

VII. PEOPLE PREPARED FOR EMERGING HEALTH THREATS (STRATEGIC IMPERATIVE FOUR)

The Centers for Disease Control and Prevention (CDC) has a national Health Protection Goal that states, “People in all communities will be protected from infectious, occupational, environmental, and terrorist threats.”¹⁷

A community can be vulnerable in a variety of ways. Not only can it be susceptible to a disaster or a disease outbreak, but it can also be vulnerable in regard to social factors (such as economic hardship) that influence the community’s resilience and ability to deal with adversity. This needs assessment attempts to examine Manchester’s vulnerabilities in two ways: from the perspective of multi-faceted needs among groups of people which may limit our community resiliency as well as from the perspective of how prepared local people are to respond to potential public health threats.

Information in this chapter focuses on residents of Manchester and includes data about the other Health Service Area (HSA) communities when possible. The circumstances described exist in all HSA communities to varying extents.

Some Manchester area residents experience difficult circumstances and inequity in ways that make them vulnerable and if tracked, may signal problems in the community. Residents who face difficulty because of, for example, losing their jobs, experiencing cultural barriers, or living in unsafe settings could be more vulnerable in emergencies or disasters. They may also be more vulnerable to poor health. In both cases, vulnerable individuals present a potential challenge to the community that may not be felt until problems arise. Identifying factors that make local residents vulnerable will improve the community’s ability to take action to strengthen its resilience. The following factors are among those that make can community members vulnerable:

- poverty
- unemployment
- food insecurity
- housing
- cultural barriers
- education
- crime/public safety

Manchester has been engaged in public health preparedness since before 2001. Since 2002, the Manchester Health Department has served as the point of contact for the Manchester All Health Hazards Region (AHHR), which includes the municipalities of Auburn, Bedford, Candia, Deerfield, Goffstown, Hooksett, Manchester and New Boston. As such, the Department has led planning activities to ensure the region is prepared to protect its residents from possible public health threats. The following section describes components of this community’s readiness to respond to disaster.

WHAT CAN MAKE THE COMMUNITY VULNERABLE?

POVERTY

Located in a predominately rural and affluent state, Manchester is an urban community. In turn, Manchester faces challenges and vulnerabilities that are similar to those found in cities across the United States. For example:

- Over 3,000 of Manchester's 25,484 families are living below the poverty line.⁸
- The fastest growing impoverished age group is children under the age of 18. In 2007, one in four of Manchester's children were living below 100% of the poverty threshold and two out of five students were enrolled in free or reduced meals in the beginning of 2009.^{8,60}
- While Manchester makes up 8.3% of the state's population, it accounts for about 15% (n=16,481) of New Hampshire's Medicaid Enrollees. The other seven towns in the Manchester HSA have an additional 3,210 Medicaid enrollees.¹¹⁸
- In 2008, over 1,100 unduplicated homeless individuals of all ages were served by the Mobile Community Health Team Project.⁸

MANCHESTER FAMILIES AND RESIDENTS LIVING BELOW THE FEDERAL POVERTY LEVEL			
	1989	1999	2007
All Families	6.3%	7.7%	11.9% +/-3.7
With Related Children <18 Years	9.9%	12.3%	20.2% +/-6.6
With Related Children <5 Years Only	14.3%	17.2%	25.5% +/-11.5
All People	9.0%	10.6%	14.0% +/-3.4
Under 18 Years	12.6%	15.0%	24.9% +/-8.3
18 Years and Over	7.9%	9.3%	10.7% +/-2.3
18 to 64 Years	7.0%	8.8%	11.5% +/-2.7
65 Years and Over	12.2%	11.7%	6.2% +/-2.9

