The Massachusetts Department of Health Immunization Equity Initiative Targeting Underserved Populations 2009-2012

Massachusetts Department of Public Health
Office of Health Equity
July 2013

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Figures and Tables

Acknowledgments

This report was prepared by Lillian Komukyeya, Intern, Northeastern University Master of Public Health in Urban Health Program (MPH), Dianne Hagan, Health Disparities Reduction Grants Manager and Georgia Simpson May, Director, Office of Health Equity, Massachusetts Department of Public Health (MDPH). The report would not be possible without the tireless efforts and innovative strategies of the Health Disparities Reduction (HDR) Grantees in reaching out to isolated and marginalized populations hardest hit with Influenza within their communities. We also wish to thank the Immunization Equity Team, Local Boards of Health, Community Health Centers and community-based organizations, for their hard work and commitment to reducing disparities in influenza outcomes and immunization rates among racial, ethnic and linguistic populations in their communities.

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Special Thanks:

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Overview

This report is a summary of the activities of the Massachusetts Department of Public Health Immunization Equity Initiative targeting hard-to-reach racial, ethnic and linguistic (R/E/L) populations and recommendations for moving forward. The report contains the background and rationale for the Initiative; a summary of outreach, education and flu immunization efforts; challenges and lessons learned over the last three flu seasons beginning with the H1N1 flu season in January 2010, and ending in March 2012. The purpose of the report is to share the innovative and promising strategies for reaching isolated and vulnerable R/E/L populations with other bureaus within MDPH, local boards of health, community based organizations, potential funders and policy makers both at the state and community level. These approaches and recommendations can serve as best practices across a continuum of programs designed to reduce disparities in R/E/L immunization and other health disparities.

Executive Summary

In 2009, the United States experienced two waves of the H1N1 flu outbreak; the first, in the spring of 2009 and the second in the fall and winter of the 2009-2010 flu season. The CDC reported an estimated 57 million infections, 257,000 H1N1 related hospitalizations and approximately 11,690 deaths in the period beginning April 2009 through January 2010. MA alone reported 1959 confirmed cases, 389 hospitalizations and 31 deaths from H1N1. MA morbidity and mortality surveillance data also revealed a disproportionate burden of the H1N1 flu among Black, Hispanic and Asian residents compared to their white counterparts in the state.

In response to H1N1 outcomes, the Massachusetts Department of Health (MDPH) Office of Health Equity (OHE), whose mission is to promote the health and well being of racial, ethnic and linguistic (R/E/L) minority populations throughout the Commonwealth, launched the Immunization Equity Initiative, an initiative through which OHE in partnership with the Bureau of Infectious Disease Immunization Program facilitated community-based programs through grant support to perform intensive outreach, education and flu immunization activities in the hardest hit R/E/L communities during the H1N1 epidemic and, in the subsequent flu seasons following the outbreak.

This report summarizes the initiative's community strategies to addressing barriers to flu vaccine uptake, challenges encountered and recommendations made for continued learning and systems improvement.

Key Findings:

- Grantees were community-based programs that had demonstrated experience in reaching out to the target populations and had established trust and partnerships within the community.
- Grantees targeted unique population categories including, but not limited to: young men of color, individuals with chronic diseases, recent immigrants, gay, lesbian, bisexual, transgender and queer (GLBTQ) youth, and pregnant women.
- The most common languages spoken by the target populations were English, Spanish, Arabic, Amharic, Bengali, Cape Verdean, Chinese, Haitian Creole, Portuguese and Vietnamese.

- Grantees reached out and educated community members at day care centers, ethnic and religious festivals, gay bars, Head Start Programs, ethnic food markets and held vaccination clinics in non-traditional settings including apartment buildings, senior centers, family planning clinics, needle exchange programs, local food pantries, homeless shelters and WIC centers.
- The quantitative data showed a gradual increase in the numbers of individuals reached and vaccinated from Year 1 to Year 2 and a marked increase in numbers in Year 3. There was a 96% increase in the total number of individuals vaccinated from Year 2.

Lessons Learned:

- Flu prevention strategies including outreach, education and increasing access to affordable and effective vaccine are most effective when implemented prior to the onset of the flu season.
- The sustainability of community flu immunization activities targeted at R/E/L populations depends on improved coordination of immunization efforts at the state and local level; building on previously successful strategies and continued engagement of community partners especially "non-traditional" partners with expertise in community norms, practices, values and have relationships within the community.
- Community residents – those who actually live in the neighborhoods – should be involved in all phases of the design, planning, implementation and evaluation of immunization efforts since they have the most valuable insights into the challenges, barriers and/or beliefs within their communities.
- Immunization activities are most successful when held in conjunction with other on-going events and at times and locations that are convenient for R/E/L populations.
- It is important to have a designated "community champion," for example a church leader, elder, community activist or community health worker who has been immunized to participate at outreach and immunization events and clinics.
- Communities are rapidly evolving and flu prevention strategies and messages need to be adapted to the culture and beliefs of new and emerging populations.

Recommendations:

At the end of Year1 and Year 2 flu seasons, OHE held learning labs in which the grantees, community partners and DPH staff convened to share outcomes, challenges faced and make recommendations for future flu immunization efforts. Recommendations specific to DPH included:

- *Improving coordination of immunization activities at the state level.* This resulted in the formation of the Immunization Equity Team whose purpose is to develop long-term goals and strategies to guide flu immunization efforts and, establish a sustainable infrastructure for the elimination of racial, ethnic and linguistic disparities in immunization.
- *Development of a uniform guidance* which contains information including but not limited to relevant flu facts, answers to commonly asked questions, strategies for addressing myths, as well as referrals to appropriate materials and websites. This led to the development of the flu guide: *Flu Vaccine for Everyone! A Guide for Reaching and Engaging Diverse Communities*. The guide, which is available in print and on-line and has been presented as a resource both locally and nationally, provides tools and resources to enable local boards of health, public health nurses and community agencies and others to engage R/E/L communities and coordinate and implement culturally relevant flu immunization strategies.
- *Development of more refined flu immunization goals and strategies*. This resulted in the development of goals and strategies based on national Healthy People 2020 goals, state and community data and funded grantee feedback.

Moving forward:

The goal of the MDPH Immunization Equity Initiative is to increase flu immunization coverage among R/E/L residents towards the Healthy People 2020 goal: To achieve 80% vaccination rates against the seasonal influenza among non-institutionalized adults aged 18-64, and 90% in adults 65 and older by the year 2020. The recommendations for moving forward which are geared to building capacity and developing policy for the sustainability of immunization efforts are to:

- Continue coordination of efforts by the Immunization Equity Team
- Ensure availability and flexibility of funding for immunization activities

- Communicate MDPH Immunization Equity Initiative goals to local boards of health and community- based organizations so that all may work towards achieving the Healthy People 2020 goal
- Continue to support local boards of health and community-based immunization programs through technical assistance and resources
- Promote the use of the flu guide by local boards of health and others statewide
- Integrate the Plan-Do-Study-Act approach to all MDPH immunization efforts

Introduction

> ***"Anyone can get the flu, and most importantly anyone can spread the flu to somebody else". Additionally, "a mild case of the flu for one person may be deadly to another person."***
> *Flu Vaccine for Everyone! A Guide to Reaching and Engaging Diverse Communities, 2011*

The flu is a highly infectious disease caused by influenza viruses. Although the highest rates of infection are among children, the flu is known to cause serious illness and complications that result in hospitalizations and deaths in adults 65 years and older, children less than 2 years and individuals with medical conditions that increase their risk for the flu.[1] Furthermore, many cases of the flu go undiagnosed because flu symptoms and flu-like illnesses may be clinically difficult to distinguish.[2]

The flu, compared to other vaccine-preventable illnesses, is unique because of its seasonality and ability to cause pandemics, the most recent of which was the 2009 H1N1 or "Swine" flu pandemic. Currently, three types of influenza viruses; Influenza B, Influenza A types H1N1 and H3N2 have been identified as the most common in circulation however, each flu season may come with a different strain of the virus.[3] Often, when, whom and where the flu will attack is unpredictable, therefore, receiving the annual flu vaccine remains the single most effective approach to protecting oneself and others from the flu and, reducing morbidity and excess mortality among individuals at higher risk for the flu and its complications.[4]

Prior to the H1N1 flu pandemic, public health professionals emphasized the promotion of flu vaccination among those at higher risk for the flu and its complications including; young children above the age of 6 months, seniors 65 years and older, pregnant women and people with chronic illnesses and their close contacts.[5] With the advent of the H1N1 pandemic flu, the CDC expanded flu vaccination recommendations to include all individuals 6 months and older beginning with the 2010-2011 flu season.[6]

Racial and Ethnic Disparities in Influenza Vaccination Coverage in the United States

Over the years, significant efforts and resources have been invested in raising awareness and flu vaccinations especially among the most vulnerable populations in the country. However, despite these efforts, the flu continues to claim the lives of the hardest-to-reach populations including

minorities, undocumented immigrants, substance users, homeless and homebound elderly[7], many of whom are from diverse racial, ethnic and linguistic populations. Today, seasonal flu vaccination coverage across all ages in the United States continues to be below the national Healthy People 2020 target of 80% flu vaccination coverage for individuals 6 months to 64 years of age and 90% for seniors 65 years and older and individuals 18 to 64 years at increased risk for the flu and its complications.[8] Additionally, disparities exist in seasonal flu vaccination coverage across age groups, races and ethnicities. [9] **(Tables 1 and 2)**

Table 1. Estimated Influenza coverage in the United States by age groups for the period August through May for flu seasons; 2009-2010, 2010-2011 and 2011-2012

Flu Season		**2009-2010**	**2010-2011**	**2011-2012**
	Age- group	%	%	%
All persons	**≥6 months**	47.8	43.0	41.8
Children	**6-17**	55.3	51.0	51.5
	6 – 4	*	63.6	67.6
	5 -12	*	54.7	54.2
	13 - 17	*	34.5	33.7
Adults	**≥18**	45.4	40.5	38.8
	18-49 HR	45.3	39.0	36.8
	18-49 Not HR	34.5	30.5	28.6
	50 - 64	48.7	44.5	42.7
	≥65	72.0	66.7	64.9

Source: CDC data Behavioral Risk Factor Surveillance System (BRFSS) and National Immunization Survey (NIS)
*Not available. High-risk includes asthma, other lung problems, diabetes, heart disease, kidney problems, anemia and weakened immune system caused by a chronic illness or by medicines taken for a chronic illness. 2009-2010- Seasonal and /or H1N1 flu vaccine, 2010-2011, 2011-2012 – Trivalent vaccine.

