respiratory illnesses by linking the two datasets. This case control study included an analytic sample of 510 instances of individuals being seen at UAMS who reported a residential address that matched a property that was inspected for a housing code violation. We found that individuals who had either an emergency department or inpatient hospital stay at UAMS for a respiratory related illness were over two times as likely to rent a property that was issued a mold related violation notice compared to controls regardless of demographic differences (adjusted odds ratio= 2.72).

This study does have limitations, with one significant one being that the geocoding matching process used to link the housing code violation data with the healthcare data does not incorporate apartment numbers in the process. A link between a hospital data point and code violation means that a citation was issued for the apartment complex, but not necessarily for the individual's apartment, for those addresses which are multi-family residences. With approximately 74% of the subjects in the current study living in multi-family residences, this could have a significant impact on interpretation of the results. However, this would be expected lower the statistical power. Since there was a significant association between mold related violations and respiratory morbidity, one possible explanation for this would be that a citation being issued for one apartment within a multifamily complex could indicate a more widespread problem within the complex as a whole. A final limitation is the relatively small analytic sample,

the power of the study. This limits our ability to predict how other variables, such as other medical conditions, zip code, or neighborhood characteristics may also influence the results.

While the current study has its limitations, the results indicate a strong association between mold related housing violations and respiratory morbidity. These results highlight the

coupled with the low base rate of Figure 7. Map of all code violations and the 11 properties within the citations being issued which limits study receiving 10 or more inspections from 2010-2016



importance of housing regulations and enforcement of those regulations for population health. A study with a larger sample size and more accurate linking between housing code violation data and healthcare data is warranted. See appendix F for a fuller description of the methodology and analysis.

UAMS Service Learning Project

ACI partnered with students from UAMS to complete a service learning project from January— May 2017. The project included collecting short surveys and interviewing renters and code enforcement officers. A complete description of the class project methodology and findings can be found in Appendix G.

Interview participants were identified through a voluntary screening survey. While the screener did not collect demographic data, a brief summary of its findings as stated in Table 2 is indicative of the scope of potential problems and the public's opinion of the current state of landlord-tenant laws.

Table 2. Renter Screening Survey Findings

Total number of surveys: 976	%
Percent who had a problem with landlord	51
Percent who reported having a problem with the landlord	23
Percent who reported a health problem attributed to their housing	7
Percent who support changes to the law to give renters greater protections	83
Percent interested in working in coalition with others	17

Twenty-six interviews were completed with renters who were currently experiencing housing and/ or landlord problems, or had within the last four years. The following themes were identified:

Housing Conditions. A total of 99 different housing problems were reported across the 26

interviewees. The most frequently reported problems were mold and/or mildew and pests and/or rodent infestations, with nearly half (12 of 26) participants describing each issue. Many participants described visibly noticeable mold in kitchens and bathrooms that would come back despite attempts to clean it away. Pests, especially cockroaches, were reported as a common problem in all areas of the homes. Inadequate heating and cooling systems were the next most common violation, with 10 of 26 interviewees who experienced this problem. Leaks and ceiling or roof problems were next (9 participants each), followed by septic or plumbing issues, rotted or structurally deficient floors, compromised security (e.g. windows or doors without proper locks), and electric problems followed, each with 7 participants who described these problems. Four participants each reported flooding problems and cracks and holes in the walls. Less common problems, with only one or

She [landlord] should make it liveable as if she were living there. Respect the fact that we are good tenants and always have the rent in on time...We've only seen her twice in the two years we've lived there.

two participants who experienced them, included problems with air ventilation, gas leaks, lead paint and trip/fall hazards.

Health Impacts. Participants were asked if and how their housing problems impacted their health and well-being. The most common response (14 of 26) was that they were embarrassed to have company over to their home because of the poor conditions. Half the participants also described increased stress levels due to their problems. About one-fourth of participants (7 of 26) reported more allergies than usual when living in the home. Six people stated having breathing or respiratory problems (3 of which specifically noted increased asthma exasperation). Five people noted a negative financial impact and burden their problems caused. Four participants each described a feeling of fear caused by their housing problems (e.g. fear about safety, family well-being, etc.), increased frequency of headaches, and a general increase of colds and being sick. Three participants described depression that was caused by their poor living conditions. Two people sustained injuries due to hazards in the home.

Landlord Relationship & Involvement. After asking the landlord to address the problems, the majority of participants (18 of 26) reported being either ignored by the landlord, getting no follow up and/or consistently asking with no results. Eight people said they would get halfway repairs but that root problems were not addressed (e.g. painting over mold or putting a patch on a leaky spot of a structurally unsound roof). An additional eight interviewees reported feeling discriminated against for a variety of reasons, based on race (e.g. not being the same race as the landlord), income, having a felony or being of young age. Seven participants spoke about issues with the staff of property management companies such as high turnover and low transparency. Five people tried to fix the problems themselves when they did not get help. Four participants reported calling code enforcement, which had varying success in getting the problems fixed. Three participants reported having their rent increase after asking for repairs, and another three stated they did not get their security deposit back when they felt they should have. Although the majority of participants reported these mostly negative experiences and remarks about their landlords or property managers, three participants also stated their landlord was responsive and satisfactorily made repairs when needed.

