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Lutchmie Narine

Syracuse University, lnarine@syr.edu

Sandra D. Lane

Robert A. Rubinstein

Inga Back

Caitlin Cornell

See next page for additional authors

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Author(s)/Creator(s)

Lutchmie Narine, Sandra D. Lane, Robert A. Rubinstein, Inga Back, Caitlin Cornell, Alexander Hodgens, Monique Brantley, Rachel Kramas, Kathleen Keough, Brandon O'Connor, William Suk, Eric Morrissette, and Mary Benson

Action Anthropology and Pedagogy: University-Community Collaborations in Setting Policy

**Sandra D. Lane, Robert A. Rubinstein, Lutchmie Narine, Inga Back, Caitlin Cornell,
Alexander Hodgens, Monique Brantley, Rachel Kramas, Kathleen Keough,
Brandon O’Conner, William Suk, Eric Morrissette, and Mary Benson**

This article describes a student-led, community-participatory project focused on reducing the burden of childhood lead poisoning in rental housing. A multidisciplinary group of students and faculty worked with community members. We compiled the social, public health, economic, and policy information on the human and fiscal costs of childhood lead poisoning. This analysis was done for community advocates to use to persuade policymakers to enact a local law strengthening the prevention of childhood lead poisoning in rental property. In conducting this work, the students gained experience in qualitative research methods, quantitative data analysis, the health consequences of lead exposure, health policy, urban health, science writing, and public presentation.

Key words: urban health, community-participatory research, lead poisoning, teaching, action anthropology

Introduction

In common with many other United States cities, Syracuse, New York has a wealth of institutions of higher education, located in a city, where according to the 2000 United States census, one-third of residents live in poverty. This

Sandra D. Lane is Laura J. and L. Douglas Meredith Professor of Teaching Excellence, Professor of Public Health and Anthropology in the Department of Public Health, Food Studies, and Nutrition at Syracuse University and Research Professor in the Department of Obstetrics and Gynecology at Upstate Medical University. Robert A. Rubinstein is Professor of Anthropology and International Relations in the Maxwell School of Syracuse University. Lutchmie Narine is Chair and Associate Professor in the Department of Public Health, Food Studies, and Nutrition at Syracuse University. At the time of this study, Caitlin Cornell, Monique Brantley, Rachel Kramas, and Eric Morrissette were undergraduate students at Syracuse University. Alexander Hodgens was an undergraduate student at Hamilton College. Mary Benson was a senior at Skaneateles High School. Brandon O’Conner was a medical student at Upstate Medical University. Kathleen Keough and William Suk were staff members of the Department of Public Health, Food Studies, and Nutrition at Syracuse University. Inga Back was the Coordinator of the Syracuse Area Lead Task Force. Partial support for the work reported in this paper came from the Cultural Competence Initiative funded by the Health Resources and Services Administration through a grant to LeMoyne College, the Program for the Advancement of Research on Conflict and Collaboration of the Maxwell School of Syracuse University, and Syracuse Model Neighborhood Facility, Inc. (SMNF). The authors thank Jesse Dowdell, Executive Director of SMNF for his collaboration and support. The authors dedicate this paper to the memory of Tarah Tapley, the late Director of Programs at SMNF who collaborated on this and their other projects for over a decade.

situation presents a moral challenge to privileged academics occupying tax free land in the midst of devastated neighborhoods to use their knowledge and skills in the service of helping the community improve itself. It also presents an opportunity for higher education to move beyond the classroom to engage the real-world problems within walking distance of the ivy-clad buildings. This article describes a university-community collaboration focused on reducing the burden of childhood lead poisoning in rental housing. The project took place over two years. The project’s goals were: (1) to partner with community members to compile the social, public health, economic, and policy information on the human and fiscal costs of childhood lead poisoning; (2) to help community advocates create materials to use to persuade policymakers to enact a local law strengthening the prevention of childhood lead poisoning in rental property; and (3) to have students conduct this project in order to teach them about qualitative data analysis, quantitative data analysis, health effects of lead exposure, health policy, urban health, science writing, and public presentation. The students included one medical student, one anthropology graduate student, five undergraduate students, and one high school student. The students and a community member are all coauthors on this article.

In the course of this project, the students conducted:

- A major review of published studies and compilation of local quantitative and qualitative data on lead poisoning;
- A legal and policy analysis that compares lead prevention policy in New York State, Massachusetts, and local ordinances in Rochester and New York City;

- An analysis of the fiscal and human cost of childhood lead poisoning in Syracuse;
- A set of meetings at which the students, in collaboration with community stakeholders, presented their findings in clear, jargon-free formats to elected officials and neighborhood residents.