Table 2. Estimated Influenza coverage in the United States by age groups, Race and Ethnicity for the period August 2010 through May 2011

	Non- Hispanic Whites	**Non-Hispanic Blacks**	**Hispanics**	**Other**
All persons≥6 months	44.3	39.0	40.0	42.9
6-17	48.5	50.8	55.1	57.1
≥18	43.2	34.2	32.3	38.0
18-49 Not HR	31.9	28.1	27.1	32.6
50-64	45.7	38.4	41.9	44.2
≥65	67.7	56.1	66.8	64.5

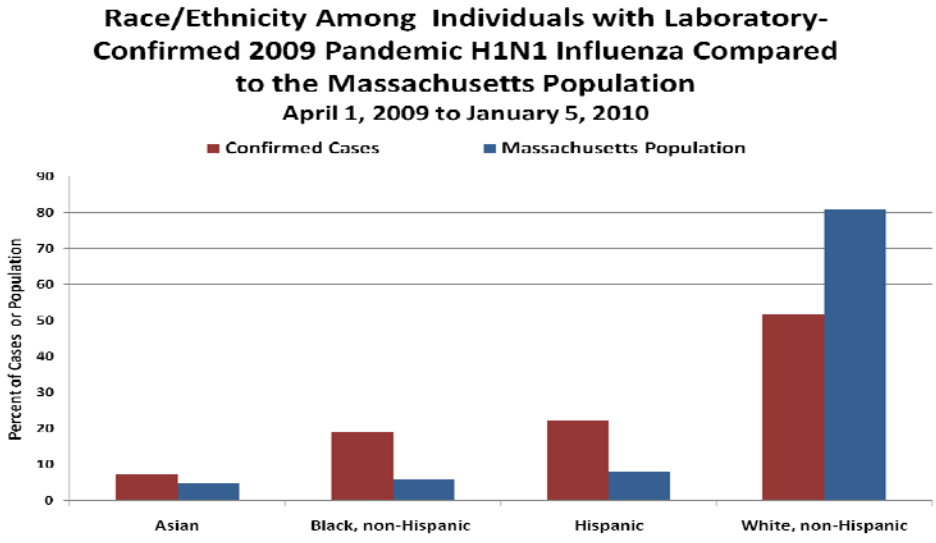
Source: CDC data - BRFSS and NIS. Other- Asians, AIAN, Native Hawaiian or other Pacific Islanders, Multiracial and others. HR- High risk (HR) including Asthma, Diabetes or Heart disease. *** Data not available Retrieved from website: *http://www.cdc.gov/flu/professionals/vaccination/coverage_1011estimates.htm*

Racial and Ethnic Disparities in influenza outcomes (Hospitalizations and Deaths) during the 2009 H1N1 Pandemic Flu Outbreak in MA

Disparities in influenza outcomes became more apparent when the United States was struck by a novel strain of the Influenza A (H1N1) virus. The US experienced two waves of the H1N1 flu outbreak; the first, in the spring of 2009 and the second in the fall and winter during the 2009-2010 flu season. In the period beginning April 2009 through January 2010, the CDC reported an estimated 57 million infections, 257,000 H1N1 related hospitalizations and approximately 11,690 deaths.[10] The CDC also reported an increased risk of influenza complications among adults aged 19 to 64, which was not typically seen with the seasonal flu.[11] In addition, some studies conducted during the pandemic found racial and ethnic disparities in hospitalizations and pediatric deaths due to H1N1.[12] [13]

In the same time period, the state of Massachusetts alone reported 1959 confirmed cases, 389 hospitalizations and 31 deaths from H1N1. Racial and ethnic minority populations were reported as having worse outcomes due to the H1N1 compared to White residents. Among the confirmed cases, Black, Hispanic and Asian residents were overrepresented relative to their representation in the overall population in the state. **(Figure 1)**

Figure 1.



Source: Massachusetts Immunization Program, MDPH Mass CHIP 2005 Population Estimates

Blacks, Hispanics and Asians had up to four times higher H1N1 related hospitalization rates than White residents (Blacks had 4 times higher, Hispanics 3 times higher, and Asians 1.5 times higher). Racial and ethnic minority death rates were also higher (Hispanics 6 times higher; Asians 4 times higher and Blacks 3 times higher) compared to White residents.[14]

Figure 2.

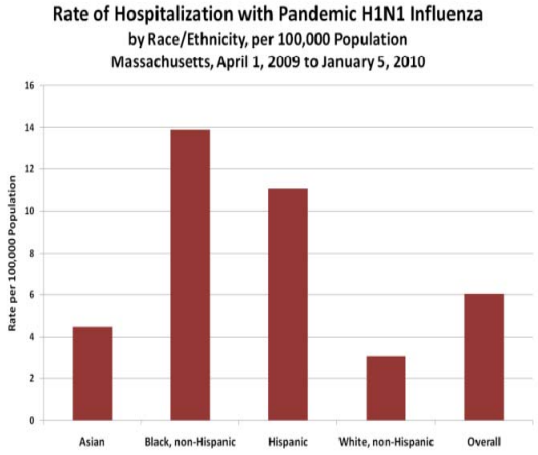
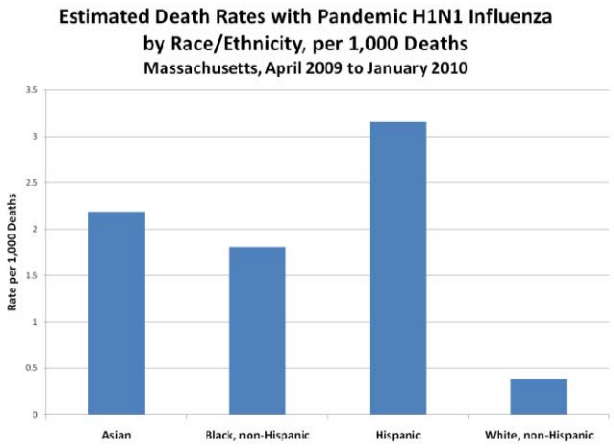


Figure 3.



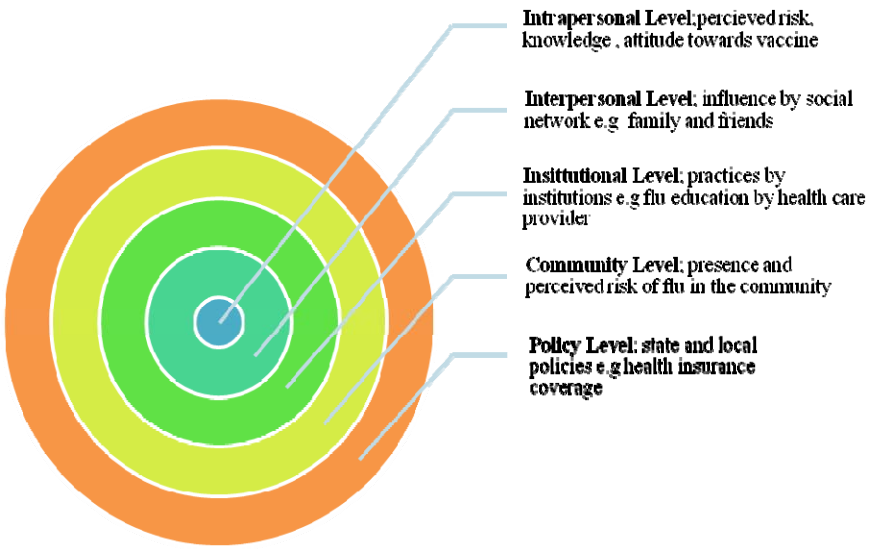
Source: Massachusetts Immunization Program, MDPH Mass CHIP 2005 Population Estimates
Death proportions based on 2007 data – MDPH Registry of Vital Statistics

Factors Contributing to Racial and Ethnic Disparities in Influenza Vaccination Coverage

Several factors are linked to racial and ethnic disparities in immunization against all vaccine-preventable diseases including influenza. These are: "inequities in education, income, and socioeconomic status; structural and systemic barriers in the health care delivery system and, beliefs, preferences and practice patterns of the recipients and providers of care"[15] – all of which also contribute to racial and ethnic health disparities in general. Issues specific to flu immunization include: poor access to preventive health care services due to language barrier; inflexible work schedules; a lack of transportation to immunization centers or other health care facilities; varying beliefs, fears and misconceptions regarding the flu vaccine safety and effectiveness and, mistrust in the health care system. [16]

These factors can be further explained by the Social Ecological Model (SEM), which argues that individual behavior; in this case, getting the flu vaccine, is determined by factors at the intrapersonal, interpersonal, institutional, community and policy levels. [17]

Figure 4. A Social Ecological Framework for Influenza Vaccination Uptake



Source: Kumar et al. (2012). The Social Ecological Model as a Framework for Determinants of 2009 H1N1 Influenza Vaccine Uptake in the United States. Health Education & Behavior, 39(2), 229-243.

