Town of Lincoln

Community Health Assessment & Planning Project

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Prepared for:
Town of Lincoln
Healthy Community Committee

Prepared by:
Community Opportunities Group, Inc.
Boston, MA

Acknowledgments

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I. Introduction

The Town of Lincoln initiated the 2009 Community Health Assessment and Planning Project (CHAPP) to evaluate the town's existing health-related services *and* community health needs, including needs that may not be the purview of town government. CHAPP was funded by a grant from the Community Health Network Area 15 (CHNA), a coalition of public, non-profit, and private organizations established by the Massachusetts Department of Public Health (DPH) to build healthier communities through community-based prevention planning and health promotion. Today there are twenty-seven CHNAs statewide and Lincoln is part of CHNA 15.

Lincoln's CHAPP was led by a steering committee of residents and town employees who reviewed Lincoln's health-related services and programs using nationally recognized *Community Health Principles* - principles that define "health" and "community" in the broadest terms (Appendix A). The steering committee used the principles as a guide to sketch out what community health means for Lincoln, identifying physical, mental, social, and spiritual health as four key components of individual and community well-being. The goal of the assessment was to include a cross-section of the community in determining what Lincoln does well and identifying needed improvements in health-related services that benefit both residents with particular needs and the town as a whole. The culmination of the needs assessment is an action plan with recommendations to improve five community health issues identified through the public process.

Broad definition of "health"

Defining health broadly to include the full range of quality of life issues. It recognizes that most of what creates health is lifestyle and behavior related. Other major factors are genetic endowment and the socio-economic, cultural, and physical environment.
(HCP no.1)

Broad definition of "community"

Using a broad definition of what makes up a community, individuals and partnerships can address their shared issues in the most fruitful way possible. (HCP no.2)

From the onset of the nine-month assessment and planning project, CHAPP promoted public participation and made a concerted effort to include stakeholders that were *not* tapped by Lincoln's recently completed Comprehensive Long Range Plan (CLRP) process. Also to the committee's credit, no preconceived health needs were named or championed. The committee's goal was to hear what the community perceived to be its health assets and needs. Lincoln's CHAPP was an evolutionary process of asking questions and listening, allowing for very open and authentic community engagement. Only when the needs and issues were voiced time and again from different groups and individuals did the committee name them as possible issues to be addressed. After taking additional public steps to vet these five newly identified issues, the

committee allowed the consultant to focus on them during the data research phase in order to determine if statistical evidence exists to bear out the public's experiences and perceptions.

II. Public Process

II.A. Setting Priorities and Scope

Healthy Community Principles were used as a guide in setting Lincoln's community health assessment priorities and scope. The first two goals of CHAPP were to determine who to talk to and what questions to ask. The committee intentionally sought diverse sections of the community and a variety of perspectives, including representatives at Hanscom Air Force Base (HAFB). Further, the committee reached out to residents who did not have a history of serving on town committees. The first few meetings were used to brainstorm and develop a list of healthy community "stakeholders" – residents or people who serve or represent them – young and old, mothers and fathers, singles and empty-nesters, teachers, physicians, ministers, care givers, and staff of programs, services, and facilities. Each time an individual or group was named, the committee noted a contact name or connection they would follow up with later. The stakeholders list continues to grow and fill out each time the committee meets with or has an official 'healthy community conversation' for the record (Appendix B). The stakeholders list is organized by groups and is meant to be an ongoing resource that not only records points of contact but also guides the committee's outreach efforts.

Diverse citizen participation and ownership

All people taking active and ongoing responsibility for themselves, their families, their property, and their community. A leader's work is to find common ground among participants, so that everyone is empowered to take direct action for health and influence community directions. (HCP no.5)

As the committee selected people to interview, it also grappled with the scope of the assessment and planning project. Defining what community health means in Lincoln and what constitutes a community health *need* were early and repeated discussions. Writing a mission statement was an important step in defining CHAPP's purpose and helping committee members understand their role. The current mission statement could be refined as the committee pursues future actions. Finding the best way to introduce the project and its broad understanding of community health was another challenge. An early and ongoing commitment that the committee made was to create a CHAPP webpage on the town's website and to partner with the *Lincoln Journal* to provide community health interviews. The interviews, or "conversations," offered readers tangible examples of the broad scope of the Healthy Community Principles and CHAPP's goals for making Lincoln a healthier place in which to live and work. Four interviews were published on domestic violence prevention, Lincoln's school and town nurse services, Council on Aging, and the school's METCO program. Fortunately, the Town of Lincoln has a long tradition of caring about the quality of life of individual residents and the community as a whole. The town attracts

intellectually and physically active people who take care of themselves and who look out for their neighbors. Still, the committee found it challenging to stretch residents' and town employees' concept of *health* to include the breadth of Healthy Community Principles.

> The concept of Community Health usually requires one to disregard their previous notion of health, to see it as an overall reflection of all facets of their environment. It's a broad approach that can be intimidating to someone who likes clear lines and boundaries. So we have experienced a slow community change, in the form of residents stopping us in the supermarket to ask a clarifying question, or employees seeing their job descriptions a little differently.
>
> What is most heartening about this process are the connections it has created. Employee to employee, neighbor to neighbor, people slowly become more aware of the connection between themselves, their actions, their neighbors, their environment, their cultures and the impact that all has on their overall well being.[1]

In time, committee members became more comfortable with articulating the principles of community health and how those principles apply to Lincoln residents. As evidenced by CHAPP's interview questions and the response matrices, Lincoln's public engagement process was not rote or perfunctory (Appendix C & Appendix D). The committee's work to refine its purpose and questions was valuable as it grew into its role. This process helped orient public discussion and an understanding of health and wellness as it encompasses all aspects of a person's and a community's life: the physical, the mental, the social, and the spiritual.

II.B. Qualitative Data Collection Methods

The Town of Lincoln places high value on civic engagement and consensus building, and this influenced CHAPP's commitment to gathering information, ideas, and opinions from town staff, residents, and service providers. They used various data collection methods to document as many perspectives as possible, including interviews with fourteen Town Departments; dozens of interviews and conversations with town boards and commissions, organizations, and groups; a town-wide citizen survey that

Quality of life for everyone

Striving to ensure that the basic emotional, physical, and spiritual needs of everyone in the community are attended to. (HCP no.4)

[1] Dan Pereira (Committee Co-Chair and Director of Recreation Department) CHNA Progress Report, May 2010.

generated 160 responses; and two public forums (See Appendix E for Public Forum summaries).[2] Early on, the committee developed questions that had a "town service" focus. With encouragement from CHNA, the committee expanded its scope to include health-related issues that may not be in the purview of town government.

The committee designed a town-wide citizen survey with two goals in mind: 1) to reach every Lincoln household through the Annual Town Meeting warrant mailing and 2) to inform and gather feedback from every household about community health in general and four issues in particular (senior vulnerability, pressure on youth, tick-borne disease, and use of paths and roads

Questionnaire for Town Departments

1. What health-related services does your department offer?
2. What health-related services are you asked by the public to offer?
3. What health-related services can't you offer and where do you refer residents?
4. What are other comparable communities offering for services that you wish Lincoln could?
5. What are Lincoln's health-related assets and needs?
6. Who do you recommend we talk to about "community health"?

Questionnaire for Residents and Groups

1. What are Lincoln's health-related assets?
2. How well is the Town doing in providing health-related services?
3. What health-related services do you routinely seek in Town?
4. What health-related services is the Town not providing which you feel should be provided?
5. What are other comparable communities offering for services that you wish Lincoln could?
6. Prioritize the types of health-related services that Lincoln does or should provide?
7. Who do you recommend we talk to about "community health"?

