

Metro North
Regional
Employment
Board

Perspectives on Vulnerability:

A Profile of Vulnerable Youth

in the Metro North Region

A strategic plan for youth development

Web/Electronic Version with Color

METRO NORTH P-21

The Metro North Regional Employment Board (REB) serves as the Workforce Investment Board for the Metro North region of Massachusetts. Workforce Investment Boards are federally mandated to provide oversight of local workforce development services, and are authorized under the Workforce Investment Act of 1998. The REB is one of 16 such boards in Massachusetts. The Metro North region consists of 20 communities north of Boston: Arlington, Belmont, Burlington, Cambridge, Chelsea, Everett, Malden, Medford, Melrose, North Reading, Reading, Revere, Somerville, Stoneham, Wakefield, Watertown, Wilmington, Winchester, Winthrop, and Woburn.

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Table of Contents

P- 21 STRATEGIC PLAN

Introduction..... 2

Executive Summary..... 4

The P-21 Plan..... 9

The Setting: Urban Splinters..... 9

The Goal: Engage the Disengaged..... 11

Issues Impacting Vulnerable Youth..... 12

What Works: A National Perspective..... 17

*Metro North: Implementing Lessons Learned and Expanding on
Success..... 19*

Strategy # 1: Develop a Forum for Enhanced Regional Coordination.... 20

Strategy # 2: Build on Current Success and Expectations..... 23

Strategy # 3: Link Needs of Youth with Economic Development..... 28

Strategy # 4: Encourage New Models of Learning..... 34

Benchmarks..... 37

Summary and Conclusion..... 39

Introduction..... ii

The P-21 Process ii

Youth in the Metro North Region..... iv

a.Economic Factors: Poverty..... v

b.Language and Culture..... viii

c.Education..... xi

Family Education..... xiii

Dropout Concerns..... xv

<i>School Diversity</i>	<i>xvii</i>
<i>Per Student Expenditures and Population Trends</i>	<i>xix</i>
d.Crime	xxii
e.Health & Safety	xxiv
Conclusion	xxvii
Acknowledgements	6
FOOTNOTES	A
ACKNOWLEDGEMENTS	F

FIGURES: CHARTS, GRAPHS AND MAPS

Figure 1: Population Density, Metro North Region.....	1
Figure 2: Patterns of Engagement.....	17
Figure 3: Logic Model.....	38
Figure 4: Population Under18, Metro North Communities, 2000.....	v
Figure 5: Per Capita Income by Census Tract, Metro North, 2000.....	vi
Figure 6: Child Poverty Rates by Community, Metro North, 2000.....	viii
Figure 7: Non-English Speakers by Census Tract, Metro North, 2000.....	ix
Figure 8: Non-English Speakers – Percent of 5 to 17 Year Olds, Metro North Communities, 2000.....	x
Figure 9: Percent of College Graduates, 25 +, Metro North Communities, 2000.....	xiii
Figure 10: Percent of College Graduates, 25 +, Metro North Census Tracts, 2000.....	xiv
Figure 11: Percent Difference Between 9th v. 12th Grade Public School Enrollments, Metro North.....	xv
Figure 12: Ethnic Ratios, Metro North High Schools, 2004.....	xvii
Figure 13: Per Pupil Expenditures and Increases Over 5 Years, Metro North Public School Districts.....	xix
Figure 14: Per Pupil Expenditures, Metro North Public School Districts, 2003-2004.....	xx
Figure 15: Changes in Student Population, Metro North Public School Districts, 1999-2004.....	xxi
Figure 16: Percentage Increase in Per Pupil Expenditure Cost, Metro North School Districts.....	xxii
Figure 17: Violent Crime per 100,000, Metro North Communities, 2000.....	xxiii
Figure 18: Needle Use per 100,000, Metro North Communities, 2004.....	xxiv
Figure 19: Substance Abuse Hospital Admissions per 100,000, Metro North Communities, 2004.....	xxv
Figure 20: Percentage of Births by Women Under 20 years Old, Metro North Communities, 2000.....	xxvi

Figure 21: Teenage Birthrates, Metro North Communities in Top 25 Statewide
..... **xxvi**

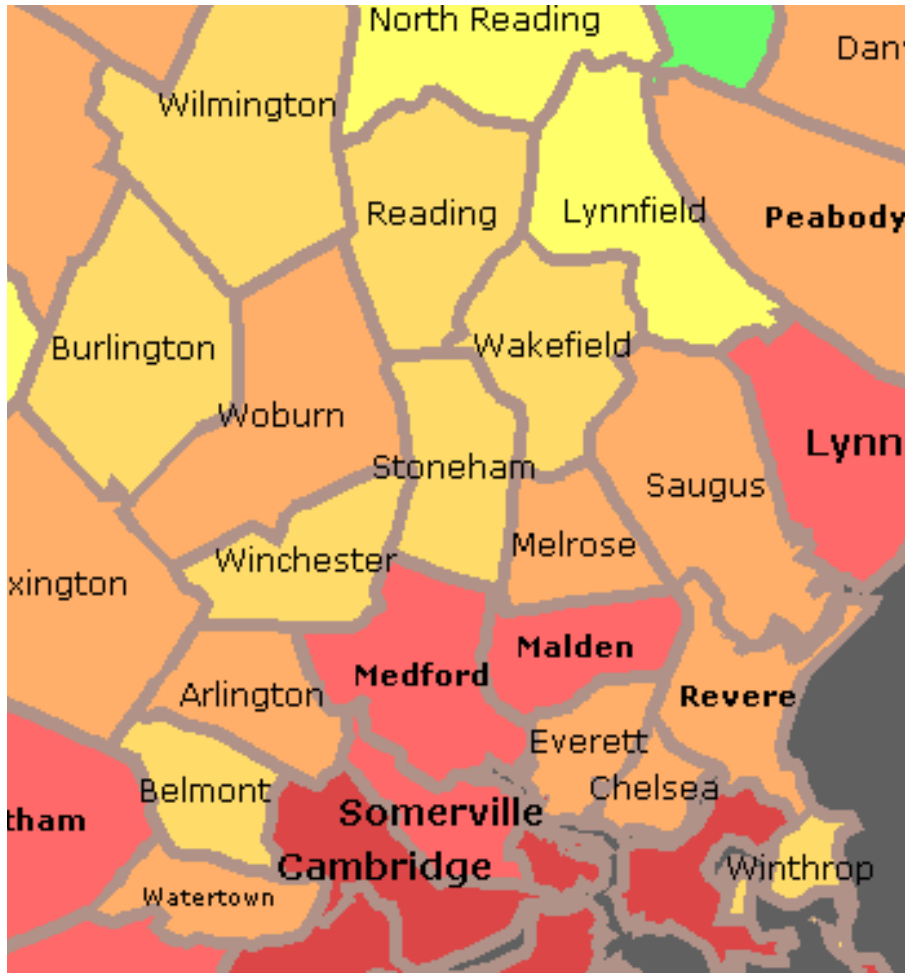


Figure 1: Population Density, Metro North Region
Population Density per Square Mile, By Community, Metro North Region
 Red: over 5,000; Orange, 1,000-5,000; Yellow, 500 to 1,000; Green, under 500

Source: MassStats- www.massstats.com¹

Introduction

Over the last few years, the Commonwealth of Massachusetts has increasingly recognized that it is "losing" a significant number of its young people. There are too many young people, aged 16-24, who are out-of-school, without diplomas, unemployed, or without the necessary skills to access good careers and to become productive citizens. In an effort to address this issue, in 2004 the Commonwealth of Massachusetts initiated Pathways to Success by 21 (P-21). Through P-21, the Commonwealth Corporation made \$20,000 strategic planning grants available to local workforce areas. The Metro North Regional Employment Board received these funds in early 2005, and over the course of the next nine months undertook an extensive examination of the issues regarding vulnerable youth within its twenty communities. This work was guided by the Metro North P-21 Steering Committee, which consisted of individuals representing a cross-section of youth-serving programs and constituencies.

Under P-21, we analyzed a broad range of quantitative and qualitative data, held discussions with a wide range of key stakeholders, and developed key regional strategies and goals to address the needs of youth at-risk. The end result is this plan, which summarizes the information gathered through this process, and in turn proposes a number of bold initiatives for addressing the needs of vulnerable youth.

With the issuance of this report, our intent is to stimulate program development and engage a wide range of audiences including policy-makers, youth agencies, government officials, politicians, educators and others – in particular young people themselves and their parents. We hope that this report will be a resource to the Metro North region, and influence the planning that impacts youth. In addition, we would like to see this report catalyze broader concern that:

- The number and vulnerability of young people are very significant in the Metro North region, with major impact on the youth themselves, their immediate communities, and the region as a whole;
- The existing network of services is not enough in either number or variety, and other than the need for substantial growth in some of those services, the region requires bold and innovative strategies, rather than simply "more of the same";
- Engaging disengaged young people in school requires that the schools themselves engage community and other resources, and that schools and community programs vary their offerings to respond to the learning styles and knowledge needs of more of today's students;
- The region must attract and then generate new resources targeting core issues of at-risk youth.

This report is organized in three sections:

- An *Executive Summary*, which outlines the overall process, findings, and strategic plan that resulted from this work
- *The P-21 Plan*, which expands on the Executive Summary, and details the strategic plan for responding to the needs of vulnerable youth.
- A *P-21 Report Supplement*, which provides more detailed data analysis and back-up information for this report. This section should be of particular interest to planners in cities and towns, community organizations, policymakers, and others who are looking for comprehensive sources on the needs of vulnerable youth in Metro North.

All sections of this report will be available on the Metro North Regional Employment Board website (www.mnreb.org). Additional maps and data sources will also be available on the site, including color charts and maps which graphically display an array of data. It is our hope that resources can be identified to maintain and update this web-based resource over time, so it will be dynamic in nature and can continue to meet the needs of the region over the long-term.

Our thanks to all who contributed to the development of this report. Many individuals were incredibly generous with their time and spent countless hours sharing ideas and information that have added vastly to the richness of this effort.

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Note: This version of the report was designed for electronic distribution and posting on the worldwide web. It includes all text and figures that are in the printed and bound black and white version distributed by the Metro North Regional Employment Board. In this web version, some of the maps and charts are in color, for easier analysis. The supplement section of this web version also contains additional colored maps to further illustrate the data discussed.

"Do not follow where the path may lead. Go instead where there is no path and leave a trail."
– George Bernard Shaw

Executive Summary

Society's strength is measured by how it prepares its young. Most young people in Massachusetts are reasonably prepared for economic self-sufficiency and can make positive contributions to their community. But many are not. As one young member of a focus group suggested, "When I told them I was in Voc, they said I wouldn't go to college. I know I'm going to college. I know where. I know why. I know how I'll pay for it. They should stop lying." Too many hear the lie and not the promise. Too many are out-of-school, without diplomas, unemployed, and lack necessary skills to access good careers and become productive citizens. Too many have had schools fail them, and too many have been closed too soon to the kind of opportunities their schools are intended to offer. They face lives on the economic fringes characterized by unfulfilled potential.

Vulnerable Youth: The Costs

The impact of that future on individuals is profound, and on communities catastrophic. In significant numbers, such an impact in itself should be a "call for action." In the Metro North region of Massachusetts, several communities have major concentrations of these young. ***Preventing their increase is the goal, and those most likely to join them are our target.***

As an indicator of the scope of this issue, from 2000 to 2004 the entering senior classes of Metro North public high schools were on average 17% smaller than the 9th grade classes four years earlier. While there are a variety of factors that may account for this difference, given that the population growth in the region has been largely flat, there is little doubt this is a clear indicator of a major dropout problem. The cost of over 1,000 of the region's ninth graders annually not progressing to the twelfth grade is – to both the individual and society – very great indeed. In some of the region's schools this represents an opportunity cost to the district of up to ***\$8,000 per student per year*** in uncollected and uncollectible state and federal reimbursements for up to six years, since many of these students could remain enrolled to age 21. In gross terms, within three years it represents at least ***\$10,000,000 a year*** lost to this region's economy in Pell Grants alone, the minimum transfer payment to eligible students. In longer term impact, it represents nearly ***\$1,000,000 per student*** in the difference between non-diploma and four year college degree holder projected lifetime earnings. To their community, the costs of lost student years represents higher risks of crimes of violence and crimes against property, as well as continued and seriously eroding economic property: depressed housing, commercial, and industrial real estate, taxes, and services.² Henry Levin, a professor of economics and education at Teachers College of Columbia

University, has estimated that a “one-year increase in average years of schooling for dropouts would reduce murder and assault by almost 30%, motor vehicle theft by 20%, arson by 13% and burglary and larceny by about 6%.”³ The costs of this issue in Metro North in terms of impact on individual lives and the region as a whole are too great to ignore.

The P-21 Process

In identifying the goal and target, we began first with the demographics of the region, the diversity of its cities and towns, and the barriers young people face from home to school to work and to college. We quickly identified those who had already fallen through some of the cracks in the system. Whether dropout or bouncing back and forth, some of those lost from grade 8 through at least grade 12 or, even more, grade 14 – are the most vulnerable. We also obtained a rich array of qualitative data through formal and informal focus groups and interviews with young people, professionals, and local community leaders. And then we sought to identify best practices from local programs and national literature to reduce the odds against dropping out and remedy its most immediate and grievous impact. Those practices, largely preventive, are reflected in the goals derived in this study. The target individuals - mostly in the key vulnerable communities identified, and often at risk within or outside school of leaving education before they acquire adequate skills to succeed in work – should get the most benefit from meeting these goals.

We also reviewed the indicators offered by the Commonwealth Corporation to the region as part of the P-21 initiative. Having looked at school, income, regional housing, transportation, language, and other data, we felt these factors seemed much more compelling than the statewide indicators provided suggest, particularly and specifically in this region. First, there are an unusually high number of college students here, enrolled and non-enrolled, full and part time. This high number of college students tends to distort the data for 16 to 24 year old residents. Second, there is a significant “underground economy” in any community with high ratios of immigrants, many of whom are or may be undocumented. In Boston, for the 2000 census, there was an unusually effective outreach effort to include as many residents, regardless of their legal status, in the decennial count. There was much less effort in the Metro North region, leaving both an undercount and an un-reported economy which are not reflected in the state data.

In examining this wide array of qualitative and quantitative data, there were two major findings:

- The “official” dropout rate is masking a major crisis in regards to young people leaving school without a high school diploma. As noted earlier, the fact that there are approximately 17% more ninth graders in the public schools of Metro North than in twelfth grade indicates a major drop-out problem. However, school districts have typically measured the dropout rate in ways

that are inconsistent and, whether intentional or not, in ways that have minimized the scope of this issue. For example, many school districts only count students who officially un-enroll rather than those who just stop showing up; others report only the percentage of seniors who drop out. By 2007, Massachusetts school districts will be required to report their graduation and dropout rates using a measure which more accurately reflects the scope of the issue. This is part of a national effort to get all states to use the same consistent measure. As a result, the dropout crisis is a brewing issue that will soon be reaching the boiling point. This problem is particularly acute in Chelsea, where the 2004-2005 twelfth grade class was 60% smaller than the 2001-2002 ninth grade class, continuing a consistent trend over several years. Somerville and Revere are also of particular concern, averaging over a 30% reduction in class size from ninth to twelfth grade. (See Figure 11 in the P-21 Report Supplement for specific percentages by district.)

- Out of the 20 communities in Metro North, seven contain high concentrations of vulnerable youth: Cambridge, Chelsea, Everett, Malden, Revere, Somerville, and Winthrop. The neighborhoods where these vulnerable young people reside are largely characterized by intense poverty, large percentages of first and second generation immigrant populations, and a wide array of socio-economic challenges, ranging from crime, to substance abuse, to substandard housing. The lives of these young people are also characterized by limited expectations: from their schools, from their families, from their community, and from their peers.

The P-21 Plan

As a result of these findings, our principal insight is that, at all costs, ***young people must remain engaged in school and education – and when they disengage they must be re-engaged.*** This seems obvious except that the P-21 initiative implied we might address workforce issues independent of the schools. In the 2003-2004 school year, the 20 school districts of Metro North spent \$763 million, or an average of \$9,000 per student. The state and each one of the Metro North communities invest far more social and economic capital in their schools than in other youth services. When young people leave or think of leaving school is the most critical moment for the youth, for the school system, and for the community. Any P-21 effort must address that moment specifically, concretely, and with enough flexibility, adaptability, and intelligence to redress the vulnerabilities of those young people. While some community options address some of those needs for career and vocational skills, most of our suggestions are preventive, focusing on how schools can be more effective and how community agencies can maximize that effect. This plan consists of four strategies, each with several objectives described below.

- 1. Develop a forum for enhanced regional coordination through creation of a Regional Youth Coordinating Committee within the Metro North Youth Council to undertake the following:**
 - a. Identification, sharing, and incorporation of best practices from both within and outside the region.
 - b. Development of a mechanism for training, staff development and peer support.
 - c. Development and coordination of the various P-21 initiatives as they are implemented across the region.
 - d. Provision of a mechanism for enhanced linkages of community and public agencies, resulting in stronger coordination of services, with potential for organic evolution of informal and formal collaboration over time.

- 2. Build on current success and expectations within Metro North**
 - a. Expand success in vocational education to ensure that vocational education is more widely recognized as a viable option, which includes linkages to post-secondary education.
 - b. Develop and extend entrepreneurship options for vulnerable youth.
 - c. Promote the adoption and expansion of comprehensive career education for young people.
 - d. Expand the U.S. Department of Education funded Talent Search program to Metro North, to enhance the ability of nontraditional high school students to access postsecondary preparation, tutoring, financial aid and placement counseling.
 - e. Within the REB's youth programming, incorporate innovations and best practices as they are identified.