Source: US Census and American Community Survey

POPULATION LIVING IN POVERTY, MANCHESTER HSA TOWNS, 1989 AND 1999			
PLACE	POPULATION LIVING BELOW THE FEDERAL POVERTY LEVEL, 1989	POPULATION LIVING BELOW THE FEDERAL POVERTY LEVEL, 1999	POPULATION, 2000 (FOR WHOM POVERTY CAN BE CALCULATED)
New Hampshire	6.4%	6.5%	1,199,322
Manchester	9.0%	10.6%	104,398
Auburn	4.3%	1.8%	4,665
Bedford	2.2%	2.2%	17,851
Candia	3.8%	2.6%	3,890
Deerfield	5.6%	3.2%	3,652
Goffstown	3.1%	2.8%	14,973
Hooksett	2.8%	2.7%	10,849
New Boston	4.9%	4.3%	4,107

Source: US Census 1990 and 2000

The aspects of Manchester described earlier make the community more vulnerable to poor health. Over the last fifty years, health officials and researchers have continued to build evidence that poverty contributes to poor health.^{119, 120} When people live in poverty or with limited economic resources, they often have limited access to aspects of daily life that encourage health and a good quality of life such as good nutrition, safe places to live, work and be active, health care, good education, and transportation. Furthermore, if people live with limited economic resources, they may encounter higher levels of crime, stress, and social disadvantages.

MEASURES OF HEALTH STATUS AND HEALTH CARE, COMPARING LOW-INCOME POPULATION TO FULL POPULATION				
	MANCHESTER RESIDENTS WITH ANNUAL INCOME < \$25,000	MANCHESTER	MANCHESTER HSA	STATE OF NH WITHOUT MANCHESTER
Behavior And Health Status				
Proportion of adults who are current smokers, 2005-2007	37.0%	24.8%	21.8%	19.1%
Proportion of adults with no moderate or vigorous physical activity, 2005 and 2007	19.5%	12.9%	10.3%	9.1%
Proportion of adults who are overweight or obese, 2005-2007	65.5%	63.5%	62.5%	61.0%
Access To Care				
Proportion of adults who have a primary care provider, 2005-2007	81.9%	89.3%	90.1%	88.5%
Proportion of adults whose general health status is excellent, very good or good, 2005-2007	63.5%	85.5%	88.2%	88.4%
Proportion of adults with emotional support, always, 2005-2007	28.5%	45.8%	46.6%	49.1%
<i>Source: NH Behavioral Risk Factor Surveillance System</i>				

In Manchester the Behavioral Risk Factor Surveillance System (BRFSS) reveals an association between people’s level of income and their perceived mental and physical health. Combined community data from 2005-2007 shows that individuals in Manchester who make less than \$25,000 a year reported that they experienced bad mental health an average of seven out of the last 30 days and bad physical health an average of 7.4 of the last 30 days. In the same survey, individuals who make between \$50,000 and \$74,999 reported an average of 2.7 days of bad mental health and 2.1 days of bad physical health out of the last 30 days.⁶³ This contributes to the idea that poverty is associated with poorer community health in Manchester.