The comprehensive study by Kumar et al. which applied the SEM (**Figure 4)** to understand the determinants of influenza vaccination uptake in the United States during the 2009 H1N1 pandemic concluded that factors at each level of the socioecological model predicted influenza vaccine uptake as well as intent to get the vaccine. Based on their findings, the authors proposed that interventions targeted at multiple levels would be more effective than those at a single level[18].

Other studies conducted to understand racial and ethnic disparities in flu immunization proposed specific interventions to improve vaccine access and acceptance among racial and ethnic minority populations. These include: physicians and health care providers serving racial and ethnic minority populations should recommend flu vaccination routinely to their clients, as well as educate their clients about the flu and dispel myths and misconceptions regarding the flu vaccine, its benefits, safety and effectiveness[19] ; providing flu vaccine at non-traditional sites to improve availability

and access; using culturally and linguistically appropriate and relevant health promotion approaches and collaborating with community-based organizations including faith based organizations and trusted and respected community members to reduce the mistrust of government and the health care system. [20, 21]

In light of the projected growth of racial and ethnic minority populations in the United States [22] and the potential for pandemic flu, it is imperative that the barriers to influenza vaccination uptake among R/E/L populations are fully understood and all efforts made to eliminate or reduce them. Ultimately, the goal is to increase Influenza vaccination coverage and in turn lead to the reduction in flu-related complications, morbidity and mortality.[23] The proposed interventions from different studies and the lessons learned from the H1N1 flu pandemic could be applied at the national, state and local level to improve seasonal flu vaccine acceptance and uptake as well as inform flu pandemic preparedness.

The Massachusetts Department of Public Health Office of Health Equity's Approach to Reducing Racial and Ethnic Health Disparities

Disparities in Influenza outcomes and immunization are a reflection of larger disparities in health status, quality and access to care especially, among R/E/L populations. The state of Massachusetts has made great strides at improving health care access with nearly universal health care coverage since the enactment of the Health Reform legislation in 2006.[24] Massachusetts' uninsured rate remains the lowest in the country with tremendous gains seen in overall health care access, utilization of preventive care and in health care delivery[25]. However, R/E/L disparities in health outcomes and access remain, and thus call for more targeted interventions to address the broader social determinants of health to achieve health equity[26].

The mission of the Massachusetts Department of Health, Office of Health Equity (OHE) within the commissioner's office is to promote the health and well-being of racial, ethnic and linguistic minority populations throughout the Commonwealth by increasing MDPH's capacity to respond effectively to the critical needs of these communities through **Policy** by: 1)Establishing health disparity elimination goals; 2) Consulting minority representatives and the scientific and health services communities and 3) Examining the Commonwealth's research, data, service and prevention programs and recommending necessary changes. The OHE **Research** goals include: 1) Improving data for determining priorities and designing programs and 2) Researching state-of-the-art interventions in minority communities. The goals for **Action** are to: 1) Implement relevant risk reduction and disease prevention programs; 2) Reduce barriers and promote access to care and 3) Increase participation of minority professionals and students in the health professions.

The MDPH Office of Health Equity funds a number of programs to this cause and works in partnership and collaboration with the other bureaus within the department to provide insight into the development of strategies and policies that respect the cultural and linguistic diversity of the communities served. Programs include:

The Culturally and Linguistically Appropriate Services (CLAS) Initiative has been funded by the U.S. Office of Minority Health since 2005 and is designed to increase health equity and address health disparities through the implementation of the 14 National CLAS standards[27] across

MDPH bureaus, MDPH contracted vendor agencies and other community-based agencies in the state. The goal of the OHE's CLAS initiative is to ensure the integration of the federal CLAS standards through the following strategies: policy, system or infrastructure change; cultural competency and language access and, workforce development and self assessment.

The Health Disparities Reduction Initiative; a project established by OHE in 2007 targeted at decreasing gaps in health status and outcomes for racial, ethnic, and linguistic minority populations in the state. The initiative currently funds 21 community-based grants to address two main priority areas: the social determinants of health and workforce development. The strategies to achieve these goals include: supporting efforts at hospitals and community health centers to collect race, ethnicity, and primary language data; analyze whether patients are receiving equal care ; increasing opportunities for minority students in the health professions through education, mentoring, internships or pipeline programs; supporting efforts at hospitals, community health centers, and neighborhood workforce agencies to recruit, keep, and promote employees of color; supporting coalition health efforts in communities affected by racial and ethnic health disparities and, promoting health literacy for diverse racial, ethnic and linguistic populations.

The Healthcare-based Interpreter Services Program monitors the provision of language access in state licensed medical facilities and assumes a critical role in the state regulated Determination of Need (DoN) certification process administered through the Bureau of Health Care Quality and Safety. Following the regulations and Office of Health and Human Services (EOHHS) guidance on language access, OHE instituted a formal process for reviewing and assessing the capacity for medical facilities to provide medical interpreter services. The review examines institutions' compliance with state and federal regulations for language access for patients with limited English proficiency or non-English speaking; allows for the development of tailored technical assistance to modify or improve existing services and assistance on materials translation. Additionally, the Office produces reports detailing the provision of language access statewide and within MA regions which in turn aides departmental program and policy planning processes. OHE Interpreter Services serves all of the state acute care hospital, specialty hospitals, and rehabilitation centers.

The Health and Disability Program's goal is to promote the health and well-being of people with disabilities living in the Commonwealth of Massachusetts across their lifespan through leadership, policy and systems change. The Health and Disability Program which has been a National Center on Birth Defects and Developmental Disability, Centers for Disease Control and Prevention (CDC) grantee since 1989 became a part of the Massachusetts Department of Public Health's (MDPH) Office of Health Equity (OHE) in July 2012. Placing the disability initiative within the Office of Health Equity assures optimal visibility and influence for this work, and connects it to the broader effort to reduce health disparities and achieve health equity statewide. Currently, the Office of Health Equity, which supports the provision of culturally and linguistically appropriate health care services through the CLAS initiative, is working to elevate disability concerns as a key element of cultural competency.

The Immunization Equity Initiative

In response to the H1N1 pandemic outbreak, the Massachusetts Department of Public Health embarked upon both a broad-based and concerted effort to reduce H1N1 illness state-wide and a more focused approach in the most affected communities in the state. With help from the federal CDC, through the Bureau of Emergency Preparedness, MDPH dedicated over 1 million dollars to enable community-based organizations that work directly with the most vulnerable populations including but not limited to community health centers and WIC programs, to perform outreach to those hardest hit by the H1N1 flu. MDPH also developed messages tailored to the target populations by expanding their Flu Facts media campaign to speak directly to African American, Latino and Asian audiences.[28]

> ***The MDPH has identified that certain racial and ethnic populations within the state are at disproportionate risk of medical complications from the H1N1 influenza. A recent Departmental review of health data has shown that Black, Latino and Asian residents are more likely to be hospitalized and/or to die from H1N1 than white residents.***
>
> *MDPH Press Release, January 15th 2010*

As a result of the H1N1 efforts, the MDPH Office of Health Equity launched a special flu vaccine initiative in 2010; the H1N1 Vaccination Initiative, later named the Immunization Equity Initiative. For three flu seasons beginning January 2010 through March 2012, OHE in partnership with the Bureau of Infectious Disease Immunization Program collaborated with the Office of Health Communications, Bureau of Emergency Preparedness, Bureau of Health Care Quality and Safety, local boards of health and community-based organizations to increase community awareness and immunization against influenza. Through this initiative, the Office of Health Equity (OHE) supported and facilitated outreach, education and flu immunization activities targeted at the most vulnerable and isolated racial, ethnic and linguistic populations hardest hit by the H1N1 flu and continued to do so through subsequent flu seasons.

The following is a description of the activities of the Immunization Equity Initiative beginning January 2010 through March 2012.

YEAR 1: **January 2010-June 2010**

In the first year, the H1N1 Vaccination Initiative received emergency preparedness funds to support outreach, education and immunization activities among vulnerable and isolated R/E/L populations hardest hit by the H1N1 flu. The funds were made available to existing Health Disparities Reduction (HDR) Initiative grantees[29] **(APPENDIX B)** who had demonstrated established trust, partnerships within the community and experience in reaching out to the target populations. In addition, OHE provided flu education materials and technical assistance to the grantees and collected outreach, education and vaccination data by age, race, ethnicity and language provided by the grantees. The grantees also provided a narrative on their experiences and the challenges faced in the community. The following is a summary of community activities by some of the HDR grantees.

Highlights of Community Activities – Year 1

Cambridge Public Health Department (CPHD) focused their flu immunization efforts on men of color and individuals with chronic disease living in Cambridge. The staff at CPHD held two focus groups with men of African-American, Hispanic and Haitian decent to discuss barriers to immunization and other health issues affecting them. The men raised two main concerns: there was a lack of flu outreach materials targeting "average" healthy men and that physicians did not often educate them or offer the flu shot during primary care visits. In response to these issues, the Men's Health League, a program at CPHD, offered to create posters with flu prevention messages and images that appealed to men from this community. CPHD staff also reached out to a daycare center in a church serving mainly the African-American population in Cambridge until a level of trust had been built with the clergy who then later endorsed the need for flu immunization to their congregation. Additionally, CPHD staff held flu clinics by the elevators of apartment buildings to reach those returning from work in the evenings.