Background

This project is part of an ongoing set of activities in Syracuse, New York, in which university faculty have worked in collaboration with community non-profit agencies and activists. For more than a dozen years, two of the authors (Lane and Rubinstein) have been part of a university/community collaboration addressing health disparities due to racism, structural violence, and environmental injustice (Lane and Rubinstein 2008; Rubinstein and Lane 2010). Our collaborators include faculty and students from three institutions of higher education (Syracuse University, Upstate Medical University, and Lemoyne College) and community-based colleagues from two non-profit agencies (Syracuse Model Neighborhood Facility and the Center for Community Alternatives).

Our previous work with this community coalition led us to realize that Syracuse was an epicenter for childhood lead poisoning in New York State. We wanted to use this issue both to help the community and to teach our students. Syracuse is the fifth largest city in New York, with a 2000 population of 147,306, which is 25.3 percent African American, 5.3 percent Hispanic, 3.4 percent Asian, 1.1 percent Native American, and 3.4 percent of two or more racial ancestries (Lane 2008). According to the 2000 United States Census, nearly 43 percent of Syracuse children under age five live in poverty; the poverty rate for African American children (57 percent) is more than double that for white children (27 percent). Syracuse has New York State's third highest child poverty level following Buffalo and Rochester and the second highest Latino child poverty rate in the United States (Children's Defense Fund 2001).

Action Anthropology and Community-Based Participatory Research

Within anthropology there is a long tradition of scholars collaborating with communities for the public good, activities often termed "action research" or "participatory action research." In this form of work, anthropologists have used their scholarly expertise in the service of their research communities. This pattern of work yields information and activities useful for the community, while also contributing to public knowledge, usually in the form of publication in the discipline's refereed journals. Examples of this kind of work are many. In the early 1950s in response to turmoil surrounding urban renewal in Chicago, anthropologist Sol Tax worked with community organizations to help keep the neighborhood surrounding the University of Chicago a

vibrant ethnically diverse area (Rubinstein 1986). Tax (1958; see also Gearing, Netting, and Peattie 1960) translated his work with the community groups into public anthropological knowledge by publishing it in *Human Organization*. This project, and Tax's work in collaboration with and on behalf of Native Americans in the Fox (Mesquakie) Tribe, became known as "action anthropology." Tax's student Joan Ablon (1988, 1999, 2009) followed in his footsteps in her work on the lived experience of stigmatizing genetic disabilities, including dwarfism, neurofibromatosis, and osteogenesis imperfecta. Ablon's student, Sandra Lane (2008), integrated action anthropology with an analysis on structural violence in her work on racial/ethnic health disparities. Physician/anthropologist Paul Farmer (2004), a leader in applying the conceptual framework of structural violence, has similarly connected human rights and health in Haiti, where his research questions and interventions were shaped by his interaction with the community in Haiti.

The action anthropology approach we describe in this paper bears a family resemblance to other applied work in social science and public health that is described as community-based or community-engaged, especially to Community-Based Participatory Research (CBPR) (Cochran et al. 2008; Green et al. 1994; Minkler et al. n.d.). While CBPR overlaps with action anthropology (indeed, anthropology is one source of inspiration for CBPR; see Israel et al. 2005), there are significant differences between CBPR and the action anthropology approach we present in this paper. The differences are seen in the ways in which the approaches (1) conceptualize community collaboration, (2) how and by whom problems are defined, (3) the centrality of pedagogy, and (4) authorship. These divergences reflect different epistemological, methodological, and value commitments. We discuss each of these in turn below but first describe the overlaps between CBPR and our application of action anthropology.

Community-Based Participatory Research is defined by Green et al (1994:1) as "systematic inquiry, with the participation of those affected by the issue being studied, for the purposes of education and taking action or effecting social change." The overlap between CBPR and our model is their mutual emphasis on (1) the community as the locus of study, (2) the community as an entity with a social identity that may or may not fit within a geographic area, (3) establishing respectful relationships among researchers and community members, and (4) choosing topics of study that are linked to the well-being of the community and its residents. Yet, CBPR frequently involves activities that can unintentionally reproduce and reinforce the hierarchical relationships that characterize non-community-based approaches. Our model, and action anthropology in general, is explicit in breaking down these traditional hierarchical relations. Here are four examples:

Conceptualizing community collaboration: When academic researchers hire youth or paraprofessional data collectors without also involving higher status community members as authoritative colleagues on the research team, the

resulting status disparity between researchers and community members reproduces existing social hierarchies. For example, Vasquez, Minkler and Shepard (2006) describe the creation by their project of a community data collection strategy, which hired local youth as paid interns. While creating economic opportunities for local youth is a laudable activity, they are in a subordinate position to the academic researchers. In contrast, even when our projects include young community members, we always involve higher status community members as integral collaborators; thus, their authority, knowledge, and status are equal to that of the academic researchers. This approach is consistent with what Ermine (2007) calls an “ethical space” for collaboration, which he describes “as a new partnership model” with the aim of eliminating the status disparities among collaborators.