All of the collected renter profiles can be found on our website www.arhealthyhousing.org

"I felt embarrassed and I was unable to have friends over. I isolated myself from family and friends. The girls were unable to play in the back yard. I was constantly bleaching the house because I felt dirty."

Renter story

A 23–year-old mother and her young child rented a two-bedroom apartment called Briarwood in Little Rock. She no longer stays there, but she lived there for three years and reported a tumultuous renting experience. She had a major problem with mold growing on the ceiling due to an upstairs water leak, as well as multiple problems with the appliances.

When she signed the lease, she noted that there was a clause that they would address any issues within 24 hours. This was not the case. She would routinely submit a work order, wait 24 hours, then and call the main office. When she called about the mold, she was told they didn't get the work order. She initially gave them the benefit of the doubt, but it kept happening about over four months. She felt like she was constantly getting the run around because she was young. She ended up buying bleach and cleaning up the mold herself, although it never really got rid of the mold. She also said the air conditioner never worked properly all three years she was in the apartment. Although she never had major health problems from her living situation, she remembers having more allergies than usual and reported missing some extra days of work here and there.

She ended up being evicted from the apartment, in a situation she described as very unfair. She began to get eviction notices taped to her door, which she attributed to her complaints since she paid the rent on time. When she would call the office to inquire about the notice, they denied it and report that they had just misplaced her rent, but they would "miraculously find it" when she insisted they were mistaken. She kept her rent receipts and eviction notices and eventually filed a complaint with the company. After her complaint, she was evicted and the complex confiscated her personal belongings. She has since found a good apartment to rent and wants to see changes happen to the state laws.

LITTLE ROCK CODE ENFORCEMENT OFFICER INTERVIEWS

The students also interviewed six Little Rock code inspection officers. We felt it was important to gather input from this critical workforce as the frontline workers who encounter housing violations regularly, and likely have some of the most important recommendations for ways to improve housing quality. The officers were selected by the manager who oversees the Code Enforcement Division. The six officers selected had a range of years of experience, from two to 19 years. Most of them reported being in the job because they have genuine desire to help people, and believe the rental inspection program is one that has the ability to improve the quality of people's lives. However, they also described their inability to work as proactively as they would like due to chronic understaffing; one officer stated they were 100 officers short. Many of the common housing violations they described reflected those that were reported by renters. The officers also pointed out geographic differences in frequency of complaints and code violations as being very obvious--with more violations in our study area versus other areas of the city.

"My area is the west part of northwest-I don't get many complaints. But someone working right here [Willie Hinton Center] will get a ton."

Most believe the rental inspection program has promise to ensure quality housing, however, acknowledge constraints.

"You know the amount of work we're able to do is gonna depend on how much staff we have, right now we don't have much staff so we're doing the best that we can with what we've got, but there is a tremendous amount of rental property in the city of Little Rock.... There are issues with connectivity

and not having standardized technology across our team."

The officers shared many examples and stories that illustrated the need for landlords and tenants to work together to maintain property. For example, they shared many stories about how tenants need to do what they can to keep their property clean or about angry tenants that want to take it out on the landlords.

"If renters honestly are mad at the management they aren't going to check anything out themselves."

"I went to address a complaint that the heat was not working. There was nothing wrong with it- she [the renter] didn't know how to use the thermostat."

Likewise, they had many stories about unresponsive landlords who do not make sufficient repairs and do just the minimum to squeak by, which they feel is not fair to the tenants. Their stories illustrate the need for a balanced system that requires accountability on both landlords and tenants.

"There are many situations when the tenant has done all they can do on their part. If the landlord doesn't show up in court, all the tenant can do is leave and often not get their deposit back."

"I mostly hear how tenants don't want us to tell the landlord they called. 9 times out of 10, the landlord is going to try to evict them."

"Felons cannot live anywhere else, so they are desperate to stay where they are so they will not be homeless."

Officers described a number of improvements that could be made to the current program, including public education and updating local health and safety code regulations.

"Codes need to be updated and simplified. Fines should be higher, the way to improve renters' conditions is to hold the owner's feet to the fire. If they had to fix their property or risk losing it, many of the problems may go away."

"The existing codes are too lenient. They are broadly written and leave loopholes for both the landlord and the renter."

"Need to do better educating the public about codes- a better job of telling our story. Code enforcement has a very bad reputation."

They [City board] don't understand what we do, how we do it and what is required to do it. I can't work with an 83 year-old woman who is scared to death of being out on the street who has no family and no money. I'm not going to put her in court. I am going to work with her. It may take me a lot longer, and I know the complaint is going to turn red in the system because I am over the time limit.