The Family Van, a mobile clinic and an affiliate of Harvard Medical School, reached out to the isolated and economically disadvantaged communities of Boston, Dorchester, Hyde Park, Mattapan and Roxbury. The staff coordinated efforts with commercial vaccinators to provide the

flu shot. They also trained children and adolescents at the Boys & Girls Clubs to serve as flu prevention "ambassadors' to their families and the larger community.

Manet Community Health Center reached out to Chinese, Arabic and Vietnamese populations in the cities of Quincy, Weymouth, Milton, Braintree and Randolph. In addition to providing flu vaccine at the health center, the staff at Manet incorporated flu outreach with the enrollment of individuals without health insurance into health plans. Other strategies included outreach to Arabic and African Muslim members of the community at 'Halal' meat stores. Manet also developed H1N1 materials for children like coloring sheets and large badges saying "*Protect Me"* to engage and establish trust with families living in their community.

City of Worcester - The Worcester Partnership to Eliminate Racial and Ethnic Health Disparities, a partnership between the city's public health department, community leaders, organizations and institutions in the Worcester area, prioritized H1N1 and infant mortality as its two main health issues. Outreach efforts for H1N1 were specifically concentrated in the hardest hit and most isolated neighborhoods within Worcester. Members of the partnership teamed up with public health nurses to educate the community and dispel the myths regarding the flu vaccine safety. They developed a simple tagline to put on bottles of sanitizer and hand washing cards which could be worn on the back pocket of pants and shorts by adolescent/young African American males and this was seen as very "hip".

"Hi & Gone – Flu Today, Gone Tomorrow. It's this easy…Wash, Rinse & Repeat"
City of Worcester tagline

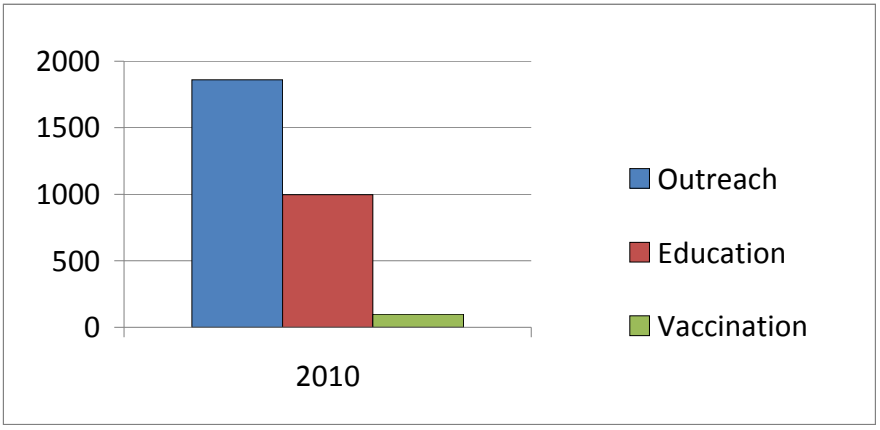
Learning Lab - Year 1

In July 2010, after the conclusion of the 2009-2010 flu season, the first H1N1 Learning Lab was held to provide an opportunity for MDPH to dialogue with the funded community-based agencies. The meeting was intended to identify successful strategies to improve coordination, collaboration and communication (the 3 "Cs"); to propose possible solutions to challenges and make recommendations to enhance future state and local immunization efforts. The meeting was attended by staff from the Office of Health Equity, Office of Health Communications, Bureau of Infectious Disease and Prevention Epidemiology and Immunization Programs, Bureau of Emergency Preparedness and, the community-based programs from the communities of Boston, Cambridge, Quincy and Worcester. At this meeting, both state and community response efforts were shared with the group including preliminary outreach, education and vaccination data, challenges and recommendations.

The figure below is a summary of preliminary and approximate numbers of people reached by the grantees beginning February through June 2010.

Figure 5.

Numbers of community members reached in February 2010 through June 2010



A possible explanation for the lower actual immunization numbers is that the initiative's grantees focused their efforts more on raising awareness about H1N1 flu prevention and vaccine availability through outreach and education than providing flu vaccine themselves.

Challenges

The following is a summary of the challenges to flu outreach, education and immunization activities shared by the grantees.

- Firmly held beliefs/misperceptions and fears of the H1N1 vaccine by communities of color.
- Lack of trust in the established "medical community".
- Lack of transportation to existing immunization clinics.
- Fear of retribution for non-citizenship among immigrant communities.
- The use of interpreters was often seen as disrespectful.

Recommendations: The recommendations proposed by the grantees in the learning lab fall into four major categories: Outreach and Education; Communication: Immunization and Coordination and Collaboration

Outreach and Education:

- Developing culturally competent and relevant strategies is an on-going learning process.
- Flu outreach efforts targeted to youth and children should be expanded beyond the classroom and include sports and recreational activities.
- Outreach should be conducted by respected members of the target community who share a similar race, ethnicity, language and often gender.
- The clergy are often a useful resource for community-based outreach efforts since they are seen as trusted leaders.

Communication:

- Youth/young adults from the targeted communities/populations should be involved in the development of messages and provision of feedback regarding effectiveness of these messages.
- Messages should maximize relevant social media like Twitter, YouTube, Facebook and others.
- Flu education materials should be readily available to communities before the flu season begins and distributed throughout the community in non-traditional sites such as barbershops, restaurants bathrooms, bodegas, corner stores, hairdressers, local shops and bars.

- The correct dialect for oral and written messages is as important as language.
- All printed education materials should be in the primary language of the target population with minimal text. Photos and/or graphics should be representative of the population, their customs and beliefs.

Immunization:

- Immunization uptake can be increased if incorporated in other health care activities like primary care visits.
- It is important to have a designated 'community champion' for example a church leader, elder or community activist who has been immunized to participate at outreach and immunization events & clinics.
- Clinics should be held in non-traditional sites and at times convenient to the target population.

Coordination and Collaboration:

- Community residents – those who actually live in the neighborhoods, should be involved in all phases of design, planning, implementation and evaluation of flu education and outreach efforts. They have the most valuable insights into the challenges, barriers and/or beliefs within their communities.
- There is a need for the development of written community-wide emergency preparedness and immunization plans made in partnership with community-based organizations such as housing, daycare, schools, religious communities, elected officials, shop/business owners and, most importantly, R/E/L residents.

Recommendations from grantees for MDPH

- MDPH should continue to provide the resources and technical assistance needed for flu immunization efforts.
- Every effort should be made to ensure that resources, particularly funds for activities are made available before the flu season begins.
- Existing H1N1 materials should be adapted and tested both culturally and linguistically for established and emerging R/E/L communities.

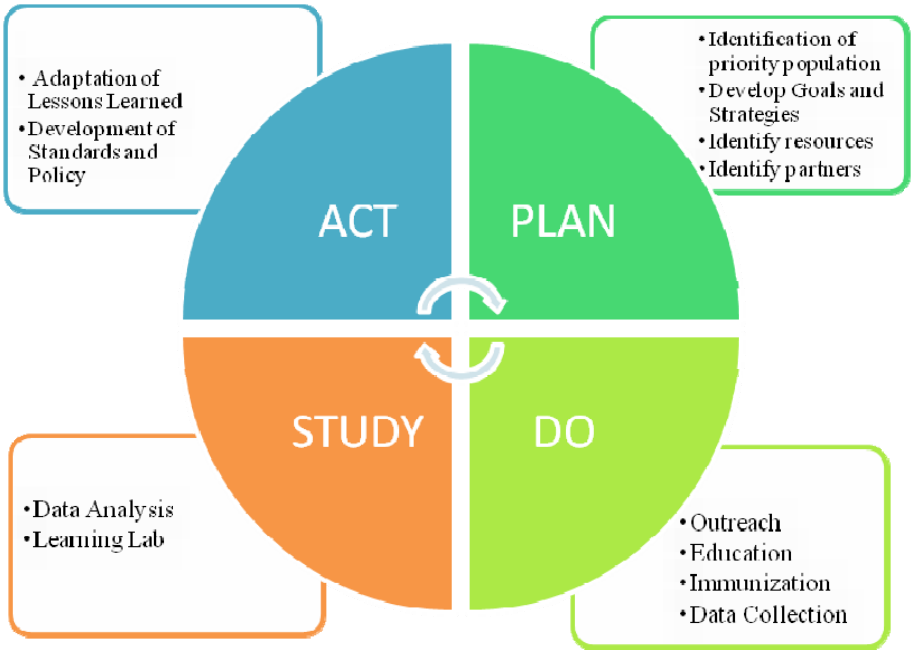
- MDPH should develop a uniform training guide on flu immunization for community agencies, local boards of health and others. The guide should include, but not be limited to: relevant facts, answers to commonly asked questions, strategies for addressing myths, as well as referrals to appropriate materials and websites.

The Immunization Equity Team

In response to the recommendations made by the communities in the Year 1 Learning Lab, the Office of Health Equity convened the Immunization Equity Team (IET) in October 2010. The IET consists of MDPH Medical Director and members from the Office of Health Equity, Office of Health Communications, Office of Health Care Quality, Bureau of Infectious Disease Epidemiology Immunization Program, a representative from the Massachusetts League of Community Health Centers and Mass Pro. The purpose of the team was:

- To develop long-term goals and strategies to guide efforts to increase immunization in R/E/L populations.
- To identify resources.
- To coordinate and support immunization activities at the community level through facilitation of partnerships between grantees, local boards of health and community-based agencies.
- To establish a sustainable infrastructure for the elimination of racial, ethnic and linguistic disparities in immunization.

