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# Community Gardens to Fight Urban Youth Crime and Stabilize Neighborhoods

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## Community gardens to fight urban youth crime and stabilize neighborhoods

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### Abstract

Chronic poor health within inner cities is usually the result of prolonged exposure to a multitude of health disparities. These disparities, are exacerbated by poverty, high unemployment, crime and youth violence. In many cases, these factors increase neighborhood instability and civic disengagement. Community garden programs can strengthen civic engagement and foster neighborhood stability, while simultaneously cutting down on youth violence. Community garden programs address the accumulation of health challenges in many ways and provide curative building blocks to deal with poor nutrition, obesity, diabetes, psychological disorders, and deficient growth of infants, substance abuse, civic detachment and suicide rate. Urban agriculture not only strengthens communities from within, but is also a cost-efficient, trans-generational cross cultural, multi-disciplinary tool that can be used to address these issues.

This article will summarize a rapidly growing body of research addressing the use of community gardens and the ways in which it can positively impact economic, social, and health-related aspects within inner cities. The article will draw upon the experience of the Neighborhood Community Garden Initiative implemented by Lawrence Massachusetts.

The initiative is a community-based multi-pronged approach and demonstrates how lot revitalization and urban agriculture not only address health-challenges but also effectively stabilizes distressed neighborhoods and is a cost effective community-organizing tool. In turn, violence is reduced and residents feel safer, relations with police improve thereby lowering stress levels and empowering residents to take pride and ownership in the further development of their neighborhoods.

**Keywords:** Community gardens, urban agriculture, urban land use planning, Brownfields, youth violence, crime prevention, gang activity, youth programs, trauma and post traumatic stress

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## Introduction

Chronic urban health challenges, particularly among the young, result from a prolonged exposure to a multitude of environmental health disparities. Challenges include living in Environment Justice Neighborhoods with poor soil and air quality and an acute scarcity of fresh food and vegetables. These challenges are exacerbated by poverty, high unemployment, single parent homes, neighborhood instability, civic disengagement, crime, and youth violence. The accumulation of these challenges results in poor nutrition, obesity, diabetes, psychological disorders, deficient growth of infants; unwanted or inadvertent pregnancies, suicide, substance abuse and exposure to prolonged trauma. However, often the devastation caused by youth violence is categorized as a tangential separate criminal justice issue with inadequate recognition that it is the result of prolonged environmental health disparity. Violence is a serious health issue and prevention needs to be included in breaking the cycle of environmental health disparities (1-3).

Most inner city areas have abandoned properties and unused vacant lots. These unmaintained lots are often Brownfield hazards, overgrown with unwanted vegetation, trash and vermin, making the lots attractive places to hide guns, conduct illegal activities and engage in violent crime. The existence of these lots perpetuates health disparities. The recapture of these lots can become a vital tool to reduce health disparities while assisting community organizing, neighborhood stabilization and long term strategic land use planning. By reclaiming these lots and converting them to gardens or pocket parks, a city not only addresses the obvious health conditions but also eliminates blight in the neighborhood. This in turn creates a positive neighborhood resource that can stabilize a neighborhood and bring neighbors together in a shared activity and purpose. Thus, an obvious liability is efficiently and effectively converted to a cost effective multi-purpose urban asset (4-8).

Inner city residents include immigrants who have traveled from areas of the world where community gardens are an economic and social staple within their communities. In the US, this often results in an increased demand for community gardens that can be met by residents building informal community

gardens on existing vacant lots. Oftentimes, these informal gardens are built without authority and often without proper testing with regard to soil suitability and safety or environmental appropriateness. Many vacant lots are contaminated by traditional urban fill including wood and coal ash and residual solid contaminants such as lead and arsenic. Without appropriate environmental testing and site preparation, these contaminants create immediate and direct health hazards for the neighborhoods, creating a food consumption pathway risk. This risk is particularly acute because of the area's large numbers of children who are highly susceptible to lead and other soil contaminants often found in abandoned lots (9,10).

The importance of community gardens, particularly in low-income neighborhoods, has been recognized by numerous studies as vehicles for neighborhood stabilization, economic development and contribution to the betterment of neighborhood health and recreational activities particularly for the young and elderly. The utilization of vacant lots for community gardens provides small oases of productive green space and a source of shared recreation in a gritty area otherwise lacking opportunities for healthy social interaction and recreation (10-12).

Community gardens generate direct economic benefits in at least two ways: they increase property values significantly within a 1,000-foot radius by attracting new residents and small businesses and help to stabilize neighborhoods. This translates into thousands of dollars in cumulative property tax revenue increases annually. Gardens help stabilize neighborhoods as a result of stewardship of the gardens by neighborhood groups and residents at little or no cost to the city. Resident gardeners also benefit directly from the produce at each garden, not only in terms of potential nutritional value but also either through food cost savings or through supplementary income from sales at farmer's markets (11-14).