Code Officer

Rapid Assessment of House Bill 1166

On February 16th, 2017, we convened a group of landlords, tenants, tenant advocates, code enforcement officers, attorneys, criminal justice reform and re-entry advocates and public health professionals to discuss how Arkansas House Bill 1166 (HB1166) and other changes to landlord-tenant laws might impact health and well-being.

HB 1166 would have required landlords to supply a functioning roof and building envelope; heat and air if they were working at the beginning of the lease; and plumbing, sewage and electrical systems that met code requirements when installed. The tenant would be able to move out if the landlord does not make these specific repairs. Introduced in the general legislative session by Rep. Laurie Rushing, HB1166 purported to create "minimum standards" for rental property. These standards, however, fall far below the URLTA recommendations. Its sponsors packaged the bill as an important first step, but the experts we convened felt strongly that HB1166 in fact represented a step back, espeically compared to proposed legislation (which never passed) from the previous legislative session.

Through this rapid assessment our group identified a number of gaps in the proposed legislation. Most Arkansas localities outside of major urban areas do not have building codes, thereby making it difficult to enforce HB 1166's mandate statewide. The bill only guarantees basic standards if they were properly working at the beginning of a lease or at installation. These time-limiting clauses may incentivize landlords to not ensure proper maintenance and disclosure of problems. Under HB 1166, only landlords hold authority to determine what is in compliance and what is not. Finaly, the bill's standards do not apply in the event of a natural disaster which could damage the building

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structure and leave the resident without recourse. HB1166 reflects significant sacrifices from the more equitable, URLTA modeled HB 1486 that was introduced in the 2015 legislative session. Table 3 shows the gaps between standards established in URLTA and HB1166.

Table 3. Gaps between standards established in URLTA and HB1166

URLTA Requirements (most states request parts of this)	Required by HB 1166
Comply with building and housing codes affecting health and safety	NO
Make all repairs to put and keep premises in fit and habitable condition	NO
Keep all common areas in a clean and safe condition	NO
Maintain in good and safe working order plumbing, sanitary, heating, ventilating, air-conditioning	PARTIALLY
Provide receptacles and conveniences for removal of garbage	NO
Can't require tenant to waive these rights in the lease, authorize any person to confess judgment, agree to pay attorney's fees, agree to landlord's limitation of liability	NO
May be required to repair, pay damages, allow tenant to deduct repairs from rent	NO
Must allow tenant to terminate lease, refund security deposit	YES
Cannot evict tenant who complains or reports code violation	NO

The group also deliberated on the potential health impacts of the proposed legislation. HB 1166 gives the very basics of a safe house, but leaves out comprehensive coverage for common health-harming household problems like mold and pest infestations. By only providing tenants with an option to move out if conditions are not improved, the bill may not improve housing conditions and may perpetuate housing instability, frequent moves, and doubling up, all of which negatively impact health. It is unknown how stricter habitability standards would impact rental affordability. There is concern that costs may increase if standards increase. New information and research is needed that take into account the total public health costs of poor and inadequate housing. For example, what are the healthcare costs attributable to poor living conditions? What are the societal costs due to renters chronically being sick and/or moving?

Based on this convening of key stakeholders and content experts, our preliminary recommendations regarding the passage of HB 1166 and landlord-tenant laws more broadly included the following:

- Significant tenants' rights education would be needed under HB1166 to change tenant behavior.
- Giving tenants a hearing to address violations would provide greater balance between landlords and tenants.
- Healthy homes education is needed to educate both landlords and tenants on each party's role.
- Strategies for improving landlord-tenant communications are needed.
- Because the tenant and landlord requirements in the URLTA were designed to be complementary
 when operating together; all elements should be implemented (and enforced) equally in order
 to achieve a healthy home or unit.
- There is a need for a broad stakeholder group to work collaboratively in shaping policies

moving forward. Additional stakeholder involved in criminal justice reform efforts and health professionals should be engaged in the process.

One of the limitations of this assessment process was the lack of transparency regarding the details of the bill. Because of the political nature of the legislative session and the influence of powerful lobby groups it was challenging to identify legislative champions to invite or learn more information from. Summarizing and assessing the impact of the bill was a challenge, as its text was not released until just before it was scheduled for committee debate, and by the time we convened, it had already been amended twice (with both amendments weakening protections for tenants). Because of these constraints and the limited leverage we had at the state level where the Arkansas Realtors Association and other lobby groups have great influence, we re-focused our analysis at the local level.

DISCUSSION

Through our documentation of the strong relationship between housing and health issues nationally and at the local level, we can expect that efforts to improve renters' protections and bring rental housing up to code will overtime improve key health outcomes, particularly for renters in our study area with a disproportionate share of the city's substandard housing.

Our data linkage analysis found that individuals seen at UAMS for a respiratory condition were nearly three times more likely to live in a property that had a mold related violation notice issued—highlighting the importance for policy that can effectively regulate such health harming agents. The focus group discussions and renter and code officer interviews highlighted the imbalance in knowledge about the implied warranty of habitability between renters and everyone else. While few were familiar with the landlord-tenant laws, the majority of renters understood from experience that they had few protections or legal recourse against landlords who provide uninhabitable premises, refused to make repairs or illegally evicted. Renter participants provided rich descriptions of their experiences living in substandard housing and many associated their experiences with substandard housing with poor physical and mental health. Interviews with code enforcement officers corroborated these testimonials and attested to the constraints of the code enforcement program.