The Immunization Equity Initiative Framework



The Immunization Equity Team operates under the Plan-Do–Study–Act (PDSA) model to ensure continuous quality improvement both at the state and local level. This process involves the incorporation of the learning from the H1N1 pandemic to inform planning for future immunization efforts. The initial learning from the H1N1 pandemic flu revealed that aggressive preparation which included; identification of the priority populations; securing funding to facilitate community outreach and education activities; making vaccine available and easily accessible for at-risk populations was critical to reducing adverse effects from the flu.

Plan

Identification of priority populations: The OHE prioritizes and targets vulnerable, disenfranchised and isolated racial and ethnic communities in the state based on national and state data. During the H1N1 pandemic flu attack, OHE focused efforts on Black, Hispanic and Asian populations that had shown increased flu related morbidity and mortality and low immunization compared to the White residents in the state.

Development of Goals and Objectives: The Immunization Equity Team (IET) developed goals and objectives for the Immunization Equity Initiative (launched in Year 2) that were aligned with the national Healthy People 2020 Immunization objectives. Specific program objectives were based on state seasonal flu data and on recommendations made from the learning in Year 1. These goals and objectives are accompanied by strategies, processes and measures to guide immunization activities. **(APPENDIX A)**

Identification of resources:

- ***Funds:*** During the H1N1 pandemic flu attack, MDPH received federal funding through the Bureau of Emergency Preparedness and made it available to community-based organizations for outreach, education and vaccination activities. Funds were given to existing Health Disparities Reduction (HDR) grantees **(APPENDIX B)** based on need; success in reaching out and working with the targeted populations at the community level; established trust with the target populations and partnerships with community agencies and community leaders.
- ***Education materials:*** MDPH is equipped with both print and on-line culturally and linguistically appropriate immunization education materials to be used by health workers, schools, local boards of health, community health centers and agencies. These materials include; facts about the seasonal flu and the recent pandemic flu, ways to protect oneself and others from the flu and links to where individuals can get their flu shot. These materials can be disseminated to different locations where the target populations congregate, for example bodegas, barber shops, train stations, apartment buildings, community health centers, schools and more. Community health workers or agencies can also use the materials to adopt messages for different populations for example, those with chronic diseases or homeless populations.
- ***Technical Assistance:*** Beginning with the H1N1 flu season, MDPH supported the community grantees through individual and group conference calls. These calls included advice on how to collect data, updates and referrals to sources of new information about the flu and suggestions on how to address specific challenges at the community level.

Identification of partners: The learning from the H1N1 flu season testified to the need for partnerships and collaboration across bureaus at the state and at the community level to enhance communication and coordination of immunization activities.

Do

Outreach, Education and Immunization: During the H1N1 pandemic, MDPH used local media to disseminate culturally, linguistically, age and gender-appropriate messages on flu prevention and the importance of vaccination. Additionally, MDPH provided free vaccine to uninsured and underinsured individuals and worked in partnership with pharmacies and commercial vaccinators within the target communities to increase vaccine availability.

Study

Data Collection and Analysis: During the H1N1 flu season, OHE created a tool to collect outreach, education and vaccination data by race, age, ethnicity and language. Additionally, the grantees provided information on the locations of activities including flu clinics, partnerships in the community, strategies and challenges and a narrative on their experience.

Learning Lab: The first learning lab was held in the aftermath of the H1N1 flu season. It was an opportunity for MDPH staff and other stakeholders including the HDR grantees to share immunization data, unique strategies, challenges and successes and to make recommendations for subsequent flu efforts at the state and community level.

Act

Adaptation of Lessons Learned: This includes building on successful immunization strategies and developing standards based on the learning that can be replicated across all immunization programs.

The Flu Guidance Manual – *Flu Vaccine for Everyone! A Guide to Reaching and Engaging Diverse Communities*

The Office of Health Equity with support from the Culturally and Linguistically Appropriate Services (CLAS) Initiative and the Bureau of Infectious Disease Immunization Program responded to the grantees' stated needs by creating a flu guidance manual; *Flu Vaccine for Everyone! A Guide for Reaching and Engaging Diverse Communities*. The guide was designed with input from members of the Bureau of Infectious Diseases, Refugee and Immigrant Health Program, local boards of health, community-based organizations and public health nurses. The guidance manual is intended to support community agencies, organizations and other groups to develop, implement and coordinate culturally relevant and non-traditional strategies to increase the rates of immunization among under-immunized populations. Chapters include best practices for reaching out to community, faith, workplace and ethnic organizations; campaign development; message development; beliefs and perceptions; and a comprehensive toolkit including resources and templates. The guide was extensively pilot-tested to ensure relevancy and distributed to all 350 local boards of health, community based agencies, federal and state organizations and others. This guide was also featured as a national resource by the Centers for Disease Control and Prevention during the 2012 National Flu Vaccine Week and listed in the resource book for the National Immunization Summit held in 2012.
The guide was also presented at state and national conferences and can be found online at: *http://www.mass.gov/eohhs/docs/MDPH/cdc/flu/vaccine-admin-diverse-communities.pdf*

YEAR 2: January 2011- June 2011

In the second year, the vaccine initiative was named the Immunization Equity Initiative. The initiative prioritized young adults aged 18-49 who had shown the lowest vaccination rates in the previous 2009-2010 flu season (Table 3). The data below shows that although Massachusetts was highly ranked compared to other states, the flu immunization rates among adults aged 18 to 64 were significantly below the national Healthy People 2020 target, which is to achieve 80% vaccination rates against seasonal influenza among non-institutionalized adults aged 18-64 by the year 2020.[30]

Table 3. Seasonal Influenza Vaccination Rates in Massachusetts and the United States for people 6 Months of Age and Older, 2009-2010 Influenza Season

	MA	US	MA Rank Among States
Everyone ≥ 6 mos	52%	41%	4
Children 6 mos-17yrs	58%	44%	5
Adults ≥ 18yrs	49%	40%	6
Adults 18- 49 yrs	49%	38%	7
Adults 18- 49 yrs Not High Risk	**38%**	28%	5
Adults 50-64	53%	45%	4

Combined data from the Behavioral Risk Factor Surveillance System (BRFSS) and the National 2009 H1N1 flu survey (NHFS) from February – June 2010 to estimate vaccination coverage through May 2010 Seasonal Influenza (Flu). Influenza Vaccination Coverage. 2009-2010 Influenza Season. *www.cdc.gov/flu/professionals/vaccination/vaccinecoverage.htm*

MDPH identified funds for 6 months and made it available to HDR grantees to enhance flu pandemic planning and preparedness efforts and to build upon previously successful flu outreach, education and vaccination strategies. Funding was also made available to grantees that had not received H1N1 pandemic flu funds in FY 2010 for the development of comprehensive local planning activities in collaboration and partnership with community agencies. These included but were not limited to local boards of health, recreation departments, community and faith-based agencies, local media outlets, schools and with people living in the targeted neighborhoods. Eight agencies from the cities of Cambridge, Boston, Dorchester, New Bedford, Lawrence, Springfield

and Quincy received funding for outreach, education and immunization activities beginning January through June 2011. **(APPENDIX B)**

Highlights of Community Activities: Year 2

Cambridge Public Health Department (CPHD) worked with local agencies like the Margaret Fuller Neighborhood House, East End House, Cambridge Housing Authority and Cambridge Public Schools to target men of color who spoke Haitian Creole, Portuguese, Spanish Amharic and Benghali. CPHD held focus groups to get buy-in from the local community. With input from community members, CPHD developed culturally appropriate social marketing messages for a multi-media flu prevention campaign. CPHD trained members of existing outreach groups like the Men's Health League, the Literacy ambassadors, and Community Engagement Team to educate the community and disseminate flu education materials and postcards with reminders for flu immunization appointments.

'Stay Healthy for Work'- a message developed for Brazilian men who were most often day laborers

CPHD tagline

Greater Lawrence Family Health Center (GLFHC) which is also located in Lawrence focused on workplace immunization with a 91% success rate. Community outreach and education was coordinated through collaboration and coordination of activities with other community- based agencies such as WIC, the senior center, the YWCA in Lawrence and the Mayor's Health Task Force. Staff at GLFHC reported that many Latino residents were still fearful of receiving the flu shot, which they said has side effects and was unsafe. To address the residents' concerns, GLFHC implemented a city-wide media blitz using GLFHC workers in flu prevention advertisements that appeared on local TV, radio, busses and in newspapers. They also recruited local stars to receive the flu shot publicly to encourage the local residents to receive the vaccine.

"No one wants to be the root of an epidemic"

JRI tagline

Justice Resource Institute (JRI) worked in conjunction with the Boston GLASS (Gay and Lesbian Adolescent Social Services) to reach out to gay, lesbian bisexual, transgender and queer (GLBTQ) minority youth living in the Greater Boston area. The staff at JRI targeted

GLBTQ youth at the Boston's Youth Gay Pride 2011 festivities. Culturally and gender sensitive messages to educate the GLBTQ youth were developed using a direct cause and effect strategy. To the sex workers in the GLBTQ community, the staffs at JRI stressed that if they contracted the flu, they would look awful and lose work and money.

Health Quarters (HQ) located in Lawrence, conducted flu education through their promotoras (community health workers) and charlas (community– based informational meetings held in homes or other culturally familiar settings) programs. The target population was mainly Latino women living in the Haverhill and Lawrence area who came to the health center to receive reproductive care services. The staff developed and advertised flu immunization activities and location of clinics in local and ethnic media like the Eagle Tribune and the HQ newsletter. They also incorporated flu education into existing health initiatives for example, the Barber Ambassador Initiative in which 12 Barbers were taught how to include flu information in messages to clients.