- 3. Link the needs of vulnerable youth with economic development initiatives within the region**
 - a. Obtain funding for a pilot project to leverage the economic development activities in Metro North (e.g., MBTA expansion, NorthPoint) to provide education, training and employment opportunities which maintain the engagement of vulnerable youth.
 - b. Incorporate linkages with economic development within schools and community organizations in Metro North.
 - c. Utilize resources of area colleges and universities for support in linkages with economic development.

- 4. Encourage adoption of new models of learning within schools in Metro North**
 - a. Pursue development of Early College High Schools in Metro North
 - b. Monitor utilization of Problem-Based Learning at Phoenix Charter Academy and encourage successful innovations within other schools in the region.

- c. Encourage development of additional regional demonstrations of new models of learning.

Morally and economically we cannot simply “write off” significant segments of our population, including young people at-risk, because their needs are considered too difficult or too challenging. It does neither the youth nor our larger society any good to quote nostrums that their circumstances reflect their own failure of personal will or self-discipline: finding fault is a fallacy too expensive for us all. Despite our society’s inclination towards finding the “quick fix”, there are no simple causes, and there are no simple solutions. As Dr. Claire McCarthy of the Martha Eliot Health Center has noted “Solutions to poverty are going to need to be as complicated as everything that causes it.” We hope with this report to blueprint and clarify at least some of the complicated solutions needed to ensure that all young people in the Metro North region have the opportunity to live full and productive lives.

The P-21 Plan

The case for critical services reflects the location, the targets, and the process of engaging or re-engaging vulnerable teens to schools and colleges. It underscores the need for more services in what appears to be a rich but, in truth, is quite a poor region, while incorporating new initiatives, and transporting key instructional innovations from other regions and settings. That case is, like any region, idiosyncratic, with unique features of history, culture, and migration. It frames special problems faced by the most disengaged young people, and suggests a specific range of interventions – some old, some new, yet all tested and productive – that have proven useful in engaging youth in education and workforce preparation.

The Setting: Urban Splinters

Metro North consists of some intensely urban centers, housing most of those at risk, on the edge of a largely suburban sprawl. There are few demographics in common across communities. As long as a freshman in Stoneham, Belmont or Reading is more than twice as likely to finish high school as his/her cousin in Medford, nearly four times as likely as a peer in Malden, nearly six times more likely than a cousin in Revere, and almost nine times more likely than a football opponent in Chelsea, these cities and towns simply **do not compare**. While there are some pockets of need in other locations, there is a real, identifiable, and treatable concentration of a whole complex of problems in seven of the twenty Metro North communities: Cambridge, Chelsea, Everett, Malden, Revere, Somerville, and Winthrop.⁴

One of the major regional challenges of Metro North is the “shadow” of Boston across the river. Of the sixteen workforce investment areas in Massachusetts, it is the only region with several communities that are like Boston in urban characteristics and demographics. Funding agencies presume that any resources dedicated to Boston will by inference impact the surrounding communities. In many cases, however, the opposite is true. Funding provided to organizations and programs within the city of Boston rarely impacts outside the city without some deliberate and intentional effort. Additionally, as the largest city in Massachusetts, there is a perception that the needs within Boston often outweigh those of any other municipality, and therefore the city deserves more of the available resources. While there are certainly instances where this is the case, in terms of population there is markedly little difference between Boston and Metro North. In 2004, there were 26,371 students enrolled in the 23 public high schools in Metro North, compared to the 18,509 enrolled in the 39 public high schools in Boston. Yet the differences in resources are very significant. For example, for FY 2006, Boston received \$1.8 million in Connecting Activities School-to-Career funds from the Massachusetts Department of Education, while Metro North only received

\$147,000. Similarly, for the state's 2005 summer jobs program for at-risk youth, Boston received \$1.4 million, while Metro North received \$75,000. It is tougher to bring attention to needs that are split between 20 different small municipalities rather than one large one, but it does not make these needs any less worthy of attention and resources.

Concentration of Need

This "concentrated need" in seven of the Metro North Communities is associated with poor transportation and poor access to metropolitan jobs or careers with real mobility. These neighborhoods host the intense immigration of linguistically identifiable communities, moving *en masse* from often very dangerous developing countries. In these settings there is more to do to address these immediate needs than even the most accomplished schools, colleges and corporate networks – all of which also exist in this region – can do alone. Before itemizing these risks, however, it is critical to recognize that these same cities have historically housed and addressed these same risks for many cycles of immigrants, for at least the whole of the twentieth century. Italian, Irish and Jewish communities have been succeeded by Latinos, Portuguese, and Haitians. Immigrants come to immigrant cities. And immigrants have some predictable problems in surviving their immigration.

Intense poverty is isolated but impacts host cities and towns often dramatically. These neighborhoods *do* harbor gangs, nurse drug deals, undermine the police, and manage a large underground economy. To understand these pockets of poverty, it is useful to know the physical settings of these cities and towns. For the most part, these are very dense communities, with old housing and little industry. Here, poverty is distinguished by often extremely narrow views of "neighborhood." These are cities where, until well into the 1960's, communities were known by parishes, and parishes were known by the language of their founders – usually European: Polish, Italian, Greek, and Irish. They were constructed in the 1880's, 1890's, and early in the twentieth century as workers' cities, without zoning, with mixed industrial, commercial, and residential construction, an extensive network of trolley lines, on what were a hodge-podge of islands, swamps, and estuaries north of Boston harbor. By the 1940's they had largely lost their public transit connections to the larger metropolis, and their working class residents relied on jobs in local factories or harbor and cartage industries, as staff to universities, health or service businesses. In the 1950's, when greater Boston developed the 128 corridor of technology, these communities were largely skipped and overlooked. When their industrial base moved elsewhere, they were left further behind with a network of marginal service employment. They still contain one of the highest densities of brownfields in the country, and the site of "A Civil Action." Three of these cities – Somerville, Chelsea, and Cambridge – are the three most densely populated cities outside of

Manhattan, at 16,000 to 20,000 people per square mile, nearly twice as dense as Boston across the Charles River.

Just because they don't have tall buildings does not make them any less urban than regions of the Bronx or Brooklyn, and considerably more urban than much of Dorchester and Mattapan. Their residents are tough immigrants and former immigrants, who have known adversity and the disdain of wealthy, often absentee business owners, landlords, and investors, students, faculty and professionals. And they now face serious and pervasive issues of gentrification.

The Goal: Engage the Disengaged

There is much cultural texture and variety to this target group. Their numbers – their demographics – are largely focused in Cambridge, Somerville, Chelsea, Everett, Revere, Winthrop and Malden. For the most part, these cities are densely populated, have traditionally welcomed many immigrants, and have had the worst access to the central city, the most difficult environmental issues, and the least inflated housing stock in the Boston region. The exceptions in this mix, however, underscore how difficult it is to generalize about the problems the target population brings to school/work transitions.

Overwhelmingly, the low income young people in the region are immigrants or children of immigrants. Although, as a recent MassINC study underscores, lack of ability to speak English is a critical barrier to employment, these young people are largely English speaking but second language learners, who are frequently the first bilingual members of their families. That gives them a unique family role, as translators and ambassadors, while it also isolates them from more mainstream routes to mobility. Their role models frequently speak only another language, usually Portuguese, Spanish, or Haitian Creole.⁵

The family invests substantial assets, despite very low income, to develop these ambassadors, and the family usually – particularly in these key cities – has low expectations of postsecondary opportunities. There is an exception to this among the Brazilians of Somerville and Cambridge who have a much higher ratio of college graduates than other immigrant groups and expect greater numbers of their children to attend and succeed in some kind of postsecondary environment. Yet no immigrant group is familiar with the intricacies of higher education finance, and few have the assets required to fund their young people through two or four years of college. This cultural barrier is a critical circumstance mirroring differences in finance, aspiration, and access to long-term stable workforce integration.

Issues Impacting Vulnerable Youth

The critical disincentives to postsecondary and professional development – which merit specific reference in this region – include immigration status, teenage clinical depression, and cultural biases against education. These, in turn, engage local, state, and national mental health, immigration and criminal justice systems, substance abuse and treatment programs and hospitals. While Metro North reflects the general downward trend in teenage pregnancy statewide, teenage birthrates are still a major issue in Chelsea, and also of significant concern in Revere, Everett, and Somerville. Of the seven target communities, juvenile crime is a serious issue Chelsea and Revere, and less so in others. State standardized testing – considered a serious barrier to graduation in many communities elsewhere – is, while very important in several communities, generally an inadequate indicator of school and workforce ineligibility.

Many young people experience violence, if not abuse, at home, either as observers or participants. Many have limited means of emotional expression, and escape through pregnancy, suicide, or substance abuse. Many are quite invisible, and only show up in oblique unobtrusive measures like ratios of seniors to freshmen in high school or percents of seniors, already a self-selected group, moving directly to college. In most of these cities, relatively few actually have direct experience with courts or mandated therapy or counseling. The police and court systems traditionally focus on diversion and community treatment rather than incarceration of first, second and even third time offenders for most status offenses.

Although outside of Cambridge the African American communities are small, many vulnerable teens are vulnerable by class or race, and not by language.⁶ Many may have unidentified special education, mental health, or substance abuse conditions themselves or in their families. While health data – like needle use – denote those communities at highest risk, the intensity of those risks comes out idiosyncratically, like Somerville's health survey that reported 12% of the teens planned suicide in 2004 (itself a drop of 40% from the year before) or Cambridge's five homicides a few years ago.⁷

The quality of urban life is most critical in how it affects the career and long range opportunities of the young. Many of their parents and more affluent neighbors are away during the day, working in the city and out of their immediate community. Many of the most vulnerable young people have never met a professional on their own, know few adults by their first name, and have only small business entrepreneurs as positive career role models. This is not new. As a former Speaker of the House from one of these very cities once put it, in describing the difference between his family and the family of a former Governor, “we were all immigrants, only the ones in Brookline were doctors and the ones in Everett were lucky to get out alive.” Ignoring that tradition compromises even more opportunity than adhering to it.⁸

Limited Role Models

With very few exceptions, successful adults available to act as examples for low-income young people are entrepreneurs, rather than professionals. Most successful adult immigrants of first or second generation have their assets in local business, real estate, and trades. With very few exceptions, they have not moved into any of the high-skilled, high technology, biotech, health, or higher education professions. Therefore, most of the models designed to recruit low-income young people into those fields face a critical barrier of community acceptance. If, as several students cited in focus groups, his/her model for success is a family member, almost without exception that family member owns a restaurant, a shop, a business, or manages a union or industrial service company.

These circumstances both describe and explain the vulnerabilities of this particular target population: most are unfamiliar with globalization, with long range and large scale transitions to the information economy, with the most accessible high pay careers, and with more than superficial explanations of the value of postsecondary education. Many would be first in their families to finish high school, let alone college. As one teen girl explained in a focus group, “My father didn’t finish seventh grade, but he owns three successful businesses. I want to be like him, and know I need to finish high school and ought to do at least the business program at community college to start where he did years ago.”

Teachers, students, community workers all seem to agree on the critical need to engage or re-engage young people in school and education, where most of the resources are available to create careers and fulfilling community roles. Yet the problem for many, particularly for immigrant and low income young people, is that they continue to find school “irrelevant,” with more rules than realization. In spite of many well meaning and occasionally effective interventions, many young people in these target communities bounce in and out of education, seeking engagement but finding only a foil for “oppositional defiance disorder,” “rebellion” or “the streets.”

Current Support Services and Successes

These circumstances highlight the very important contributions of those schools and programs which demonstrate success. In some conditions, success could be explained by distinctive cultural or economic conditions – in Somerville, among Brazilian immigrants, for example, where college is a more accepted stage toward career development, or in Cambridge, where an intensive community investment results in data which indicates strong retention from freshmen to senior year.

For some, the answer is well established community programs like SCALE, the Cambridge Community Learning Center, various branches of Bunker Hill Community College, MY TURN, LARE, or ESL programs at the Massachusetts Alliance for Portuguese Speakers, Concilio Hispano or Centro Latino, and any of the many community initiated and privately managed education and training opportunities in the region. Just A Start's YouthBuild produces and improves housing while making the building trades dramatically more accessible for many teens; Housing Authority initiatives in Woburn and Cambridge result in higher graduation rates and clearer career options. Programs such as ROCA and Choice thru Education result in dramatically higher ratios of high school completion and postsecondary enrollment for pregnant and parenting teens in Chelsea, by linking young people with professionals in real life settings.

What has been lacking, however, is a clear vision about why some initiatives succeed more than others, if we assume that the only way to substantial workforce success is through some kind of postsecondary engagement. They succeed because they expand youths' "geographical reach" as much as feasible, so young people know their larger region and its capacity; they make college a practical, utilitarian and accessible means to achieve real and concrete career goals developed by young people themselves, rather than an abstract "good thing"; and they expand career options beyond entrepreneurship, while not ignoring legitimate entrepreneurial opportunities. These themes reflect and underlie the data collected via the P-21 process, just as they suggest the solutions and pilot initiatives those data support.

The Role of the Metro North REB

Many programs are currently supported with federal Workforce Investment Act (WIA) funding, overseen by the Metro North Regional Employment Board and administered by Employment Resources, Inc. in Cambridge. For FY 2006, Metro North is administering approximately \$1.2 million in WIA youth funds. Most of these funds are made available via a Request for Proposal process on an annual or bi-annual basis to support education and training programs for young people who have left school (70%), with some additional support for programs for young people

still in school (30%). For FY 2006, 12 organizations were awarded WIA youth funds through this RFP process to serve approximately 250 young people. While these funds are substantial in FY 2006, the amount tends to gyrate significantly from year-to-year (due to changes in the federal funding formula), which is most challenging for programs building long-term service strategies and infrastructure. For example, the FY 2006 amount is more than then double the WIA youth funds available to the region just two years ago, and the REB is concerned that the current funding amount is likely to be significantly reduced in the coming years.

In addition to WIA youth funds, the REB also administers Connecting Activities funding for the region. This funding is made available from the Massachusetts Department of Education for school-to-career activities in the region's high schools. As a result of the relatively small amount of this funding (approximately \$150,000 annually for the last few years), the REB has been able to focus its efforts under Connecting Activities in only a few communities (FY 2006 - Medford, Somerville, Everett, and Woburn). Beyond WIA Youth Funds and Connecting Activities, the REB will periodically administer special projects for youth as a result of the awarding of grant funds to the region (e.g., the BEST for Older Youth project in 2003-2004). Finally, each of the One-Stop Career Centers overseen by the REB (The Career Place in Woburn, and Career Source in Cambridge and Everett) has an array services that young people can take advantage of, although most services are geared towards adults.

The Role of Public Agencies

As with all other parts of the Commonwealth, Metro North is served by an array of public agencies, which are either primarily charged with meeting the needs of young people, or who serve youth as a subset of the overall focus. These agencies provide direct services through their staff and/or fund services through a network of service providers. These agencies include among others: DSS - the Department of Social Services [responsible for protecting children from child abuse and neglect], DYS – the Department of Youth Services [providing services to young people convicted of criminal offenses]; DMH - the Department of Mental Health [providing clinical, rehabilitative and supportive services for adolescents with serious mental illness or serious emotional disturbance]; MRC – the Massachusetts Rehabilitation Commission [working with eligible students with disabilities transitioning from high school to training, further education, or employment]; DMR – the Department of Mental Retardation [working with eligible young people and their families to provide ongoing supports and assist with the transition process from high school].

Current Resources: Not Meeting the Demand

The range of programs and services obscures how few slots they may actually provide, and the contrast to nearby Boston, with many more and many larger programs available to young people with similar demographics, is very acute. Across the river, the standard spectrum of alternative education resources is far more diverse, far better funded, with far fewer barriers.

For many, “the old standards” simply do not work. They are eager to be adults, to make money and join a consumer culture. They develop skills on their own that the schools do not or will not offer: entrepreneurship, email and time management, shopping, “team building” in gangs. They lack the history and context of educators, but they are greedy to develop the skills and access they see those educators guarding.

“Unless the education and labor market status of these young persons improve, they will spend their adult years on the fringes of the labor market marginalized in their ability to provide for their economic well-being or that of their families. More young people will find avenues for economic survival through illicit activity, thus reinforcing the pipeline to prison and the accompanying stigma that will exacerbate their labor market situation upon reentry.”⁹

- Linda Harris, Center for Law and Social Policy

Engagement: A Dynamic Process

Policymakers and outside observers often have stereotypical views of vulnerable youth as being a separate subcategory of young people who remain in a stasis mode or easily defined box, which they will hopefully move out of at some point in linear fashion on to more productive lives. As several members of the P-21 Steering Committee observed, the reality is quite different, and these vulnerable youth show many different and conflicting patterns. They move in and out of school, often resigning themselves to dropping out when their records are irretrievably confused by erratic attendance and performance. They move up and down in terms of their engagement, from traditional classrooms to alternative programs, parent or therapist or court-mandated enrollment, to unengaged and resistant. They may also move back and forth, from workplace to school and back, depending on available jobs or available alternative programs. This cycle can be linear or repeated, random or almost deliberate. Some of these students vacillate from high achievement to low, from articulate and communicative to surly and depressed, from eager to angry. Members of the Steering Committee developed the taxonomy in Figure 2 wherein students may move up and down, left and right by day, by week or by month.