Findings from focus group discussions, renter surveys and stakeholder interviews all indicated resounding support for the adoption of minimum standards for rental housing and more equitable landlord-tenant laws. Our study reinforced findings from previous local research that showed Little Rock renters were largely unaware of the state's landlord-tenant laws and the lack of an implied warranty of habitability. There is a need for public education on residential landlords' and tenants' rights and responsibilities. Cases from other states have demonstrated how the implied warranty of habitability can bring needed repairs and improvements to substandard housing. Adopting minimum standards for rental housing would strengthen renters' rights, and, paired with enhanced code enforcement and education-based initiatives, would likely improve public health and begin to address housing inequalities in Little Rock.

RECOMMMENDATIONS

Based on the findings in the project's research and community engagement process, the Steering Committee developed four primary recommendations to address Arkansas's unbalanced landlord-tenant laws.

1. Provide education on residential landlords' and tenants' rights and responsibilities

Statewide: State agencies such as ADFA, the Arkansas Fair Housing Commission, and the Department of Health should work together to educate landlords, tenants, and related stakeholders on:

- Healthy Home Principles (including how housing conditions can impact health and best practices for dividing maintenance obligations between landlords and tenants),
- Effective landlord/tenant communication and dispute resolution;
- · Programs and available assistance to promote affordable and energy efficient housing;
- Laws regarding fair housing (including the use of criminal records in the rental housing application process), self-help eviction, and security deposits.

Local: City government and local housing authorities should educate landlords, tenants, and related stakeholders on:

- Minimum housing standards and landlord and tenant obligations for maintaining units;
- · A landlord's obligation to register rental units and ensure compliance with housing codes;
- · A tenant's legal options when a landlord will not make needed repairs.

2. Strengthen local and statewide housing policies to protect tenants' health and safety

Statewide: Arkansas should adopt statewide minimum housing standards that ensure that premises and common areas are safe and fit for their intended use.

Because the tenant and landlord requirements in the URLTA were designed to be complementary when operating together; all elements should be implemented (and enforced) equally to achieve a healthy home.

3. Effective enforcement of minimum standards requires dedicated resources and meaningful remedies for tenants

To protect tenants living in unhealthy housing, minimum housing standard policies should provide remedies to tenants that include both the option to terminate the lease and move out and an option to require the property owner to make needed repairs.

Local: Little Rock could optimize the health promoting potential of its local ordinances by adding independent legal remedies for tenants in units that do not comply with the rental inspection ordinance. In addition, the City should assign dedicated code enforcement officers to systematic rental inspections, with a focus on nuisance properties. City officials should examine factors leading to high code inspection vacancies, such as salaries.

4. Data on housing conditions should be collected and disseminated

Local: Code Enforcement should computerize all data to allow for tracking and sharing of rental unit registrations, inspections, complaints, compliance updates, and actions taken.