Citizen Survey Questionnaire

1. How well is the Town doing in providing overall health-related services?
2. Are you satisfied with the physical and mental health services in Lincoln?
3. Would you know where to go to find in-home services for a family member?
4. Would you know where to go to find alternative housing for yourself or family members at various stages or with various needs?
5. What do you see as Lincoln's health-related assets?
6. What health-related services do you routinely seek from the Town?
7. What health-related services is the Town not providing which you feel should be provided?
8. What are other comparable communities offering for services that you wish Lincoln could?
9. Can you prioritize the types of health-related services that Lincoln does or should provide?
10. Do you and/or your family feel physically safe in Lincoln?
11. Do you feel Lincoln's religious communities are integrated adequately into life in Lincoln?
12. Do you think Lincoln is accessible and welcoming to those with disabilities?
13. Does Lincoln offer enough preventive community health services and programs such as blood pressure clinics and educational programs?
14. Do you feel there are adequate social/cultural opportunities in Lincoln?
15. Do you feel Lincoln is welcoming to a broad range of cultures?
16. What can we do to provide better support to our seniors and other vulnerable residents?
17. Do you feel that children, especially teens, are under more pressure today than when you were young?
18. Do you have concerns about tick borne illness in Lincoln? Have you or a member of your family suffered from a tick borne illness?
19. Do you feel Lincoln is safe for cyclists? Do you feel the roadside paths are safe for biking?

[2] Citizen survey responses are available through the Town of Lincoln's Healthy Community Committee.

by bicyclists) that were identified in the earlier phase of public engagement. Rather than design a scientifically controlled survey, the committee wanted respondents to be able to write in comments. As with other CHAPP methods of qualitative data collection, the information coming from the survey had to be weighed against existing or *future* quantifiable data.

II.C. Needs Analysis

The criteria used to decide the needs and issues to address were important to CHAPP's public process and final recommendations. How would the committee sift through the hours of documented conversations and surveys? Not surprisingly, the criteria were chosen through an iterative process, not from a set decision tree that could have foreclosed options or ideas early on. However, the committee recognized its accountability for the steps and decisions it made. About midway through the assessment and planning project, the committee arrived at four criteria as the healthy community needs/issues became apparent. The criteria include: 1. Frequency of times the issue was identified through the public process; 2. Severity of perceived health need; 3. Consistency with town values as outlined in the 2009 *Comprehensive Long Range Plan* ; 4. Likelihood of the Town/residents committing time and resources.

Criteria for deciding priority community health needs

- Frequency of times issue was identified through the public process
- Severity of perceived health need
- Consistency with Town values as outlined in the *Comprehensive Long Range Plan*
- Likelihood of Town/residents committing time and resources

Another step the committee decided was important for its process and for the future of its recommendations was to cross-check the newly identified healthy community needs and issues with town values and goals confirmed in the *Comprehensive Long Range Plan* . The committee understood that any future actions involving town and resident resources, time, or funds would need to be justified. At the same time, it was reassuring for the committee to realize that the community values expressed during the CHAPP process were the same as those identified in the *Comprehensive Long Range Plan* (Appendix F).

II.C.1. What Lincoln Does Well - Assets

The Town of Lincoln provides comprehensive services that many surrounding towns three and four times Lincoln's size offer, which is a great credit to Lincoln's small town government. Lincoln does many things very well, so much so that some strains and needs in town can be masked by highly competent town employees and residents. Many town employees wear multiple job hats or provide services beyond their immediate roles, such as the police and fire departments responding to calls that they characterize as "social service in nature." As the Police Chief said, "Public Health is a 24-7 operation." Likewise, when a Department of Public Works employee recently passed away, it was discovered that he had been providing assistance to a frail resident which allowed her live more comfortably and safely in her own home. Many residents volunteer their professional expertise and time to town boards, committees, and organizations

that would otherwise have to contract for these services or go without. While Lincoln offers many services, the town received a CHNA grant for a community health needs assessment in order to identify where Lincoln has health-related service needs as well as health-related issues that may or may not be within the purview of town government.

Lincoln values can be seen as a mirror of its *health-related* assets. Lincoln's health-related assets are its people, the health of the population, the town's fiscal health, community safety, land resources, civic-minded and engaged citizenry that is open to diversity in its many forms, and the town's commitment to providing affordable housing. Other assets named during CHAPP were the Council on Aging and Recreation Department's services and programs, Lincoln's public schools and school/town nurse, and faith communities and ministers. Lincoln residents repeatedly identified the feeling of community in town as a major asset. One person offered the adage, "You don't move to Lincoln, you join." For a full record of what Lincoln residents, service providers, and town employees see as Lincoln's health-related assets, see Appendices C, D, and E.

Shared vision from community values

A community's vision is the story of its desired future. A community's vision reflects the core values of its diverse members. (HCP no.3)

Lincoln Values

People (children, families, seniors, singles, and town employees)

Health and safety of people

Land conservation/stewardship, the environment, rural/scenic landscapes

Civic engagement, democratic process, town meeting, volunteerism, informed citizenry

Diversity (cultural/ethnic, religious, age, racial, economic)

Affordable housing options for low-income individuals and families

Small, fiscally responsible government

II.C.2. Where Lincoln Can Improve – Needs

The Town of Lincoln also has health-related needs, some of which are *not* unique to Lincoln and others that present themselves because of prized features of the town. Lincoln is to be commended for asking "the question" and looking for areas that need to be improved. The needs recorded in Appendices C, D, and E detail residents' and employees' perceptions and experiences, all of which were important to hear, discuss, and record for CHAPP's process and for the future of Lincoln's community health efforts. However, the following five needs and issues rose above the others, meeting the committee's criteria for further investigation, data research, and probable action. The following are listed in no priority order:

1. **Vulnerable seniors and residents**

   The Town of Lincoln is aware of its growing senior population and their growing needs – physically, mentally, and socially. Some of the challenges to providing critical services are seniors' hesitancy in asking for and accepting assistance; making plans for life transitions before they happen; and involving familial or other supports. Lincoln seniors seem to

experience social isolation due to a number of factors: the geographic distance of many homes from a road or neighbors, the high proportion of single family homes lead to more seniors living alone, and the lack of a comprehensive public transportation system. Lincoln has far fewer financially vulnerable seniors and residents than other towns, but they do exist. For example, in Lincoln 13 percent of households with a householder who is between 65 and 74 years old are housing cost burdened, i.e. they pay more than 35 percent of their income on housing. This figure increases to almost 20 percent for households with a householder who is 75 or older. Residents with physical disabilities would be better served if all of the town's buildings were fully accessible.

2. **Pressures on children and teens**

Even though life is faster and more complex today, survey respondents had mixed opinions about whether children, especially teens, are under more pressure now than a generation ago. Still, Lincoln parents want to know how they and the community can support children in being children – negotiating the pressures and choices that confront them – while still being prepared for life beyond Lincoln.

3. **Tick-borne diseases**

Both public perception and data indicate that Lincoln has a high incident rate of individuals who have had a tick-borne disease, especially Lyme disease.

4. **Use and condition of roadside paths, safety of bicyclists and motorists on roads**

This issue involves two components with overlapping interests: roadside paths and bicyclists/motorists. Overall, this issue generated the highest number of survey responses and revealed a high degree of tension between bicyclists and motorists. The roadside paths appear to be underused because of their condition and limited coverage throughout town.

5. **Public education of available health-related resources**

This need was identified at the end of the public process as a result of many survey respondents asking, "What are Lincoln's health-related services?" The committee decided to add this *need* to the list even though it is not an "issue" like the four above.