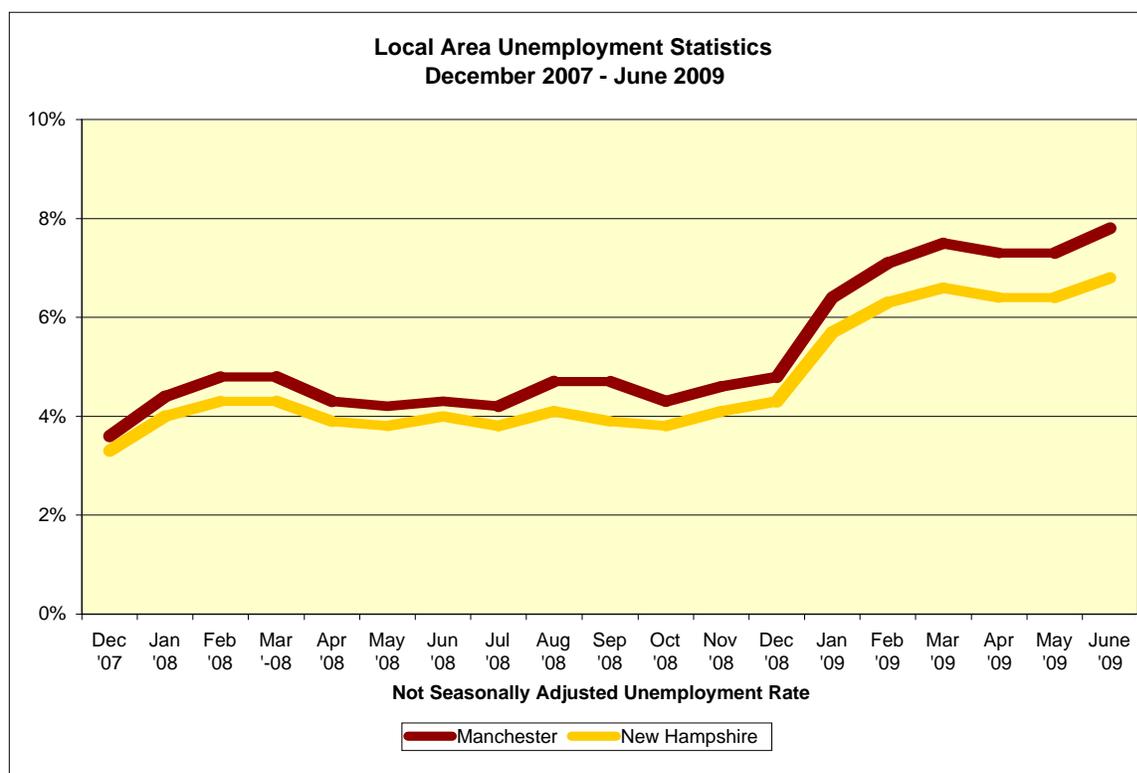
UNEMPLOYMENT

Unemployment has recently become a growing problem in Manchester. When adults are unable to find enough work, they and their families are more likely to experience poverty. Participants in many of the focus groups described particular concerns with job security in Manchester.

2009 UNEMPLOYMENT IN THE MANCHESTER HEALTH SERVICE AREA							
PLACE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY
New Hampshire	5.7%	6.3%	6.6%	6.4%	6.4%	6.8%	6.6%
Manchester	6.4%	7.1%	7.5%	7.3%	7.4%	7.9%	7.7%
Auburn	*	*	*	*	*	*	*
Bedford	3.7%	3.9%	4.3%	4.6%	4.7%	5.4%	5.3%
Candia	*	*	*	*	*	*	*
Deerfield	5.5%	6.2%	6.8%	6.3%	6.1%	6.5%	6.3%
Goffstown	4.3%	4.8%	5.2%	4.8%	4.8%	5.3%	5.2%
Hooksett	4.9%	5.6%	6.2%	5.3%	5.6%	6.4%	6.1%
New Boston	*	*	*	*	*	*	*

**data unavailable*
Source: New Hampshire Employment Security's 2009 Local Area Unemployment Statistics Report

Families that have limited access to financial resources may experience some degree of food insecurity, meaning they have limited or uncertain availability of nutritionally adequate and safe foods.²⁶ Food insecurity includes not having enough food and not having enough nutritional food to provide a healthy diet. Some families are more likely to experience food insecurity than others. Factors that are most often associated with food insecurity are having an income below the poverty line and having a household with children headed by a single woman.¹²¹ In Manchester, 10.3% of households have children under age 18 and are headed by women with no husband present (versus 6.5% for all of New Hampshire).⁸