Manet Community Health Center in Quincy reached out to Chinese, Vietnamese, Arabic and Brazilian communities in Quincy and Weymouth. Staff at Manet, partnering with local boards of health carried out extensive outreach and provided flu vaccine at large religious/community festivals and ethnic markets including the Quincy Asian Resources', Asian Lunar Year festivities, Iman Islamic Center Holi Festival, Assembly of God Church, South Shore YMCA's Germantown Neighborhood Celebration, Kam Man Marketplace, the Quincy Human Rights Committee's Martin Luther King Breakfast and many others.

Where do you get a flu shot? The same place you can count on for birth control… pregnancy testing, HIV testing and emergency contraception. That's right, Tapestry Health provides flu vaccines. Stop by the Tapestry Health at 15 Main Street for a free flu vaccination clinic on Wednesday, January 25 from 9am-4pm. No appointment needed! Get a flu shot, instead of the flu. Tapestry Health -- always safe, confidential and affordable. Often free. At 15 western mass locations.
Information at
www.tapestryhealth.org

PSA at Tapestry Health

Tapestry Health in Springfield collaborated with the Springfield Board of Health and partnered with the North Citizens Council to reach out mainly to African American and Latino youth in Springfield and Holyoke. The staff at Tapestry Health developed a PSA to inform members in their community about the availability of flu vaccine at all Tapestry Health locations including; the family Planning and reproductive health clinics, HIV prevention and needle

exchange clinics and the WIC programs. They staff trained a group of nine male peer educators between the ages of 17 and 28 f from the Men's Group, an established group at Tapestry to conduct outreach and education in the Springfield area. The staff also conducted several educational sessions during the Public Health Awareness month in April 2011 at all Tapestry Health locations in which they incorporated flu prevention and vaccination into other health issues impacting young adults.

Vietnamese American Civic Association, Inc (VACA) provided flu education and offered flu vaccine to low income Vietnamese immigrants attending ESOL (English for speakers of other languages) classes in the Dorchester area. Flu education was added to the health education workshops as part of ESOL curriculum. VACA staff advertised flu immunization clinics in booklets that were mailed out to Vietnamese households and created PSAs for the local Vietnamese radio. Referrals and follow-up for flu immunization was done in partnership with Neponset Health Care and Carney Hospital in Dorchester and with trusted providers within the Vietnamese community.

YWCA of Southeastern MA in New Bedford worked closely with the New Bedford Health Department to reach out and educate established Cape Verdean and Black communities and the growing Latino communities from Puerto Rico, Dominican Republic, Guatemala, and Ecuador, Venezuela, Honduras, and Mexico. Information about flu immunization clinics and activities was disseminated through newsletters to members of the community. The staff at the YWCA met with church leaders in the community to explain the need for flu vaccine and to request permission to publish flu information in the Church bulletin. Outreach and education including immunization was also conducted during clothing drives. Some members of the New Bedford community expressed that they were afraid of being used as 'guinea pigs' based on historical events and thus refused the flu shot. This barrier was overcome by the help of the local parish priest who spoke in favor of the flu vaccine, dramatically increasing the immunization numbers.

The figures below are a summary of approximate numbers and target age-group of community members reached during the 8 month funding period, November 2010 through June 2011.

Figure 7: Target age-group Year 2

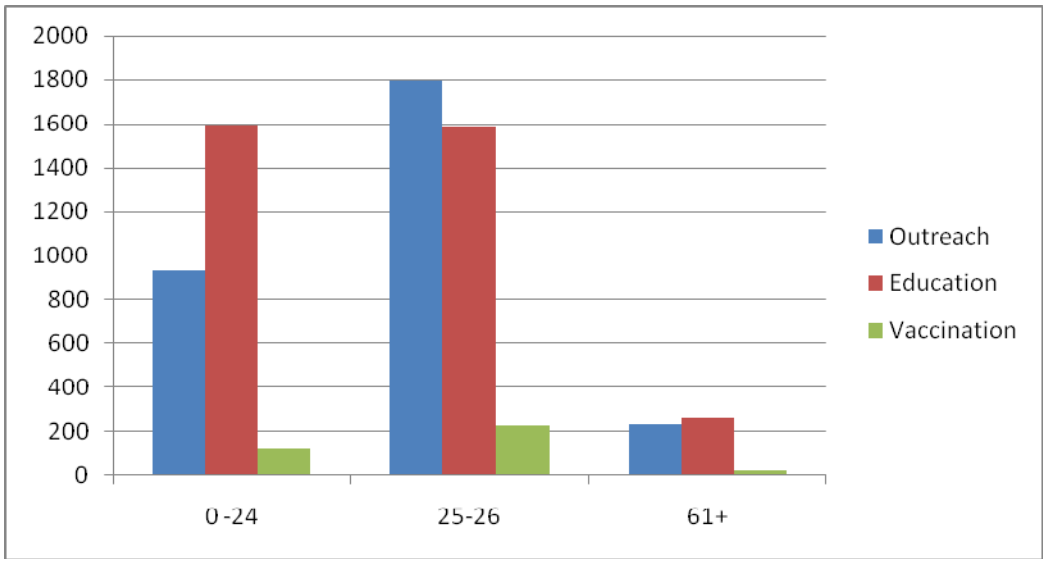
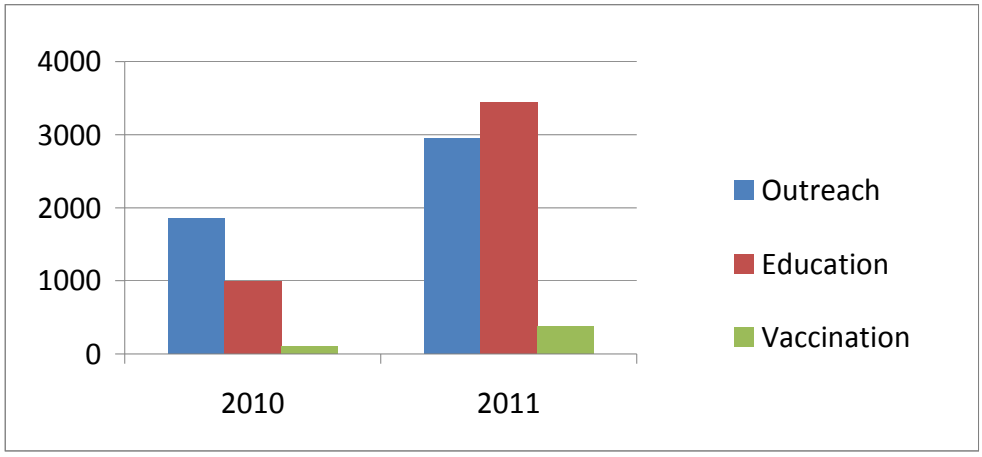


Figure 8: Numbers reached in Year 1 and Year 2



The increase in numbers from 2010 to 2011 may have been due to the availability of resources in November compared to January in the previous flu season, recognition of grantees by the community resulting from Year 1 flu immunization activities and building on previously successful strategies through increased partnership and collaboration.

Learning Lab - Year 2

In September 2011, the second Learning Lab was held to continue the dialogue between the community and MDPH. The IET and the grantees convened to review progress on recommendations made in year 1; assess state and grantee immunization data; share successful strategies and approaches to challenges in year 2 and to make recommendations for future flu efforts.

New challenges

- Many flu events had to be cancelled due to the bad weather and low turn up.
- Some organizations had already run their own flu clinics and were not interested in partnering with the grantees.
- Some community members complained that the flu shot made them sick.
- Many adult males continued to resist the flu shot.
- Some people preferred to get their shot from their primary care doctor.
- It was difficult to reach some vulnerable populations like the GLBTQ youth who were often homeless or living in unstable, temporary situations and reluctant to seek care for fear of disclosure.

Recommendations from Grantees:

- Repetition is important. It may take consistent messages and presence at multiple community events from year to year to develop trust in the target population.
- Immunizations clinics are most successful when held in conjunction with other ongoing events and at times and place that are convenient for the target populations.
- Direct cause and effect flu messages that are adapted to a particular group have a greater impact. For example" *Flu can cause you to lose work and pay*" for day laborers or "*Flu can make you very sick and unattractive*'' for adolescents.
- Peer education is an effective strategy for adolescents and young adults.

- Meetings with local boards of health, community agencies and members of the community should start early in the planning process to ensure coordination of activities prior to the onset of flu season.
- It is important to identify specific outreach /education strategies for traditionally isolated populations like the elderly and people with disabilities.
- Flu education materials need to be reviewed and adapted for emerging populations.

Recommendations for MDPH

- Efforts to secure funding for flu activities as early as possible should continue.
- Priority should be given to enhancing strategies that result in increasing actual immunizations.
- Data collection tool age categories should be modified to be consistent with CDC's categories.

YEAR 3: November 2011- March 2012

A review of Massachusetts 2010-2011 flu season data below showed a slight improvement in vaccination rates in adults 50-64 years and among White and Hispanic populations in the state however, there was no improvement seen in vaccination rates among young adults 18-49 years from the previous year.

Table 4. Seasonal Influenza Vaccination Rates in MA by Age for period beginning August through May

	2009 - 2010	2010 - 2011
Adults ≥ 18 yrs	49%	49%
Adults 18 – 49 yrs, High Risk	49%	45%
Adults 18 – 49 yrs	**38%**	**38%**
Adults 50 – 64 yrs	52%	54%
Adults ≥ 65 yrs	75%	73%

Seasonal Influenza (Flu). Influenza Vaccination Coverage. 2009-2011, 2010-11 Flu Seasons. Selected high Risk include adults with Asthma, Diabetes and Heart Disease
www.cdc.gov/flu/professionals/vaccination/vaccinecoverage.htm

The percentage of Blacks who received flu vaccine decreased from 47% in 2010 to 42% in 2011, although this may be a statistical anomaly.