The first and second needs - vulnerable seniors/residents and pressures on children and teens - and the need for public education about available resources are not unique to Lincoln. Lincoln has many excellent services, programs, and safeguards in place for vulnerable seniors/residents and children, including real estate tax programs for seniors, veterans, and for people facing financial hardship (See Appendix G). Likewise, the Council on Aging is an indispensible "frontline" advocate, service provider, and barometer of senior needs and issues. During an interview for the *Comprehensive Long Range Plan* , the former Director of the COA reported that the COA had experienced growth in demand for services and programs in the previous ten years and that the community had higher expectations of the COA. In the same period (1999-2009), Lincoln's over-60 population increased 36 percent and is expected to continue to grow. In March 2009, the COA reported to the Board of Selectmen that demand for social services, especially from the frailest seniors, had tripled since the COA added a full-time social worker in 2008.[3]

[3] Board of the Lincoln Council on Aging, Memorandum to the Board of Selectmen, February 12, 2009.

Lincoln is wise to support the COA to the fullest extent possible and plan for a growing senior population with complex needs.

Lincoln Public Schools[4] and Lincoln-Sudbury Regional High School have above average staffing levels for social and mental health services, with three and six social workers respectively, not including nursing staff, guidance counselors, and psychologists in both school systems. Just as Lincoln's conservation efforts are a national model, Lincoln could become a model for how children, parents, schools, and the community talk and find healthier ways to be kids, be families, and be community. No matter where you grow up, if youth are depressed, anxious, abusing their bodies and substances, or taking risks with life-altering consequences, there is room for a thoughtful community to ask why and to look for ways to foster healthier behavior, healthier coping skills, and healthier life choices.

Youth Development

Recruiting and engaging youth to be full partners in community-based efforts. (HCP no.9)

While senior and youth needs are not unique to Lincoln, tick-borne diseases and roadside path and road use present particular challenges in Lincoln and to the town's high value for open space, woods, outdoor recreation, and rural roadways. Between 2005 and 2008, Lincoln had the highest incident rate of confirmed Lyme disease cases of any surrounding town. Moreover, it had *six times* the incident rate of Middlesex County and *four times* the state rate for those years (See Table 3.6). Interestingly, 2009 incident rates of confirmed Lyme disease cases dropped significantly in Lincoln, Weston, Sudbury, and Acton, but remained relatively constant in Concord, Lexington, the county and state. Wayland and Bedford's reported cases increased.

An illustration of the challenge that Lincoln faces among competing needs and desires is evident in a CHAPP survey response, "Lincoln's roads should have bike lanes...but don't widen the roads!" Lincoln residents and town employees will have to work hard to find a compromise between competing needs and desires that arise between health and safety, lifestyles, and the town's value for conservation and scenic settings. The 2009 *Comprehensive Long Range Plan* also identifies this tension:

> Today, increased traffic volumes and speeds on local roads, coupled with the absence of sidewalks or paths except on major roads, has created an increasingly unsafe environment for local drivers, walkers, and bikers ... Improving the paths and trails for bikers and encouraging shared motor vehicle use will help to increase mobility for residents and enhance Lincoln's sense of community.[5]

It is time for public dialogue and public problem solving from all concerned parties. There is no easy fix, but open dialogue will yield solutions that more people can understand and support.

[4] The two schools on Hanscom Air Fore Base, serving K-8 students, are not included in this discussion.

[5] Town of Lincoln, Town of Lincoln, Massachusetts, Comprehensive Long Range Plan (September 2009), 25.

III. Data & Benchmarks

An important complement to public participation and qualitative research is the collection of "hard" data, or quantitative data. Quantitative research refines perception by providing numerical or statistical evidence that supports or refutes the conclusion. The steering committee identified Lincoln's predominant health needs by listening to people's perceptions, anecdotes, and personal experiences. In this way, the committee was able to gather information to help it determine the town's seemingly most critical needs. From there, the town could seek quantitative data to determine the severity of the need and devise ways to measure how needs might change over time. Collecting quantitative data is useful because it describes what people observe in a clear and objective way. It allows people to make comparisons over time and geographies, and provides factual evidence that can augment the results of qualitative research.

Benchmark and measure progress and outcomes

Using performance measures and community indicators to help expand the flow of information and accountability to all citizens, as well as to reveal whether residents are heading toward or away from their stated goals. Timely, accurate information is vital to sustaining long-term community improvement. (HCP no.8)

When conducting quantitative research, it is critical to evaluate the integrity of the data and its applicability to the research subject. This is especially important when using data from secondary sources. The user must understand the initial purpose of the data collection, research methodology, when the data was collected, and any situational factors that may affect the relevance of the data. It can be challenging to find secondary sources of information that correlate perfectly with the research topic. Benchmarks are standards by which something is evaluated or measured. They allow us to draw comparisons and to observe how conditions change over time, and to evaluate our progress toward a particular goal.

In this section, we take each of Lincoln's health-related needs and specify data sources, if any, how existing data relates to the issues, what other data the town may collect, and how to track the data over time to measure progress. In addition, we identify benchmarks to help the town interpret the data today and in the future.

It should be noted that data using a Lincoln population of 8056 from Census 2000 includes the Hanscom population of aprox. 1575.

III.A. Vulnerable Seniors & Residents

Addressing the needs of Lincoln's elderly residents is of particular concern when assessing community health needs. There are several resources available to this population, and people tap these resources at varying levels. It is possible to collect information at points of interaction. For example, there is an opportunity to collect information about a senior citizen every time s/he comes to the senior center for an activity, or in particular, to meet with the COA's social worker.

By aggregating this information, we can then start to understand the needs of the population on a broader scale.

III.A.1. Data Sources & Statistics

The U.S. Bureau of the Census collects demographic data on elderly people and, at a general level, it can provide information about the potential needs of this population. However, since the federal census is only conducted every ten years, the information becomes dated over time. The American Community Survey (ACS), also conducted by the Bureau of the Census, offers an alternative to the decennial census. The ACS uses sampling to calculate estimates for much of the data traditionally covered in the decennial census. ACS estimates are generated on a rolling basis, and while data currently is available only for geographic areas of 20,000+ persons, the Bureau plans to release data at the census tract and block group level in December 2010.

Table 3.1
Elderly Population Demographics, 1

	Total Population	Persons 65+		Persons 65+ living alone	
		Male	Female	Male	Female
Acton	20,331	732	972	125	320
Bedford	12,595	1,080	1,204	98	402
Carlisle	4,717	214	188	31	74
Concord	16,993	1,189	1,614	126	480
Dover	5,558	307	317	14	92
Groton	9,547	310	386	60	132
Harvard	5,981	214	237	44	74
Lexington	30,355	2,254	3,423	282	1,084
LINCOLN	8,056	416	482	0	137
Sherborn	4,200	228	253	23	90
Sudbury	16,841	732	889	90	155
Wayland	13,100	805	1,039	62	254
Weston	11,469	826	1,054	92	275
Middlesex Co.	1,465,396	74,220	112,717	12,421	40,899
Massachusetts	6,349,097	341,057	518,544	62,789	197,389

Source: Census 2000, STF 3, Tables P1, P8, P11.

The following data collected by Census 2000 can help Lincoln understand the baseline demographics of its elderly population. Knowing who lives in town, how they live and their financial capacity can help the town assess the extent and availability of its services against the potential need. Census data alone is insufficient to understand the specific needs of a population, but paired with anecdotal evidence, program usage statistics and/or survey results, the town can develop a good understanding of unmet needs. Census data helps to narrow the areas in which the town should conduct further research. Comparing information against communities with similar characteristics provides a context for interpreting the data.