In School	In Workplace
Traditionally Engaged	Traditionally Engaged
Non-Traditionally Engaged	Non-Traditionally Engaged
Forcibly Engaged	Forcibly Engaged
Unengaged	Unengaged

Figure 2: Patterns of Engagement

Several of the more well-developed programs in the region address this cycling, and accommodate the many failures that some students demand. Some – particularly in the public schools – set tight limits like requiring students with four absences to repeat a full course, regardless of how much that student may have achieved. Patience like their patients varies considerably, depending on the degree to which these agencies see themselves as therapeutic or regulatory. Some agencies give up, and look forward to young people “aging out” of such testing behavior.

It is precisely these students, however, who are the targets for the P-21 initiatives. They are at the edge of dropping out, and frequently go back and forth, in and out of jobs, of school, of home, of crime, of substance abuse or depression. Catching them before they fail is the ideal. Reflecting that ideal, the purpose of this strategic plan and the ideas proposed within it is to cure the causes of that failure before that failure becomes habitual and ingrained. We know there are more than 2,000 young people between 14 and 22 in these seven cities who meet these criteria.¹⁰

What Works: A National Perspective

In looking for models of success, the P-21 Steering Committee reviewed best practices and innovations from a national perspective. A synthesis of such practices, of particular potential value in Metro North, includes the following:

- Young people need many different options available to them which respect the broad spectrum of learning styles, preferences and life circumstances, in order to remain engaged in school and education. Communities must work with their schools to develop those options “that will keep struggling students engaged and provide on ramps for those who have dropped out.”¹¹
- A combination of caring adult support, integrated learning environments (i.e., learning environments that use the context and demands of the workplace as a basis for learning),

high-quality work experience and civic engagement are effective in restoring the pathways to success for youth.¹²

- Successful programs for dropout prevention must include strong vocational components, with out-of classroom learning.¹³
- Experiential education is an essential component for at-risk students. Experiential education is different from traditional vocational programs in that traditional vocational programs “tend to focus on monetary rewards and to offer less opportunity for students to take challenging roles and opportunities. Experiential activities, on the other hand, offer possibilities for maximizing adolescent development that are important”. Such a program: a) offers optimal challenge with manageable conflict; b) provides a young person with an opportunity to exercise initiative and responsibility; c) provides the young person with a task that has integrity (i.e., is not “make work”) and thus reinforces the young person’s sense of dignity; d) provides the young person with a sense of competence and success.¹⁴
- Across the country, a number of school districts have shown positive results in terms of academic achievement, attendance, and reduction in dropouts through development of “career academies” which mix academic and vocational programs. Students learn core concepts, through the lens of their chosen field, such as students in a medical track doing math problems which involve calculating drug dosages, or criminal justice students practicing their English skills by composing police reports or case memos.¹⁵
- In alternative programs for high school dropouts, participants most value the caring adult support and guidance, and the ability to reconnect to education. In such programs, the end results for many former dropouts are postsecondary ambitions in very specific majors and pathways. High school dropouts are not hopeless. Young people who fall by the wayside “have hopes and aspirations and their paths can be positively redirected with the appropriate guidance and support.”¹⁶
- Work experience, internships, and community service or service-learning opportunities must be expanded in communities at-risk. Young people in these communities need the same level of exposure to work environments and civic opportunities as young people living in more advantaged circumstances.¹⁷
- In community programs that work with young people, the following eight features promote youth development: 1) physical and psychological safety; 2) appropriate structure; 3) supportive relationships; 4) opportunities to belong; 5) positive social norms; 6) support for efficacy and mentoring; 7) opportunities for skill building; 8) integration of family, school, and community efforts.¹⁸

What is apparent from this summary is that there are a wide range of proven strategies and innovations for meeting the needs of vulnerable youth. One of the major goals of Metro North's P-21 initiative is to ensure that these nationally recognized practices and innovations are incorporated within the efforts in the region to meet the needs of vulnerable young people.

Metro North: Implementing Lessons Learned and Expanding on Success

The case has been made for services in Metro North that address immigrants and other low income residents, from 16 to 24 years old, who risk dropping out, have inadequate exposure to professions and careers, experience continued isolation by geography, language, class or status, and who may have a history of delinquency, substance or other kinds of abuse by self or family members, with lower test scores and stunted academic expectations. This profile also suggests a variety of strategies, using higher but different recruitment, academic and behavioral standards, feedback, curricular and instructional innovations, technology and non-school resources. Such strategies must be based, in part, on recognizing the limits young people themselves may impose on their future by their inexperience and isolation, including low exposure to careers of success and perceptions of class or barriers that may be real, but can be breached. These young people need realistic self assessment skills and career exploration through mentorships, internships and externships, as well as school year and summer jobs; they need to get out of their immediate communities on a regular, planned basis to solve authentic problems in teams of peers and college and graduate students. All these features are critical to both the "ripple effect" of any solution, and its broader impact on students and teachers and community agencies.

As noted, several established educational innovations have begun to address these specific needs. Cities like New York, Los Angeles, San Francisco and Seattle have created school alternatives that build education closer to authentic career opportunities in realistic growth occupations, and engage instructional skills rarely represented in traditional secondary education. Their innovations have not made it to Metro North. This region must now draw on its existing and successful projects while adding a much wider range of programs, of curriculum, and of instructional tools with demonstrated effectiveness in engaging just those who now most need that engagement.

Metro North's P-21 Strategic Plan

"I am a firm believer that relationships count more than institutions. It's because you know someone that you start to care about their issues." - Lenny Zakim

Strategy # 1: Develop a Forum for Enhanced Regional Coordination

Over the last several years, the concept of a seamless, well-defined, easily quantified system of community supports, with easy access and limited redundancy, has been pushed by policymakers both for its perceived efficiency and ease in evaluation. However, the reality is that within the communities of Metro North there exists a diverse and complex system of community supports established to meet a broad range of community needs. These community supports by their nature are not easily and simply defined or quantified, nor should they necessarily be expected to lend themselves to such an endeavor.

While schools are the cornerstone of how communities interact with many young people (at least those still in school), young people interact with their communities, systems, and services in a wide variety of other ways depending on their needs, preferences, life situations, personal networks, etc. The Metro North region consists of 20 different school systems; 20 different municipal governments with an array of services, commissions, etc. which are focused in whole or in part on the needs of young people; an array of non-profit community agencies focused entirely or in part on the needs of young people; juvenile justice systems and related entities; two community colleges; public housing authorities; three One-Stop Career Centers; and others. Within each of these entities, there are a large number of services and programs to meet the needs of youth who are vulnerable. There are also services from the full array of state agencies that are responsible for meeting the needs of young people (DSS, DYS, DMH, MRC, DMR, etc.). These various state agencies do not have common services areas, nor do any of their respective service areas coincide with the geographic boundaries of the Metro North region.

To date, the only region-wide effort to fund and coordinate youth-related services is via the Metro North Regional Employment Board and its Youth Council. The REB's Youth Council was intended to coordinate the various youth-related services across the region. Yet the Council's primary focus on programs funded through the REB has narrowed its actual activities. With limited support, moving beyond this focus has proven a challenge. The Council's structure and operation must also meet various federal and state legislative and policy mandates. However, the P-21 Steering Committee members expressed a strong desire and need for a regional youth services group, consisting of voluntary participants who would share their experiences to develop new projects that

reflect common needs and interests. Therefore, one of the key strategies being proposed for Metro North under the P-21 initiative is the development of a Regional Youth Coordinating Committee as a revamping and expansion of the REB's current Youth Council. The intent of the development of such a group is to provide a framework and forum for the organic development of collaboration and coordination. The Youth Workers' Network in Somerville and the Cambridge Reaching All Youth Committee both serve as potential models for such an effort

The Regional Youth Coordinating Committee would essentially serve as the "glue" for the wide range of initiatives being proposed under P-21. This committee would support and monitor these models' impact on workforce development and curriculum planning, to identify features of those plans, pilots, and demonstrations worthy of replication in other settings in the region, and *to promote and extend those features through grants, training, and technical assistance*. Ultimately, funding to achieve these goals will come to correspond to whatever innovations – problem based, economic development oriented, or community generated – the Regional Youth Coordinating Committee determines. The point of P-21 is to broaden the vision of youth serving entities and build options they may not have seen within the region.

The group will:

- Provide a forum for sharing and incorporating best practices from both within and outside the region.
- Act as a coordinating and information sharing body for the wide range of initiatives occurring via P-21 and related efforts throughout the region. This would in particular include the development of grant proposals to support the initiatives resulting from the P-21 effort.
- Provide a mechanism for mutual communication, exchange of ideas, staff development, peer support, cross-referrals and enhanced service coordination.
- Provide linkages and coordination with various support services (such as mental health and substance abuse) and public agencies serving youth, including DSS, DMH, MRC, DMR, as well as DYS and other entities interacting with court-involved youth. The intent of such linkages is that they be functional in nature, and evolve as issues, needs and solutions are identified.
- Review activities and outcomes over time, based on evaluations and on members' common interests and needs. Formalized service coordination would not be the initial or core intent of the group. Rather coordination will reflect the common experience of members and their agencies and develop organically over time.

The group would also operate under the following parameters:

- Participation will be voluntary.
- While the WIA-funded service providers will likely form a substantial portion of the basis of the starting core group, the focus of activities will be on issues that go well beyond WIA guidelines and programs.
- Regular meetings of the entire group will complement ad hoc meetings of task groups, committees, and groups designing or observing special programs. Meetings will complement online communications.
- After the first year, the group will assess the level of interest and outcomes of their activities, and decide whether to continue or reorganize.
- The Metro North REB will provide staff support, enhanced by any consultation and funded assistance. The committee will operate under the auspices of the REB's Youth Council.

As a starting point, participants invited to participate would include members of the P-21 Steering Committee. This committee would also include representatives of additional youth serving organizations. In particular, membership by school superintendents and their representatives will be strongly pursued as their roles are critical. In addition, college support, through staff development, curriculum planning, placing and coordinating student teaching and parent and community involvement, would be vital complements to the function of the regional coordinating body, and the colleges in this region are particularly promising in this regard. Tufts, with its partnerships in Everett and Malden; Cambridge College, with partnerships in Somerville and Cambridge; Bunker Hill's Tech Prep partnerships; and other agreements with Lesley University, Harvard University, and MIT represent an extraordinary and largely untapped resource to the region. Engineering those arrangements is a challenge worthy of a regional youth coordinating body with substantial goals and objectives, programs, and school and community resources.

One of the key action steps in the development of the Regional Youth Coordinating Committee will be identification of resources for staff support as the REB's current resources are not adequate to support such a wide-ranging effort.

Strategy # 2: Build on Current Success and Expectations

Those most at risk are students who do not fit into traditional or vocational education. For some, work readiness, transitional employment and vocational education, with their emphasis on hands-on experiential learning, can be an excellent option. For many it is a matter of curriculum and authenticity, problems they see as “real world” and solutions that engage both academic and vocational skills. Few schools or community agencies offer this entire spectrum in this region. To address the disengaged learner, more of those options are critical.

Expand Successes in Vocational Education

Many vocational fields in many schools remain or appear to be dead ends: they provide adequate hands-on learning for students who intend to work in a family business or join military or other non-college options, but no longer offer either a terminal certification or a guarantee of income security. Rather than drop out, many of these students “slide out,” and laterally slip into jobs with friends or family. A surprising – but unstudied – number of these dropouts eventually earn a diploma and, statewide, more than half complete a diploma or GED, but their delay and frustration extract a heavy cost on individual students and on the system as a whole.¹⁹ The most vulnerable of these young people are immigrants with the least extensive network of corporate or professional role models, and often with the most pre-conceived career expectations.

Those most at risk are students who distrust traditional schools or vocational education. Yet work readiness, transitional employment and vocational educational, with their emphasis on hands-on experiential learning, can be an excellent option for maintaining the engagement of students in broader educational activities, meeting their immediate needs and expectations, and keeping them in school while they test their options.

Where vocational education often represents the residue of secondary school tracking systems, as it does in too many suburban high schools, students resent such easy classification, and rebel – with reason – against old stigmas. Updating vocational education to “career education” and a pre-college, pre-career and vocational exploration subject matter transforms the whole field from tracking to interdisciplinary skill applications, from hand work in lieu of brain work to twenty-first century careers. Doing this, however, requires renewing vocational education to (a) recognize technical and professional careers as equivalent to those available through more academic pre-college tracks; (b) reinforce the utility and authenticity of skills in high demand trades and professions, often leading to similar or higher income than four years of college; and (c) incorporate the full range of technology that is part of today’s modern workplace.

In this region, there are several notable bridges between high school vocational programs and college. Metro Boston Tech-Prep at Bunker Hill Community College has articulation agreements with a number of the region's high schools. Through Tech-Prep, students can earn college credit for technical courses they take in high school. In Cambridge, there is a substantial history of vocational innovation, and the Rindge School of Technical Arts within Cambridge High School has a range of campus and off-campus programs and placements. So also does the Vocational Program within Somerville High School, where students frequently register for Advanced Placement courses while enrolled in vocational and technical programs, transferring technology experiences to pre-college venues. In many respects, YouthBuild, regionally sponsored by Just A Start and serving Cambridge and Chelsea, offers a similar "taste" of the building trades along with a GED or a diploma option. Students in these programs do not forego their postsecondary options, and, in fact, may have higher postsecondary placement, retention, and graduation rates than their more academic peers. These programs successfully divert otherwise high risk students into activities that look and feel "authentic," "productive," "relevant," and career-related, even if many of those students later choose other careers or life paths. They serve to give students a taste of a career early enough to put that career in a larger context and scaffold a variety of vocational options that build on the same interests and challenge new or different skills.

Entrepreneurship Options

Parallel to the initiatives of YouthBuild and vocational education, there have been several attempts to install permanent or self-sustaining entrepreneurship education models in the region. ROCA's transitional employment program, still in its early stages, is the most recent model, but Just A Start was founded on entrepreneurship and, in the past, has sponsored a restaurant and a whole range of youth-managed supported work initiatives. For years the North American Family Institute's Alliance House, in Stoneham, has served up to fifteen 13 to 18 year old boys for the Department of Youth Services, and offered a youth enterprise program in home maintenance and support that earned enough to cover the cost of its off site supervision. The MA Department of Education, in Malden, established a Youth Tech Entrepreneurship enterprise, now based at Malden High School, to offer young people with tech skills the opportunity to market those skills to nonprofits and others in their community. These projects have substantial, but transitional, impact. There is a need to take the lessons learned from these various efforts, expand upon them, and make entrepreneurship a more readily available option for the vulnerable young people of Metro North.

Career Education

One of the critical unmet needs for many vulnerable youth is strong career education. As noted earlier, the parameters within which many of these young people consider potential jobs and careers are extremely narrow. The negative connotation associated with what is perceived as “a job”, and the concept generally held that the sole purpose of a job is to generate a paycheck, create major challenges in keeping young people engaged in education. Too often, what little career guidance is provided to young people at-risk is often focused on the mechanics of the job search, with limited assistance in regards to critically considering a wide-range of potential career options. If young people receive career education that creates excitement regarding potential options for the future, they are more likely to recognize the value of remaining engaged in the education process.

It is critical that career education be available to the vulnerable young people within the region that: a) radically expands the potential career options they are considering, beyond those they have been personally exposed to; exposure to fields with significant demands for labor over the long-term is particularly important; also critical is experiential learning in new and different potential employment environments; b) helps these young people understand the concept of careers with career ladders and advancement; c) expands the concept of employment beyond simply a means to a paycheck and instead helps young people recognize that a career can provide a sense of fulfillment and self-actualization; d) helps young people understand it is critical for long-term success that their jobs and careers be linked with their own personal interests, needs, personalities and learning styles; e) helps provide guidance to young people in how to pursue the necessary training, education, and experience to succeed in their careers.

Within Metro North, an example of this type of comprehensive career education program exists at Somerville High School. One of the proposed initiatives resulting from P-21 is expansion and replication of this type of program within other school settings throughout the region.

Expansion of Talent Search to Metro North

A long standing national program, Talent Search, also addresses some of the needs of vulnerable youth. Talent Search offers postsecondary preparation, tutoring, financial aid and placement counseling to nontraditional high school students. There is a Boston-based Talent Search program which is large and well established, serving students in Boston and Lawrence. The local sponsor, the Hispanic Office of Planning & Evaluation (HOPE), is prepared to develop a second Talent Search application for this year’s grant cycle in partnership with Choice Thru Education and the Metro North REB, to serve those seven districts where college placement has been difficult and

financial aid and other advocacy is so critically needed. Current grantees have a bonus in federal scoring, and HOPE's partnership both addresses this need and has a high prospect of successful funding.

The REB's co-sponsorship of this Talent Search application reflects the core of a broader range of partnerships that represent the kinds of resources required to address the range of vulnerabilities in this population. Expanding and adding to existing and established programs is the most feasible and most immediate kind of resource, since it builds on current proposals and funded programs that can or could be coordinated to maximize their impact in these target communities.

Incorporate Best Practices and Innovation

Part of the role of the Regional Youth Coordinating Committee will be to act as a catalyst for the incorporation of best practices and innovation within the region to provide a common vision to engage the most vulnerable in the region. The federal Workforce Investment Act's ten youth program elements provide a strong basis for such a vision and are directly or indirectly critical to all current initiatives for vulnerable youth (whether funded by WIA funds or not). These elements include: 1) tutoring and study skills, 2) alternative secondary school offerings; 3) summer employment; 4) paid and unpaid work experiences; 5) occupational skill training; 6) leadership development; 7) support services; 8) formal and informal mentoring; 9) follow-up services; 10) comprehensive guidance and referrals. Yet the degree to which all these elements are evident in every program (both WIA and non-WIA funded) varies considerably, as do the needs of the young people involved. Coordinating these programs is more a matter of sharing best practices and transferring practices across programs within and outside the region than just delivering the WIA elements. To do so, the Regional Youth Coordinating Committee will:

- Identify best and promising practice models outside and within the region on an ongoing and continuous basis, using the WIA elements and best practices discussed earlier under the *Case Statement* as a starting point. This will also include the results of the various initiatives proposed under the P-21 auspices.
- Provide forums for sharing and staff development regarding best and promising practices.
- Identify mechanisms for incorporation of the best and promising practice models within the region.