Problem definition: Because the model of action anthropology that we use involves a long-term commitment to working with the local community, the problems selected for study arise naturally from ethnographic observations, conversations, and community members’ suggestions. When the focus of our research projects is suggested by community members who ask our help in studying a problem, they are asking us to work with them rather than to take ownership of the study. The community members with whom we work have experienced us sharing credit with them, and their trust of us is based on this prior reciprocal experience, not on contractual relations. Once we embark on the study, its definition and design are done collaboratively among our academic and community team members. In the project we are reporting in this paper, community members were actively involved at all stages in shaping the study design, including suggesting specific activities to be undertaken. For instance, the cost analysis and community meetings in our project design were shaped by the ideas and input of community members.

In CBPR, in contrast, while the topic of study may come from the community (this is not a clear requirement for the CBPR model, where the topic may be the result of academic concerns or the availability of funding), academic researchers retain control of study design. For instance, Vasquez, Minkler, and Shepard (2006: 104) note, “The topic for this study came from the community partner, while the study itself was largely designed by the academic partners.” Again, this can reinforce traditional hierarchical relationships among researchers and community members.

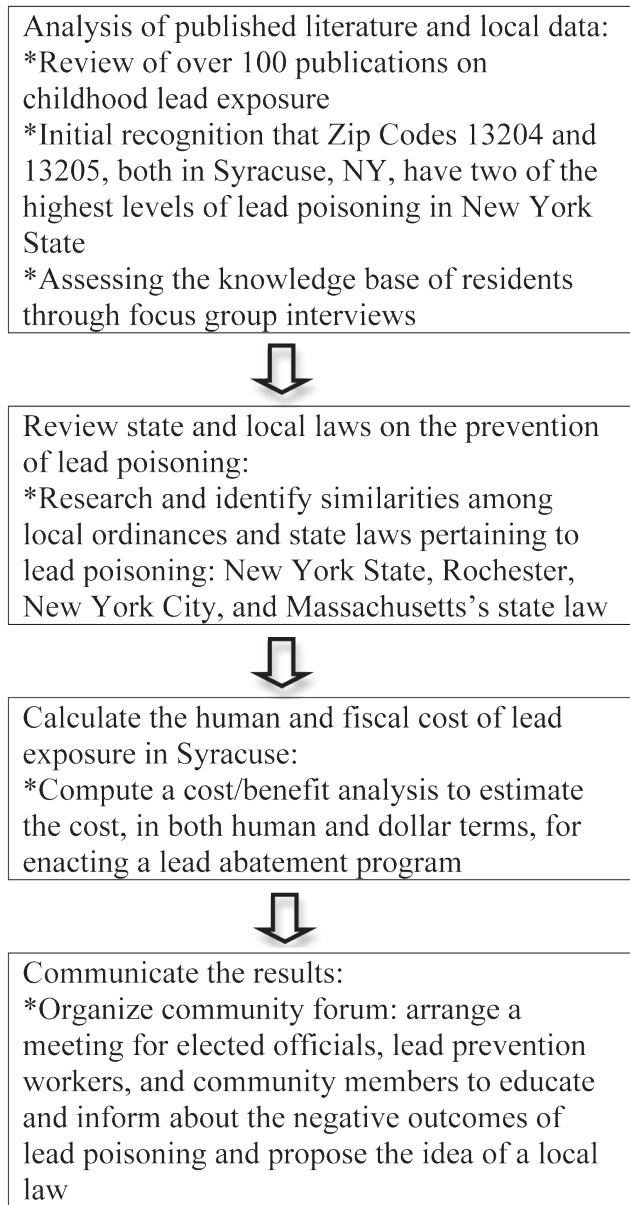
Pedagogy: Our model of action anthropology is explicitly pedagogical. By this, we mean that student learning is integrated into each project as one of the specific outcomes, equal to the production of knowledge to benefit the community. Pedagogy is not just a fortunate byproduct of the project; it is a central feature of the model. As we describe in this paper, the students involved in our projects have a wide range of ages (from high school, to medical school, to “nontraditional” older students), come from a number of disciplines (e.g., anthropology, psychology, biology, medicine, public health, and policy studies), and include students of diverse racial/ethnic backgrounds.