The environmental benefits from this form of sustainable reuse are also obvious. Open space amenities, like the gardens, reduce carbon emissions and use Low-Impact Development (LID) techniques that improve water quality and reduce flood risks through advanced storm water management (11-14). Non-Economic Benefits also result as community

gardens provide an increased sense of well-being and security by residents and effectively create a neighborhood “watering hole” where neighbors can congregate, socialize and exercise. The reduction of violence is both an economic and non-economic benefit (15). Violence has far-reaching consequences for young people, families and neighborhoods, beyond serious physical injury and death. Communities cannot flourish in a crime-ridden environment. Violence contributes to other health problems and community concerns, such as anxiety, mental illness, poor learning and chronic diseases. For example, children who are scared at school cannot focus on learning and people are less likely to be active and engaged if the local park isn't safe. If children are too afraid to go outdoors to play they tend to stay at home and watch TV while eating unhealthy snack foods. Prolonged exposure to personal trauma resulting from poverty, broken and displaced families, illness, substance abuse, unemployment, homelessness, crime, domestic abuse and suicide all perpetuate environmental health disparity and result in neighborhood instability, civic disengagement and youth violence. Consequently, violence is an assault and a cost not only on the individuals involved but also on the community at large. The result is damaged lives often passed from one generation to the next thus perpetuating the cycle (1-3,16,)

Many of inner city youth exhibit classic symptoms of post-traumatic stress, called “street syndrome”: - hypervigilance, hopelessness, inability to form lasting relationships, lack of trust and depression. Each of these factors has been present in the inner city for many years and each has been demonstrated as a factor contributing to school dropout, a high crime rate and incarceration. The result has been accepted for too long as a fact of life without full appreciation of the destruction of lives that results and that it is potentially preventable (16-19).

Violence can undermine the work of all health and social service delivery sectors including educators, social service agencies, early childcare facilities, health providers and police. The work of each sector should include recognition of the widespread and pervasive impact of violence in their efforts. The prevention of violence is a fundamental

aspect of creating and maintaining any vibrant community, one where young people enjoy every opportunity to grow, learn, thrive and excel (1-3,16,20).

The reality is that it is somewhat misleading to categorize these benefits as an economic, non-economic or environmental. All contribute to a better quality of life and healthier citizenry and are vital components of an economic development policy. The cumulative effect is to contribute to the creation of a better environment in which to live and operate a business while reducing in governmental costs.

## Case study

### *Lawrence, Massachusetts*

While each city is unique in demographics, history and geography, most cities share common challenges and characteristics albeit with different make-ups. Lawrence Massachusetts provides an illustrative case study for understanding how a community-wide multi-faceted coordinated approach can help prevent violence, especially in highly impacted neighborhoods.

The population of the Lawrence today is approximately 77,000 people. Lawrence has always been an immigrant city and is rich in its history and cultural diversity. Many of Lawrence's residents are foreign-born or first generation United States citizen. It is a classic mill city founded in 1847 as one of the first planned industrial Communities in the United States. The city was once a compact textile-manufacturing machine that prospered for over a century from a thriving industrial economy. The topography benefits from the confluence of 3 rivers. The rivers made the city's prosperity during the industrial revolution possible. Thus the city is also rich in its architectural geography and architecture.

As Lawrence entered the 21st century, the City was reeling from the accumulated socio-economic debt resulting from the harsh reality of a century of being a purely industrial community followed by decades of decline and disinvestment. This debt needed to be paid while the city confronted the challenges of revitalization and assimilation. Moving

forward into the twenty-first century, a snapshot of the city today reveals:

- Chronic high unemployment currently about 15% and usually at least twice the state average particularly among young males;
- The highest rate of teen pregnancy and unwed mothers in the state (4 times the state average);
- High levels of foreclosures, abandoned properties and homelessness;
- Over 75% of the population is Latino, proud of their culture and ethnic heritage while trying to assimilate into a new community;
- 35% of the population is foreign born with over half the population with Spanish as the first language;
- The percentage of people living under the poverty level is one of the highest in the State;
- Median family and per capita income in Lawrence are approximately 50% of the state average;
- One of the youngest populations in the state with approximately 41% under 24 (33% is under 15) and the percentage of foreign-born even higher among this segment of the population;
- One of the fastest growing cities in the state as reflected in the 2010 US Census;
- 17 of the 18 census tracts in the city are classified as a low to moderate income neighborhoods and contain minority concentrations of greater than 50% in all of these tracts;
- A geographically small city (6.7 sq miles) with population densities well above state average;
- The poorest neighborhoods are environmental justice neighborhoods by every measure;
- The highest levels of youth obesity and diabetes in the state;
- One of the highest school dropout rate in the state with a school system that is in receivership;
- Soils in vacant lots are often dense urban fill with many contaminants;
- The rate of teen pregnancy in Lawrence is approximately 4 times the state average and 40% of these teen pregnancies in Lawrence are to children aged 15-17.
- Lawrence is among the poorest municipalities in the Northeast United States.

All of these contributing factors are acute in Lawrence. Each of these challenges has been present in the city for many years and each has been demonstrated repeatedly as a factor contributing to chronic health problems within the city of Lawrence. Most frustrating, each of these factors poses a significant and immediate threat to those who most need guidance, structure and hope i.e., the youth of the city. The confluence of all of them has regrettably been accepted for too long as a fact of life - the norm (10,20,21).

These factors have also contributed to an alarming increase in violent crimes committed by or on the youth of the city. In the past five years, violent crime (murder, rape, robbery, aggravated assault) has increased dramatically.

Significantly, firearm violence has increased as well. The majority of both shootings and stabbings involved youth under the age of twenty-five years. Not surprisingly, school related violence and weapons crime has increased significantly during this period (21,22).