REFERENCES

- 1. Krieger JW, Song L, Takaro TK, Stout J. Asthma and the home environment of low-income urban children: preliminary findings from the Seattle-King County healthy homes project. J Urban Health Bull N Y Acad Med. 2000;77(1):50-67. doi:10.1007/BF02350962.
- 2. Krieger JW, Takaro TK, Song L, Weaver M. The Seattle-King County Healthy Homes Project: A Randomized, Controlled Trial of a Community Health Worker Intervention to Decrease Exposure to Indoor Asthma Triggers. Am J Public Health. 2005;95(4):652-659. doi:10.2105/AJPH.2004.042994.
- 3. Rauh VA, Chew GR, Garfinkel RS. Deteriorated housing contributes to high cockroach allergen levels in inner-city households. Environ Health Perspect. 2002;110(Suppl 2):323.
- Rauh VA, Landrigan PJ, Claudio L. Housing and Health. Ann N Y Acad Sci. 2008;1136(1):276-288. doi:10.1196/annals.1425.032.
- 5. Burdette AM, Hill TD, Hale L. Household disrepair and the mental health of low-income urban women. J Urban Health. 2011;88(1):142–153.
- 6. Bashir SA. Home is where the harm is: inadequate housing as a public health crisis. Am J Public Health. 2002;92(5):733–738.
- 7. Krieger J, Higgins DL. Housing and Health: Time Again for Public Health Action. Am J Public Health. 2002;92(5):758-768. doi:10.2105/AJPH.92.5.758.
- 8. Shaw M. Housing and public health. Annu Rev Public Health. 2004;25:397–418.
- 9. Beck AF, Moncrief T, Huang B, et al. Inequalities in neighborhood child asthma admission rates and underlying community characteristics in one US county. J Pediatr. 2013;163(2):574-580. doi:10.1016/j. jpeds.2013.01.064.
- 10. Sharfstein J, Sandel M, Kahn R, Bauchner H. Is child health at risk while families wait for housing vouchers? Am J Public Health. 2001;91(8):1191–1192.
- 11. Garvin E, Branas C, Keddem S, Sellman J, Cannuscio C. More Than Just An Eyesore: Local Insights And Solutions on Vacant Land And Urban Health. J Urban Health Bull N Y Acad Med. 2012;90. doi:10.1007/s11524-012-9782-7.
- 12. Olmedo O, Goldstein IF, Acosta L, et al. Neighborhood differences in exposure and sensitization to cockroach, mouse, dust mite, cat, and dog allergens in New York City. J Allergy Clin Immunol. 2011;128(2):284-292.e7. doi:10.1016/j.jaci.2011.02.044.
- 13. Rosenbaum E. Racial/Ethnic Differences in Asthma Prevalence: The Role of Housing and Neighborhood Environmentsl. J Health Soc Behav. 2008;49(2):131–145.
- 14. Been V, Bozorg L. Spiraling: Evictions and Other Causes and Consequences of Housing Instability. HeinOnline: 2016.
- 15. Coulton CJ, Richter F, Kim S-J, Fischer R, Cho Y. Temporal effects of distressed housing on early childhood risk factors and kindergarten readiness. Child Youth Serv Rev. 2016;68:59–72.
- 16. Cutts DB, Meyers AF, Black MM, et al. US Housing insecurity and the health of very young children. Am J Public Health. 2011;101(8):1508-1514. doi:10.2105/AJPH.2011.300139.
- 17. Leon E de, Schilling J. Urban Blight and Public Health: Addressing the Impacts of Substandard Housing, Abandoned Buildings, and Vacant Lots. Urban Institute; 2017. https://www.urban.org/sites/default/files/publication/89491/urban_blight_and_public_health_0.pdf.
- 18. Bureau USC. United States Census Bureau/ American Fact Finder. "B25032: Tenure by Units in Structure". In 2011-2015 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2015. https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t. Published October 2017. Accessed November 6, 2017.

- 19. Constitution of the World Health Organization.; 1946. http://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1. Accessed October 23, 2017.
- 20. Health UD of, Services H, Prevention O of D, et al. Healthy People 2020.; 2000.
- 21. The State of the Nation's Housing 2013. Cambridge, Mass.: Joint Center For Housing Studies of Harvard University; 2013. http://www.jchs.harvard.edu/research/publications/state-nations-housing-2013.
- 22. Samara TR. The Rise of the Renter Nation: Solutions for the Housing Affordability Crisis. http://www.academia.edu/7448820/The_Rise_of_the_Renter_Nation_Solutions_for_the_Housing_Affordability_Crisis. Accessed November 9, 2017.
- 23. Rhine SS. Criminalization of Housing: A Revolving Door that Results in Boarded up Doors in Low-Income Neighborhoods in Baltimore, Maryland. Univ Md Law J Race Relig Gend Cl. 2009;9:333.
- 24. Uniform Residential Landlord and Tenant Act. San Francisco, California: National Conference of Commissioners on Uniform State Laws; 1972:40. http://www.uniformlaws.org/shared/docs/residential%20 landlord%20and%20tenant/urlta%201974.pdf.
- 25. Foster L. The Hands of the State: The Failure to Vacate Statute and Residential Tenants' Rights in Arkansas. UALR Rev. 2013;36:1.
- 26. Franzese PA, Gorin A, Guzik DJ. The Implied Warranty of Habitability Lives: Making Real the Promise of Landlord Tenant Reform. 2016.
- 27. McDonough LR. Then and Now: The Uniform Residential Landlord and Tenant Act and the Revised Residential Landlord and Tenant Act-Still Bold and Relevant. UALR Rev. 2012;35:975.
- 28. Heskin AD. The Warranty of Habitability Debate: A California Case Study. Cal Rev. 1978;66:37.
- 29. Dana DA. An Invisible Crisis in Plain Sight: The Emergence of the Eviction Economy, Its Causes, and the Possibilities for Reform in Legal Regulation and Education. Mich Law Rev. 2016;115:935.
- 30. Mulvaney TM, Singer JW. Move Along to Where? Property in Service of Democracy (A Tribute to André van Der Walt). Rochester, NY: Social Science Research Network; 2017. https://papers.ssrn.com/abstract=2976009. Accessed November 9, 2017.
- 31. Brower MA. The Backlash of the Implied Warranty of Habitability: Theory vs. Analysis. DePaul Rev. 2010;60:849.
- 32. Kennedy D. The effect of the warranty of habitability on low income housing: milking and class violence. Fla St UL Rev. 1987;15:485.
- 33. King S. Thoughts on the Unnatural Occurrence of Cheap Housing. Shelterforce. April 2017. https://shelterforce.org/2017/04/25/thoughts-unnatural-occurrence-cheap-housing/. Accessed November 22, 2017.
- 34. Bureau USC. American FactFinder Results. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_B25053&prodType=table. Accessed November 6, 2017.
- 35. CHAS Query Tool. https://www.huduser.gov/portal/datasets/cp.html. Accessed November 7, 2017.
- 36. 2013 State of Healthy Housing. Washington, DC: National Center for Healthy Housing; 2013. http://www.nchh.org/Policy/2013StateofHealthyHousing.aspx. Accessed October 11, 2017.
- 37. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 500 Cities Project Data (Little Rock) [online]. 2016 [accessed Nov 22, 2017]. URL: https://www.cdc.gov/500cities.
- 38. Bachelder AE, Stewart MK, Felix HC, Sealy N. Health Complaints Associated with Poor Rental Housing Conditions in Arkansas: The Only State without a Landlord's Implied Warranty of Habitability. Front Public Health. 2016;4. doi:10.3389/fpubh.2016.00263.