Linkage of Best Practices with REB Youth Initiatives

Throughout the initiation and development of the P-21 effort, the Metro North REB has made great efforts to ensure that P-21 does not simply reflect the REB's involvement in youth services and activities, which while relatively substantial does not in any way encompass the full range of youth services within the region. However, as discussed earlier, the region's WIA Youth Services and School-to-Career Connecting Activities fall under the REB's auspices. As best practices and innovations are identified, these will be incorporated into the REB's youth programming within the parameters allowed by the funding agencies, which will provide not only an easily accessible forum for the incorporation of such practices, but also an opportunity to leverage the REB's youth resources to expand these practices throughout the region through other resources and funding streams.

Strategy # 3: Link Needs of Youth with Economic Development

Too often, a focus on vulnerable populations, including at-risk youth, ignores general economic trends and developments in their immediate communities. To link vulnerable youth with the economic mainstream, and to exploit the often substantial resources available via general economic trends and development, these plans must make those links explicit. In Metro North, a number of large scale development efforts provide excellent opportunities for leveraging resources and opportunities, and excellent venues for experiential learning with tasks that have integrity, and are not “make work”. Therefore, the third strategy within the Metro North P-21 plan proposes pursuit of just such linkages, and specifically the development of grant proposals to obtain funding for development of models and programs which link local economic development initiatives with the needs of vulnerable youth. The goal for this alternative curriculum would be its incorporation within secondary schools in targeted communities, as well as adoption of this curriculum within various community-based programs that provide educational alternatives and training for young people.

There are several abstract benefits in designing this kind of alternative curriculum:

- Programs building on local economic initiatives are *independent of education and social service funding*, and often attract substantial public and private outlays that welcome investment in human capital.
- Big projects *last a long time* from planning to final execution, often between ten and twenty years, surely long enough to springboard current high school students into careers with enough variety, options, stability and durability for a lifetime.
- They often have *high levels of community participation*, enabling students in high school to engage parents and professionals in realistic scenarios, practical discussions that build school work into community-wide hearings, legislation, rules, zoning, siting, and other decisions.
- They have *enough authenticity to engage otherwise disengaged students*, and enough technology and direct application to *demonstrate a wide range of careers* and occupations that could, might, and often are in interdisciplinary teams in the “real world” of planning and development.

Such programs are well established in other regions, some even in Boston, but have had very little attention in Metro North. For example, South Boston High School developed a maritime environmental program that placed students in the high growth, high pay environmental remediation industry directly upon graduation. The New York Transit Authority sponsors an entire high school, in Queens, New York, preparing students for a broad range of opportunities from

planning and engineering to maintenance and construction. New York Blue Cross hosts a high school in its building, integrating internships in information sciences with jobs and pre-college skill building. In Southern and Northern California there are several high schools that focus primarily on computer graphics for the film industry. Such programs are feasible wherever there is a long term economic development or industrial plan with a wide range of feasible careers and authentic responsibilities.

Two other features are critical: first, teaming high school with college or graduate students, and second, targeting high need career fields. Too often those most at risk lack immediate contact with peers who are not of their class, their culture, or their closest community. With 70,000 postsecondary students in Metro North, this is particularly a wasted opportunity for both college and high school students. It reflects how these colleges in particular are national and international in scope, and have only rarely been involved in daily educational activities in these communities. Even the Boston University partnership in Chelsea has primarily involved the BU School of Education, only rarely and tangentially engaging other departments or disciplines, and rarely involving undergraduates.

Secondly, targeting what state economic development specialists call a “traded cluster” assures young people that their time investment will have a market and value well beyond the immediate job openings in their community. It also assures program planners and partners both investment and mobility. “Traded clusters” – like software, biotech, health, higher education, financial services, and transportation – all have markets for Massachusetts products and services outside the state, and generate the most opportunity for the least investment. They will, in terms used in a recent MassINC report, “generate pull along ‘local clusters’ of restaurants, realtors, dry cleaners, banks, and myriad other businesses and social services whose demand is primarily *inside* Massachusetts.”²⁰

Linkage of Vulnerable Youth With Economic Development: Unprecedented Opportunities

Several projects in the region are likely to involve just this mix of careers, professions, community, and college/university interns, and could be built into secondary school settings. They are much more feasible and likely to achieve funding than purely educational interventions, since they affect economic, environmental, health, transportation, or other areas as well. And they are both authentic – with calendars of activities – and well funded, often from both public and private sources. Ironically, that funding is much larger than most education programs ever require, as these projects are layered with many planning, development, and technology tasks that would be made available to secondary and postsecondary interns and paraprofessionals.

MBTA Expansion

Two projects involve transportation. Concurrent with this study, the Commonwealth announced, and the MBTA approved, a \$550 million Green Line extension cutting through the center of this region, from Cambridge through Somerville and Medford. This project was designed to mitigate the environmental impact of the “Big Dig,” now in its final phases in Boston. It was approved specifically because of intense community organizing and interest already affecting these high school students. This project already demands planning and technical support.

State and federal planners have a second initiative: to develop a “silver line” bus rapid transit “Urban Ring” in and through East Boston, Chelsea, Everett, Somerville and Cambridge, for between \$150 million and \$3 billion depending on its final configuration. This larger project has more phases, one of which is already underway, with others – depending on the final configuration of bus, rapid transit, or trolley – scheduled to come on line during the next fifteen years. The initial Silver Line feasibility studies have been authorized and bid, with later stages depending on federal and state commitments

These projects are currently in the state’s transportation plan. They are both funded, in whole or in part, with substantial state and federal funds for planning, site acquisition, and early stages of design. The Green Line extension is scheduled for completion in 2011, and parts of the Urban Ring will open soon thereafter and continue opening through 2025. Yet many of the details of the plans, the locations of stations, the configuration of housing and economic development consequent to construction, and the “Transit Oriented Development” qualifying for federal and state subsidized planning and development, remain unknown.²¹

Whether or not these projects meet their schedule, their short term interest level is both authentic and significant, as is their probability of funding. They represent very substantial employment prospects for this particular region, since most of the planning, development, construction, and community impact will be in these specific target communities. There will be years of hearings, planning meetings, contracts and studies required for between \$700 million and \$3.5 billion in new construction in the ten square miles of these few cities.

This massive investment represents enormous opportunities for young people in the short and long term. Most obvious are the jobs that will directly result from this influx of resources. These jobs and careers will be those that cannot be outsourced to offshore companies, or delivered by out of state contractors. These career opportunities will range from engineering and construction to planning and development, from finance to labor, from marketing to systems design, from computer

applications to food service. These are jobs for which many of the most vulnerable have profiles which are relevant.²²

The opportunities presented by this major public investment, however, go beyond preparing young people for the jobs that will directly result. This influx of resources provides a unique opportunity for development of a living laboratory for engaging young people in an array of experiential and problem-solving learning, which can engage at-risk young people in education and employment-related activities, enhance their skills, and significantly expand their horizons in regards to potential career paths which go well beyond those directly related to mass transit development. For example, there will be an immense amount of initial and continuing public controversy, into which students, both secondary and postsecondary, may present hard and relevant data, both online and in public forums. Whether their ideas or data are accepted will depend on the political, technical, and economic feasibility of their findings, but *they will be heard*. There will be forums. And young people can take on critical roles within these activities, with opportunities for learning and skill development across academic disciplines, in actions that have real relevance and impact within the communities where these young people live. This relevance is critical to engaging these young people. They rebel against abstract scenarios and made-up problems. Instead they prefer, and will be rewarded for, work on real community problems and issues, with genuine impact, and become integral participants within their communities.

The technology to support such student involvement is available in all the affected high schools. Ten years ago, Somerville and Chelsea piloted a nationally known program in Geographic Information Systems (GIS), which now has an audience, students, and a forum. Gathering of data, development of presentations, and participation at forums provide a myriad of learning possibilities. Development of this type of pilot program only scratches the surface in regards to the multitude of potential disciplines and career opportunities that will arise from this massive transportation investment.

As noted, engagement of local universities and colleges can be a critical piece to such an undertaking. A recent meeting with Environmental Careers Organization, which develops internships for college students, ascertained potential support for linkages of college interns with high school students. Partners from both MIT and Tufts may be available as advisors to teams of students to focus on careers ranging from engineering to public health, from construction to finance, from economic development to state and regional planning. The largest department at the Massachusetts Institute of Technology, Transportation and Regional Planning, has the highest ratio of foreign graduate students, many of whom are bilingual in the languages of Somerville, Cambridge, Malden and Chelsea students – Spanish and Portuguese. Linking these college

students as mentors with the vulnerable young people of the region, and partnering with local colleges and universities, can provide a substantial influx of resources and supports. Just as important though is the fact that many of these young people have had limited, if any, interaction with college settings and individuals who attend and succeed in college. Linking with colleges and universities will provide tremendous opportunities for young people to gain exposure to college settings and understand that college is a realistic option for them.

Other Opportunities for Linkage with Economic Development

While the mass transit infrastructure improvements are probably the largest and the most obvious examples of economic development to link to the needs of vulnerable youth, there are a number of similar opportunities in public/private development in the region offering other real and substantial opportunities for vulnerable youth to enter the economic mainstream. These include the Wonderland Transit Oriented Development in Revere - the MBTA has already sponsored the planning for a mixed use development for housing, business, and commercial users where there are now only parking lots adjacent to the beach and dog track; NorthPoint development, near the Lechmere MBTA Station, which is developing a 45 acre site into 19 city blocks over the next 15 years, primarily located in the city of Cambridge with smaller portions in Somerville and Boston; River's Edge (formerly Telecom City) which is developing 200 acres of land in Malden, Everett and Medford, situated along the Malden River; and Assembly Square in Somerville, developing 145 acres and its own subway, suburban and water connections for office, residential and commercial owners and tenants, and which is already moving forward with mixed use development.

The Future is Now

In discussing with the P-21 Steering Committee how to link the needs of vulnerable youth with economic development, the Committee expressed concern that: a) much of this economic development is in early stages and seems speculative, and there is the real possibility that some of these projects may not come to their full fruition; b) such long-term economic development seems distant from the immediate needs of vulnerable youth.

The opportunity for young people to engage in this economic development, however, is largely independent of whether these various projects come to their full fruition or meet their deadlines. All these plans involve some stage of current concrete activity that is moving forward – and with this activity comes opportunities to engage young people. As indicated earlier, much happens before the first shovel hits the ground, and this provides plenty of opportunities to engage young people, particularly if they are engaged early on. As projects progress, those opportunities will expand.

Now is the time for school systems, other education entities, and youth-serving agencies to position themselves to engage young people in this economic development. Finally, while the activities identified here are the most obvious and wide-ranging within the region, these examples are by no means exhaustive. While there is currently an environment of unprecedented opportunity in the region, the concept of engaging young people in actual economic development and real community issues is one that has continual, ongoing relevance to the needs of vulnerable youth. Exclusion from those opportunities is, in fact, the defining characteristic of their very vulnerability.

“The surest way to corrupt youth is to teach them to hold in higher esteem those who think alike than those who think differently” – Frederich Nietzsche

Strategy # 4: Encourage New Models of Learning

Just as expanding on existing successes and creating innovative curriculum and programs with links to economic development will affect some of the vulnerable youth in the region, no range of palliatives will affect them all. Unless, that is, that range directly impacts the secondary school system at the same time. In the past ten years, several of the school systems of Metro North have changed dramatically. Many have experienced a sharp drop in enrollment and a consequent explosion of their cost per student; several have discovered their new urbanism; and many have had difficult and sometimes painful discoveries in how they manage new immigrants.²³ Increasingly they look across the river to Boston, where a stable administration and managed continuous progress has turned a dramatically difficult system into a network of successful alternatives. While Boston and other large cities have piloted problem-based instruction, small learning communities, and closer partnerships with area colleges, most of the Metro North communities have limited experience with such innovations.²⁴ Therefore, the fourth strategy in the Metro North P-21 Strategic Plan is to encourage demonstrations and adaptation of new learning models, particularly Early College High Schools and Problem-Based Learning.

Early College Initiatives

Early College High Schools “are small, autonomous schools that blend high school and college into a coherent educational program. They are designed so that all students can achieve two years of college credit at the same time as they are earning a high school diploma.”²⁵ They are particularly designed for young people who are under-represented in postsecondary education, and who meet the profile of many of the vulnerable youth in Metro Youth – students who have not had access to the academic preparation needed to meet college readiness standards, students for whom the cost of college is prohibitive, students of color, and English language learners.

From the days of busing, the Boston Higher Education Partnership has tested open or dual enrollment and a variety of early college high school patterns. Recognizing that students with “street smarts” sometimes mask their academic skills when faced with traditional classroom instruction, a number of the Boston – and national – innovators have focused on new ways of conveying and assessing those skills. Because the overarching goal is to engage or re-engage vulnerable teens in school, it is time to adapt those innovations across the river in Metro North settings.²⁶ The Boston-based Jobs for the Future is one of the major partners in the current Early

College High School initiative that is being implemented nationally, and is funded by the Bill and Melinda Gates Foundation. It makes absolute sense for Metro North to take advantage of this nearby resource.

As part of the discussions that have occurred within the P-21 effort, an Early College High School planning phase has already attracted interest among some of the mainstream district high schools in Metro North. There is good reason to create a pre-college career exploration resource center to serve a number of district high schools and community agencies. Ideally such a center would have classrooms and students engaged in demonstration activities – like those at the new Phoenix Academy charter school and at several district schools and community agencies. In addition, Metro North does have some examples to build on. Tufts University’s High School Student Audit Program invites Somerville High School students to audit spring semester courses at Tufts during the January semester of their junior and senior years.²⁷ As part of the Metro North P-21 plan, efforts will be pursued to encourage and expand these types of innovations.

Problem-Based Learning

In addition to Early College High Schools, another innovation to maintain the engagement of vulnerable youth is the use of Problem-Based Learning, which is a learner-centered educational method. It is essentially learning that is based on the messy, complex problems encountered in the real world as a stimulus for learning and for integrating and organizing information in ways that will ensure its recall and application to future problems. Problem-Based Learning is a motivating way to learn as students are involved in active learning, working with real problems. What they have to learn in their study is seen as important and relevant to their own lives. The problems in Problem-Based Learning are also designed to challenge learners to develop effective problem-solving and critical thinking skills. The model produces independent learners who can continue to learn on their own in life and in their chosen careers.²⁸

In Problem-Based Learning, the traditional teacher and student roles change. The students assume increasing responsibility for their learning, giving them more motivation and a greater sense of accomplishment, setting the pattern for them to become successful life-long learners. The teachers, in turn, become resources, tutors, and evaluators, guiding the students in their problem-solving efforts. Students acquire knowledge and become proficient in problem solving, self-directed learning, and team participation. Studies show that Problem-Based Learning prepares students as well as traditional methods. The students do as well as their counterparts from traditional classrooms on national exams, but are in fact better practitioners of their professions.²⁹

Problem-Based Learning in Metro North: A New Opportunity

The Phoenix Charter Academy will open in the 2006 school year in Chelsea or Lynn, serving Chelsea, Revere, and Lynn and adjacent communities. The opening of this school presents an opportunity for development and expansion of the types of educational alternatives such as those discussed above, that have been missing in Metro North. The Phoenix is actively supported by the Chelsea and Revere School Departments, and has already received its charter and initial planning funds from the state. As a charter school with the active support of its adjacent public school systems, it will be exceptional, regardless of its design. The school is deliberately intended as a pilot to serve precisely the demographic population described by this study. In the Phoenix Charter Academy a number of different opportunities converge and build directly on the capacities of the region and can support new instructional development opportunities for existing schools and community organizations. This charter school suggests a new kind of vocational education model that is problem-based and interdisciplinary, drawing from existing innovations within the region and across the country, and articulating secondary and post-secondary credit and credibility. Like most charters, the Phoenix Charter Academy will not have an extensive vocational and school-to-work infrastructure and easy access to Perkins vocational education funds. It will however use problem-based instruction to structure career exploration and college preparation. This model overlaps with the Cambridge College model of lifelong learning involving interdisciplinary, work-centered problems that produce insights into mainstream subject matter while exploring hands-on and vocational topics. It further coincides with Lesley University's model of portfolio assessment and several alternative diploma models built around achievement and demonstration rather than time in class. These models have historic significance to the community colleges, and offer a means by which they can join a range of partnerships patterned after the Early College High Schools.³⁰

Phoenix plans competency-based assessments rather than time in class; a three phased cycle of "tools," "scaffolding" and "mastery" to mobilize student achievement and construct critical thinking skills; and a system of "authentic acquisition and authentic inquiry" to construct substantial problem-based inquiries and synthesize problem solving skills across disciplines. Of particular note is the Phoenix stress on authenticity in constructing problems and building problem-solving skills. This stress reflects both their planners' experience in Chelsea and Boston, and a specific kind of educational innovation, compatible with the problem based approach.³¹

The Context of Phoenix Within Metro North: Linkage with Regional Coordination

The Phoenix Charter Academy is an example of an exciting alternative educational opportunity that is emerging in Metro North. It is no way implied that the Phoenix is "the answer" for vulnerable

youth, but rather it is a significant effort among many, designed to meet the needs of young people for whom traditional education has failed. The fact that the Phoenix is supported by its neighboring school districts makes it unique within the charter school movement. Given this context, it is hoped that the Phoenix will serve as a laboratory for educational innovation within the region. In spite of serious academic research based in this region, “problem-based education” is often misunderstood and over-simplified. Clarifying the concepts and documenting their utility with actual students in real classrooms provides a common curricular and staff development laboratory for any school or agency in the region to observe, adapt, and adopt.³² As part of the fourth strategy under P-21, the Regional Youth Coordinating Committee will serve as the mechanism for identifying the utility and application of the Phoenix experience for the region, particularly in terms of Problem-Based Learning. In this respect the Phoenix Charter Academy could become the research and development resource for the region, particularly in problem-based and community-focused workforce development, and vocational partnership initiatives serving the most vulnerable youth populations in the region.