Much like Iceland is a good genetic test tube, Lawrence, because of its population composition, size and severe density, is wonderful test tube for an analysis of a coordinated social program approach.

These characteristics make Lawrence unlike any of the other cities in Massachusetts and probably few other cities in the United States. Consequently, Lawrence presents the "perfect storm" of urban challenges.

To some, this poses an intractable social service rubix cube while to others it presents an ideal candidate for urban planning and the utilization of a "smart growth" philosophy. Is it a social service nightmare or an urban planner's dream?

### *The Arlington district*

Within Lawrence, the Arlington District in the north of the city faces the highest concentration of health challenges. The Arlington District has an estimated population of sixteen thousand and is a classic New England working-class enclave. The district remains a largely residential area characterized by its tightly clustered triple-decker homes. The District is also known for its rich history as a point of entry for Irish, French Canadian and Italian Immigrants who powered the industrial city of Lawrence during the nineteenth and twentieth century's (15, 17).

As Lawrence's downtown manufacturers declined in the 1970s, the adjacent Arlington District lost many of these longtime residents. This set the district up for a long period of abandoned buildings and vacant lots left to decay. Today, almost three-quarters of local residents are Latino, including many from the Dominican Republic. This wave of immigrants continues the proud tradition of previous immigrant groups and, as with previous immigrants, represent a potentially bright future of the city. The neighborhood's residents face numerous economic and social challenges that are exacerbated by the negative environmental and public health effects of the presence of vacant and underutilized Brownfield's sites (15,17).

The Arlington District is an Environmental Justice Community by every measure. The neighborhood has four-times the state percentage of minorities. It is one of the state's most crowded and densely built neighborhoods (16,000 persons in only 419 acres, or approximately 23,000 per square mile). The District has higher concentrations of children and women of childbearing age compared to state averages; sensitive locations include four public elementary schools, a public middle school, a charter school and a Catholic high school. All but one of these schools is located within 200 yards of a known contaminated site (9,10,13).

Brownfields disproportionately impact the Arlington District residents compared to other residential areas in the city. Because of the District's extremely high population density, most residents live within a hundred feet from one of the 40 reported contaminated sites (covering five percent of land area). More than 70% of the sites were reported for oil

contamination, roughly a quarter for unspecified contaminants, and the rest for mixed oil/hazardous materials. This area's density of reported sites is also disproportionately high at more than twelve-times the Massachusetts state average. (9,10,13-15).

Brownfields and other underutilized sites pose a serious threat to the neighborhood's overall well being. More than half of the City's approximately 1700 documented vacant properties are located in the Arlington District, where the residential vacancy rate is estimated to approach 20%. Almost 1,200 buildings have been abandoned and demolished in the City since 1990, largely in or near Arlington. Many abandoned properties in the area were arson sites during the recession of the early 1990s (up to 120 fires per month Citywide), in many cases resulting in soil contamination. At least 349 neighborhood properties were foreclosed upon in the subprime mortgage crisis through 2008 and early 2009. The housing stock in the neighborhood is suffering from neglect and disinvestment. Public safety is perceived to be inadequate, especially where vacant lots and abandoned facilities are located. Lawrence police reported that crime, including illegal waste disposal, is a major problem at abandoned and underutilized sites in the area (9,10,15).

Proximity to Brownfield's is highly correlated with poverty rate and other indicators of economic distress and chronic poor health. Lawrence ranks at or near the bottom among the 351 Massachusetts municipalities in median household income; the Arlington District's income level is lowest in the city. Many of its industrial properties and roughly 20% of its residences are vacant, often containing known or suspected contamination (including lead paint, asbestos and arson debris). The poverty rate is nearly three-times the state level. The Arlington Neighborhood's unemployment rate is consistently well over 25% and it has the highest rates of chronic diseases such as asthma, and diabetes, the highest rates of teen pregnancy and highest rates of teen violence in the city (15, 21).

Within the Arlington Neighborhood, there are several other potential environmental hazards. These include twenty-four documented underground storage tanks at four gas stations or other fueling facilities, plus sixteen manufacturing firms (textiles, metal plating, printing and food processing), fourteen

construction companies, thirteen auto-repair businesses, eight warehousing and transportation operations and one waste-treatment/recycling facility (9,10,13,15).

These industrial facilities and Brownfields in the District are closely intertwined with residences, often on the same block. This poses risks to children and others who access these sites. Also contributing to health risks are older, poorly maintained housing (61% of units predate 1950, with associated lead paint risk) and a major regional highway (MA-28) that runs through the neighborhood. While health metrics are not routinely tracked at the neighborhood level, Lawrence as a whole has four-times the state rate of childhood lead poisoning and twice the state rate of asthma emergency hospitalizations, both of which are typically caused by environmental factors. Several vacant sites in the Arlington neighborhood and elsewhere are used as informal community gardens, a serious potential health risk through the food consumption pathway. These gardens have been found to contain health-threatening levels of

contamination of lead, polycyclic aromatic hydrocarbons (PAHs), and other heavy metals (9-13).

In addition to the Arlington District residents, Brownfields also negatively impact the adjacent Spicket River that runs directly through the District. The Spicket River has long been a dumping ground for trash and contains endangered and threatened species such as the Atlantic salmon and sturgeon. Soil and groundwater contaminants also pose a broader environmental and health threat as this area is prone to frequent flooding and is located within the FEMA-designated repetitive-loss flood zone (11,15).