While some CBPR projects include as a goal capacity building and education of community members, in general they do not focus on student learning. For example, Israel et al. (1998) list capacity building as among the 10 characteristics of CBPR, but they do not focus on the pedagogical needs of student researchers. Minkler et al.’s (n.d.) review of 10 case studies of CBPR notes only three in which student researchers are mentioned and then in capacities which most accurately can be described as serving as research assistants rather than with the projects being designed with the students’ learning needs in mind.

Authorship: We share with CBPR the commitment to disseminate to the community the results of our work. However, we view authorship and ownership quite differently than does CBPR. Using the key term CBPR we conducted a Medline search, which returned 293 citations. Among these, the vast majority of papers were authored by university researchers. Very rarely, senior members of community-based organizations with whom the researchers collaborated are coauthors. This contrasts with the practice in our model, which is to include as authors all student and major community collaborators, in addition to the academic researchers. Their authorship is real, not symbolic, as they participate in all phases of the conceptualization and drafting of the publications. The coauthorship of the papers is in itself a pedagogical experience. In addition, this joint publication benefits all involved. For faculty collaborators, it provides needed evidence of scholarly productivity; it helps the students with their career development and is impressive for those applying for further educational opportunities. The community agency staff benefit by having the problem that they have been addressing published in a journal read by colleagues across the nation; community members have also expressed that being coauthors has made them feel appreciated and included in the university community in ways that they had never before felt. This is important because it is another way in which our model breaks down the usual hierarchal relationship between academic researchers and the community.

In summary, while the commitment to community involvement in research is shared between our action anthropology approach and CBPR, there are significant methodological, epistemological, and value difference between them. On the methodological level, our commitment to long-term field relationships means that our work is first and foremost ethnographically grounded, although in specific studies we draw on other methods as necessary to solve the problem at hand (Rubinstein, Scrimshaw, and Morrissey 2000). The epistemological differences between our approaches rest on different understandings of whose knowledge counts. Authoritative knowledge in public health is created by academic researchers (see, e.g., Jordan 1977; also Keefe, Lane, and Swartz 2006; Rubinstein 1984, 1986) who, thus, serve as gatekeepers of, and spokespeople for, what counts as legitimate information. Our model seeks to equalize the voices of community members and academic researchers, unlike many applications of CBPR. Finally, the norm in CBPR research

Figure 1. The Evidence-Based Process that the Students Followed



is that the products of the community-based work are owned by the academic partners to the research. In our model, the fruits of joint labors are jointly owned. This an important value difference between the approaches.

Activities

The impetus for this project emerged from meetings with community groups who wanted information on the costs of childhood lead poisoning. The members of the Syracuse Area Lead Task Force, a group of professionals from health care

and community agencies whose work addresses lead prevention, also requested assistance in organizing community meetings to disseminate information about lead exposure and prevention of lead poisoning to community members and elected officials. Three faculty members, Sandra Lane, Robert Rubinstein, and Lutchmie Narine, brought together a diverse group of students to work on this project. They were joined by Inga Back, then chair of the Syracuse Area Lead Task Force. She worked together with the academic researchers in developing, implementing, and supervising the project. Because this project took place over a two-year period and included students of various levels and disciplines, not all students worked on each aspect of the project. In addition, students worked with the project as they had time in their schedules. Some students received independent study credit for the project. The medical student was funded by Upstate Medical University School of Medicine to work on the project during his summer break. Some students participated in all phases of the project. When students were not able to participate in a given phase of the project, their fellow student-colleagues mentored them to help them learn about the parts of the projects in which they had not been involved. All students participated in at least one presentation of the results. All students helped to put together the fact sheet reproduced in Figure 2 below.

The students followed a format for evidence-based advocacy that involves reviewing published studies and analyzing local data, reviewing state and local laws for the prevention of lead poisoning, conducting an analysis of the human and fiscal cost of lead poisoning in Syracuse, and communicating this information to policymakers, stakeholders, and community members. This evidence-based model was developed following that outlined by Brownson, Gurney, and Land (1999) and Levandowski et al. (2006). Figure 1 illustrates how this format was adapted to the steps in this project.