Benchmarks

The substantial demographic and population information on the target communities (available in the supplement to this report) builds a case for collaboration that reflects the history of the participants. With twenty different communities, collaboration can only grow from successful partnerships to embrace more partners over time.

The attached logic model reflects how the Regional Youth Coordinating Committee will proceed to develop three themes, producing a variety of proposals, some with excellent prospects like Talent Search, some already in concept form like economic development curriculum, and some more preliminary like blends of problem-based approaches adapted from pilots like the Phoenix Charter Academy. Along with timely pilot programs, these will produce demonstration initiatives. Like all logic models, the short term is the most concrete, and the long term more an aspiration than a plan. Like all such models, the outcomes of the early phases are most feasible: proposals, grants, pilot programs, partnerships and continued planning and assessment. Once programs proceed to operating pilots, they will, with funding, produce quantified impacts on students and schools. The task for the Youth Council’s Regional Youth Coordinating Committee is to attach concrete outcome measures to meet funding and public expectations. Programs in prevention, like these, have marginal outcomes that affect other behaviors and services – placement in college, graduation rates, and, only after a long time, actual job performance and career mobility. Key organizational resources and strategies are in boldface.

	Expand & Develop, 2005-6			Pilot, 2006-7		Demonstrate, 2007 -	
	Goal	Participants	Outcome	Goal	Outcome	Goal	Outcome
Exemplary Programs	Review WIA options and leverage WIA funds with other sources	Grantees & potential grantees: Renewed Youth Council	Evaluate WIA programs; new WIA initiatives	Expanded successful programs, serving 25-200 new students	100 additional diplomas or GEDs	Retention to completion of higher ratios of enrollees	More efficient recruitment, more placement in jobs and postsecondary
	Review Youthbuild and entrepreneurship Options	YouthBuild, CDC's, Housing Advocates, city youth services, chambers of commerce, etc.	Regional Support for Follow-up for alumni, local demonstrations, or entrepreneurship Proposals	Expand in key locations	Housing & workforce, placement in unions, startups, jobs and colleges	Add additional locations & enterprises	Region wide professions and postsecondary; development of youth businesses
	Review Transitional Employment Options	ROCA, Just A Start, other community organizations, Career Centers	Plans and Prototypes, goals by quarter	Enroll 100 youths, 14-18 years old, Chelsea and adjacent cities	20 return to school; 20 to GED and employment	Expand products & services in Chelsea/Metro North	Larger numbers employed, returning to school and to employment
	Authorize Talent Search & College Placement	Choice Thru Education, Talent Search, school counseling offices, others	Regional TS Proposal	Recruit 250 in Somerville, Malden, Chelsea, Revere, Everett, Cambridge	Place 200 in postsecondary ed, with financial aid & plan	More recruitment, testing, financial aid & placement	Recruit 1000/year region wide, place 500-700/year in postsecondary w. financial aid
Curricular Resources	Plan GIS Curriculum Resources w. online access	REB, Somerville, Medford, Chelsea, & community groups, MIT, Tufts, & MBTA	Proposal and Plan; staffing and web promotion, summer-school year schedule	Pilot in Somerville & Medford	5 web products, 35 students, 5 in college; college placement	Expand in Chelsea & Urban Ring Communities	Library of projects, targeted to every city and site
	Regional Economic Development workforce partners for youth	Schools, community, cities' economic development departments, private investors	Proposals and pilots; curriculum and web products for other schools	2 to four other pilots (NorthPoint, Wonderland, Urban Ring)	Multi-site challenge for "smart growth" GIS and other programs	Adapt/adopt curriculum to other courses and school settings	Feedback between community and schools re: economic development opportunities
Resources for Instruction	Partnership on Problem based Education	Phoenix Academy, Colleges, REB, schools for Early College partnerships	Proposal and Plan; staffing and outcomes of staff and online curriculum support	Pilot in Chelsea/Lynn, with structured visits by partners	Net based modules; 6 to 10 teacher courses, for credit	Expand in Region	100-150 teachers, mentors in problem based instruction; joint college-school appointments
	Professional Development	Schools, colleges, organizations which frame and solve social, economic, urban problems	Joint faculty appointments, funding proposals, and online materials targeting vulnerable teens	Professional development for regional teachers	25 teachers per year in credit courses with online products for students	Regional cohesion and extra-regional collaboration	50 to 100 teachers as mentors in creating curriculum to solve regional problems

Figure 3: Logic Model

“Gradualism in theory is perpetuity in practice.” – William Lloyd Garrison

Summary and Conclusion

The Metro North region has a significant and growing problem with its vulnerable youth – young people who are leaving school with limited skills and limited prospects for the future. The end result is not only wasted lives, but ripple effects that adversely impact the people around them, their neighborhoods and their communities. Seven communities in Metro North have particularly high concentrations of these vulnerable youth. The most significant indicator of this is the high dropout rate, which too often and for too long has been masked through data manipulation, hiding the true scope of the problem. The impact on individual lives is, in itself, a call to action – coupled with the drain on resources caused by having such a large population of vulnerable youth, this call becomes a shout. It is clear that the core of any response must be one common theme: the need to engage young people in education - keeping them engaged – and reengaging them when they disengage.

Significant societal problems require bold solutions. The Metro North REB’s P-21 Strategic Plan is proposing just such solutions, recognizing that complex issues require a broad, comprehensive response. This response includes:

- Developing a Regional Youth Coordinating Committee within the Metro North Youth Council as a body which will serve as comprehensive collaborative for issues regarding at-risk youth within the region
- Building on the multitude of current successes and expectations, with stronger incorporation of promising practices and innovations within the region.
- Developing curriculum with new authenticity which allows young people at-risk to become engaged in the economic development of the region and, in turn, develop skills and talents for future success.
- Encouraging the adoption of new modes of learning such as Early College High Schools and Problem-Based Learning, utilizing new educational alternatives as laboratories for innovations, and incorporating these successful innovations throughout the region.

Support for these efforts and initiatives needs to come from a variety of sources. Current resources need to be re-directed towards best practices and innovations. Resources that have been previously underutilized (particularly colleges and universities) need to be tapped into and leveraged. However, current resources are simply not enough. If this strategic plan is going to truly

result in pathways to success by 21, additional resources will have to be identified and brought into the region.

The P-21 process has identified target populations geographically and demographically, has focused on community capacities available and best practices worthy of expansion or replication, and found pilot program opportunities with excellent prospects of short and long term funding with broad community and educational impact. Leveraging projects with this level of promise and this range of existing commitment supports a feasible, long term, and multi-agency, cross-community impact.

Perhaps more significant, however, is that these initiatives promise to provide substantial curriculum and instructional innovations as a resource for teachers, administrators, and community program staff across the region, while supporting workforce development opportunities to the target population and demonstrating innovative and cost-effective approaches to the more general population of schools, students, parents, and community members. These strategies are intended to engage employers, unions, and professional organizations in a variety of workforce development activities, from developing curriculum to supporting mentors, from reviewing student problem solving to sponsoring students for postsecondary opportunities, from providing summer jobs to establishing careers for long term success. Finally, the proposed initiatives share a common theme that goes beyond the needs of students and the capacities of the region. They also provide an opportunity for reconfiguration of needs and resources resulting in school, community, and industry collaboration for mutual benefit. That is the promise of P-21; and, with adequate support, that promise has a reasonable prospect of realization.

In conclusion, Metro North can simply no longer write off significant portions of our younger population. The future of the region depends on the engagement of all young people, no matter their challenges, in the economic mainstream of our society.

Metro North REB:
Perspectives on Vulnerability

P-21 Report Supplement

Introduction

This document is a supplement to the plan developed under the Metro North Regional Employment Board's P-21 initiative. It provides more extensive quantitative and qualitative data support for the initiatives proposed within the strategic plan. The intent is also to provide a framework and basis for professionals – for schools, community groups, universities, and their collaborators – to develop proposals and other innovations worth funding and piloting in the region.

The P-21 Process

Having reviewed the literature and the data regarding innovations and regional features of Metro North, the P-21 Steering Committee approached the problem of youth vulnerability directly rather than through a more extended definition of needs and associated methodology. The needs are obvious from the demographics of the school systems and the communities involved: young people who leave school too early and abandon formal education before exploring long-term career opportunities. Those young people are predominantly immigrants or the children of immigrants, and reside in substantial concentrations in only a few of the Metro North communities.

The heterogeneous nature of the 20 communities in the region, e.g., urban/suburban, high-income/low-income, does not allow for a single, simple measure of vulnerability. However, a concentrated, coordinated approach will yield more productive benefits to more young people than attempting to approach the issues of each community individually.

We began the P-21 process by assembling the “usual suspects” of demographic and economic indicators:

- Education data, from federal, state, and local sources describing dropout and attendance patterns; school achievement indicators like test scores, suspensions, and retentions; postsecondary patterns like placement rates, aspirations of enrolled students; and attendance and career services at and among the public and private community and four-year colleges most accessible in this region.
- Youth services, delinquency, workforce, health and mental health data from the non-contiguous regions of state and metropolitan providers, along with health indicators from MassCHIP; rates of detentions and commitments by region, month, and area for the past five years from the Department of Youth Services; the Commonwealth Corporation's digest of census data; police and court data from the most available town, city and county sources; recent reports by [Boston Magazine](#); The Boston Foundation's Indicators Project, and their interactive website via the [Boston Renaissance Resource Kit](#) produced by the Center for

Urban and Regional Policy at Northeastern University; the Metropolitan Area Planning Council; the Massachusetts Bay Transit Authority (MBTA); MassSTATS (an online application using Maptitude, by Caliper Software); DataPlace, an online resource for community development professionals, sponsored by the Nellie Mae Foundation; and the interactive reports available from the US Census itself through their [American Factfinder](#).

- Bibliographic and publications information shared by members of the P-21 Steering Committee and other projects and researchers via phone and email, listservs and computer networks.
- Formal and informal focus groups of young people, convened by schools and program personnel, to discuss their personal and collective experience with employment, career planning, postsecondary education and other outside training, and their goals and aspirations regarding income and professions.

Altogether these sources were more than adequate to (a) identify target populations, (b) denote geographic as well as economic, cultural, and educational focal points, (c) suggest some strategic considerations in identifying best practices accessible to the most relevant schools and community organizations, and (d) identify strategic opportunities for feasible and relatively low-cost interventions that respond to real world circumstances and which have a high prospect of long-term impact.

These goals were discussed in general terms by the Metro North REB Youth Council and P-21 Steering Committee at several meetings and confirmed by members of the focus groups. They were defined by a focus on feasibility, on immediacy, and on what young people can do themselves on behalf of their current and future prospects. In other words, the goals went beyond “stay in school,” “graduate from high school,” or “go to college,” and, instead, treated the why and how and where of such questions. A correlated purpose of the planners was to formulate feasible and attractive proposals for outside funding to initiate pilot programs with high probabilities of regional impact.

Although we did not specifically involve groups of employers, there were employers represented on the P-21 Steering Committee and Youth Council, and meetings were held with employer organizations. One of the key anecdotal findings from these discussions was the perception that young people today are less prepared for the demands of the workplace, particularly in regard to “soft skills” (i.e., reliability, attendance, work ethic, etc.). The accuracy of this commonly-voiced perception is hard to measure without a level of research and investigation well beyond the scope of the P-21 effort. However, this perception itself is a major issue, which indicates the need for new options in preparing young people for the workplace. On a more positive note, discussions with

employer organizations indicated the availability of previously unexplored career preparation options. For example, through a meeting with the Environmental Careers Organization, we identified the potential for a high school/college partnership to provide experience in environmental assessment, treatment, and remediation services.

Youth in the Metro North Region

Vulnerable youth in Metro North are particularly concentrated in seven communities: Cambridge, Chelsea, Everett, Malden, Revere, Somerville, and Winthrop. These seven communities with the most intense needs are very different from their neighbors in demography, in their density and access to jobs and careers, in their education and social mobility, and in their economy. This supplement treats in some detail how these differences indicate “need,” and defines vulnerability in very concise and measurable terms. However, these needs do not easily lend themselves to easy and simple solutions. The extremes of these cities are not to be addressed by a single, or even multiple, treatments or programs. Only through a better understanding why young people are vulnerable, however, can we begin to frame such approaches to impact individual lives and communities and contribute to substantial social change.

The seven communities considered most vulnerable are each distinct and vary regarding the mix of measures of vulnerability. Also, the issues of vulnerable youth are not exclusive to these seven communities. However, looking at the data as a whole, the seven target communities stand out regarding their consistency in terms of vulnerable youth indicators.

Much of the data is presented as percentages of population. Given the significant variations in size of the youth population among the Metro North communities (see Figure 4), this can potentially be misleading in terms of the actual numbers of youth impacted by the various indicators. However, six of the seven target communities have the highest number of residents under age 18 in the region. Therefore the percentages are generally a good indicator in terms of both the scope and size of the issues. The only exception is Winthrop, which has the fewest number of residents under 18. While the issues are certainly significant in terms of the percentage of youth in Winthrop, the impact in terms of overall numbers of vulnerable youth in the region is relatively small. On the other end, Cambridge has the highest number of residents under the age of 18, and therefore, while less consistent in terms of the percentage of its youth that would be considered vulnerable, Cambridge contains a large number of vulnerable youth in the region in terms of raw numbers, primarily concentrated in specific census tracts and neighborhoods in the city.

City/Town	# of residents under 18	% of residents under 18	City/Town	# of residents under 18	% of residents under 18
Arlington	7,783	18%	Reading	6,233	26%
Belmont	5,487	23%	Revere	9,920	21%
Burlington	5,392	24%	Somerville	11,498	15%
Cambridge	13,450	13%	Stoneham	4,657	21%
Chelsea	9,566	27%	Wakefield	5,608	23%
Everett	8,231	22%	Watertown	4,658	14%
Malden	11,240	20%	Wilmington	5,900	28%
Medford	10,010	18%	Winchester	5,342	26%
Melrose	5,969	22%	Winthrop	3,414	19%
North Reading	3,811	28%	Woburn	7,861	21%
			TOTAL	146,030	20%

Figure 4: Population Under18, Metro North Communities, 2000

Source: MassStats³³

The following sections outline multidimensional measures of **poverty**, of **language disparity**, of **education** and schooling, of **crime**, and **health** and substance abuse. These large categories, in turn, reflect hundreds of daily decisions, any one of which could contribute substantially to reducing the vulnerability of some or many teens. We can only clarify why some communities have greater concentrations of these teens today, and how we can engage those young people to transcend the most significant of these barriers in the future.

a. Economic Factors: Poverty

In deriving measures of “vulnerability,” poverty is perhaps the most visible, most pervasive and most difficult to change. It also recurs in its many different effects in many different measures. All of these data are mapped and tabled, collected and available through any of several sources. Only a few of these maps and tables are included in this report, both for brevity and clarity; a larger selection of those maps will be made available on the Metro North REB website (www.mnreb.org). Too much data can sometimes obscure too simple a fact: some of these towns are poor, while many are rich. Whether one accepts the arguments of a “culture of poverty” or that of the reformers that poverty is a simple measure of lack of income, the effects of poverty are much the same: isolation, despair, limited perspectives, and few options.

Technology and a highly evolved network of social research in this region has made measuring poverty, particularly measuring the disparity between low income neighborhoods and their neighboring communities, much easier today than in the past. Figure 1 at the beginning of the main P-21 report shows the relative population density of each of these cities and towns. Density

determines and reflects so many different factors that we chose to use this as an illustration of how these factors combine. The densely populated cities are, on the whole, older, have older housing and infrastructure, more traffic problems, and, except for Cambridge, more limited transit opportunities. Cambridge has five MBTA stations and two terminals, as well as a full range of bus, trolleys, electric bus, and subways. Unique in the region, most of the Cambridge buses are powered by non-polluting LNG or electricity.

Poverty is not caused by density, however, and only reflects density in certain conditions. As Figure 5 illustrates, the per capita income of those same census tracts shows considerable variation among these very crowded cities and towns. Dark blue denotes the lowest income, with yellows and greens indicating moderate means, and red describing the wealthiest. In Cambridge for example, red and dark blue are side by side, which shows the transitional income of Harvard students, and which is also the color of the Tufts University community in North Somerville and Medford, and MIT near the Charles River across from Boston.