The two maps that follow show open space per capita and environmental justice populations in Lawrence. The Arlington Neighborhood in the north central of the city has the least open space per capita and is the most pronounced environmental justice population in the city. The first map shows open space per capita by census tract. The Arlington Neighborhood (census tracts 2501 to 2514 is the most densely populated, least “green” section of the city. Not surprisingly, it is an environmental justice neighborhood.

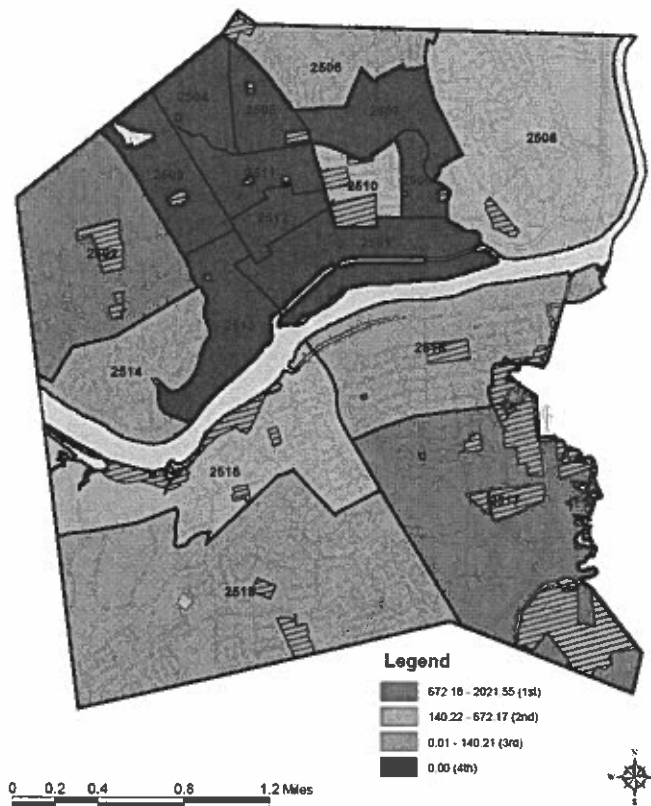


Figure 1.

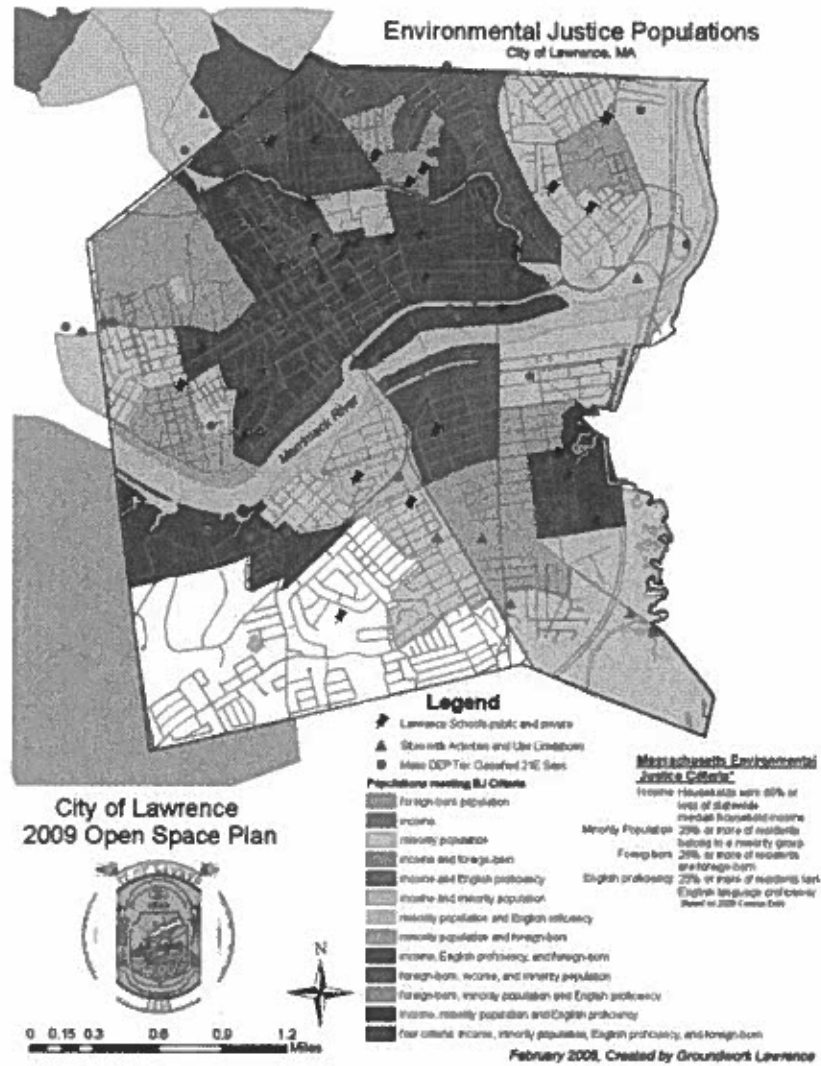


Figure 2.