Table 3.2
Elderly (65+) Population Demographics, II

	Elderly households w/ income <$20K		Elderly households w/ income <$60K		Median household income	
	Number	Percent	Number	Percent	Householder 65-74	Householder 75+
Acton	207	20.7%	658	65.7%	$55,870	$25,375
Bedford	202	16.2%	656	52.6%	$64,375	$39,297
Carlisle	34	12.3%	139	50.2%	$90,822	$24,792
Concord	209	12.7%	844	51.1%	$64,728	$47,969
Dover	39	9.6%	163	40.1%	$69,773	$76,194
Groton	109	25.3%	302	70.2%	$43,000	$26,579
Harvard	46	18.6%	153	61.9%	$80,070	$30,278
Lexington	515	15.7%	1,773	54.0%	$65,931	$40,185
LINCOLN	49	8.8%	209	37.6%	$89,626	$56,750
Sherborn	66	19.1%	180	52.0%	$54,773	$63,500
Sudbury	163	18.7%	440	50.4%	$70,104	$27,692
Wayland	134	13.2%	512	50.3%	$68,580	$47,639
Weston	168	16.9%	414	41.6%	$118,517	$48,693
Middlesex County	38,582	32.8%	87,709	74.5%	$40,483	$24,546
Massachusetts	210,437	38.5%	441,367	80.8%	$33,589	$21,522

Source: Census 2000, STF 3, Tables P55, P56, P92. Includes Hanscom data.

The data presented in Tables 3.1 and 3.2 indicate that Lincoln has approximately 140 elderly women living alone and 50 households with incomes less than $20,000 (in 1999 dollars). Furthermore, the median household income for elderly households drops significantly when the householder is 75 years or older. However, very few of Lincoln's elderly households have incomes below the poverty level. From this data, one can conclude that while there are some financially vulnerable households in Lincoln, the level of need is less than what many other communities experience. Still, within Lincoln's elderly population, people over 75 years old have fewer financial resources. This also suggests that Lincoln may not need to design additional programming around financial assistance but rather around the social and interactive needs of this population. When looking to take action on this issue, consideration should be given to whether or not the elder population lies fully in Lincoln, or partially in Hanscom. This may impact percentages used to some degree.

Table 3.3
Elderly Housing Demographics

		Owner-occupied households 65+		Renter-occupied households 65+		Cost-burdened owners*	
	Households	Number	Percent	Number	Percent	Householder 65 -74	Householder 75+
Acton	7,495	817	14.3%	197	11.0%	18.9%	28.9%
Bedford	4,621	880	23.7%	295	32.2%	18.3%	10.0%
Carlisle	1,618	302	19.9%	18	17.8%	7.3%	50.6%
Concord	5,948	1,426	29.7%	337	29.4%	21.1%	19.3%
Dover	1,849	437	24.9%	7	7.4%	26.1%	16.4%
Groton	3,268	354	12.9%	91	17.2%	7.1%	20.2%
Harvard	1,809	191	11.7%	26	15.2%	11.5%	21.7%
Lexington	11,110	2,639	28.8%	654	33.6%	16.7%	18.8%
LINCOLN	2,790	594	34.6%	34	3.2%	12.9%	18.7%
Sherborn	1,423	349	26.4%	42	40.8%	16.8%	11.2%
Sudbury	5,504	861	17.0%	135	30.4%	12.8%	28.7%
Wayland	4,625	857	20.2%	97	24.9%	17.4%	15.8%
Weston	3,718	809	25.3%	268	52.0%	16.0%	19.5%
Middlesex Co.	561,220	82,445	23.8%	36,906	17.2%	18.8%	21.9%
Massachusetts	2,443,580	378,669	25.1%	176,880	18.9%	18.4%	21.6%

Source: Census 2000, SF3, Tables H14, H96, and Community Opportunities Group, Inc.
*In this case, "cost-burdened" is defined as a household that spends 35% or more of its income on housing.

The Lincoln Council on Aging (COA) is one of the most comprehensive resources for understanding the needs of Lincoln's seniors. The COA tracks participation rates in all of its programs and prepares reports annually. In a February 2010 memorandum to the Board of Selectmen, the COA presents participation figures for its programs from 2000 to 2009 (Table 3.4). While program attendance has fluctuated, the number of elders served by COA programs has increased steadily. Since 2000, on average 56.9 percent of the population has participated in COA programs each year. In 2009, almost 64 percent of the town's elderly residents attended the senior center.[6]

[6] Board of the Lincoln Council on Aging, Memorandum to the Board of Selectman, February 12, 2010, and Community Opportunities Group, Inc.

Another data source is the Town Assessor, who tracks participation rates in tax deferral and abatement programs. Currently Lincoln offers several programs to assist seniors with the financial burden of property taxes (Table 3.5). These programs include arrangements to exchange work hours for a tax credit, partial tax abatements, and tax deferral programs. Seniors need to meet certain eligibility requirements to qualify for some of the programs. In addition, there are separate programs that assist veterans and people with disabilities.

Table 3.4
Number of Participants in COA Programs

	FY09	FY08	FY07	FY06	FY05	FY04	FY03	FY02	FY01	FY00
Elders in Lincoln (60+)*	1,575		1,435	1,321	1,331	1,221	1,182	1,220	1,208	1,209
Elders Served**	1,001	937	802	744	614	725	725	700	700	650
Program Attendance										
Health benefits counsel	76	74	50	57	48	40	50	51	47	45
Group support	168	0	0	0	0	60	80	60	76	159
Tax Prep	22	13	14	12	12	15	10	0	0	0
Intergenerational	200	100	180	200	200	50	84	38	95	158
Health screening	389	398	444	432	409	440	450	510	509	528
Health Services	222	140	163	141	131	200	325	257	362	388
Fitness/exercise	2,070	1,929	1,843	2,495	2,329	2,344	2,971	2,052	2,469	1,798
Congregate meals	48	0	24	54	72	0	0	0	0	0
Health education	121	30	40	66	68	12	70	30	0	0
Recreation/Socialization	1,357	1,885	1,818	2,317	1,408	1,366	2,000	1,848	2,156	1,987
Cultural events	117	211	181	266	328	90	650	600	550	550
Community education	1,357	471	613	910	639	176	670	656	326	206
Trips	242	242	270	340	249	388	303	0	297	270
TOTAL	6,389	5,493	5,640	7,290	5,893	5,181	7,663	6,102	6,887	6,089
Social Services										
Information & referral	7,500	6,627	6,800	6,710	6,224	6,218	5,600	5,498	4,648	4,002
Case management	121	55	35	100	100	100	100	100	150	160
Medical Equip loan	96	63	63	41	22	40	22	52	0	
Transportation	1,368	1,158	1,588	1,660	1,681	1,352	1,250	1,252	1,396	787
Home delivered meals	506	1,500	1,062	641	723	2,000	916	1,736	1,481	1,848
Non-elder Families	39	22	120	85	75	75	75	70	70	100

Source: Board of the Lincoln Council on Aging, Memorandum to the Board of Selectman, February 12, 2010.
* Based on Town Census
* *Actual count FY07-09, estimated before

Information from the Board of Assessors indicates that, aside from the Senior Property-Tax Work Off Program, participation rates for these programs are low in Lincoln. Given the relative household wealth of Lincoln's elderly residents, this is not surprising. However, there are still people who benefit from this assistance. In 2000, 209 elderly households, or 37.6 percent of seniors 65 years and older, had incomes below $60,000, the upper income limit for participation

in the tax deferral program. Yet, a review of table 3.5 shows that few eligible seniors participate in the tax deferral program.

Table 3.5
Participation Rates in Tax Abatement & Deferral Programs

Clause	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
17-Elderly							1	1		
17D-Elderly	6	4	5	1	1	2	1	2	3	2
22-Veterans	15	16	16	13	12	12	13	13	12	11
22C-Veterans	1	1			1	1	1	1	1	1
22E-Veterans	1	1	1	1	1	1	1	1	1	1
37A-Blind	2	2	3	3	2	1	1	1	1	1
41C-Elderly	2	3	1	4	8	9	10	6	5	5
Paraplegic	2	1	1	1						
41A-Tax Deferral					4	8	13	11	9	8
Total	29	28	27	23	29	34	41	36	32	29

Source: Patrice Brennan, Administrator, Lincoln Board of Assessors.