Analysis of Published Studies

The students began by collecting over 100 published articles on childhood lead exposure, which they discussed in regular meetings and summarized as follows. Over time, researchers have identified health consequences due to lead exposure at increasing lower levels. Before 1970, 60 mcg/dl was considered dangerous; by 1985 the level for concern had dropped to 25 mcg/dl, and in 1991 it was lowered to 10 mcg/dl (New York State Department of Health 2001a). A review conducted on these current studies by the Centers for Disease Control (CDC 2005) found that lead levels as low as 5 mcg/dl are associated with negative cognitive effects among children (American Academy of Pediatrics 2005). Among children with elevated blood lead (10 mcg/dl or greater), every 1 mcg/dl of blood lead decreases their school attendance by 0.131 years, making lead poisoning a key risk factor for school dropout (Canfield et al. 2003; Needleman 1998). Lead poisoning also increases the need for special education. An estimated 20 percent of children with blood lead levels >25

mcg/dl will need special education services for three years each (Schwartz 1994). Lead exposure and other health disparities are estimated to account for nearly one-quarter of the racial gap in school readiness (Currie 2005). Neurotoxicity from lead poisoning affects not only cognitive capacity but also the ability to plan, learn from prior experience, and control impulsive behavior and creates impairments that are collectively termed deficits in “executive function” (Bellinger 2004). Needleman et al. (2002) identified early childhood lead exposure as a factor in what he termed “juvenile delinquency.” Using Needleman et al.’s data, an Ohio county estimated that 11 percent of all their juvenile delinquent cases are due to childhood lead poisoning (Stefanak, Diorio, and Frisch 2005). A long-term prospective study found that lead exposure during fetal development and under age two was associated with criminal arrests in adolescence; this research also documented that for every 5 mcg/dl of blood lead arrests for violent crime increased (Wright et al. 2008). A study conducted by the lead authors on this article showed childhood lead exposure to be associated with repeat teen pregnancy and tobacco use among adolescent females (Lane et al. 2008). According to Bellinger (2001), the neurotoxic effects of lead on children’s development appear to be irreversible.

Quantitative Analysis—Local Data

In the next stage of the project, the students compiled the public health data specific to lead poisoning in Syracuse. The lead data was obtained from both the New York State Department of Health (NYS DOH) and the Onondaga County Health Department (OCHD). Some of the data was posted on the NYS DOH website, but much of the data required the students to communicate with the two health departments in writing. This step was a learning experience for the students who needed to understand how to communicate clearly what types of data they needed at what geographic specificity. Part of this process required submitting a Freedom of Information Act request to the NYS DOH.

From 2000-2001, the prevalence of elevated blood lead (EBL) in Onondaga County’s children was the second highest in New York State outside of New York City (New York State Department of Health 2004). Five ZIP codes in the City of Syracuse, Onondaga County’s seat, accounted for 76 percent of the county’s total childhood lead poisoning and 7.7 percent of the *entire incidence* of elevated blood lead in New York State children. From 2000-2003 among Syracuse children, elevated blood lead (10 mcg/dl or greater) was identified in 10.8 percent of white children (425 of 3,940 tested) and 22.7 percent of African American children (1,112 of 4,899 tested) (Lane et al. 2008). Despite recent dramatic decreases in childhood blood lead across New York State, the State Health Department listed six ZIP codes as remaining “highest incidence ZIP codes” statewide, two of which are in Syracuse: 13204 and 13205 (New York State Department of Health 2001b).

Qualitative Analysis—Local Data

The Onondaga County Health Department Lead Poisoning Control Program (OCHD) was in the midst of conducting a study funded by the Environmental Protection Agency to decrease lead exposure in homes by reducing lead dust in the indoor environment. The OCHD’s lead dust project was being conducted in the same two high lead ZIP codes (13204 and 13205). As part of the evaluation of the study, they planned to conduct a series of pre-project focus groups with community members to better understand what residents understood about lead prevention and lead exposure and to obtain community input about the project design. The OCHD allowed the students to assist with those focus group interviews under the direction of Sandra Lane. In order to conduct the focus group interviews, the students undertook online protection of human subjects training, learned how to facilitate focus groups, and worked with the OCHD staff to develop a set of questions for the focus groups. Five of the students participated in conducting the focus groups, including obtaining informed consent from the participants, facilitating the discussion, and recording the participants’ comments. A key finding of the focus groups was that parents of small children believed that lead exposure only involved children eating paint chips. No community participant of any of the focus groups realized that paint dust around window sills and doors was an important risk factor. The information gained from these focus groups was used in the development of the fact sheet and community presentation described below.

Identification of Community Stakeholders

The students also identified stakeholders to target for information about childhood lead poisoning, including: the Syracuse Common Council, the Onondaga County Legislators representing the two highest lead ZIP codes, the City of Syracuse Lead program staff, the Syracuse Area Lead Task Force, the Alliance of Communities Transforming Syracuse, community-based agencies, and local residents in the two highest lead ZIP codes. Several of the students began attending regular meetings of the Syracuse Area Lead Task Force. In this interaction and outreach, the students learned to seek the input of these stakeholders with the goal of collaboration. In all of their written communication, the students were careful to document the collaboration and partnership of the stakeholder agencies and individuals in order to share credit.