*The neighborhood community garden initiative*

In 2009, Lawrence began a conscious and aggressive effort to implement policies and programs that would complement and build on one another. A study of the Arlington neighborhood identified a number of factors that crippled efforts to revitalization. The lack of accessible green space was specified as a primary obstacle to quality-of-life and economic improvement in the District. This effort began with the implementation of a Neighborhood Community Gardens Initiative that became a fundamental part of an emerging citywide urban regeneration concept. The Initiative sought to utilize existing city-owned

vacant, undevelopable, often contaminated, sites strategically situated throughout the City in low income, high density, and high crime environmental justice neighborhoods.

The District faced a problem in that the demand for community gardens was being met informally. Local residents built community gardens on private and public vacant lots without authority and without proper environmental testing, potentially endangering themselves and those who eat any produce grown. For many of Latinos and other newcomers to the City the use of community gardens and local farm stands is commonplace in their countries of origin (15).



The lots were generally in densely populated neighborhoods and were less than 3,000 square feet making them poor candidates for residential or commercial development. Many were in a flood plain district near the Spicket River. The City identified over twenty such lots with little or no residential or commercial development potential in underserved neighborhoods of the City on which to construct neighborhood gardens with the assistance community based neighborhood organizations. These lots were also usually crime and trash magnets often infested with various forms of vermin. The gardens on these lots were planned to be of varying size and shape to provide for handicap accessibility and involvement of the youth and seniors. The utilization of these lots for community gardens was designed to provide small oases of productive green space and a source of shared recreation and enterprise for the neighbors (11,14, 15).

To start the process the city sought and received two grants – a Brownfield grant from the EPA and a Parkland Development Grant from the Executive Office of Energy and Environmental Affairs of the Commonwealth of Massachusetts. The EPA Brownfield grant funds was used to conduct environmental assessments on the target lots permitting evaluation of soils conditions to address the urban fill health issues. The state grant was used to implement a Community Garden Initiative in the most distressed areas of the city. The initiative was started in the Arlington District, the city's most disadvantaged area.

The first major hurdle for the city was the need to obtain neighborhood buy-in. To accomplish this, the city needed to reconcile two superficially contradictory conditions: the reticence of new citizens for civic engagement (and a general wariness of government) and a strong history of successful community based organizations and partnerships. The reconciliation was aided substantially by the election of the state's first Latino Mayor, William Lantigua. Before his election, Mayor Lantigua served in the Massachusetts House of Representatives for many years and had been (and still is) a strong and effective community organizer and leader with a demonstrated commitment to social justice for the most disadvantaged in the city. Mayor Lantigua also recognized the strength, utility and record of

successful collaborations of the city's many dedicated community based organizations. The Neighborhood Community Gardens Initiative in Lawrence proved to be an ideal vehicle to reconcile the two conditions.

At the beginning of the initiative the city sought to actively engage the neighbors to the vacant lots in the planning. At first, there was strong opposition because the neighbors were concerned that the gardens would immediately fall into disrepair and aggravate the existing problems. The neighbors' anxiety was not without basis. Lawrence is a poor city in terms of financial resources and consequently, the ability to maintain city parks had been very limited. Through the dialogue process, the city eventually converted the neighbors from opponents to partners. The neighbors worked with the city to construct the park and in the process the neighbors actually came together to form a stewardship group so that when the construction was completed, they literally took control of the gardens and shared both the labor and fruits of the communal garden. The Latino community shares a passion for gardening so once the concerns were alleviated; they embraced the concept and established a model for the rest of the city. The result was not only fresh vegetable and fruit for the neighbors (Lawrence is an urban food desert) but also very effective neighborhood stabilization and mobilization.

In spite of and perhaps as a result of the chronic shortage of financial resources, Lawrence has been blessed by an abundance of vibrant dedicated community-based organizations including Arlington Community Trabajando (ACT) and Groundwork Lawrence (GWL). ACT is a nonprofit community development corporation (CDC) founded 1996 in the aftermath of the devastating Malden Mills fire. ACT assists Arlington District residents and businesses by funding and managing housing, business, job training, at risk youth leadership programs and open space projects. GWL was organized in Lawrence since 2001 and is deeply engaged in quality-of-life projects throughout the City. GWL is part of the national organization, Groundwork USA. Both ACT and GWL have provided critical project management and public outreach services, in the implementation of the Community Garden Initiative. Both organizations are committed to the continuation of programs that promote the protection and restoration of Lawrence's

natural resources and public health by engaging adults and teens in advocacy and service-learning focused on the community's parks, streets, gardens, waterways and vacant open spaces (11,15,17).

In part thanks to the mayor's service in the Massachusetts legislature, Lawrence has a proven successful framework for governmental partnership. In recent years, in partnership with local, state, and federal agencies, the city has conducted significant outreach effort for Brownfields projects. Completed Brownfield projects in or near the Arlington neighborhood include the conversion of a former incinerator site into the EPA award winning Manchester Park; the conversion of a former industrial dry cleaner site into Nina Scarito Park; the conversion of a former superfund site into the 2 acre Oxford park; and the completion of the 2.6 mile Spicket River Greenway, an emerald necklace walking and biking trail along the banks of the Spicket River that traverses the entire Arlington Neighborhood and connects all three parks. All of these projects successfully integrated the concerns of local residents and governmental funders to create neighborhood stewardship while promoting a vision of a sustainable community valuing the integrity of the environment and the urban core. All outreach efforts were bilingual (11).