Source: NH Employment Security

HOUSING

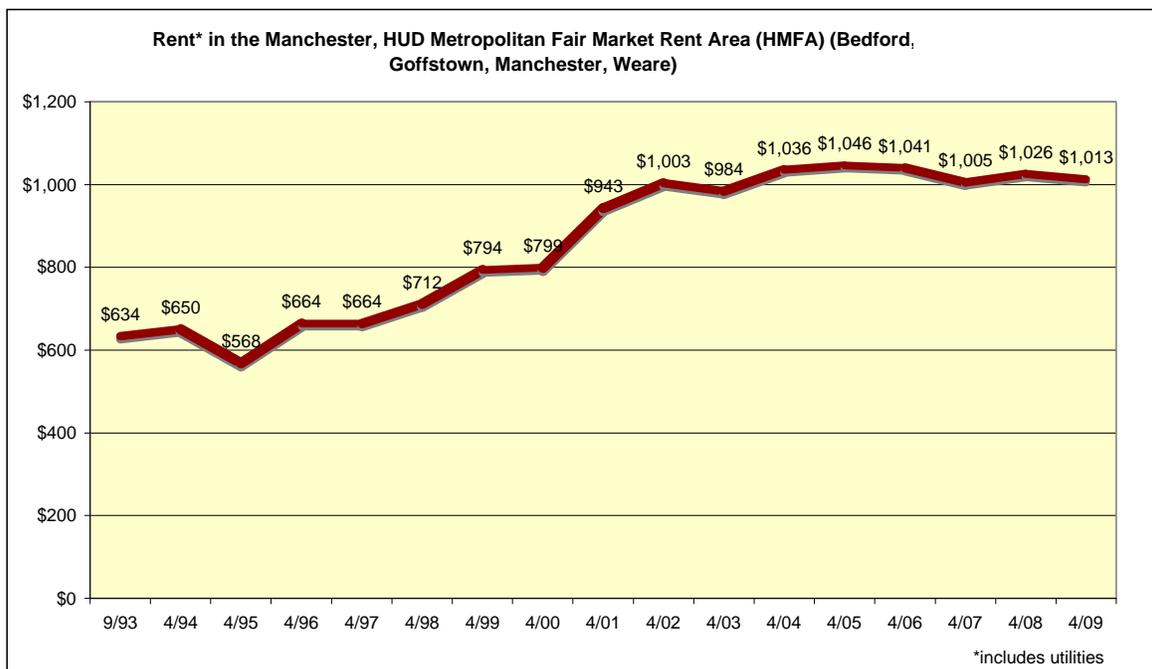
Similarly, the City has vulnerabilities related to housing. When people are living with limited financial means, they are limited in the housing options they can afford and may live in housing that is in poor condition. They are more likely to rent their homes, and may pay a significant proportion of their income for housing.

Of the 48,905 total housing units available in Manchester, 52.9% of them were built before 1950. In 2008, there were 43,461 occupied housing units in Manchester in 2008. Of these occupied housing units:¹²²

- approximately 51% of housing units were renter-occupied;
- of rented housing units, 50.4% of them cost 30% or more of their household income for rent; and
- about 44% of housing units were occupied by people who had moved within the preceding three years.

HOUSEHOLD INCOME AND 2-BEDROOM RENT IN 2008			
ESTIMATES OF AFFORDABILITY	MEDIAN MONTHLY GROSS RENT FOR 2-BEDROOM UNIT	HOUSEHOLD INCOME REQUIRED TO SUPPORT 2-BEDROOM RENT	PERCENT OF 2-BEDROOM UNITS THAT ARE AFFORDABLE TO 3-PERSON FAMILY EARNING 50% OF MEDIAN
Statewide	\$1,044	\$41,800	62.2%
Manchester NH HUD Metropolitan Fair Market Rent Area (HMFA)	\$1,026	\$41,000	59.6%

Source: 2008 Residential Rental Cost Survey, New Hampshire Housing Finance Authority



Source: 2008 Residential Rental Cost Survey, New Hampshire Housing Finance Authority

Primarily using federal funds from Housing and Urban Development (HUD), the Manchester Housing Redevelopment Authority (MHRA) is able to make 1,261 public housing apartments available in Manchester. MHRA also subsidizes rent for 1,850 households. All households that MHRA assists must meet the federal HUD requirements related to income and criminal background. MHRA measures unmet need for housing assistance primarily through their waiting list. From November of 2008 to April of 2009, the MHRA housing assistance waiting list jumped from 9,500 households to 9,870.¹²³