Prevalence of rental housing problems in Birmingham, AL, 2013	n Memphis,	TN &
Billingham, AL, 2013	Memphis	Birmingham
Basic Housing Quality		
Severe physical problems	3.4%	5.8%
Moderate physical problems	9.6%	5.5%
Interior Problems		
Holes in floors	3.4%	3.6%
Open cracks or holes in walls	12%	14.2%
Broken plaster/peeling paint	4.2%	4.6%
Signs of rats	2.7%	1.6%
Signs of mice	7.8%	8.2%
Water leaks from inside	19%	15.4%
Water leaks from outside	12%	12.6%
Water supply stoppage	6%	4.6%
Flush toilet breakdown	4.1%	2.3%
Sewage disposal breakdown	1.6%	3.7%
Lacking complete plumbing	2.5%	4.6%
Heating equip breakdown	4.3%	3.9%
Room heater without flue	4.6%	7.0%
Exposed wiring in unit	1.8%	1.7%
Rooms w/o working elect. outlet	1.7%	1.4%
Lacking kitchen facilities	4.7%	2.4%
Exterior Problems		
Roofing problems	8.4%	14.1%
Siding Problems	5.9%	8.0%
Window problems	13.8%	14.6%
Foundation problems	7.2%	14.1%
Any Identified problem	55.5%	59.3%

Red indicates that the housing characteristic or measure was significantly worse than the concurrent national average, green significantly better.

The National Center for Healthy Housing (NCHH) created a healthy housing rating system using American Housing Survey (AHS) data collected after 1997. It covers 45 metropolitan statistical areas and includes two indicators. The first indicator, called "Healthy Housing," compares 20 housing conditions (variables such as the presence of mice, interior and exterior leaks, etc). The second indicator is "Basic Housing Quality" and is based on the AHS measure of housing with severe and moderate physical problems. It includes primarily structural problems such as inadequate plumbing or kitchen facilities, crumbling foundations, and damaged roofs.

HOUSING & NEIGHBORHOOD PROGRAMS	OD PR	OGR	AMS		
HOUSING & RENTAL INSPECTION TOTALS	2012	2013	2014	2015	2016
DENTAL INCDECTIONS	840	DMA	1234	4204	125g
EVICE INSTELLIONS	2		-	20 X 0 X 0 X 0 X	NOT ON A
RENTAL UNITS RE-INSPECTED	718	2210	3372	4026	3551
		20000	277	10 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X	200
1	17	185	158	163	228
RENTAL UNITS REPAIRED	133	549	494	585	784
	100000000000000000000000000000000000000		-	20000000	200000
CITATIONS ISSUED	187	271	1273	769	542
	100000			18686	
REFERRED TO ENVIRONENTAL COURT	197	271	1273	769	542
01.0 X 07.0 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X 0 X	A 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			THE RES	
STAFFING LEVELS					
AUTHORIZED CODE ENFORCEMENT OFFICERS	31	40	38	38	38
VACANT POSITIONS	80	13	13	14	12

Appendix C

We received two data extracts from the City of Little Rock's 311 system database, which houses all code enforcement service requests.

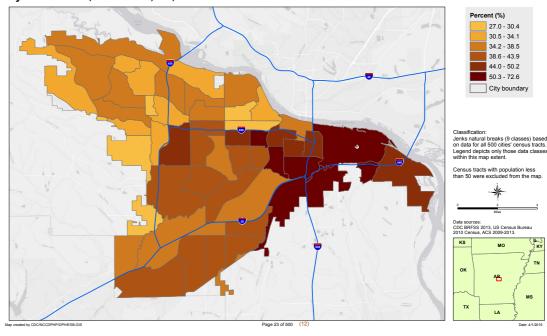
The first included over 10,000 residential code complaints between October 3, 2006 and February 23, 2017. This dataset included five descriptive fields (service request number, date created, type description, address, and request status) and was of limited utility to the study. The second dataset of 7,329 code complaints between January 2010-January 2017 included more detailed information about each code complaint including:

- Occupancy status- (Rental, Owner Occupied, Vacant, Unknown)
- Structure Type (Single family, duplex/triplex, multi-family (4 or more), Mobile home, accessory structure)
- General problem (Sanitation/ Pest; Mechanical (A/C, health, furnace); Plumbing (water, water heater, etc); Plumbing (Natural gas); Utilities (electric, water, gas); 'Too many people'; Burnout/dilapidated/unsecure; Criminal activity (Transients, drugs); Sewer (interior/exterior lines); Electrical exposed wires; Structural (roof, foundation); Boarding; Broken windows; Other (explain))
- Rental inspection (Y/N)
- Notice issued (Y/N)
- Description—field notes from code officers in long-form text
- Street address
- Service request number
- Date Created

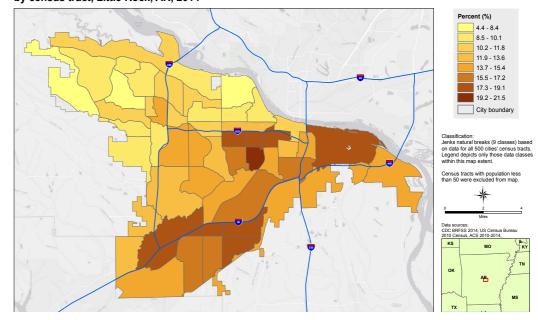
Not without its limitations, the dataset allowed a more detailed summary of the rental housing stock and the code enforcement division's work between 2010 and 2016. There were on average 915 code complaints annually. 50% of the code complaints were regarding rental properties and nearly a quarter were multi-family units (4 or more). We linked this dataset to hospital admissions data which is described separately.

Appendix D

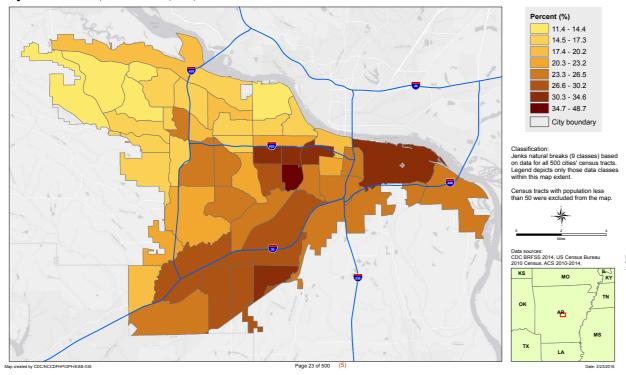
High blood pressure among adults aged ≥18 years by census tract, Little Rock, AR, 2013



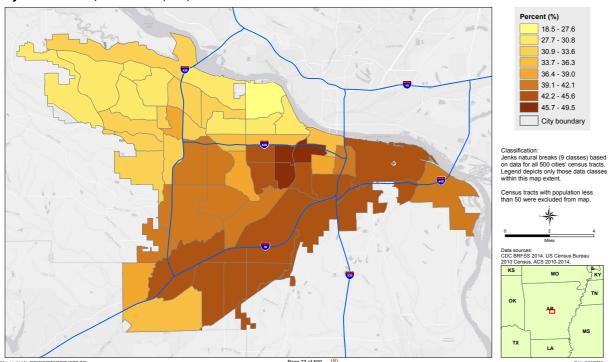
Mental health not good for ≥14 days among adults aged ≥18 years by census tract, Little Rock, AR, 2014



Current smoking among adults aged ≥18 years by census tract, Little Rock, AR, 2014



Sleeping less than 7 hours among adults aged ≥18 years by census tract, Little Rock, AR, 2014



Appendix E

Characteristic		N	%
Renter	1.Spanish-speaking Latinx	3	8%
focus groups			
	2. Formerly incarcerated	10	26%
	3. Veterans	6	16%
	4. Renter- Group 1	10	26%
	5. Renters- Group 2	9	24%
Sex	Female	19	50%
	Male	19	50%
Racial background	Black	25	66%
	White	10	26%
	Latinx	3	8%
Annual income	<\$10,000	13	41%
	\$10,000-\$20,000	12	38%
	\$20,000-\$30,000	3	9%
	\$30,000-\$40,000	0	-
	>\$40,000	1	3%
Stakeholder groups	6. City of Little Rock agencies and government officials	15	
	7 Landlords	6	

Stakeholder groups	6. City of Little Rock agencies and	15
	government officials	
	7. Landlords	6
	8. Community leaders	8
	9. Healthcare professionals	5

Appendix F

The study uses a case control design in which the condition studies is respiratory morbidity requiring an emergency department visit or inpatient hospital stay, and the exposure of interest is a housing code violation within 6 months pre or 6 months post the date the property was inspected for violations. Controls were selected from individuals with injuries requiring an emergency department visit or inpatient hospital stay.

Data

Health data came from the UAMS data warehouse. The UAMS data warehouse is an analytic extract from the UAMS electronic health record. The purpose of the data warehouse is to provide analytic healthcare data for quality improvement and research purposes. Housing code inspection data came from the city of Little Rock and includes information on the reason for inspection, findings, structure type and ownership characteristics, and whether a citation was issued.