After an initial review of the published articles on lead exposure and the local data on childhood lead exposure, the students realized that they needed to set priorities and establish a clear and “do-able” scope for the project. “Lead poisoning” was too large of a spectrum to cover adequately, and, therefore, the students narrowed their focus to childhood lead poisoning in rental properties. Lead is very likely to be present in houses built and painted prior to 1978, after

Table 1. Assessing the Laws Protecting Children From Lead Poisoning

	NY State	MA	NYC	Rochester
What homes are inspected?	any residence where a poisoned child spends a significant amount of time	units with children under six that were built before 1978	rental properties with three or more units with at least one child under the age of six built before 1960	all rental properties
When are homes inspected?	- when a child resident is poisoned (>20 µg/dl) - in some counties upon request	- when a child resident is lead poisoned - upon request - as part of all routine Sanitary Code Inspections	- when a complaint has been made - Landlords are required to make visual inspections themselves on a yearly basis; they must also keep records of the inspection.	every five years as a part of the Certificate of Occupancy Inspections
Assumption of lead paint?	no	no	in homes built before 1960	in homes built before 1978
Dust wipe clearance inspection?	no	yes	no	yes
Standard for lead safety	no minimum standard - Maximum standard: all peeling, cracking, or chipping lead paint must be removed or encapsulated.	- Lead paint must be contained. - Windows must be abated. - Moveable impact surfaces must be contained. - Any accessible surfaces (any surface where a child can put his/her mouth) must be contained.	Lead paint must be contained.	- no visible paint deterioration beyond a given size - no bare soil within three feet of the house - Homes in "high risk areas" must also pass a dust wipe test.
Enforcement	Hearings and fines are used to enforce compliance.	Receipt of a letter of full letter or a letter of Interim Control, which protects landlords from Liability. Assuming "reasonable care" is taken to maintain lead safety, without the protection of these letters, the law states liability to the damages as well as punitive damages.	The NYC law makes yearly inspections and self-directed hazard corrections a duty of the landlord. Fines of \$10,000-\$25,000 may be issued if specific timelines for compliance are not adhered to.	not yet addressed

which house paint was required to be lead-free. Children in pre-1978 rental property are at the highest risk of lead poisoning because many rental properties are poorly maintained, thus, containing loose, powdery paint on windowsills (Lane et al. 2008).

Review State and Local Laws

The students reviewed the state and local laws regarding the prevention of lead poisoning for children in rental property. They examined the New York State law, local ordinances

in Rochester and New York City, and the Massachusetts State law. A critical finding was that the New York State law, when first enacted in 1992, only mandated intervention in the housing when a child's blood lead level reaches 20 mcg/dl, a number that was reduced to 15 mcg/dl in 2009 (New York State Rules and Regulations 1992). As mentioned above, considerable scientific evidence clearly demonstrates harm at levels as low as 5 mcg/dl. In fact, the New York State law was already out of date when it was passed as legislation because in 1991, the CDC had lowered the level at which a child's blood lead was considered "elevated" and, therefore, a level of concern to 10 mcg/dl. This finding led to a great deal of discussion among the students, who realized that legislation, such as the New York State law, may take so long to enact that a newly created law can inaccurately reflect current public health evidence. Another possibility, however, is the lawmaker's fear that mandating inspection and action with blood lead levels at 10mcg/dl or lower would be prohibitively expensive. In 2009, the level at which New York State mandates a house inspection was lowered to 15 mcg/dl; although better, the statute still falls far short of the public health evidence of the level at which harm occurs. The Onondaga County Health Department Lead Poisoning Control Program policies are more protective than the New York State law in that the county staff inspects properties when a resident child's blood level reaches 15 mcg/dl. Without a legal mandate and funding to back up the requirements, however, the county lead program lacks the resources to ensure that all older rental properties are lead safe.

Furthermore, the New York State law is based on a risk reduction approach that involves scraping peeling paint and painting over lead-laden surfaces. On friction surfaces such as windows and doors, however, painting over the surfaces may be insufficient to keep the lead-based undercoats of paint from becoming released as dust. In contrast, the Massachusetts law requires that lead paint in windows must be abated, which most often means replacing the windows (Massachusetts Office of Health and Human Services n.d.). The Municipal Code of the City of Rochester, New York, established in 2006, mandates similarly strict standards for lead safety. Rochester requires that homes be made "lead safe," and encapsulating paint can only be used if the result is "permanent" (City of Rochester 2006).