EDUCATION

Because people's level of education can impact their socioeconomic status, employment, and health status, education is a useful representation of community vulnerability and resilience.^{124, 125}

EDUCATIONAL ATTAINMENT			
	MANCHESTER 2006	MANCHESTER 2007	NEW HAMPSHIRE 2007
Population 25 years and over	72,399	73,897	895,981
High school graduate	33.7%	33.8%	31.0%
Some college, no degree	19.5%	21.5%	17.9%
Bachelor's degree	18.5%	15.2%	21.0%
Graduate/professional degree	7.3%	7.6%	11.5%

Source: American Community Survey 2007

Data from the schools and various services available in Manchester also reveal other potential needs and vulnerabilities amongst community members related to nutrition, education, health care and public safety.

VARIOUS SIGNS OF POTENTIAL VULNERABILITY IN THE COMMUNITY IN MANCHESTER:		
	WHEN	NUMBER
Number of unduplicated participants in the Special Supplemental Nutrition Program For Women, Infants And Children (WIC)	2007	13, 584
Number of active students in Manchester school system known to be homeless	2007-2008 school yr	411
Calls to 211 requesting referrals related to dental care in last 10 months	6/2008-4/2009	47
Calls to 211 requesting referrals related to homeless individuals or families in first quarter of 2009	1/09-3/09	55
Reports of abuse to Bureau of Elderly & Adult Services of incapacitated elders age 60 and over in Manchester	7/2008-5/2009	197
Assessments of alleged child maltreatment by the Division for Children, Youth and Families (DCYF) in Manchester	2008	932
Households who applied and qualified for fuel assistance from Southern New Hampshire Services by the end of the winter	2007-2008	10,426
Individuals who receive Food Stamps (with or without additional public assistance) from NH Division of Family Assistance	March 2008	5,646
Individuals who receive Food Stamps (with or without additional public assistance) from NH Division of Family Assistance	March 2009	6,773

Sources: NH DHHS, Manchester School District, Heritage United Way 211, Southern New Hampshire Services, NH Division of Family Assistance

CRIME AND PUBLIC SAFETY

Crime and public safety are important indicators of community vulnerability. The presence of crime suggests weaknesses in the community and can be associated with poverty. Furthermore, crime data may shed light on the health of residents who live in environments where crime is a concern. Crime and violence in a neighborhood have been associated with increased levels of heart disease, asthma, mobility disability and other health outcomes among people who live in the area.¹²⁶⁻¹²⁸ Participants in a few of the focus groups were concerned that crime and violence seem to have increased in Manchester, and some individuals were worried that it will continue to increase in the poor economy.

2007 PART 1 CRIME STATISTICS									
CITY	POP.	MURDER	FORCIBLE RAPE	ROBBERY	ASSAULT	BURGLARY	LARCENY	MOTOR VEHICLE THEFT	ARSON
Manchester	108,874	4	22	182	94	825	2190	238	45
Auburn	5,235	0	1	0	2	14	31	2	0
Bedford	21,389	0	1	4	15	42	173	9	1
Candia	4,200	0	0	1	2	13	34	2	0
Deerfield	4,220	0	0	0	1	4	35	1	0
Goffstown	17,810	0	2	0	9	48	212	5	8
Hooksett	13,705	0	4	2	1	31	227	14	1
New Boston	5,121	0	0	0	3	9	17	0	0

Source: Manchester Police Department and FBI, Crime in the United States 2007

CULTURAL BARRIERS

While culturally diverse residents add to the strength of our community in many ways, they may face challenges with regard to employment, health care, housing, and community interaction. In turn, they may be more vulnerable in the event of emergencies and may not be able to access the help they need. They may experience health inequity.

When heads of households have limited English proficiency, it can contribute to the family having difficulty navigating the health care system and accessing health information and preventive care. As shown in a previous chapter, over 5% of households in Manchester are linguistically isolated. More than 17% of children over age five speak a language other than English at home.⁸ The New Hampshire Department of Education reports that 5.8% of enrolled Manchester students in the 2007-2008 school year had limited English proficiency. Language barriers may negatively affect a family's socioeconomic status, level of education, and stress levels, and in turn their health status (as described above).