Any town department that works with elderly residents formally or informally collects information about them. When we interact with people, we learn about them and in the context of town services, we learn about their needs. The Lincoln Police and Fire Department must keep a record of each call made, including the nature of the call and the age of the person involved in the emergency. In 2009, the Lincoln Fire Department responded to 114 calls for medical emergencies involving a patient over 60 years of age. In 24 cases, the patient had fallen and was injured. Five calls involved motor vehicle accidents. [7]

Focus on "systems change"

Looking at how community services are delivered, how information is shared, how local government operates, and how business is conducted. (HCP no.6)

The Police Department also tracks incidents and retains information on the nature of the call and age of persons involved. However, the information is difficult to analyze in its current form. The police would need to open, analyze, and cull information manually from each incident report. For the purposes of this report, we determined this to be burdensome. However, in the future, the town may want to work with the police to devise a means to retrieve the information more readily and discuss how to use the information to improve the quality of life of residents. One suggestion is for the Town's emergency services to share appropriate information with the COA, within the bounds of confidentiality, for follow-up.

III.A.2. Data Indicators & Benchmarks

Data indicators and benchmarks help people interpret data and identify points of progress and concern. Common data indicators that may suggest stresses on the elderly include living alone, low income levels, and housing costs in proportion to income. Benchmarks help to put this

[7] Lincoln Fire Department, "Patients per Age Group by Gender: Alarm Date Between 1/1/2004 and 5/31/2010," June 10, 2010.

information into perspective. We might ask questions like, "how does Lincoln compare with other similar communities?" or "what was this figure five years ago?" We also use benchmarks to track progress toward goals. Periodic comparison of data indicators against other geographic areas or in one community over time tells us how things were in the past and how they are today. However, data does not stand alone. Data can guide us toward issues, but cannot necessarily explain them. When data is paired with anecdotal information, we can start to understand prevalent issues in a population and design ways to help.

Data shows us that Lincoln's elders may not have the same types of needs that are commonly found among elderly people. In 2000, the median income for elderly households in Lincoln was almost $90,000, far above most communities. For older elderly households (with a household member 75 years old or more), the median income is $56,750. Fewer Lincoln households with a member between 65 and 74 years old are housing cost burdened than those in other communities, yet 13 percent are and this figure rises to almost 20 percent for older households.

Housing cost burden is likely due to the cost of property taxes. Lincoln's average single-family tax bill in FY 2010 ranks fourth highest in the state, at $11,684.[8] Interestingly, few people participate in the town's tax abatement/deferral programs. Of the 594 elderly households that own their own homes in Lincoln, only 17 participated in a tax reduction program in FY2010.[9] This figure does not include elderly households that may have received benefits through veteran's programs. However, the total participation for all programs is 31 households. During interviews conducted for this plan, people suggested that many of Lincoln's seniors do not participate in these programs because they do not want to be stigmatized. However, another factor may be that many Lincoln households do not qualify for these programs. The income and asset limits are very low in comparison to Lincoln's household income levels.

Program participation figures from Lincoln's Council on Aging also tell us something about Lincoln's elderly population. Table 3.4 above shows that programs with the highest level of participation include fitness/exercise, recreation/socialization, and community education. Other programs with lower participation figures such as health clinics, health benefits counseling, and tax assistance are seeing increases in attendance as the COA's capacity allows. At the same time, care management and other social services have served many more people as residents' in-home care needs become more complex, requiring greater follow-up. The COA added a full-time social worker in 2008. In addition, requests to the Lincoln Emergency Assistance Fund, which provides one-time emergency financial assistance to residents of all ages and is administered by the COA, have increased. While many seniors are generally able to meet their basic needs and use the COA for life enrichment, an increasing number are turning to the COA for assistance.

Comparing Lincoln with other communities is one way of trying to understand and interpret the significance of the data. As shown in Tables 3.1, 3.2 and 3.3, Lincoln's demographic statistics are generally similar to those of comparable communities, indicating that Lincoln may not have

[8] Massachusetts Department of Revenue, Municipal Databank, "Fiscal Year 2010 Average Single Family Tax Bill," <www.mass.gov/dor>.

[9] Lincoln Board of Assessors.

unique or unusual levels of need. However, by periodically monitoring how Lincoln compares to other communities, we may observe data fluctuations that indicate people's changing needs.

Collecting data for use as benchmarks allows people to measure progress toward goals. For example, if the town initiates an outreach effort to encourage elderly households to participate in the property tax assistance programs, we can compare future levels of participation against current levels to determine the effectiveness of the outreach program. Of course, there are other factors that will determine whether people participate, but to an extent, we can control for these.

III.A.3. Data Collection & Evaluation

Determining what data to collect and how often to collect it depends, in part, on the data sources that are available. As noted above, Lincoln already collects information on participation in COA programs, use of property tax assistance programs, and emergency calls. The town should continue collecting this data, but may want to consider other opportunities as needed. Lincoln's *Comprehensive Long Range Plan* (September 2009) recommends that the town "[c]onduct a regular survey process (such as every three years) to determine needs, desires, and priorities for municipal services … "[10] This survey presents a real opportunity to collect primary data from residents.

QUESTION: Do elderly households have housing needs?

Indicators	Benchmarks	Data resources
– Cost-burdened households – Median household income – Average single-family tax bill – Participation in property tax assistance programs – Inquiries at COA regarding housing	– Compare percent cost-burdened households against similar communities and over time – Compare participation rates in property tax assistance programs against similar communities and over time	– American Community Survey – Decennial census – Department of Revenue – Town Assessor – Council on Aging – Periodic resident survey

QUESTION: What other needs do elderly people have?

Indicators	Benchmarks	Data resources
– Persons living in poverty (or with incomes below a certain threshold) – Number of home-delivered meals – Number of requests for COA transportation services – Number & types of emergency calls	– Track participation and demand for senior center programs over time – Monitor number & type of emergency calls over time	– American Community Survey – Decennial census – Council on Aging – Periodic resident survey – Police/Fire logs

QUESTION: Is Lincoln effective in meeting the needs of its elderly residents?

Indicator	Benchmark	Data resources

[10] Town of Lincoln, Town of Lincoln, Massachusetts, *Comprehensive Long Range Plan* (September 22, 2009), 292.

NA	NA	– Periodic resident survey – COA program evaluation

III.B. Pressures on Children and Teens

There is ample evidence that children and teens face challenges and pressures today unlike those of the past. While some issues like teenage drinking, promiscuity and drug use have been around for a while, the rates at which teens indulge in these behaviors have increased. Teens experience academic and social pressures and face expectations of achievement which ass to their stress levels. High levels of stress correlate with risky behavior.[11]

III.B.1. Data Sources & Statistics

It is no secret that children and teens are constantly experiencing pressures and challenges during pre-adolescence and adolescence. The most readily available data comes from behavior surveys conducted in schools, both locally and statewide.

Adolescent Survey Topics

Basic demographics
Helmet & seatbelt use
Weapons & violence
Suicide
Tobacco use
Alcohol use
Marijuana
Other drug use
Sexual behavior
Body weight
Stress management
Food
Physical activity

Lincoln conducted an Adolescent Behavior Survey in 1999 and 2002. All grade 6, 7, and 8 students at both the Lincoln and Hanscom Middle Schools participated in the survey. This survey, based on a survey developed by the Centers for Disease Control, asks questions about a variety of behaviors that may affect a child's health.

The results from this survey are separated into responses from students at Hanscom Middle School and those at Lincoln Middle School. Results show that in many areas, students at Hanscom have similar behavior as students in Lincoln. For the purpose of this discussion, the data below pertains to students at Lincoln Middle School only.

The 2002 Adolescent Behavior Survey covers students between the ages of 11 and 15 years and most students surveyed were either 12 or 13 years old. Roughly half the responses were from boys and half from girls. Most of the students generally receive As and Bs on their report cards. Notable results from the survey include:

- More than 10 percent of students rode in a vehicle with someone who had been drinking alcohol.
- Almost nobody carried a weapon of any type to school.
- Thirty-five percent of students were involved in a physical fight outside of school.