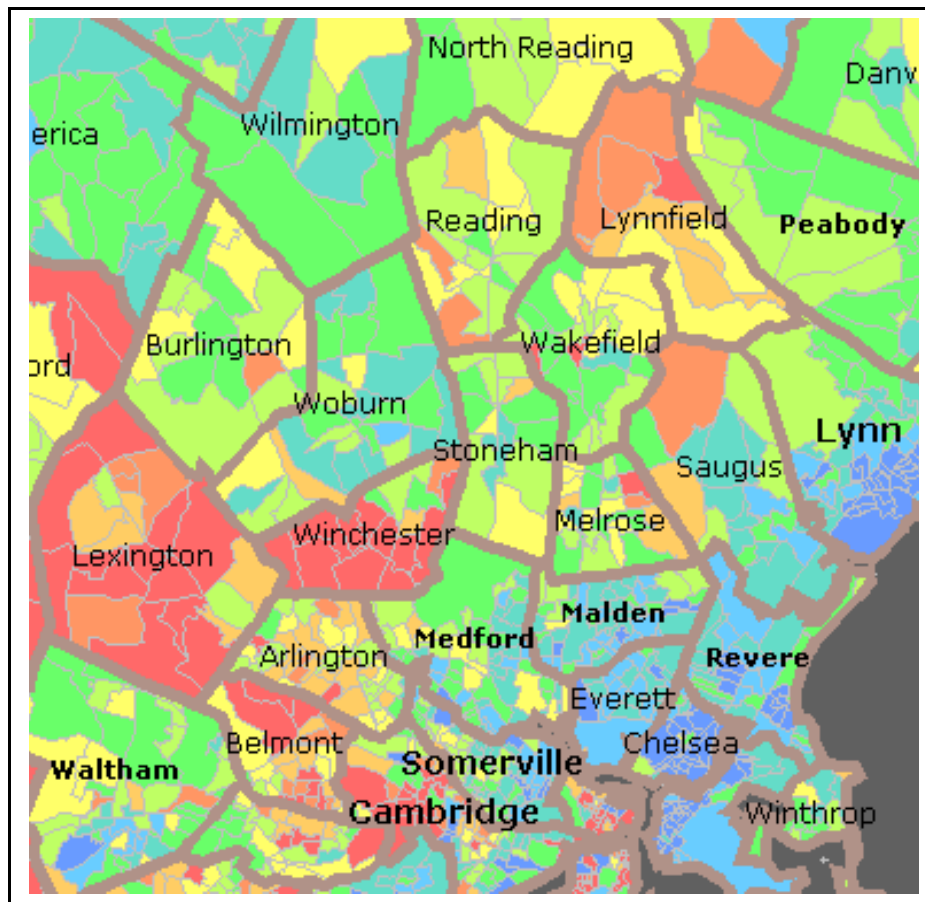


Figure 5: Per Capita Income by Census Tract, Metro North, 2000
Source: MassStats³⁴

In communities like Everett, Chelsea and Revere, as well as parts of Malden and Somerville, it is not the transitional poverty of students but, rather, the more sustained low income of new immigrant communities that the map shows in dark blue. Outside of the region, but nearby and demonstrating a highly unstable juxtaposition, is Charlestown, where public housing immediately abuts wealthy homes around the Bunker Hill Monument.

Given this report's subject matter and the impact of poverty on a child's long-term prospects, we also examined this issue through the lens of the childhood poverty rate. As Figures 6 illustrates, there is a considerable variation in the childhood poverty rate among these very crowded cities and towns.

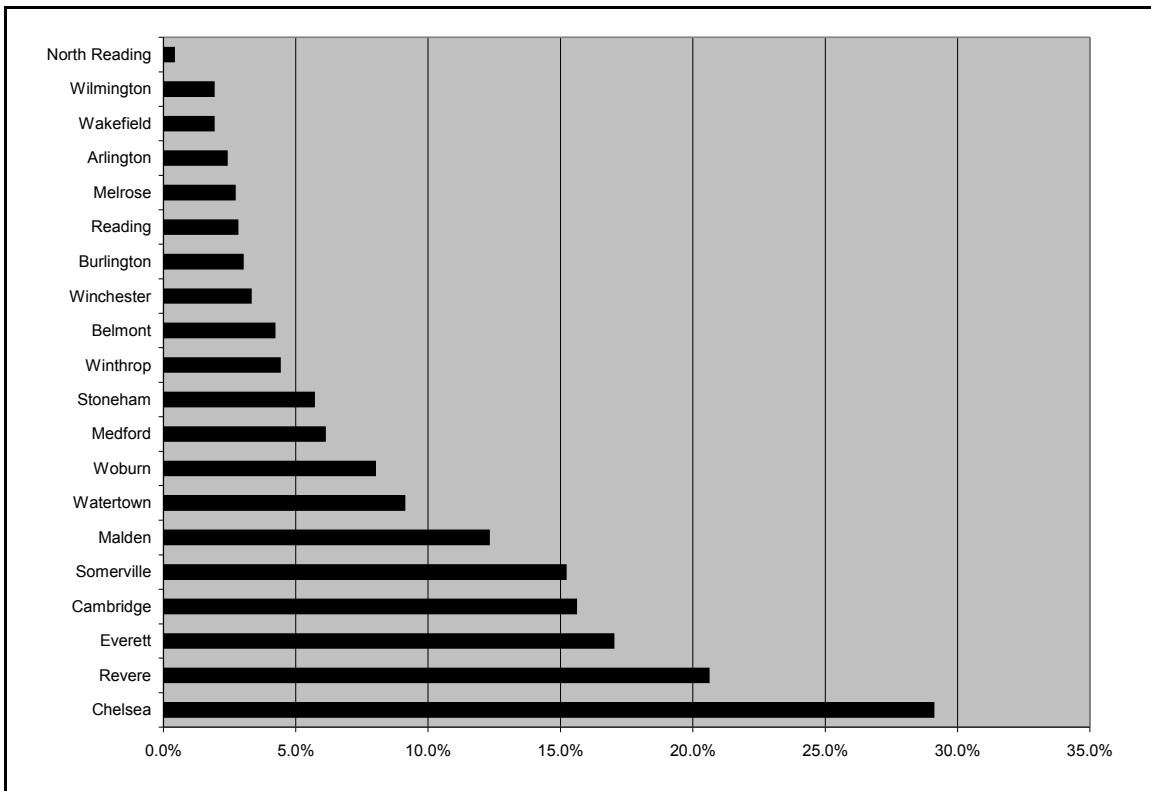


Figure 6: Child Poverty Rates by Community, Metro North, 2000

Source: DataPlace³⁵

Six of the seven target communities have the highest child poverty rates in the region. The high rate in Chelsea is particularly troubling, although the rates of several other communities are also of significant concern. Studies have clearly shown the negative impact of children living in poverty, including delays in their physical, cognitive, language, and emotional development, which in turn impacts their readiness for school. As these children grow into adolescence and adulthood, they are more likely to drop out of school, have children out-of-wedlock, and be unemployed.³⁶ The focus of the P-21 initiative on engagement in education, while not an absolute panacea for child poverty, can have a significant impact on this issue for the long-term. The connection between education and income has been clearly demonstrated and studies have shown that young children whose parents lack college degrees are increasingly likely to be poor.³⁷ Increasing the engagement of young people in education will help to ensure that their own children do not grow up in poverty, and will have a positive impact in ending the cycle of childhood poverty.

b. Language and Culture

Several times we have referred to issues of culture and assimilation of immigrants in and among these communities. While every community in Metro North has experienced some increase in the foreign born population over the past decade, this increase has in no way been evenly spread out. Chelsea, Malden, and Everett have all seen increases in their foreign-born populations by 10 percentage points or more, while Revere, Somerville and Burlington have seen increases between 6 and 9 percentage points; other communities have seen much more modest increases.³⁸

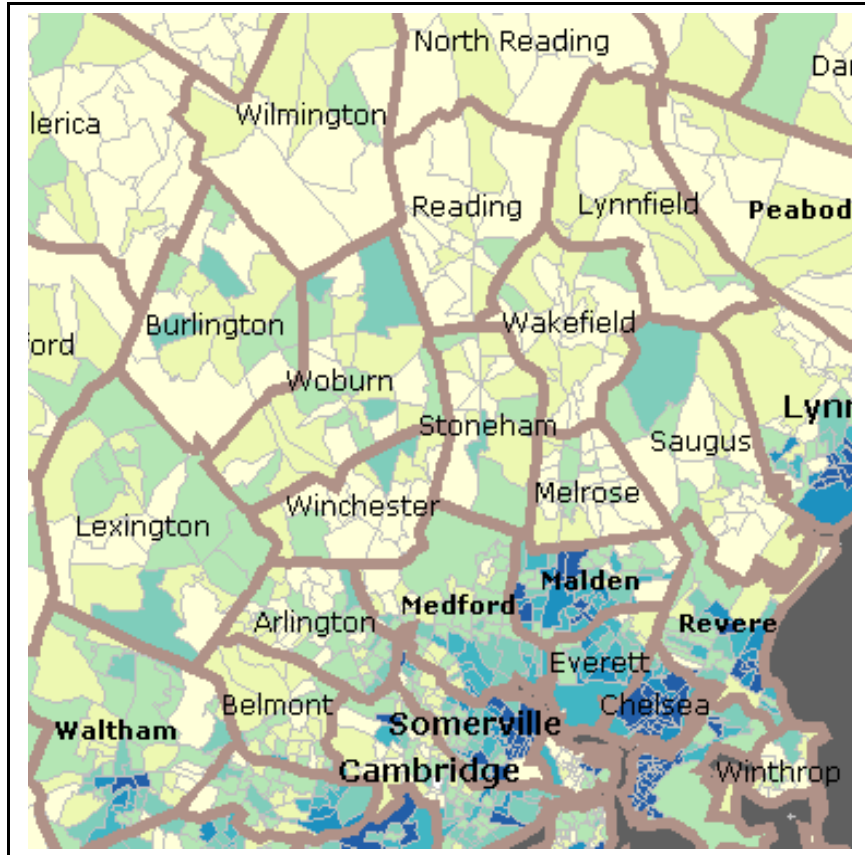


Figure 7: Non-English Speakers by Census Tract, Metro North, 2000
 Source: MassStats³⁹

Nowhere are those immigration patterns as clearly expressed than in Figure 7, showing non-English speaking ratios. The darker blue areas include census tracts where there are a higher percentage of residents who either speak English less than very well or not at all. It is important to note that these non-English speakers are not all Spanish-speaking, nor are issues of race particularly critical or more critical than those of immigration. Some immigrant groups specifically avoid the categories of race or Hispanic origin – like the large Brazilian population in Cambridge and Somerville, for example – just as others would not show in any racial balance – like the emerging Eastern Europeans and South Asian populations in Everett and Malden.

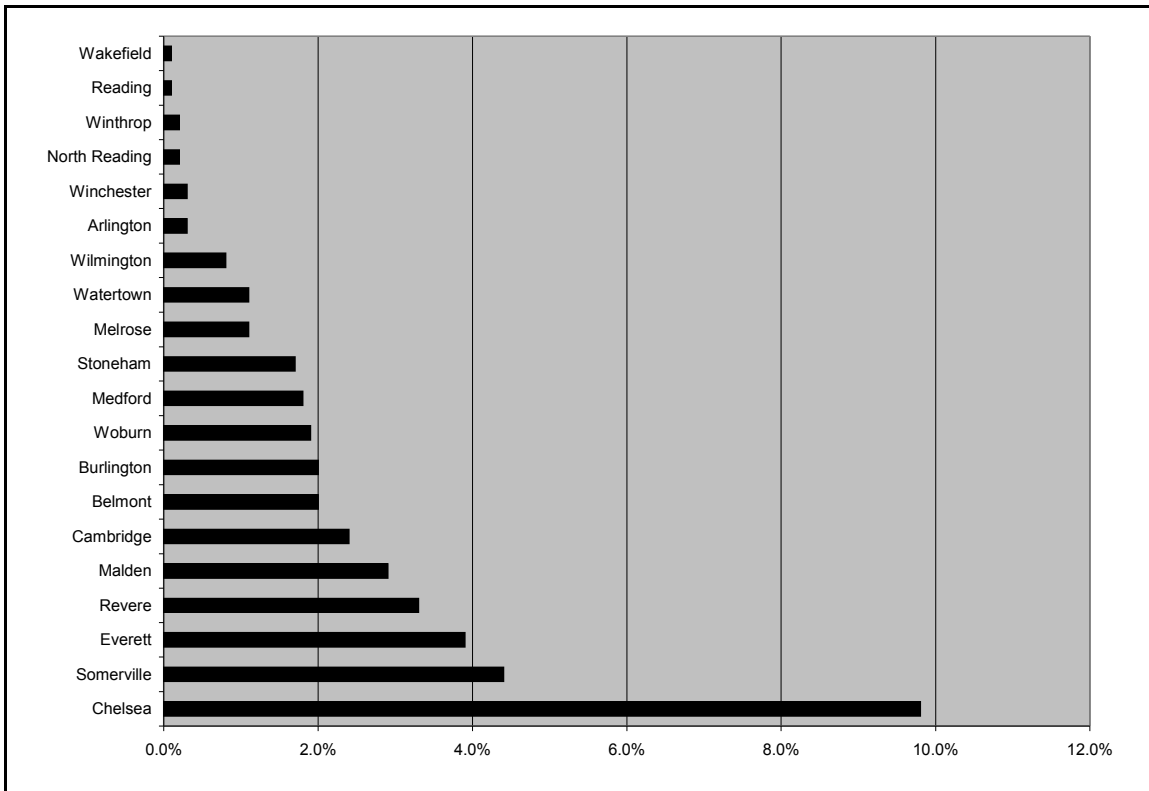


Figure 8: Non-English Speakers – Percent of 5 to 17 Year Olds, Metro North Communities, 2000
Source: DataPlace⁴⁰

Figure 8 examines the issue of language specifically through the lens of its impact on young people, showing the percentage of young people who either do not speak English well or at all. In Chelsea, close to 10% of the young people are not proficient in English; lack of English proficiency among young people is also a major issue in five of the six other target communities. English proficiency is among the critical issues in terms of future prospects for vulnerable youth. As the recent MassINC study indicated, the ability of immigrants to speak English has a major impact on earnings. For example, the average annual earnings of an immigrant in Massachusetts who speaks English very well, are almost triple that of an immigrant who does not speak English at all.⁴¹

Figures 7& 8 show that in Metro North, Chelsea is most obviously a city of immigrants with almost half the population not born in the United States. In Everett and Malden, the immigrant populations are also steadily increasing throughout these cities. Some communities – like Cambridge, Somerville and Revere – have very distinctive pockets of immigrants. We could show that these communities have historically hosted waves of immigrants from the mid-nineteenth century, and that this current wave is just the newest of many. Such an illustration would ignore, however, how many different languages are spoken in the schools – over 70 in Cambridge and Somerville – and how many cultural conflicts are almost inevitable with so much diversity within and among these

immigrant populations. Planners wonder why gangs emerge, often without realizing that there is very little communication between Haitian and El Salvadorian, Russian, Brazilian and Cambodian youth groups who all share little more than a common alienation, crammed in a very small piece of geography.

We discussed in the strategic plan document the specific cultural barriers in describing the way we identified target communities, but it should be noted here that immigration, race, class, and income are extremely varied indicators in this region. In Chelsea, a preponderance of new immigrants are from El Salvador, while in Malden they come from Southeast Asia and in Somerville from Brazil. Each migration brings with it a host of behaviors, attitudes, values, and domestic standards commonly ascribed to the culture of their former country. In many circumstances, these change dramatically soon after immigrants move to their community, due largely to strong pre-existing ties these immigrants had with the same community abroad. In some circumstances, cultural distinctiveness is much more enduring, and engages many more systems than school and workplace.

Some characteristics of the current wave of immigrants are shared by most of these communities and become both a resource and a potential barrier. Language, for example, is usually easier to learn by the young; the percentage of adults who are non-English speakers is double that of young people 5 to 17.⁴² In virtually all these communities, teens are normally the first bilingual members of their family. This changes the authority structure, since teens often interpret for their parents, and can control or influence decisions well beyond their normal authority as young members of a family unit. Parental careers are often another sacrifice to immigration, with professions frequently sacrificed to more menial occupations, at least until adults can negotiate English and international certification. This directly affects how young people view careers, occupations, and professions, and, consequently, training, education, college and professional certification.

c. Education

Like poverty, risk factors affecting education and educational plans are many and varied. There are many different measurements of this same dimension: ratios of college graduates, various drop-out definitions and numbers, test scores, ethnic ratios in high schools, SAT participation, percent who are college bound and who graduate to a four-year college. Yet many of these measures overlap and portray concentrations of youth with a negative view of secondary and postsecondary education. There is little consensus about which factors are the most critical, and even some controversy about which have any relevance. SAT participation, for example, is increasingly irrelevant to the wide range of postsecondary decisions that could, would, or may be affected by

test scores or other measures of achievement. So also are MCAS test scores, grades, attendance patterns, years in school, or even court or substance abuse history. Yet, taken together, and located by region, city, block and street, they reveal patterns which, like language, access, economics and employment aspirations, underscore the larger question of vulnerability.

As with differing measures of poverty, we will make a range of these data available via the REB's website. Four features are worth special treatment, however, since they demonstrate how unique some of these communities are relative to the rest of the region. The ratio of college graduates in the general population shows how different these communities are. The raw contrasting number between freshmen and senior classes show how different their district high schools are, and how normal or unusual it may be to think about finishing high school, let alone college. Trends in regards to resources and overall student population provide a sense of the resources available to support vulnerable youth. And the very different racial and ethnic balance among these schools says everything else. Segregation by class and income does result in substantial disparities in the lives of secondary school students in this region.

Family Education

In large part we do what our parents did: children of college graduates go to college and the first in their families find college the most challenging. In describing the target communities within the Metro North region, it is therefore very useful to show where most non-college families reside as indicated in Figures 9 & 10.