The Neighborhood Community Garden Initiative aimed to address a green space shortage and health disparities in and near the Arlington District. Being one of the state's youngest communities in population, demand for parks, open space, and recreational areas is high. Abandoned and underutilized Brownfield sites within the Arlington District were viewed as opportunities to protect public health and the environment, while promoting the creation of innovative green space development in a community where high density rates strongly contrast with neighborhood's lack of open space. The addition of green space and community gardens within this neighborhood is not only aesthetically pleasing, but also enhances the ability to improve storm water management, which is a great concern of residents because of historic flooding, all contributing to improve quality of life within the district. Transforming underutilized Brownfield sites into green space and community gardens is a valuable vehicle for sustainable investment where the City's

ultimate goal is to cultivate healthy, safe, and walkable neighborhoods. In addition, proper investigation and redevelopment reduces contamination exposure pathways on sites currently being used by local youths for recreation.

The Neighborhood Community Gardens Initiative has generated expected and unexpected benefits in many ways. The addition of the gardens has contributed to a rise in market values of properties at a rate greater than the rise in the general real estate market. The gardens in the Arlington neighborhood helped stabilize the area as a result of stewardship of the gardens by neighborhood groups and residents, at little or no cost to the City. Resident gardeners have also benefited directly from the produce at each garden, either through food cost savings or through supplementary income from sales at Lawrence farmers markets. Residents, city officials and community police officers anecdotally report increased involvement of residence and engagement with the police to address crime. The Neighborhood Community Gardens Initiative has provided an increased sense of well-being and security by residents (11,15).

Another unexpected benefit resulted from the Safe and Successful Youth Initiative (SSYI) Grant received by the city in 2012. SSYI is an innovative and forward-looking program established by Governor Deval Patrick in 2011. The grant is an anti-gang/prevention of violence grant directed at reaching out and serving the "proven risk" population which the grant defines as those males 14-24 years "most likely to kill or be killed". The program essential targets the elimination of youth violence most often associated with inner city gang activity. The brilliance of the program is derived from the recognizing that youth violence is at heart a health challenge resulting from prolonged exposure to trauma inducing events such as poverty, high unemployment, broken homes, neighborhood instability, civic disengagement, exposure to crime, and youth violence. The program also is aimed at a secondary population consisting of the males' actual or extended families including teenage mothers and infants (1-3, 16,18,19).

The heart of the SSYI program depends on an active street worker program that aims to seek out and engage the gang members and convicts released from confinement and assist them in reintegrating into

society. The program provides life skills mentoring, educational and vocational assistance, trauma and family counseling and employment training and placement. A primary component of the Lawrence SSYI effort has been to provide opportunities for civic engagement for the youth. The employment of SSYI youth in the Community Garden Initiative has been very successful in providing employment and opportunity for civic engagement for some of the SSYI Youth. It has also proven to be a very effective neighborhood organization and stabilization tool. Without fanfare, the SSYI street workers and a team of SSYI youth will go into a neighborhood and completely clean, mow and weed-wack a long neglected park in a high crime area. Invariably, neighbors will come out and speak with the SSYI youth thanking them for cleaning the park. The street workers explain the program and include the youth in

the discussions. In the course of the conversations, often over a period of a week or so, a bond will be formed between the SSYI team and the neighbors and a sense of shared stewardship will develop. The neighbors see the SSYI youth in a new positive light and the youth in turn feel a renewed sense of self-esteem and civic engagement resulting from the positive interaction with the neighbors. It appears that this involvement has contributed to a reduction in crime and an increased sense of well-being and security in neighborhoods where gardens have been built. Empirical testing of this premise is ongoing but it is entirely consistent with results from research elsewhere in the US. The next three pictures provide an example of the community mobilization efforts and before and after images of the dramatic impact made by the Initiative on one of the neighborhoods.



Figure 3.