[11] MetroWest Adolescent Health Survey Results, Lincoln-Sudbury Regional High School, summary presentation (October 8, 2009), 35.

- Nine percent of students have seriously contemplated suicide; 6 percent have made plans about how they would attempt suicide, and 2 percent made an actual suicide attempt.
- Eighteen percent of students have smoked tobacco.
- About one-third of students have had an alcoholic drink.
- Seven percent of students have used marijuana; other drug use, including abuse of prescription medicines, is limited.
- Seven percent of students have had sexual intercourse.
- Twenty-three percent of students classify themselves as overweight; 30 percent are attempting to lose weight by dieting.
- Almost 40 percent of students describe their lives as stressful.[12]

In 2008, the MetroWest Adolescent Health Survey (MWAHS) was administered at Lincoln-Sudbury Regional High School (LS). [13]The MWAHS covers the same topics as the 2002 Adolescent Behavior Survey conducted at the middle schools. The survey was administered to 93 percent of the student body (1,520 students) and the results do not distinguish students from Lincoln (13 percent of the student body or 198 students) and those from Sudbury. Therefore, we cannot draw firm conclusions about the behavior of Lincoln's students alone. Notable results from the MWAHS follow:

- Under 30 percent of students have used tobacco in their lifetime.
- Sixty-three percent of students (946) have used alcohol in their lifetime; 27 percent have been "drunk."
- Thirty-four percent of students have ridden in a vehicle with a driver under 21 who had been drinking; 32 percent of students have driven after consuming alcohol.
- Thirty-three percent of students (493) have used marijuana in their lifetime.
- Forty percent have ridden in a vehicle with a driver under 21 who had been smoking marijuana; 28 percent of students have driven after smoking marijuana.
- Almost 10 percent of students have abused prescription drugs. Students have used other drugs such as cocaine and ecstasy.
- As students get older, bullying becomes less of a problem. However, in ninth grade, 34 percent of students were victims of bullying.
- One-third of male students were involved in a physical fight outside of school.
- Four percent of students have carried a weapon to school with them.

[12] Lincoln Adolescent Behavior Survey, Final Report, 2002.

[13] Hanscom high school students attend the Bedford High School and are not included in this LS survey.

- Thirty-four percent of students report that life is very stressful; 68 percent worry about school issues.
- By the time students reach twelfth grade, half of them have had sexual intercourse.[14]

In general, the MWAHS survey results mirror those of the MetroWest region. However, school staff is concerned that students drink more than their MetroWest counterparts before or after a school event and that they also have greater access to alcohol and drugs.

Another source of information for vulnerable teens is the Lincoln Police and Fire Departments. These departments track all of emergency calls and log them into a database. Between 2004 and the first half of 2010, the Lincoln Fire Department responded to three calls involving an adolescent child suffering from an overdose or poisoning.[15] The Police Department reports 262 juvenile crime incidents since 2002.[16]

In addition, a committee member held focus groups with two groups of middle school students. The first group was comprised of fifteen fifth and sixth graders and the second included twelve seventh and eighth graders. Based on student responses, Lincoln youth appear to know instinctively what needed to be explained to many adults – that individual and community "health" encompass mental, social, and spiritual wellness, not just physical wellness. For example, students identified the following traits as contributing to one's health: being optimistic, flexible, reflective, calm, and nice to others. Additionally, participating on teams, engaging in community service, and being social were noted. A summary of this discussion is located in Appendix D.

III.B.2. Data Indicators & Benchmarks

While some of the statistics above are concerning on their own merits, Lincoln can draw comparisons between its own survey results and those of comparable towns, the MetroWest area, and the state. By comparing local survey results, the Town can determine whether its teens suffer from unique problems or problems common to teens elsewhere. In the case of the MWAHS, most of the statistics generated from responses from the Lincoln-Sudbury Regional High School student body are comparable to responses from students in the larger MetroWest region. However, as mentioned above, some differences stand out.

III.B.3. Data Collection & Evaluation

As Lincoln looks to implement this CHAPP action plan and address the needs of its vulnerable teens, it will be important to track changes to existing behaviors and the development of new risky behavior. While there are mechanisms to conduct periodic school-based surveys, Lincoln may want to consider other ways to collect information on children and teens. When possible, building on existing methods of data collection is efficient and recommended. In addition, Lincoln should look for ways to augment the ability to use existing data by organizing it differently. For example, in the case of the regional high school, staff already conduct a thorough

[14] MetroWest Adolescent Health Survey Results.

[15] Lincoln Fire Department.

[16] Lincoln Police Department, "Incident Types," report generated on June 15, 2010.

survey, but do not have the capability to separate out data specific to Lincoln students. A minor modification to how this survey is conducted may allow data to be segregated. For example, staff may code the survey forms with an "L" or "S" according to the student's residence.

QUESTION: What is the degree of risky behavior among Lincoln's teens?

Indicator	Benchmarks	Data resources
– Multiple indicators in adolescent behavior surveys	– Compare against figures for comparable towns, MetroWest region, and the state – Compare figures over time	– Adolescent Behavior Survey – MetroWest Adolescent Health Survey – Mass. Youth Risk Survey

III.C. Tick-borne Diseases

The prevalence of tick-borne disease in Lincoln is a concern for the town and its residents. Lincoln's rural landscape provides an environment in which ticks thrive, and controlling exposure is difficult.

III.C.1. Data Sources & Statistics

People have become increasingly aware of tick-borne diseases in recent years. The public health nurse has reported cases of Lyme, babesiosis, anaplasmosis, and Rocky Mountain spotted fever in Lincoln. According to data collected by the Massachusetts DPH, while the number of cases declined last year, Lincoln has led the area in the number of confirmed cases since 2005.

Table 3.6 details the incident rates in Lincoln and comparable towns since 2005. These figures do not represent the number of cases, but rather the incidence of disease per 100,000 population. In absolute terms, Lincoln reached a high of 18 cases in 2008, but dropped to seven in 2009.

Table 3.6
Lyme Disease Incident Rates (per 100,000 population)

	2005	2006	2007	2008	2009
LINCOLN*	165	204	204	229	89**
Weston	146	121	155	207	129
Concord	113	107	143	137	131
Sudbury	41	147	141	147	88
Wayland	85	124	116	116	132
Bedford	121	169	145	80	105
Acton	103	63	195	156	73
Lexington	23	46	46	53	43
Massachusetts	39	39	53	62	63
Middlesex County	31	35	45	50	43

Source: Massachusetts DPH, Bureau of Infectious Disease Prevention, Response and Services, Office of Integrated Surveillance and Informatics Services (Lyme incident rates by Town, April 22, 2010).
*Includes HAFB ** partial year data due to data collection process change

III.C.2. Data Indicators & Benchmarks

Data indicators for tick-borne diseases are determined by the incidences of Lyme and other diseases each year. This data is tracked annually by the Lincoln public health nurse and the Massachusetts DPH. As indicated above, Lincoln can compare its incidence rates with those of other communities over time in order to measure progress in meeting its goals to reduce the prevalence of these diseases.

III.C.3. Data Collection & Evaluation

Lincoln should continue to collect data via the town's public health nurse and the Massachusetts DPH on a regular basis. In addition, the town should include questions about this topic in its periodic survey of residents. It is important to know how residents control for ticks to devise a plan for education and outreach. The town can use this survey tool to gauge local receptivity to tick control measures such as the introduction of Guinea Fowl (see recommendations).

QUESTION: Are tick-borne diseases a continuing problem in Lincoln?

Indicator	Benchmark	Data resources
– Incidence rate of diseases	– Compare data over time and against data from comparable communities	– Lincoln public health nurse – Massachusetts DPH

QUESTION: How do people control exposure to ticks?