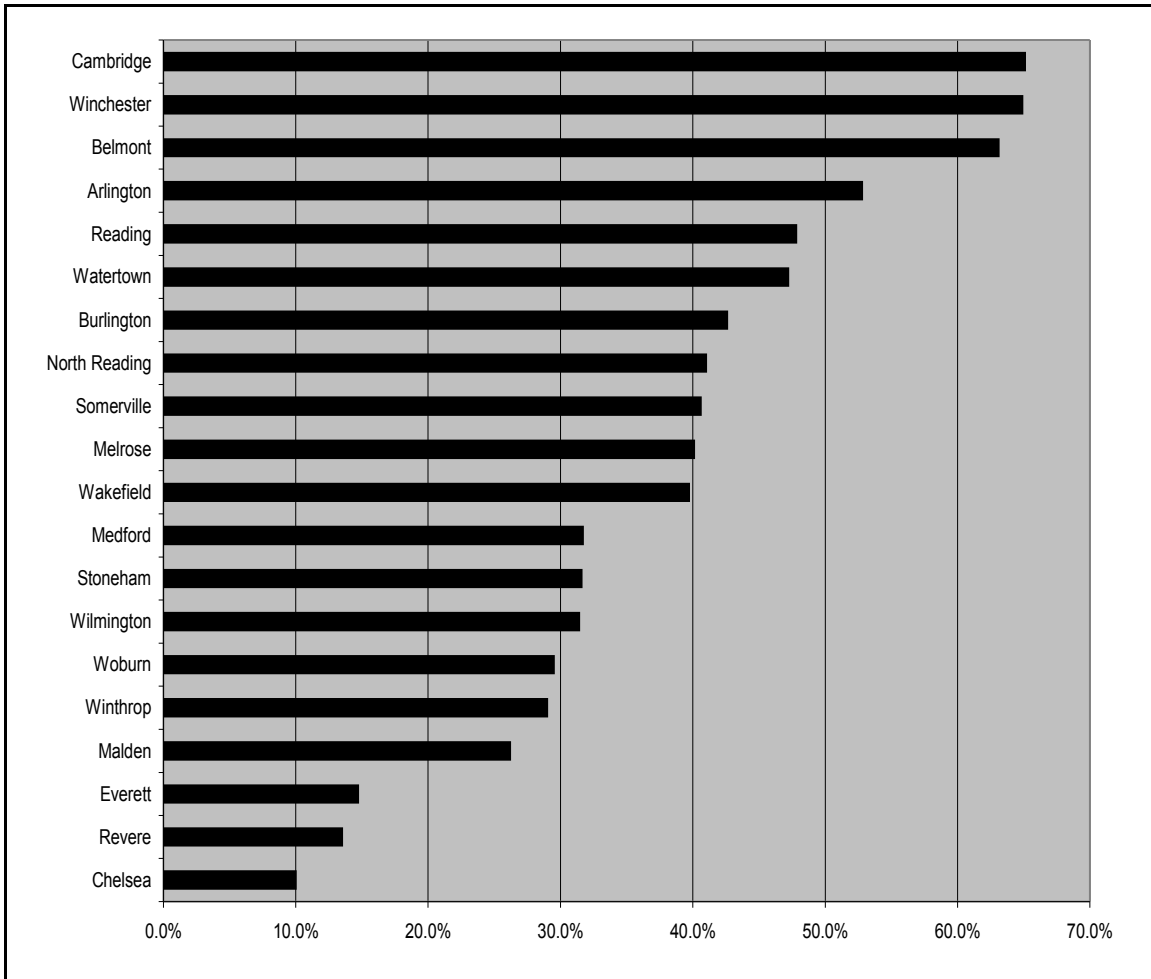


Figure 9: Percent of College Graduates, 25 +, Metro North Communities, 2000

Source: MassStats⁴³

Figure 9 shows the percentage of college graduates for each community as a whole. However, looking at these communities in their totality does not necessarily paint a complete picture, and within these communities themselves, there are distinctions, shown in Figure 10. Dark purple indicates college graduation rates of 20% or less, while the dark orange indicates graduation rates of 50% or higher. Everett, Chelsea, and Revere are predominantly non-college, except for one section of Chelsea on the waterfront, where gentrification has inserted itself in an otherwise completely working class city. Malden, along with the eastern section of Medford, reveals a fairly

similar pattern. Winthrop, Woburn and Stoneham also show lower college graduate rates than other Metro North communities. While Somerville ranks relatively high on its overall college graduate rank at over 40%, this masks a high percentage of non-college graduates primarily in census blocks and tracts in East Somerville.

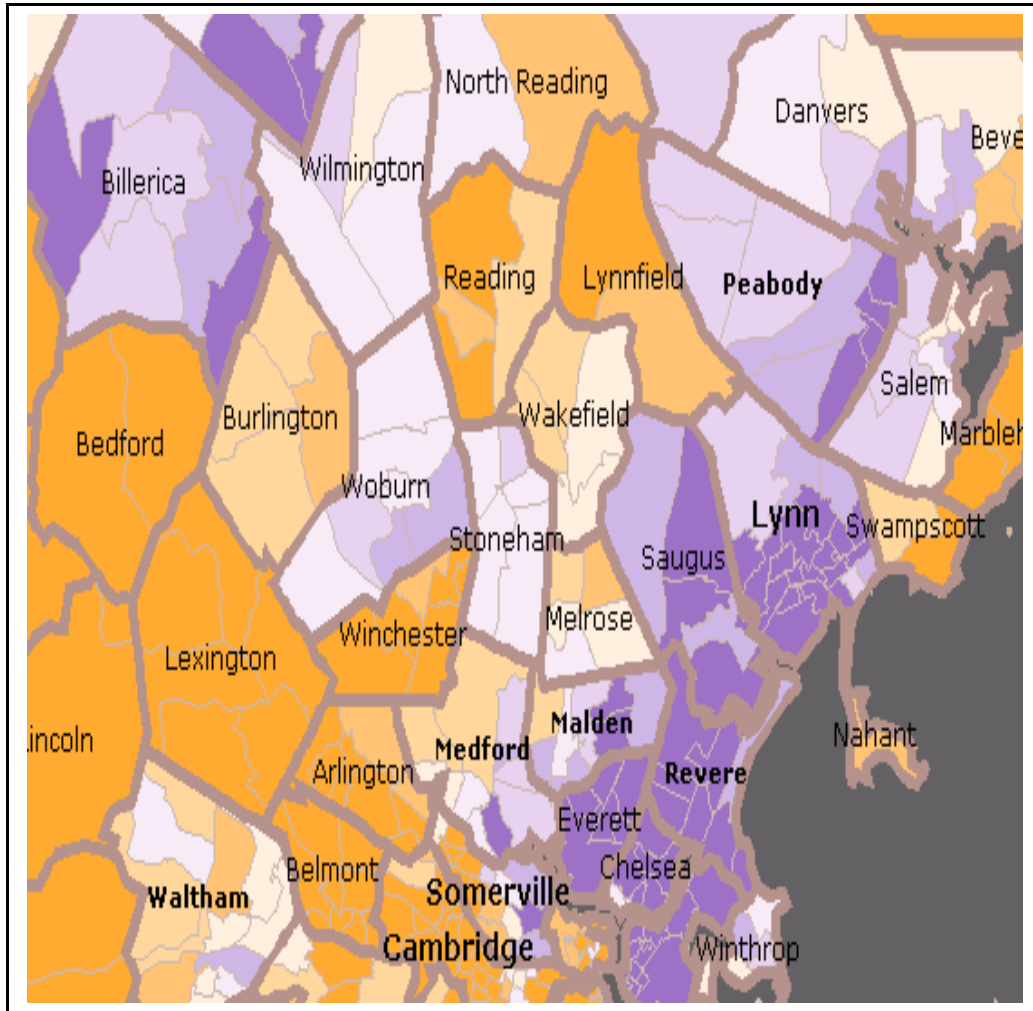
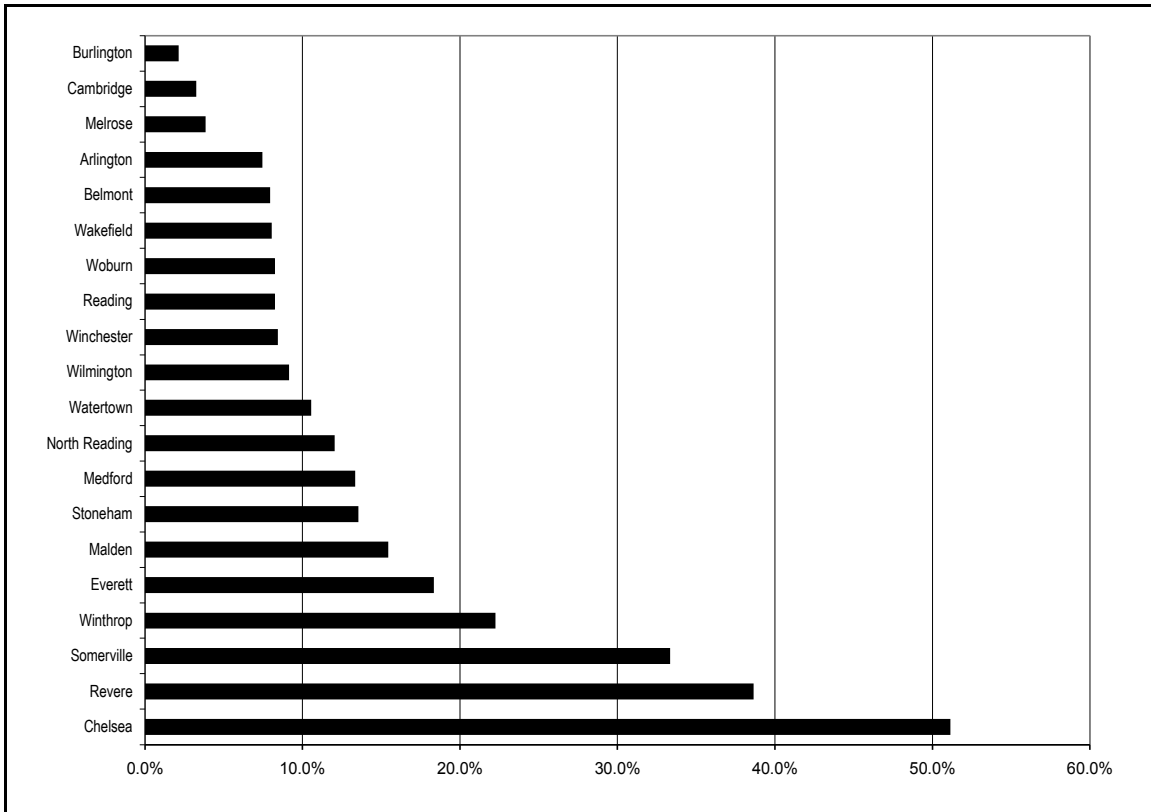


Figure 10: Percent of College Graduates, 25 +, Metro North Census Tracts, 2000
Source: MassStats⁴⁴

With family patterns this dominant in some of these communities, it is surprising that they mobilize the numbers they do to go on to any postsecondary school. Because these data reflect the 2000 census, we would expect to see some substantial erosion of the “purple” district in Somerville and Chelsea, perhaps also in parts of Everett and Revere and Medford, by the 2010 census, and perhaps in the state reports of the 2005 state census. These communities have seen substantial in-migration in the past ten years, not only of immigrants but, specifically in parts of these communities, of middle and upper class investors as well.

Dropout Concerns

Historically, dropout rates have been a serious issue that has generated a consequently complex and often obscuring range of rationales in their description. The U.S. Department of Education recognizes three very different definitions – “Event Dropout Rates” (proportion of 15 to 24 year olds who drop out over the course of the school year); “Status Dropout Rates” (proportion of 16 to 24 year olds who are out of school without a credential); and “Cohort Dropout Rates” (following a group of students, e.g., “class of 2001,” over time). Some agencies track cohorts, some track numbers from year to year, and some track cumulative numbers over four, six, or eight year spans.⁴⁵ As the Educational Testing Service dryly observed, “...Schools developed a reluctance to classify students as “dropouts” when other categories were available in which to report them, and became creative in reporting why students were no longer enrolled.”⁴⁶ Until 2005, school systems have had their choice of which to report. Starting with the 2005-2006 school year, Massachusetts has agreed to abide by a national standard for calculating graduation rates, by dividing the number of on-time graduates in a given year by the number of first-time entering ninth graders from four years earlier.⁴⁷



**Figure 11: Percent Difference Between 9th v. 12th Grade Public School Enrollments, Metro North
5 year Average Through 2004-2005 School Year**
Source: Massachusetts Department of Education⁴⁸

For the purposes of the P-21 initiative, due to limited access to data, for past school years we could not replicate this new national standard. However, we were able to analyze the public school enrollment figures to give us a sense of the dropout issue in Metro North. Figure 11 compares the 9th grade public school enrollment to the 12th grade public school enrollment over a period of five years (through the 2004-2005 school year). The percentage indicates the difference between the 9th grade enrollment and the 12th grade enrollment three years later. Readers are cautioned in over-interpreting these figures as pure measures of dropout rates, as other factors can account for the changes in class size such as students who exit to or return from private schools, students who move in an out of district, etc. What these figures also do not reveal is how many students may take five to seven years to graduate, may cycle in 9th grade for more than one year, or may transfer to a GED program for an alternative diploma and college placement. In other words, these numbers indicate a cause of concern, rather than a single, determinant measure of school failure or success.

However, even accounting for these factors, these numbers underscore a serious problem in Chelsea with over a 50% loss, and cause for significant concern in Revere and Somerville with over a 30% loss. In addition, six of the seven districts that our overall findings indicate as the most vulnerable have the highest loss, the only exception being Cambridge. These data underlie the core issue regarding vulnerable youth in Metro North, and support the rationale for strategies to address the issues of vulnerable youth, namely the need to keep young people engaged in education.

School Diversity

A fourth dimension - beyond parent and community patterns, dropout and test scores - is the diversity of the schools' student bodies. The table in Figure 12 makes that diversity very apparent. The light blue section represents white enrollment ratios, and most of these schools are near or over 80% white. The most dramatic exceptions are Chelsea, which is largely Hispanic (represented by yellow); Cambridge, Malden and Somerville, which are fairly broadly mixed; and Belmont, Everett, Medford, and Revere which all have significant minority representation. Northeast Metro Vocational School, has approximately 25% non-white enrollment, which is primarily Hispanic.

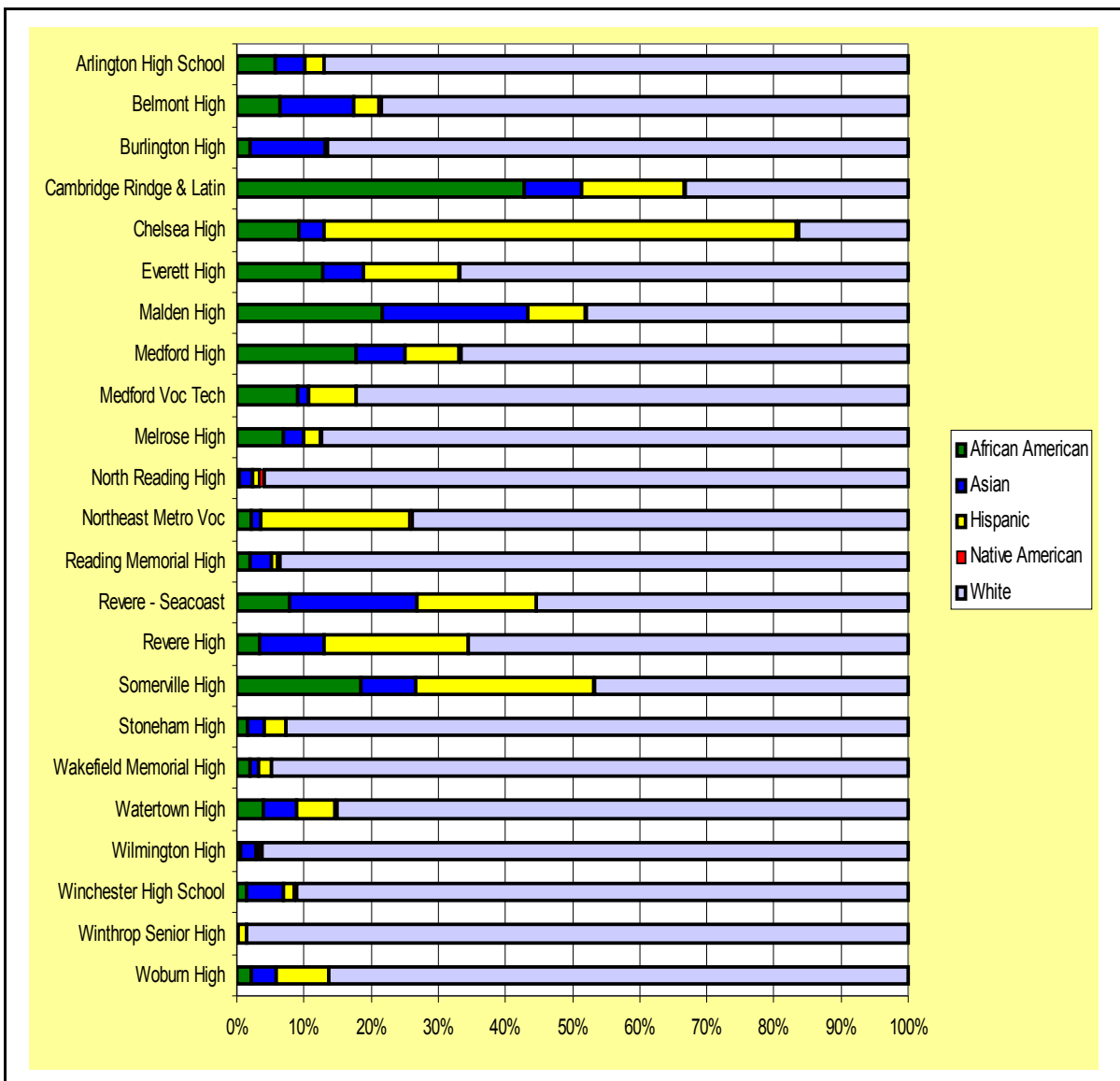


Figure 12: Ethnic Ratios, Metro North High Schools, 2004

Source: Massachusetts Department of Education⁴⁹

Per Student Expenditures and Population Trends

DISTRICT	Per pupil expenditure: 2003-2004 school year	Percentage increase: 1999 – 2004
Arlington	\$7,823	11.9%
Belmont	\$7,816	20.4%
Burlington	\$9,763	34.5%
Cambridge	\$16,116	43.0%
Chelsea	\$8,958	34.5%
Everett	\$6,976	28.5%
Malden	\$8,509	22.3%
Medford	\$9,844	21.5%
Melrose	\$7,556	18.7%
North Reading	\$6,441	15.8%
Reading	\$7,311	24.3%
Revere	\$7,505	21.0%
Somerville	\$10,453	32.9%
Stoneham	\$7,592	25.2%
Wakefield	\$8,191	31.6%
Watertown	\$11,548	34.5%
Wilmington	\$7,442	28.9%
Winchester	\$8,646	21.6%
Winthrop	\$7,252	28.6%
Woburn	\$10,128	36.8%

Figure 13: Per Pupil Expenditures and Increases Over 5 Years, Metro North Public School Districts
Source: Massachusetts Department of Education⁵⁰

Figure 13 provides data regarding student expenditure amounts and trends for the Metro North public school districts. This data, combined with the graphic illustrations of this data in Figures 14, 15, & 16, provide some interesting context regarding the issues of vulnerable youth. While these are not indicators of vulnerability per se, they do provide indications of the resources available to support the needs of vulnerable youth, as well as the changes within population size and level of resources that impact vulnerable youth.