Table 5. Seasonal Influenza Vaccination Rates in Massachusetts by Race for everyone 6 Months of Age and Older for period beginning August through May

	2009-2010	**2010-2011**
White only, non-Hispanic	51%	52%
Black only, non-Hispanic	**47%**	**42%**
Hispanic	52%	57%
Other	58%	58%

Seasonal Influenza (Flu). Influenza Vaccination Coverage. 2009-2010, 2010-11 Influenza Season.
www.cdc.gov/flu/professionals/vaccination/vaccinecoverage.htm

In the third year, the Office of Health Equity with funding from the Bureau of Infectious Disease Immunization Program continued to prioritize efforts and activities that resulted in increased actual immunization among racial and ethnic groups with low vaccine uptake. Based on the above data, the goal for Year 3 was to increase the adult immunization rates against seasonal influenza among young Black adults aged 18-49 years.

To achieve this objective, MDPH made funding for four months (November 2011 through March 2012) available to six HDR grantees (**APPENDIX B)** that proposed relevant strategies to significantly improve immunization rates especially among the Black populations. Furthermore, OHE conducted a series of statewide technical assistance calls with local boards of heath and community grantees to promote the flu guidance manual- *Flu Vaccine for Everyone! A Guide for Reaching and Engaging Diverse Communities* as a resource. In addition, at the grantees' request, OHE revised the existing data collection tool to ensure that the age-groups were aligned to CDC's.

Highlights of Community Activities: Year 3

Cambridge Public Health Department (CPHD) again worked in collaboration with members of the Margaret Fuller House, Cambridge Community Center and Council on Aging to reach out to low-income African Americans, Caribbeans, Africans and recent immigrants living in the Cambridge area. A new partnership was formed with the Islamic Society of Boston in Cambridge through a mini-clinic that was held after the afternoon prayer service at the mosque. CPHD targeted men of color by incorporating flu education and training into the Men's Health Team's monthly meeting held at Windsor Street Health Center. They also created flu advertisements that appeared on 5 bus shelters in the city throughout the month of November. At the end of March, CPHD held a flu debriefing luncheon where they obtained feedback from community participants on the following: flu trainings; the quality of flu information; effectiveness and usefulness of

> ***"The health department has previously not worked with a mosque, and this posed some special efforts to show respect. Female nurses needed to have head coverings and the women were vaccinated in a separate area from the men. We had one male nurse to provide vaccinations in the men's area of the mosque, with a female nurse as support. Although the number of people vaccinated was fairly low, we felt that this could be an excellent new avenue next season to provide flu vaccine."*** CPHD staff

communication/outreach materials and the role of community–based organizations in flu prevention. One individual was pleased to hear the flu myths debunked in the training sessions. Others suggested the incorporation of flu education at city or community coalition meetings.

Greater Lawrence Family Health Center (GLFHC) - The target population of GLFHC continued to be their health care professionals and clients. The staff created buttons in both English and Spanish to prompt staff and patients to ask for the flu vaccine. This was in addition to sending out reminders by email and phone calls for staff and clients to get a flu shot. GLFHC again collaborated with the Merrimack Valley Transit Association (MVRTA) to advertise flu prevention messages both in English and Spanish on the buses in the city of Lawrence.

Button by GLFHC targeting employees and patients

Health Quarters (HQ) continued to reach out to the larger Latino community in Lawrence and Haverhill. They collaborated with the North Shore Community College nursing program to provide an in-service training for their staff members on giving vaccines. HQ continued to incorporate flu vaccination into primary care visits and focused immunization efforts on pregnant Latino women. HQ also sent out reminders to encourage clients who access care at HQ to come in and receive flu shots and set up separate and convenient times for clients who missed the flu shot during routine visits. They also distributed MDPH and CDC bilingual "Flu Facts" booklets and promotional fliers throughout the community.

Manet Community Health Center continued to strengthen existing relationships with the Chinese, Vietnamese, Arabic and Brazilian community and reached out to the new and growing population from India. The staff at Manet offered the flu vaccine to clients through primary care clinics and at free clinics which they advertised on Facebook. Free clinics were held in several places including the Terra Nossa Brazilian Market, the South Shore Indian Market in Braintree, the Quincy Public Library, Quincy and Weymouth WIC programs and High Point Luxury apartments. Manet also worked in partnership with the Mutanafisun Academy, an Islamic school

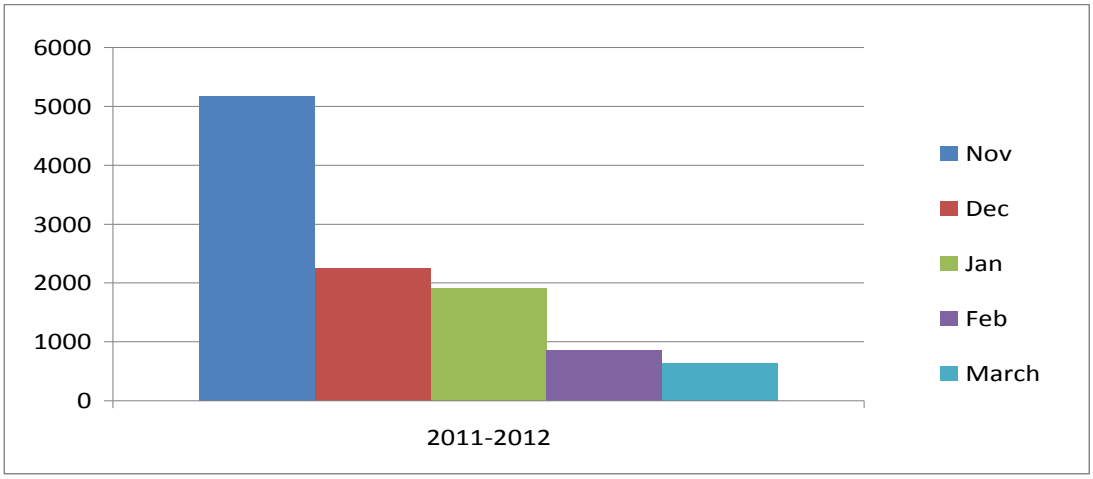
in Quincy to incorporate flu education in their early childhood program, and the Head Start Program at Quincy Community Action Program (QCAP).

Tapestry Health focused their efforts on reaching out to African American and Latino youth in the Springfield area. They worked in collaboration with the Springfield Health Department to coordinate flu immunization clinics at the La Voz and North Citizens Council drop-in centers, the Springfield Housing community, Springfield WIC programs and Club Xstatic, a gay bar in Springfield. The young men also conducted a community survey on the flu and flu vaccination. One of the conclusions made from the surveys is that women were more likely to receive the flu shot than men. The survey found four main reasons why men were less likely to get immunized. These are: 1) they did not think it was important, 2) they did not have the time, 3) they did not know where to get the shot and 4) they were afraid of getting the flu from the shot. In response to the survey, the young male peer facilitators from the Men's Health Project at Tapestry conducted flu education sessions in the community to address these concerns.

YWCA of Southern MA - Together with the New Bedford Public Health Department, the YWCA reached out to Cape Verdean, Black and Latino populations. The staff at the YWCA increased flu vaccine at different local community organizations, shelters, food pantries, churches and schools. Nine (9) immunization clinics were held throughout the New Bedford community in November mainly targeting low-income African American, Hispanic, Portuguese men, women and children. The most successful site for immunizations was at the local food pantry. Staff members at the YWCA also distributed information to various organizations to refer those who needed the flu shot to the YWCA or to the Health Department Nurses.

The figure below is summary of approximate number of vaccinations achieved by the grantees during the five months funding period.

Figure 9. Numbers of individuals immunized in November 2011 through March 2012



In the period beginning November 2011 through March 2012, the HDR grantees achieved a total of approximately 10,000 vaccinations, which is a 96% increase from the previous 2010-2011 flu season. The high number of vaccinations in the month of November may be the result of several factors including:

- The prioritization of strategies specific to increasing actual immunizations in the target population;
- Improved efforts by grantees to ensure actual immunizations including but not limited to the use of local media for flu outreach and education, incorporation of flu education and vaccination into existing health programs and providing flu vaccine in non-traditional sites and at times convenient for community members;
- Increase in first time immunizers;
- Established relationships with local boards of health and formation on new community partnerships; and
- Earlier access to funding prior to the start of the anticipated flu season.

New challenges

The numbers of individuals receiving the flu shot however began to dwindle after the month of November. This may have been due to some of the challenges highlighted by the grantees. These were:

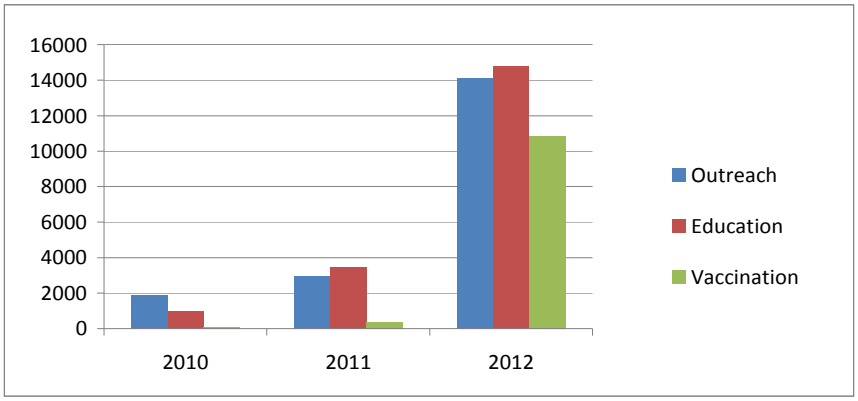
- Due to the mild winter many believed that there was no danger from the flu and therefore no need for the flu shot.
- It was difficult to schedule clinics around the holidays.
- Clinics held at schools targeting both children and parents had a low attendance. One reason may be that some parents believed that health insurance was a requirement for receiving the flu shot.