Indicator	Benchmark	Data resource
NA	NA	– Periodic resident survey

III.D. Use and Condition of Roadside Paths, Safety of Bicyclists & Motorists on Roads

Lincoln is fortunate to have scenic roads and roadside paths that draw pedestrians, bicyclists and motorists, including many from outside communities. However, this multi-modal traffic presents challenges. Safety is of prime concern, and the condition of roadside paths and roadways correlates with the safety of the user. While Lincoln has successfully completed phase I of its 2009 Road Maintenance and Paving Plan and is beginning phase II, a *roadside path* maintenance plan, with funding for implementation, would lead to safer conditions and more use of the paths.

III.D.1. Data Sources & Statistics

Lincoln must rely on its own internal data to assess use and condition of its infrastructure. The Lincoln Police and Fire Departments collect information in their emergency call logs that detail motor vehicle accidents and accidents involving bicycles. However, there is no easy way to retrieve information about incidents on roadside paths; one would need to open each call record and review it.

According to the Lincoln Police, there have been over 2,000 motor vehicle accidents since 2002 in Lincoln. These accidents do not include incidents on Route 2, as

Table 3.7
Emergency Response in Lincoln

Year	Bicycle Accidents
2004	7
2005	1
2006	6
2007	1
2008	6
2009	3

Source: Lincoln Fire Department.

they are covered by the State Police. The Fire Department identifies call responses to bicycle accidents, and Table 3.7 details emergency calls since 2004. These figures are easy to generate and can be organized by age and time period to track the number of incidents over time.

III.D.2. Data Indicators & Benchmarks

The analysis of data on motor vehicle accidents and bicycles can direct us to unsafe conditions due to a difficult intersection or unfavorable road conditions. However, this information alone is difficult to use as a data indicator. There are several factors involved in vehicle accidents including the health of the vehicle operator, time of day, and weather. Given the factors involved, it is also difficult to establish benchmarks for comparison across geographies or time.

Currently there is no data available for usage of roadside paths. However, when middle school students were asked if they rode bikes, where, and whether they felt safe riding, their responses were notable – "yes, but the sidewalks are really rough; the road is smoother," "roadside paths are scary [and] very hard to bike on." While the paths are not designed for high-speed cycling, they are intended as a safe place for children to ride bicycles. Anecdotal evidence suggests that the condition of the paths may be causing some youth to ride on the roads. Lincoln may consider collecting primary data on its roadside paths through its planned survey of residents, including youth.

III.D.3. Data Collection & Evaluation

As mentioned above, currently the police and fire departments collect data on motor vehicle and bicycle accidents. In the future, the town may want to review how it could use this data to address public health issues that go beyond accident response. For example, how can we cull out data regarding safety on the roadside paths? What else do we want to know about safety in Lincoln? The police and fire call database is an invaluable resource that may be very useful to the town in assessing public health needs beyond vehicle accidents.

IV. Recommended Priority Areas for Action

Build capacity using local assets and resources

Starting from existing community strengths and successes and investing in the enhancement of a community's "civic infrastructure." (HCP no.7)

Any actions that the Town of Lincoln or its residents take to make Lincoln a healthier place in which to live will be rooted in the town's existing community health assets, of which there are many. Lincoln's first and most important asset is its people – both its residents and the employees who work for the town. Like many communities, Lincoln has asked "What can we do better, where do we have needs, and especially, what do our most vulnerable residents need"?

Following are several recommendations, both general and specific, for the town to consider as it continues to explore ways to promote a healthy community. These recommendations include

means to institute a healthy community infrastructure, ways to continue the discussion started by the steering committee, and specific methods to address known issues.

IV.A. Healthy Community Committee Actions

1. Amend the *Comprehensive Long Range Plan* .

Incorporate Community Health needs and issues into the Community Services & Facilities (SF) element. Also, include roadside paths in recommendation SF-2 as part of Lincoln's infrastructure that needs to be maintained. Implementing these recommendations will require the Planning Board to amend the *Comprehensive Long Range Plan* by incorporating the CHAPP by reference.

2. Initiate a community health campaign.

- Create a graphic logo and slogan (work with Boston University AdLab students)
- Refine mission statement and goals
- Implementation steps and actions *(See recommendations below)*
- Evaluation of campaign goals and actions

3. Convene community health roundtables.

Invite town resource people and "problem solvers" to form sub-committees to tackle specific issues (seniors, youth, tick-borne diseases, path and road use/safety). Roundtables can lead to issue specific public forums and actions. See Appendix H, Town Resources for a preliminary list of town resource people.

4. Plan Saturday public forums on specific community health themes and issues.

Examples of possible themes/issues:

Making the Golden Years Golden ~ resources and planning for seniors and their families
Through the Eyes of Our Children ~ pressures, behavior, support
Lincoln Family Life Today ~ It Takes a Town
"Lincoln's Dirty Secret" ~ Lyme Disease prevention
Roadside Paths ~ maintenance priorities and increasing use
Sharing the Road Safely ~ what will it take?

5. Sponsor a series on human-interest stories for the Lincoln Journal or the town website.

Example of a series title: *Lincoln Community Connections*
Goal: Promote stories that exemplify Healthy Community Principles

IV.B. Issue Specific Actions

Note: Please refer to Appendix H when reading this section.

Vulnerable seniors and residents

- Re-convene Elder Care Committee (ECC) to update 2001 Elder Care Report.

- Consider having the Town's emergency services share appropriate information with the COA, within the bounds of confidentiality, for follow-up.
- ECC and COA organize senior roundtables to discuss senior concerns (isolation, socialization, in-home care and services).
- Lincoln Board of Assessors re-evaluate senior property tax programs to see where more relief can be provided for income eligible residents; consider giving seniors with financial need priority status in participating in the Tax Work-Off Program before seniors who do not have a financial need.
- COA identify income eligible seniors and increase referrals to town's real estate tax programs; work to de-stigmatize senior tax deferral program and involve adult children who can support parents in applying for a tax deferral.
- Town address COA facility needs outlined in February 2010 memorandum to Board of Selectmen; improve access to COA facility and programs.
- Town support COA staffing and programming, especially SHINE and other counseling on benefits such as fuel assistance, transportation, and care management services; (*Comprehensive Long Range Plan* Recommendation SF-1.4.1, TC-2.3).
- Build community support for the Lincoln Emergency Assistance Fund (EAF) and the new Lincoln Small Necessities Project to meet financial needs that are not eligible under the EAF.
- Town remove ADA accessibility barriers from town buildings and encourage commercial property owners to do the same (2006 Buildings Needs Assessment by Johnson Engineering & Design, Inc.; 2008 Municipal Buildings Needs Analysis by Michael Rosenfeld, Inc.; *Comprehensive Long Range Plan* , Community Services & Facilities, Key Findings, page 208).
- Town reconsider Nurse's Study recommendation for a dedicated Public Health Nurse, or consider sharing a nurse position with another town such as Concord; Lincoln's COA provides a full-time social worker for residents over the age of sixty (*Comprehensive Long Range Plan* Recommendation SF-1.2).

Pressures on children and teens

- Parents, teens, Lincoln Public School (LPS) appropriate staff and School Health Advisory Council (SHAC), and Healthy Community Committee organize youth roundtables.
- SHAC and appropriate LPS staff review Wellness policy and services, as well as transitional services to high school.
- SHAC recommend to School Committee that Wellness Policy language reflect mental health services provided by LPS.