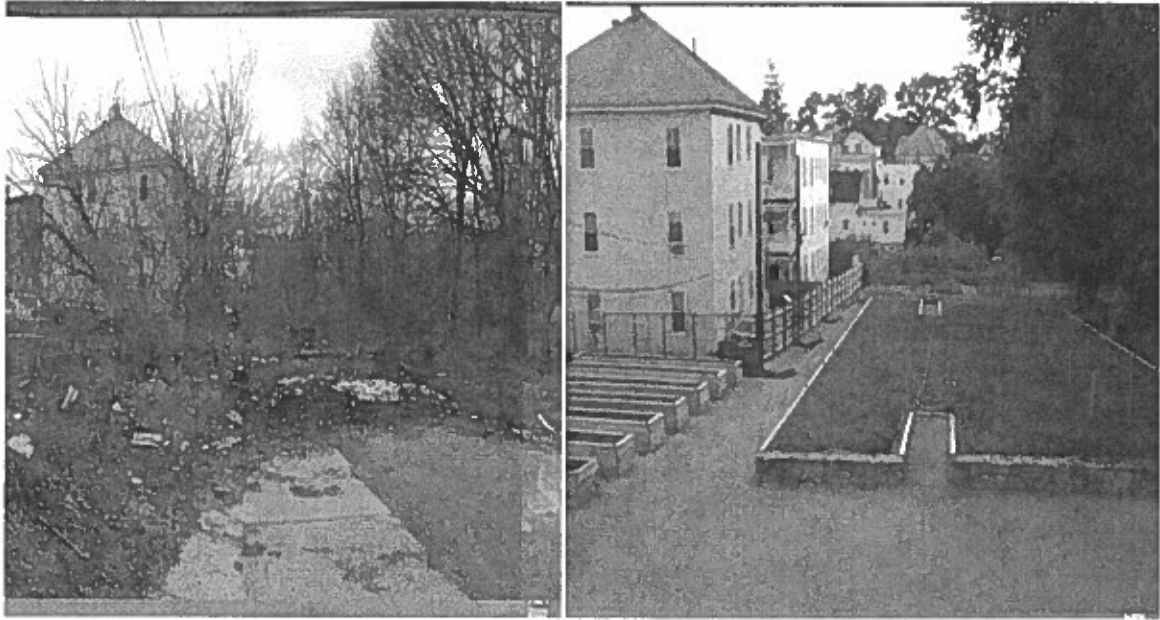


Figure 4.

## Conclusion

There is a burgeoning body of evidence-based research clearly demonstrating the direct linkage between inner city greening and crime reduction. A representative sampling of the work includes groundbreaking research by a team led by senior author Charles C Branas, PhD, Associate Professor of Epidemiology at the Perelman School of Medicine, University of Pennsylvania; Studies from The Prevention Institute of Oakland California; and work by Jeremy Mennis, Associate Professor of Geography and Urban Studies at Temple University to name a few (4-8).

The linkage between violence and prolonged exposure to environmental health disparity is clear. So too is the potential remedial effect of urban agriculture and thoughtful community gardens program. The question is now what? The tools and methods of dealing with the challenges of youth violence must be multifaceted, holistic and based on a strong sense of collaboration that focuses on prevention, intervention and sustainability. The US Attorney General's Office of Juvenile Justice Delinquency and Prevention (OJJDP) has designed what is now called the Comprehensive Gang Model, which is comprised of five strategies, Community

Mobilization, Opportunities Provisions, Suppression, Social Intervention, Preventive, and Organizational Change and Development. These five strategies must be combined to encourage collaboration between and among diverse groups including but not limited to multi-level Governmental agencies, private sector entities, schools, law enforcement agencies, social service providers, neighborhood associations, Faith-based groups and other community based organizations. A strategically implemented urban agriculture program utilizes all five strategies as the case study of Lawrence demonstrates. Most important of the 5 strategies, Community Mobilization and Organizational Change are often the most difficult to implement and the Community Garden Initiative provides an ideal vehicle (18-21, 25).

Most inner cities need and benefit from a variety of individual grants from state and federal agencies to deal with many of these challenges. These grants are given for a variety of programs ranging from law enforcement and crime prevention, housing, lead abatement, social service, food stamps, welfare assistance, job training and education. Because of the ever changing nature of politics and public policies, these grants are too often limited in time and scope and designed only to deal with a specific challenge and not conducive to building sustained capacity. Too

often delivery of these grant funded services occurs in a “silo” environment with each agency delivering its service with little knowledge of what other agencies are doing or coordination with other programs. Sometimes a duplication of service occurs while other times too often critical needs are left unaddressed. Thus for economically depressed cities with a limited tax base, it is very difficult to develop and maintain capacity and achieve sustainability. Sustainable programs to provide a continuum of coordinated treatment services and leveraging of resources are difficult to implement because of the gaps between the silos of programs. Countless dedicated educators, youth workers, governmental employees and selfless people from service agencies, community and faith based organizations administer these programs to individuals and families in crises. Many of these

organizations are severely limited by lack of financial resources and sufficient time. Consequently, the need for enhanced collaboration is vital to insure the sharing of information and coordination of services to achieve more targeted, effective service and opportunity to our youth.

The current political paralysis in government and the blood lust of some legislators to cut expenditures for these types of programs is naive, shortsighted, cynical and ignorant. The “haves” cannot continue to act as though what happens to the “have-nots” of inner city has no effect on our society in general. There must be are recognition that the costs of treatment and prevention of health disparities is minimal compared to the long term economic cost to society.

## Shared Accountability



Figure 5.

Urban Agriculture is a highly efficient and cost effective way to address a wide variety of the inner city health disparity challenges including prevention of violence and facilitating organizational change and community mobilization. Funding prevention and intervention work has an immediate impact on the country's fiscal future and our ability to fund other important long-term initiatives, such as education or transportation. On the societal cost of violence and crime alone, it is estimated that it costs the taxpayer over \$80,000 per year to incarcerate a youth. The social costs and revenue costs to the community of

treating chronic poor health are extraordinary compared to the costs of prevention including health costs and loss of tax revenue (10,18,19,23).

In April of this year, Lawrence hosted a two days trauma-counseling workshop as part of our citywide mobilization effort. The SSI leaders in Lawrence organized the event. The workshop was free and attended by over 60 diverse groups from Lawrence comprised of health practitioners, professional counselors, leaders from our service agencies, faith based and community based organizations - all united by the desire to address health disparities in general

and to reduce youth violence in our city. The workshop was an important and timely opportunity to increase the level of collaboration in our city to address a critical but substantially unmet need – the identification and proper treatment of trauma and Post Traumatic Stress. This type of event provides a model for more collaborative effort to combat health disparity (16,23-25).

Lawrence like many urban areas still has too much violence in our city especially among youth. It is often the result of a life filled by prolonged trauma. In middle schools and high schools, there are usually multiple incidents of violence almost every day. There are certainly incidents every day in the streets and homes of our youth.