In addition to language barriers, residents may experience cultural barriers that lead to poorer health status. Cultural barriers may limit an individual's access to appropriate health care and affect interactions with health care professionals. They can also limit a person's access to healthy food and adequate physical activity, for example, if culturally acceptable forms of physical activity are not available or safe. Language, culture, religious and racial barriers to a healthy life and health care can create inequity among groups in our community. These factors are very important considerations as people work to improve the health status of all groups of people living in the Manchester HSA.

One way to measure the strength or weakness of a community is to consider social connections among community members as well as ways in which community members are involved in civic activities. Community involvement and connectedness can help reduce vulnerability to poor health or emergencies by getting people more connected to a support system and to information that can help them. Participants in two of the focus groups discussed that when neighbors help neighbors and people get involved in the community, it makes Manchester a better place to live.

“During the depression it was neighbors helping neighbors. I now barter services with my neighbor. I watch her kids and she does my ironing. If everyone cares for each other and is looking out for each other, there is a learned respect for one another. Being involved with the community pushes me to help more people and reach out more. When you start helping others, it is infectious.”

Manchester residents have opportunities to attend parades, block parties, festivals, and various other open cultural events. They have an accessible local government and a variety of civic, charitable, and social organizations with which to volunteer. The City has an attractive downtown and numerous parks. The number of registered voters has grown over the past decade to 57,135 in 2008.¹²⁹ In 2007, nearly 38% of Manchester youth reported participation in community service activities, and nearly 28% were involved with clubs or organizations outside of school.³⁷

The Division of Chronic Disease Prevention and Neighborhood Health within the Manchester Health Department has been working collaboratively with the Manchester Police Department and other community organizations to strengthen resident involvement in crime prevention and neighborhood revitalization efforts. They are doing so under the umbrella of the Manchester Weed & Seed (W&S) strategy, a program from the United States Department of Justice. The W&S strategy is a comprehensive effort aimed at “weeding” out crime and aligning community resources to “seed” an improved quality of life for all Manchester residents. The strategy helps to reduce the vulnerability of Manchester residents. It has been active for seven years.

The W&S approach is unique when compared with traditional crime prevention approaches because the strategy is based on collaboration, coordination, community participation, and leveraging resources with a focus on promoting the long-term health and resilience of the community. Residents of W&S neighborhoods are actively involved in problem-solving in their community.

Neighborhood Watch Groups are another example of an initiative in Manchester that encourage community participation and helps prevent crime. To date there are fifty-eight Community Watch Groups across the City.

HOW IS MANCHESTER PREPARING FOR EMERGING HEALTH THREATS?

The Manchester Health Department currently facilitates the Public Health Preparedness Advisory Council, which is the planning body for regional public health preparedness activities. The Council includes membership from the region's hospitals, each of the Manchester All Health Hazards Region (AHHR) municipalities (i.e., health, police, fire and emergency management). Other members of the Council include the Greater Manchester Chapter of the American Red Cross, the Mental Health Center of Greater Manchester, Rockingham Ambulance, and the Visiting Nurse Association of Manchester and Southern New Hampshire. The robust community partnerships that have been developed through this council have enabled the Manchester AHHR to execute its public health preparedness goals.

The Manchester AHHR's efforts have primarily centered on developing and exercising public health preparedness plans. The region has completed the development of a regional all-hazards plan. The plan includes several annexes that focus on specific emergencies or response functions:

- pandemic influenza
- risk communication
- medical surge (expanding health care capacity in an emergency)
- points of dispensing (mass clinics ready to be opened in emergencies)
- mass fatality management

In the past two years, the Manchester AHHR has provided eleven public health preparedness trainings. The trainings have focused on medical surge; continuity of operations planning; highly pathogenic avian influenza; isolation and quarantine; psychological first aid; 2-1-1 NH; Communicator! NXT (a health alert system); eStudio (a group collaboration and communication tool) as well as Homeland Security Exercise and Evaluation Program (HSEEP).