- LPS conduct a current risk behavior survey for 7th and 8th grade students; the last survey was conducted in 2002.[17] Staff may consider coding the survey forms with an "L" or "S" according to the students residence.
- LPS social worker(s), special education, and other mental health staff have regular contact and collaboration with Sudbury's middle and high school staff:
  - Appropriate LPS staff attend LSRHS faculty department meetings for counselors held three times per year to collaborate on transition to high school, expectations, prevention programs, share information and discuss trends.
  - Organize joint Lincoln – Sudbury assemblies for 8th grade students in preparation for transition to high school; possible topics:

    What to Expect in High school and Make it Worth Your Time (intentionally edgy)
    Alcohol, Drugs, Sex: How to Resist What You Don't Want to Do
    Making Mediation Work for You: How to Talk to Your Peers, Parents & Teachers

  - PTAs organize a joint Lincoln – Sudbury 8th grade graduation event/party.

Tick-borne diseases

- Board of Health, Conservation Commission (Con Com), Healthy Community Committee host roundtables to create a *Tick Management Plan* for Lincoln; collaborate with Concord and other abutting towns; build on Con Com's tick-borne disease prevention materials, etc. (*Comprehensive Long Range Plan* Recommendation NR-3.6, OS-1.6, OS-2.2.2).
- Lincoln should continue to collect data via the Town's public health nurse and the Massachusetts DPH on a regular basis. In addition, the town should include questions about this topic in it's periodic survey of residents. It is important to know how residents control for ticks to devise a plan for education and outreach.. This tool will allow the town to gauge local receptivity to and effectiveness of tick control measures, such as the proposed introduction of Guinea Fowl
- Initiate a *'Check for Ticks'* campaign - increase public awareness, education, and prevention measures including landscape buffers.[18]
- Research Guinea Fowl (also chickens, turkeys, and other birds) as natural predators to ticks, mosquitoes, other insects, and snakes.[19]

[17] Inquire about the Metro-west Adolescent Behavioral Survey for middle school students funded through the Metro-west Community Health Care Foundation <http://www.mchcf.org>. Lincoln-Sudbury Regional High School uses this survey instrument which is a free version of the Youth Risk Behavior Survey.

[18] Ticks thrive in moist, humid environments found in deep woods, under vegetation cover or near decomposing plant materials, which create micro-climates that sustain ticks. Reducing moist environments around athletic fields and yards by strategically creating buffer zones with wood chips and gravel can help keep ticks at bay. See recommendations at <http://www.bada-uk.org/defence/control/domestic/domesticenvironment.php>.

- Talk to Lincoln residents and/or towns that have used Guinea Fowl to control tick populations (Dover-Sherborn, Berlin, Belchertown, Martha's Vineyard, Nantucket, and Long Island Sound towns such as the Hamptons, New York).
- Work with residents who are interested in raising free-range Guinea Fowl and/or other tick-eating birds in their yards (fowl need to be fed and sheltered at night).

Table 4.1
Lincoln Farm Birds

	2001	2002	2003	2004	2005	2006	2007	2008
Chickens	515	805	790	856	827	676	622	490
Turkeys		22	18	25	15	18	12	15
Waterfowl	9	39	46	54	49	72	54	60
Game birds		21	11	10	11	0	0	10
Guinea fowl					8	0	4	9

Source: Lincoln Board of Health, Animal Census, 2009

Use and condition of roadside paths, safety of bicyclists and motorists on roads[20]

- Form one roundtable for the roadside path issue and a second for motorist and bicyclist to discuss road concerns.
- Include roadside paths in a Planned Preventive Maintenance program and budget; defer new path creation until existing paths are maintained (Comprehensive Long Range Plan Recommendation SF-2.2).
- Review data collected by the police and fire departments and ascertain how to sue this data to address public health issues that go beyond accident response. For example, how can we cull out data regarding safety on the roadside paths? What else do we wnt to know about safety in Lincoln? Department of Public Works to lead walking assessments of the ten miles of roadside paths with town stakeholders such as Safe Routes to School and Traffic and Roadside Committees; create a prioritized maintenance plan with community input.
- Promote use of roadside paths; connect with WalkBoston for technical support.[21]

[19] Guinea Fowl could be suited to Lincoln's low-density housing, large lawns, and open spaces. Guinea Fowl do not generally inhabit woods but may be found on the edge of woodlands and are considered a "folk defense" against tick populations, though they are no substitute for checking for ticks. They are also thought to be a natural alarm system as they can be quite noisy when they encounter an unfamiliar human or a predator such as a fox or coyote. David Cameron Duffy, "The Effectiveness of Helmeted Guinea Fowl in the Control of the Deer Tick" *Wilson Bulletin* 104, no. 2 (June 1992): 344. <http://www.guineafowl.com/fritsfarm/guineas/ticks/tickstudy.pdf>.

[20] Cyclists using Lincoln roads, especially cycling in "packs," generated the most comments of all the issues on the survey; however, the opinions were mixed.

- Initiate "Share the Road" campaign for motorists and bicyclists;[22] educate on rules, rights and responsibilities of both motorists and bicyclists; investigate Concord and Carlisle's experience (Comprehensive Long Range Plan Recommendation TC-1.1, TC-1.2, TC-1.3, TC-2.1).
  - Contact regional bicyclist groups to collaborate on "Share the Road" campaign and other mutual concerns; involve WalkBoston.
  - Enforce safe driving vis-à-vis bicyclists (road-rage).
  - Encourage single-file bicycle riding with roadside signage.

Public education of available health-related resources

- Create an online directory of health-related resources that providers input and update on their own.

[21] *WalkBoston*, a non-profit membership organization dedicated to improving walking conditions in cities and towns across Massachusetts, with a goal to make walking and pedestrian needs a basic part of transportation discussion. Its mission is to create and preserve safe walking environments that build vital communities. *WalkBoston* promotes walking for transportation, health and recreation through education and advocacy; *WalkBoston* also promotes the national *Safe Routes to School* program, <www.walkboston.org>. Also, Walkable Communities, Inc., <www.walkable.org>.

[22] Resources: The National Center for Bicycling and Walking, <www.bikewalk.org>; Pedestrian and Bicycling Information Center, < www.bicyclinginfo.org>; Active Living Resources Center, <www.activelivingresources.org>.

V. Appendices

A. Healthy Community Principles
B. Stakeholder list
C. Town Department interview matrix
D. Groups/Organizations interview matrix
E. Public Forum summaries
F. *Comprehensive Long Range Plan* alignment
G. Real Estate property tax programs
H. Recommendations matrix

VI. References & Data Sources

Commonwealth of Massachusetts. Department of Public Health. Bureau of Infectious Disease Prevention, Response and Services, Office of Integrated Surveillance and Informatics Services. Lyme incident rates by Town. 22 April 2010.

Commonwealth of Massachusetts. Department of Revenue, Municipal Databank. "Fiscal Year 2010 Average Single Family Tax Bill." <http://www.mass.gov/dor>.

Community Opportunities Group, Inc. *Town of Lincoln Comprehensive Long Range Plan* . September 2009.

Duffy, David Cameron. "The Effectiveness of Helmeted Guinea Fowl in the Control of the Deer Tick" *Wilson Bulletin* 104, no. 2. (June 1992): 342-345.<http://www.guineafowl.com/fritsfarm/guineas/ticks/tickstudy.pdf>.

Lincoln Adolescent Behavior Survey, Final Report, 2002.

Lincoln Board of Assessors. Real Estate Tax Programs and participation rates FY2005 – 2010.

Lincoln Board of Health. Animal Census. 2001-2008.

Lincoln Board of Council on Aging. "Memorandum to the Board of Selectman." 12 February 2010.

Lincoln Fire Department. "Patients per Age Group by Gender: Alarm Date between 1/1/2004 and 5/31/2010." 10 June 2010.

Lincoln Police Department. "Incident Types." (report generated on 15 June 2010).

MetroWest Adolescent Health Survey Results, Lincoln-Sudbury Regional High School, summary presentation. 8 October 2009.

U.S. Bureau of the Census. Census 2000 Summary File 3. Detailed Tables. *American Fact Finder.* <http://www.factfinder.census.gov>.