There are very few inner city youth anywhere who have not personally witnessed or been directly affected by violence. In that regard, violence is like a contagious disease. Almost everyone who comes in contact with it is affected by it.

No citizen or family in Lawrence or anywhere should suffer from the enduring unbearable pain of violence and all of us should work together to do what we can to prevent it. Everyone has a role to play and no part is too small. The role may be as simply as spending the time to understand why much urban youth violence cannot be dismissed as an inner city criminal justice challenge that is someone else's problem to solve. The social, fiscal and moral costs are too high to ignore. It may never be possible to know the true financial and societal savings of prevention and intervention as compared to the costs of treatment and incarceration. It is clear that funding prevention and intervention is a great long-term financial investment. Urban agriculture is a cost effective investment with an immediate return.

## References

- [1] Unnaturalcauses.org. Fact sheets; A documentary produced by California Newsreel, presented by the National Consortia of Public Television, Larry Adelman, Executive Producer, premiered Spring 2008. URL: [www.unnaturalcauses.org](http://www.unnaturalcauses.org)
- [2] Cohen L, Davis R, Lee V, Valdoninos E. Addressing the intersection: Preventing violence and promoting healthy eating and active living. BA Prevention Institute, 2010. URL: [www.preventioninstitute.org](http://www.preventioninstitute.org)
- [3] McDaniel DD. Risk and protective factors associated with gang affiliation among high-risk youth: A public health approach. *Inj Prev* doi:10.1136/injuryprev-2011-040083
- [4] Garvin EC, Cannuscio CC, Branas CC, Greening vacant lots to reduce violent crime: A randomized controlled trial. *Inj Prev* 2013;19(3):198-203.
- [5] Garvin E, Keddem S, Spellman J, Branas CC, Cannuscio C. More than just an eyesore: Local insights and solutions to vacant land and urban health. *J Urban Health* 2013;90(3):412-26.
- [6] McDonald CC, Richmond, TS, Guerra T, Walker A, Branas CC, Tenhave TR, et al. Methods for linking community views to measurable outcomes in a youth violence prevention program. *Prog Community Health Partnersh* 2012;6(4):499-506.
- [7] Branas CC, Cheney RA, MacDonald JM, Tam TD Jackson, Tenhave TR. A difference-in-difference Analysis of health safety and greening vacant urban space. *Am J Epidemiol* 2011. doi: 10.1093/aje/kwr273
- [8] Wolfe M, Mennis J. Does vegetation encourage or suppress urban crime? Evidence from Philadelphia, PA. *Landscape Urban Plann* 2012;108: 112-22.
- [9] Massachusetts Department of Environmental Protection: Brownfield Data Bank. URL: [www.mass.gov/eea/agencies/massdep](http://www.mass.gov/eea/agencies/massdep)
- [10] Massachusetts Department of Health and Human Services, Department of Public Health. URL: [www.mass.gov/cohh](http://www.mass.gov/cohh)
- [11] Groundwork Lawrence. URL: [www.groundworklawrence.org](http://www.groundworklawrence.org)
- [12] Groundwork USA URL: [www.Groundworkusa.org](http://www.Groundworkusa.org)
- [13] US Environmental Protection Agency, Community Action for Environmental Health. URL: [www.epa.gov/communityhealth/](http://www.epa.gov/communityhealth/)
- [14] Report on Lawrence Parks: Improving our opportunities for recreation and physical activity: Engaging youth in research and local policy advocacy. Lawrence, MA: Lawrence Community Development Department, Groundwork Lawrence and Tufts University, 2010.
- [15] The Arlington Neighborhood Revitalization Strategy. Lawrence, MA: Lawrence Community Development Department, 2009
- [16] Berkowitz L, McCauley J, Mirick R. Riverside Trauma Center Postvention guidelines. URL: [www.riversidetraumacenter.org](http://www.riversidetraumacenter.org)
- [17] Arlington Community Trabajando, Inc. URL: [www.actinc.org](http://www.actinc.org)
- [18] Comprehensive Gang Model. US Attorney General's Office of Juvenile Justice Delinquency and Prevention (OJJDP). URL: [www.ojjdp.gov](http://www.ojjdp.gov)
- [19] McDonald DD. URL: [www.cdc.gov](http://www.cdc.gov)
- [20] Wiebe DJ, Guo W, Allison PD, Anderson E, Richmond TS, Branas CC. Fears of violence during morning travel to school. *J Adolesc Health* 2013;53(1):54-61

- [21] 2010 US Census report. URL: <http://www.census.gov/2010census/data/>
- [22] Crime Statistics from Lawrence Police Department, Crime Analysis Unit 2010-2013. Lawrence, MA: Police Department, 2013.
- [23] Massachusetts Executive Office of Public Safety and Security. URL: [www.mass.gov/eopss](http://www.mass.gov/eopss)
- [24] Harris C, Choo K, Edson T. Lawrence Gang Assessment Report 2006-2010. Lawrence, MA: Lawrence Community Development Department, 2012.
- [25] Ryan J, Pereira A. It takes a village. Communities tackle crime. *Communities Banking* 2013;24(3). URL: <http://www.bostonfed.org/commdev/c&b/2013/summer/it-takes-a-village-communities-tackle-crime.htm>

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