Subjects

All individuals that had either an emergency department visit or an inpatient stay at UAMS Medical Center between 1-1-2010 and 12-31-2016 and resided within the Little Rock city limits at the time of contact are eligible for inclusion in the study. Cases will be selected from individuals seen at UAMS Medical Center for a respiratory condition (see Appendix A) and controls will be selected from individuals seen at UAMS for a physical injury. Exclusion criteria include not being able to successfully geocode the subjects address, not matching subjects seen at UAMS with addresses that were inspected for a housing code violation, individuals with both respiratory and injury related codes when seen at UAMS, UAMS contact within a six month time window pre or post the date of the housing code inspection, and the property not being listed as a rental property. Table 1 documents the exclusion process.

Lining datasets

The housing code violation dataset contained no identifying information regarding the individuals living at the property at the time of inspection. The only method of linking the housing data to the health related data from UAMS, and thus to an individual residing at the property, is through the address. Because the address field in both the housing violation data from the city of Little Rock and the UAMS data are text fields, and thus subject to significant variation in terms of spelling and abbreviation choices/errors of the individual entering the data, linking the datasets proposed a significant challenge and consumed a significant proportion of the study's effort.

Analysis

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The dependent variable was an indicator variable representing the presence of respiratory morbidity during the UAMS contact. Respiratory morbidity was defined by the presence of diagnosis codes listed in Appendix A. The independent variable of interest will be a citation issued for a housing code violation 6 months pre or post contact with UAMS. Citations for housing code violations were categorized into any citation issues, category of citation as defined in the violation data including sanitation, plumbing, sewer, utilities, natural gas, electrical, burned out structure, structural, or mechanical. A search of the text descriptions of the housing inspections for mold was also conducted and used as a violation category in a separate analysis. Control variables came from the UAMS data warehouse and included age, gender, race/ethnicity, and being uninsured. Multivariable logistic regression models were used to analyze the relationship between respiratory morbidity and citation for a housing code violation. Separate models were constructed for any citation issued, mold related citation issued, and category of citation. Citation categories with only a single occurrence for either cases or controls were excluded from the multivariable models.

Appendix G

Project Details

During the spring of 2017, 18 students at the University of Arkansas for Medical Sciences (UAMS) completed a service learning project in partnership with Arkansas Community Institute (ACI) and the Health Impact Assessment Project. Students from the UAMS Fay W. Boozman College of Public Health and the College of Nursing learned about Arkansas's unique landlord tenant laws and the relationship between housing conditions and health. Students each conducted one or two in-depth interviews with Arkansas residents who reported having problems with their rental properties within the last four years.

Interview Details

The interview guide, developed by project instructors and ACI, included questions about the rental situation at the time of the problems, the nature of problems, self-reported health impacts, relationship with the landlord, barriers faced by formerly incarcerated people and attitudes about the law. Demographic information and a consent form were collected from all participants.

For 12 of the 18 students, recruitment was done through use of a one page screening instrument that community members completed at a free income tax filing site operated by ACI. Participants who completed the voluntary screener who indicated a willingness to be interviewed and indicated problems with the condition of their rental unit and landlord within the last four years were recruited via phone by one of the students to meet for an inperson interview. The remaining 6 students used the same screening instrument in community-based settings (e.g. laundromats, social service agencies, public parks, etc.) to identify people to interview. Interviews were all completed within 30-60 minutes, in-person at a location of the interviewee's choice. All participants received \$10 cash to compensate for their time.

Participant Demographics

Twenty-six in-depth interviews were completed with Arkansas renters. The average age was 40-years-old. The majority were female (65%), African American (65%) and non-Hispanic (96%). The sample was primarily low to moderate income, with 68% of participants whose household income was \$29,999 or below. Just over 40% had an Associate degree or higher, and nearly all (96%) had a high school education. Table 1 summarizes other demographic characteristics.

N=26	N	%
Age (n=26)		
Mean Age (40.2 years)		
18-24 years	3	12%
25-34 years	8	31%
35-44 years	6	23%
45-54 years	5	19%
55-64 years	3	12%
65 + years	1	4%
Gender (n=26)		
Female	17	65%
Male	9	35%
Race* (n=26)		
White	7	27%
Black or African American	17	65%
Asian	2	8%
Native Hawaiian or other Pacific Islander	0	-
Native American or Alaskan Native	2	8%
Other	1	4%
Ethnicity (n=26)		
Hispanic	1	4%
Not Hispanic	25	96%

Compined Family Income (n=25)		
Less than \$10,000	2	20%
\$10,000-\$19,999	9	24%
\$20,000-\$29,999	9	24%
\$30,000-\$39,999	က	12%
\$40,000-\$49,999	_	4%
\$50,000-\$75,000	က	12%
\$75,000+	_	4%
Education (n=26)		
Some high school	_	4%
High school or GED	တ	35%
Some college	2	19%
Associate degree	7	27%
Bachelor degree	က	12%
Graduate/Professional degree	1	4%
*Percent over 100 because participants selected more than one	e than	one
race if applicable		