Conclusion

The Immunization Equity Initiative, a special initiative launched by the MDPH Office of Health Equity during the 2009 HINI flu pandemic is part of the ongoing commitment by the MDPH Office of Health Equity to reduce racial, ethnic and linguistic disparities in health outcomes and access to quality health care. Through this initiative, OHE supported and facilitated targeted community-based outreach, education and flu immunization activities with the goal of improving seasonal flu vaccination uptake among the R/E/L populations hardest hit by the H1N1 flu. A review of the Immunization Equity Initiative three years after it was launched allowed the MDPH Office of Health Equity to look back and assess how well it has incorporated the lessons learned from the H1N1 pandemic flu to improve seasonal flu vaccine uptake in the targeted communities.

For three fu seasons beginning 2009 through 2012, the Office of Health Equity supported outreach, education and flu immunization activities in targeted racial, ethnic and linguistic communities in the state**.** Below is a summary of the approximate number of individuals reached by grantees in the three year period. Efforts to collect data by race, ethnicity and language during the funded period were made however, due to data insufficiency and inconsistencies in the reporting, we are unable to include R/E/L specific data in this report.

Figure 10. Numbers reached beginning Year1 – Year 3



The growth in outreach and education and the dramatic increase in immunization numbers seen in Year 3 might have been, in part, due a greater focus on strategies that resulted in actual immunization in Year 3 and the cumulative effect of strategies in Year 1 and 2. These include:

- Improved collaboration and coordination of flu immunization efforts at the state level through the formation of the Immunization Equity Team.
- Development of more refined goals and strategies based on: state and community data; the learning from previous flu seasons and from recommendations made with input from the grantees at the learning labs.
- Increased support and resources to enhance flu outreach and education in the community including; funding, technical assistance, culturally and linguistically appropriate flu education materials for existing and new populations and the flu guidance manual; "*Flu Vaccine for Everyone! A Guide for Reaching and Engaging Diverse Communities*." The manual provided tools for local boards of health and community groups in their approach to engaging diverse communities including answers to common beliefs, myths and perceptions regarding flu vaccine safety and effectiveness.
- Building on successful outreach, education and immunization strategies in the community including: working in partnership and collaboration with local boards of health and community-based agencies including but not limited to faith-based organizations, schools, and other public service organizations with whom they had developed common goals and strategies and, providing flu vaccine in non-traditional sites and at convenient times for community members.

These strategies demonstrate a multilevel system-wide approach to improving flu immunization among racial, ethnic and linguistic populations by addressing factors that contribute to flu outcomes and vaccination disparities at the individual, community, and policy levels. One of the most important lessons learned throughout the three year period is that the sustainability of community flu immunization activities targeted at R/E/L populations depends on continued engagement of "non-traditional" partners with expertise in community norms, practices, values and have relationships within the community, a process that depends on trust which is built over time and needs patience, respect and knowledge of the culture of existing and emerging populations.

Moving Forward

Reducing disparities in influenza vaccination coverage benefits everyone. It improves overall protection against influenza and also reduces complications, hospitalizations and deaths due to the flu, especially among vulnerable and at-risk populations. The national data clearly showed that those who had the lowest annual flu vaccination coverage, mainly young healthy adults and racial and ethnic minority populations, had worse outcomes during the H1N1 pandemic flu. This implies that improving seasonal flu vaccine uptake among the lowest immunizers may be protective in the event of a pandemic. It is therefore imperative that the barriers to the seasonal flu vaccination acceptance are explored and overcome.

The findings from this review are a result of the innovative strategies at the state and local level to overcome barriers to flu vaccine acceptance and increase immunization among R/E/L populations. These successful strategies and the lessons learned can in turn serve as best practices for the improvement of programs designed to reduce R/E/L across all immunizations. The strategies can also be shared with community-based organizations, potential funders and policy makers at the state and community level to improve the health of racial and ethnic minorities in their communities and support state and national health care cost containment efforts by reducing the onset of illness.

R**ecommendations:**

The goal for MDPH is to increase the percentage of Massachusetts residents who receive the yearly flu shot, ideally surpassing the national Healthy People 2020 goal which is, to achieve 80% vaccination rates against the seasonal influenza among non-institutionalized adults aged 18-64 by the year 2020. By utilizing the Plan-Do-Study-Act approach, the initiative was able to respond to the needs of the community through continuous quality improvement based on lessons learned from the H1N1 pandemic and from previous flu seasons; an approach that can be replicated across initiatives aimed at eliminating racial, ethnic and linguistic health disparities.

The following recommendations for moving forward therefore, serve as a platform for MDPH to continue this process of improving their approach to increasing seasonal flu vaccination coverage among R/E/L populations in the state. They are categorized into three: Capacity Building, Sustainability and Policy.

Capacity Building.

- Continue to support local boards of health and community-based immunization programs through technical assistance and resources.
- Explore the development of an on-line training version of the flu guidance manual which can be incorporated into existing professional continuous education modules for community health workers, public health nurses and others.
- Support local communities in the collection and reporting of flu R/E/L data

Sustainability

- The Immunization Equity Team should continue to oversee and coordinate efforts at the state and local level.
- Promote the use of the flu guide by local boards of health and others statewide.
- Integrate the Plan-Do-Study-Act approach to all MDPH immunization efforts.

Policy

- Communicate MDPH Immunization Equity Initiative goals to local boards of health and community based organizations so that all may work towards achieving the Healthy People 2020 goal.
- Funding for community-based immunization programs should be identified prior to the onset of the flu season and should be flexible enough to allow for modification of immunization strategies to cater to the needs of new and emerging communities.
- Develop standards that can be replicated across other immunization programs from successful flu outreach, education and immunization efforts.

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APPENDIX A: GOALS AND OBJECTIVES FOR IMMUNIZATION EQUITY INITIATIVE (2011-2012 FLU SEASON)

Mission:
To achieve 80% vaccination rates against seasonal influenza among non-institutionalized adults aged 18-64 in Massachusetts by the year 2020 *(Healthy People 2020, Immunization and Infectious Disease Objective IID -12.5)*

Initiative Goal:
To improve the health of disenfranchised racial , ethnic and linguistic (REL) populations within target communities who are at high risk for influenza and its complications

Objectives:

- To increase the adult immunization rates against seasonal influenza among the **Black and Latino** adult population (18-64) in target communities , in 2011 by 10% above the 2010 rates
- To reduce barriers to vaccination

Strategy	Processes	Activities	Measures
Increase Community Awareness	Community Out-reach and Education for target population	Disseminate DPH education materials that are culturally and linguistically appropriate, and respect the beliefs of target population	No. of culturally and linguistically adapted Flu education materials 1. Print 2. Web messages 3. Podcasts
		Create and distribute a flu guidance manual to Local Boards of Health and Community groups	Number of flu guidance manuals 1. Created 2. distributed
		Develop feed back mechanism on manual usage	Communication between DPH and Local boards of health regarding handbook usage 1. No. of meetings 2. No. of technical assistance calls
		Maintain a current on-line resource that is easily understood and accessible	No. of Hits to flu website
	Encourage formation of Community Based Partnerships		No. of community Partners
			Type of community partners
			No. of jointly held community outreach and education events
Increase Access to Vaccination	Timely distribution of vaccine to vendors	Provide information on vaccine availability to local boards of health	No. of community based Flu immunization clinics held: 1. Community Health Centers 2. Non-health settings
		Use of social marketing to promote clinic sites	
Monitor Flu burden	Surveillance		Confirmed cases of the Flu, mortality and Hospitalization rates - Black - Latino
Monitor Vaccination rates			Percentage of immunized adults aged 18-64 - Black - Latino

APPENDIX 2: IMMUNIZATION EQUITY INITIATIVE GRANTEES

	Grantee	Population	Target area	FY'10	FY'11	FY'12
1.	Family Van	Low income racial and ethnic minorities	Boston, Dorchester, Hyde Park, Mattapan , Roxbury	√	—	—
2.	Cambridge Public Health Department	Men of color, People with Chronic Disease	Cambridge,	√	√	√
3.	Manet Community Health Center, Inc.	Chinese, Arabic, Vietnamese and Brazilian.	Quincy, Weymouth, Milton, Braintree and Randolph	√	√	√
4	City of Worcester	Latino and African American Youth	Worcester	√	—	—
5.	Greater Lawrence Family Health Center(GLFHC)	Latino	Lawrence MA	√	√	√
6	Health Quarters (HQ)	Latinas	Lawrence	√	√	√
7.	Vietnamese American Civic Association (VACA).	Vietnamese	Dorchester	√	√	—
8.	Justice Resource Institute(JRI)	Gay. Lesbian, Bisexual, Transgender and Queer (GLBTQ) Youth	Greater Boston Area	—	√	—
9.	YWCA of Southern MA	Low income racial and ethnic minorities	New Bedford	—	√	√
10.	Tapestry Health	African American and Latino Youth	Springfield and Holyoke, MA	—	√	√