The students concluded that the New York State law is inadequate to protect children in Syracuse. They decided to provide this information to policymakers, stakeholders, and community members and developed a simple, easy-to-read chart expressing the similarities and differences among the different laws and ordinances. This chart (Table 1) was used as a handout at community meetings and has been distributed to local policymakers. The chart presents for each law what homes are inspected, when those homes are inspected, if an assumption of lead paint exists (e.g., if built prior to 1978), if there is a dust wipe clearance inspection prior to it being rented, what the standard for lead safety is, and whether there is an enforcement of these laws in place.

The Human and Fiscal Cost of Lead Exposure in Syracuse

The students looked at costing models from three areas in the urban Northeast United States—Ohio (Stefanak, Diorio, and Frisch 2005), Pennsylvania (Rothman et al. 2002), and New York (Korfmacher 2003). From these, they identified key fiscal variables, including costs incurred due to services provided from special education, juvenile justice, Medicaid, and care for repeat teen pregnancy. With these variables, the students developed a comprehensive economic model of how much lead poisoning of Syracuse children costs taxpayers. This model is also potentially applicable to other United States cities. Using Excel spreadsheets, they plugged in local Syracuse cost data from county reports of the Health Department and social service and criminal justice agencies. In all cases, only local dollar expenditures were used: for example, in the cases of Medicaid and criminal justice expenditures, only the fraction paid with local rather than federal and state dollars were used in the calculations. In cases where there were ranges in costs, only the lower, more conservative values were used. The result of this process—that childhood lead poisoning costs Syracuse taxpayers \$500,000 per year—is described in a handout that the students prepared for dissemination at community meetings (Figure 2). The students wanted to have this document widely understood; thus, on the front of the handout, the reading level was calculated to be under the fifth grade. The back of the handout summarizes the calculations the students made and the citations from which they drew cost and expenditure data.

Communication of Results

To communicate of the results of their analysis, the students began by collaborating with the Syracuse Area Lead Task Force to hold a community forum titled, "Let's Get the Lead Out" on August 11, 2008. The students worked closely with community members to hold this community-wide meeting at a minority-operated community center located in one of the two highest lead ZIP codes. They put up flyers in church bulletins, posted flyers in public areas, put a notice in the newspaper, emailed invitations to elected officials, and then followed up with direct phone calls and repeat emails. They also invited lead experts from county and city governments and hospitals. About 75 individuals attended, including community members, lead experts, several city and county elected officials, and members of academia. The students produced a concise, easy-to-read PowerPoint. The students and community members jointly facilitated the meeting, making all of the presentations together. Following this meeting, the students met with several other elected officials in their offices and participated in a press conference held by the Syracuse Area Lead Task Force. A news article describing this work was published in the Syracuse weekly alternative newspaper, the *New Times* (Griffin-Nolan 2008).

Figure 2. The Fact Sheet (part 1)

Let's Get the Lead Out

Supporting Organizations:

Syracuse Regional Lead Task Force
Southwest Community Center
Dunbar Center
Huntington Family Center
St. Lucy's Church
Syracuse University

Our community has a lead problem

Lead is a poison that makes it hard for children to learn and may increase impulsive behavior.

- ZIP Codes 13204 and 13205 have some of the highest levels of lead poisoning cases in New York State.¹
- 23% of all children tested, a total of 533 children, born between 2001 and 2004 who live in the 13204 and 13205 ZIP codes had lead poisoning.²

Why Lead is a Problem that We Can't Afford to Ignore Any Longer

Childhood lead poisoning is a risk factor for:

- Greater High School dropout rate.³
- Greater need for Special Education services.⁴
- Greater number of youth entering the Juvenile Justice System.⁵
- Repeat teen pregnancies.⁶
- Lead poisoning costs Syracuse taxpayers nearly a half million dollars per year.^{4,6}

Unsafe In Your Own Home

- The number one source of lead poisoning is dust from the lead paint in older houses.
- Most houses in ZIP codes 13204 and 13205 were built before 1950. Any house or apartment built before 1978 could have lead paint.⁷

Using Our Babies as Lead Detectors?

- Despite the efforts of the Health Department, some homes are inspected for lead only after a child is lead poisoned.⁸
- New York State Law does NOT require homes to be lead safe before they are rented to families with young children.

Not Another Generation Caught in This Cycle!

- We need a local law to protect children in rental housing from lead poisoning.⁹
- Landlords need help and guidance to make their properties safe for children.