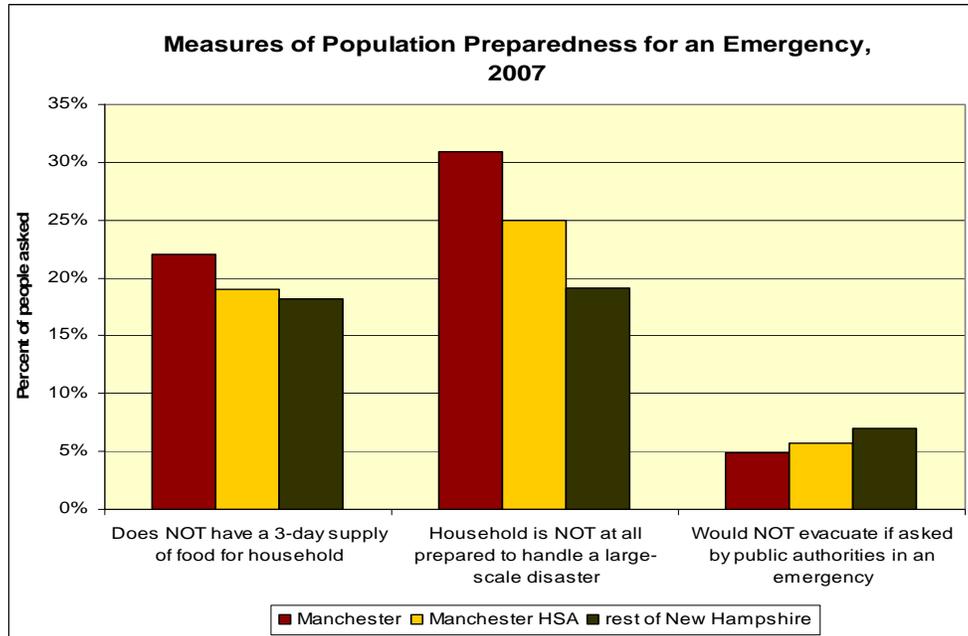
The Manchester AHHR has conducted numerous HSEEP-compliant exercises. Since 2007, the Manchester AHHR has held tabletop exercises on school closings, pandemic influenza and isolation and quarantine. Call-down drills, in addition to drills involving the set up of the AHHR's acute care center and activation of its emergency call center have also been implemented.

Additional indicators of regional public health preparedness from the Manchester Health Department include the following:

INDICATOR	NUMBER
Points of Dispensing available in an emergency	7
Back-Up Points of Dispensing	5
Medical Reserve Corps Volunteers (completed required training)	11
Community Emergency Response Team Volunteers	50

Source: Manchester Health Department, May 2007

In 2007 the state BRFSS asked New Hampshire residents about their level of emergency preparedness. The survey found that in a disaster, 61.2% of Manchester's residents would plan to get authoritative information from a radio while 26.9% would use a television.



Source: NH Behavioral Risk Factor Surveillance System

As of 2007, a noteworthy proportion of the population in Manchester did not feel prepared for a large-scale emergency. While the local government and many organizations have worked together to prepare the City infrastructure and medical response capacity for various kinds emergencies, many of the residents themselves are not or do not feel ready for such events.

CONCLUSION

The community has been busily coordinating efforts and preparing for emerging health threats in the Manchester area. At the same time, many local residents personally do not feel prepared for emergencies. Many individuals in the Manchester area live in circumstances that make them more vulnerable in the case of emergencies. Many of those same vulnerabilities also increase the likelihood of poor health outcomes. Better understanding of the factors that make people vulnerable in emergencies or to poor health is needed in order to reduce those vulnerabilities, target public health efforts where they are most needed, and improve health equity across the community.

Examining various types of determinants of health will allow the community to better understand the factors that make people and the community more resilient. Achieving health equity and community resilience requires a broad, inclusive view of what makes a community strong.