Conclusion

This lead poisoning prevention policy advocacy project achieved its goal of partnering with community stakeholders to collect and disseminate the social, public health, economic, and policy information on the human and fiscal costs of childhood lead poisoning. The students worked closely with community advocates to produce a fact sheet that is still being used to persuade policymakers to enact a local law, strengthening the prevention of childhood lead poisoning in rental property. To date, the law has not changed, which is a disappointment.

But the project succeeded in helping to set the policy agenda; both the Syracuse Area Lead Task Force and the Alliance of Communities Transforming Syracuse (ACTS) made enacting a local law to protect children from lead poisoning in rental property as a part of their official action priorities.

The project was also designed to be problem-based and student-led, so that the students could learn about qualitative data analysis, quantitative data analysis, the health effects of lead exposure, health policy, urban health, science writing, and public presentation. The fact that the project activities all focused on aspects of the same problem, and the real-world nature of

Figure 2. The Fact Sheet (part 2)

Facts on the Public Health Issue of Lead Poisoning

1. ZIP code 13204 has the second largest number of children affected by lead poisoning, and ZIP code 13205 is ranked number seven out of any other community in New York State, excluding New York City (New York State Department of Health 2004).
2. The Centers for Disease Control considers children under the age of three to have Elevated Blood Lead (EBL) when their levels are higher than 10 mcg/dl. But, recent research has shown damage to children's brains to occur at 5 mcg/dl (Committee on Environmental Health Lead Exposure in Children 2005).
3. **School Drop Out:** Lead poisoning in young children robs their learning potential. These effects are not reversible and will continue to affect them to adulthood. Among children with elevated blood lead, (10mcg/dl or greater) every 1 mcg/dl of blood lead decreases their school attendance by 0.131 years. **In the SCSD, this would result in an estimated 86 students per year dropping out in the 9th grade.** George Fowler High School, in ZIP code 13204, had the lowest graduation rate (37.6%) of all city high schools (New York State Education Department 2005).
4. **Special Education:** Lead poisoning increases the need for special education. An estimated 20 percent of children with blood lead levels >25 ug/dl will need special education services for three years each. **Per year, the extra cost for special education caused by lead poisoning is estimated to be \$70,000.** In Bellevue Middle School Academy, in ZIP code 13204, one-third (30%) of students require special education services.
5. **Juvenile Justice:** Using findings by Herbert Needleman, MD, an Ohio county estimated that 11 percent of all their juvenile delinquent cases are due to childhood lead poisoning (Stefanak, Diorio, and Frisch 2005). **Per year, in Onondaga County, an estimated \$323,758 of local dollars spent on juvenile justice is attributable to childhood lead poisoning.**
6. **Repeat teen pregnancies:** An estimated 38 percent of repeat teen pregnancies in Syracuse are attributable to lead poisoning; **the estimated Medicaid bill for those repeat teen pregnancies is \$106,129 per year** (Lane et al. 2008).
7. **Housing:** Fifty-six percent of rental housing and 65 percent of all housing units in ZIP code 13204 were built before 1950 based on 2000 Census data. Sixty-five percent of rental housing and 72 percent of all housing units in ZIP code 13205 were built before 1950 based on 2000 Census data. **The Onondaga County Health Department has found that over 200 houses per year have lead hazards.**
8. **New York State Law:** New York State Law requires that home lead inspections are done in residences after a child resident is found to be "significantly poisoned" with lead blood levels above 20 ug/dl. The Onondaga County Health Department makes greater efforts than the law requires by routinely inspecting homes in which children are found with 15-19 ug/dl blood levels and offering for blood levels of 10-14 ug/dl.
9. **Rochester** has passed a local law that requires rental property to be lead safe *before it can be rented!*

the problem, appealed to the students. One student said that the project motivated her to apply to law school in order to focus on public health law. Another student described how "using evidence-based techniques to objectively evaluate current policy combined with understanding the environmental factors that led to the local disparity in the blood lead levels was crucial to cultivating my desire to continue with public health research" in graduate school. A third student (Eric Morrissette) submitted the project to the Clinton Global Initiative University, where in 2009 it was recognized as an outstanding commitment. The students also benefited from being part of a multi-disciplinary group. The

high school student got informal advising from the undergraduate and graduate students, which informed her decision to study public health at college. Perhaps the most gratifying outcome was seeing how enthusiastically the students responded to the idea that their scholarly work could make a positive difference in the lives of disadvantaged children. One student said, "Participating on the research team addressing a problem in the local community fostered a sense of civic connectedness." Another summed up that feeling by saying, "It has become clear to me, while working on the lead project, that knowledge is hollow unless it is applied in a way that advances a good."

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