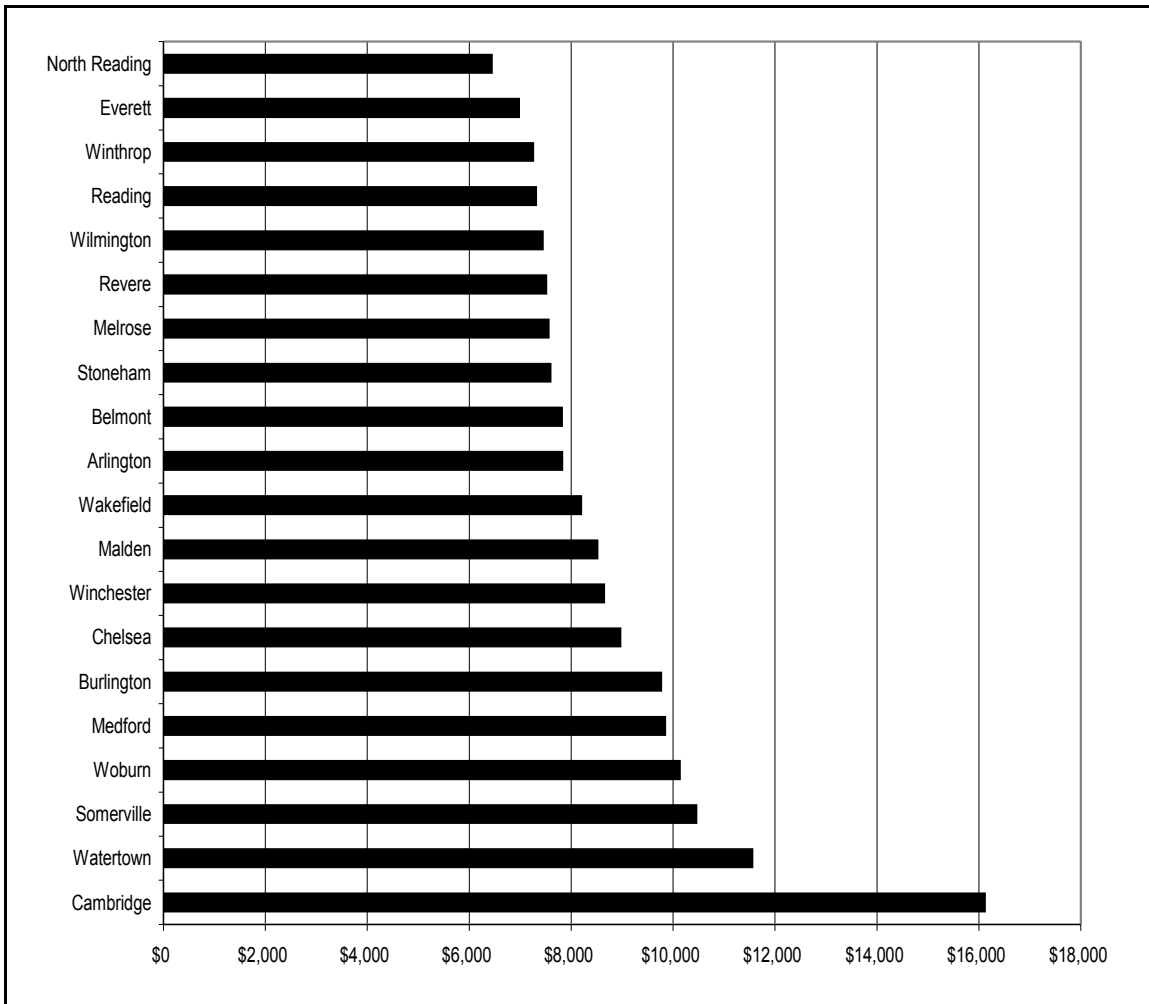


Figure 14: Per Pupil Expenditures, Metro North Public School Districts, 2003-2004
Source: Massachusetts Department of Education

The most obvious finding from this data is the high per pupil cost in Cambridge, as illustrated in Figure 14, which is 40% higher than the next highest district. While the underlying reasons and impact of this high per pupil cost go well beyond the scope of this study, it is clear that Cambridge has significantly more resources available to meet the needs of young people. In addition, this high cost per student may potentially be having a positive impact on the dropout rate in Cambridge, as our data indicates that Cambridge is the only one of the seven target communities without a significant dropout problem. Without further investigation, such an inference is speculative at best. It should also be noted that even if this high per pupil cost is having a positive impact on the dropout rate, Cambridge Rindge and Latin students still have one of the highest percentages in the region in terms of MCAS failure or needs improvement rates.⁵¹

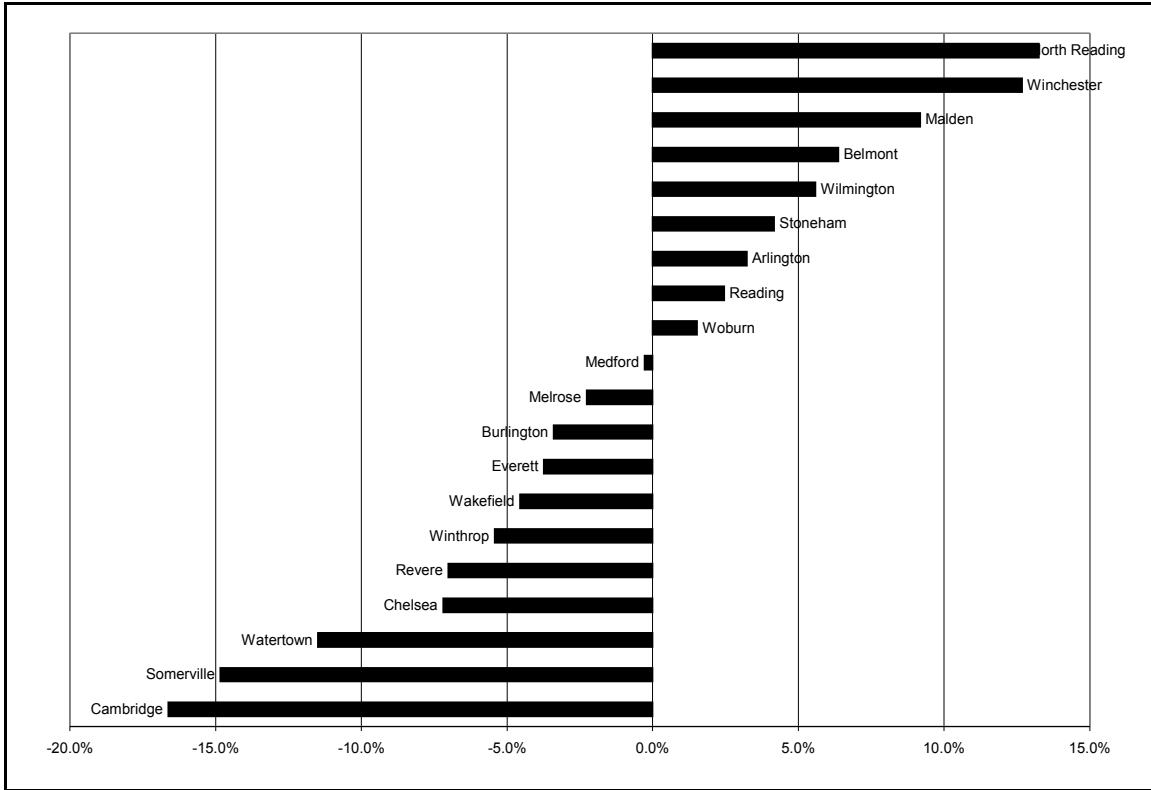
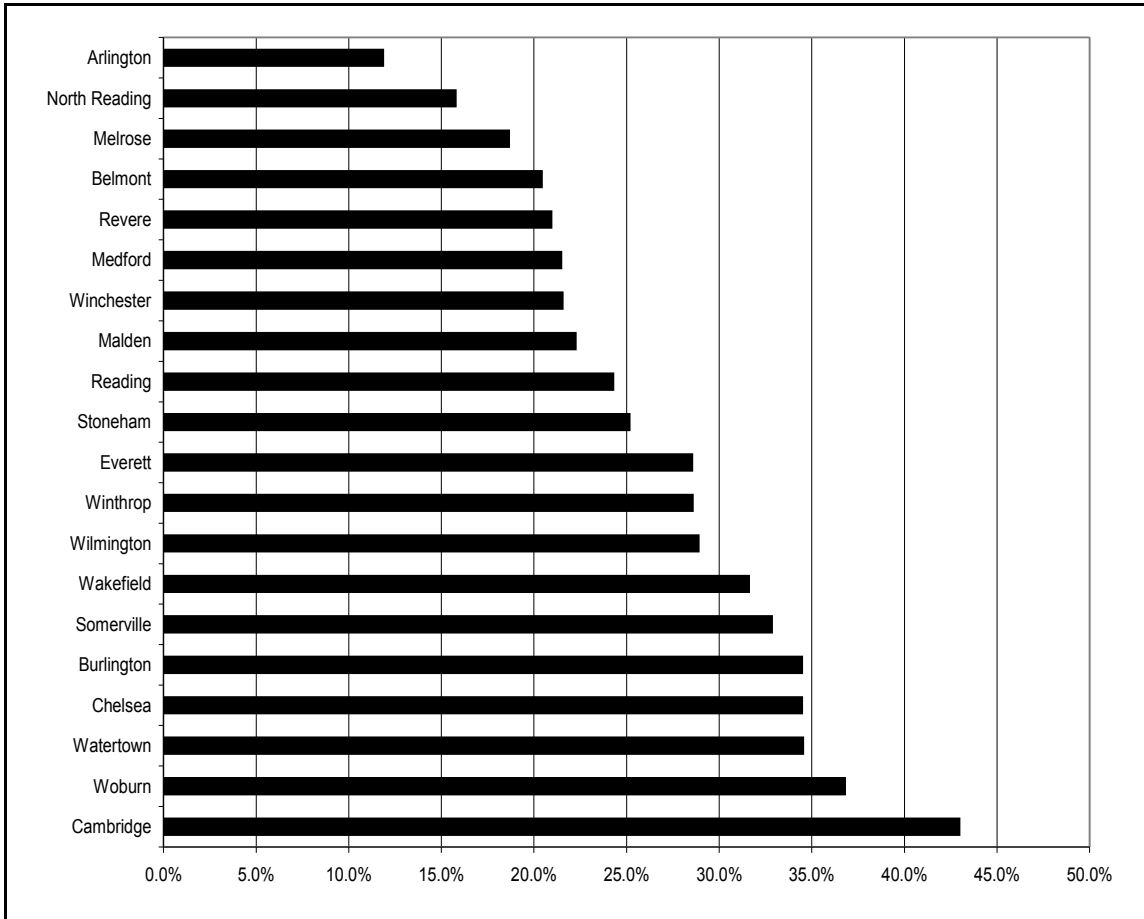


Figure 15: Changes in Student Population, Metro North Public School Districts, 1999-2004

Source: Massachusetts Department of Education⁵²

Examining the cost per student data in the context of the overall student population trends for the school districts of Metro North, as illustrated in Figure 15, provides some additional insights. From 1999 to 2004 the student population for all the public school districts in Metro North decreased by 2.3%. However, as the above graph clearly illustrates, this small overall decrease is the sum of major changes (both increases and decreases) in individual school district populations. A multitude of factors likely underlie these shifts in student population, but there is no doubt that many of the districts in Metro North are experiencing major changes in their numbers of students, while the size of the overall population of these cities and towns remains relatively stable. Those school districts that are experiencing significant losses in student population may wish to consider the underlying reasons for such losses, and whether this is at least in part an indicator of dissatisfaction with the district’s schools (although housing costs and other economic factors have likely played a significant role in these shifting demographics). It should be noted that of the seven communities with the highest student population loss, six of them are those communities that we have identified as most vulnerable (the only exception being Malden which has actually experienced a student population increase). What is also interesting is that four of the six school districts with the greatest percentage increase in cost per student are also the top four in regards to decreases in student population (Cambridge, Chelsea, Somerville, and Watertown) as illustrated in Figure 16 below.

There certainly appears to be a relationship between increasing high per pupil costs and loss of student population, and may indicate that school districts are not making adjustments in cost in relation to decreases in student population.



**Figure 16: Percentage Increase in Per Pupil Expenditure Cost, Metro North School Districts
School Years 1999-2000 to 2003-2004**

Source: Massachusetts Department of Education

d. Crime

The profile features of poverty, linguistic isolation, and relatively low levels of postsecondary and other educational attainment, come together, at least in some of these communities, in crime statistics. More concretely, Figure 17 reflects rates of violent crime in 2000, with the most vulnerable communities appearing in red. Chelsea is the most vulnerable community in this regard with 10.2 violent crimes per 100,000 residents, followed by Revere at 8.3, Malden at 7.6, Everett at 7.2, and Cambridge at 5.1.

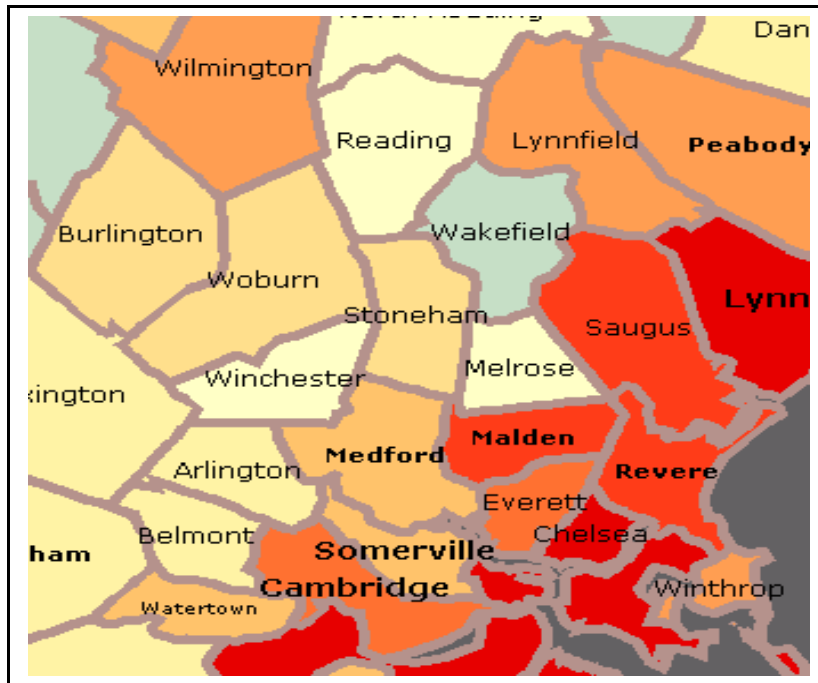


Figure 17: Violent Crime per 100,000, Metro North Communities, 2000
 Source: *MassStats*⁵³

These crime rates are neither inevitable nor unpreventable, however, since there is substantial variation among these communities. The “tiers” of vulnerability focus most preventive activity in Chelsea, where gangs have become more visible and threaten to export their enforcement methods to other cities. Somerville, for example, recently passed a controversial home rule gang ordinance, patterned after Los Angeles and Chicago, prohibiting groups of three or more people including one or more “known gang members” from congregating in locations known by the police as provocative. This ordinance was widely discussed in Cambridge and Medford, and reflected a genuine fear, if not an actual increase, in the rate of violent crime.

Whether or not such responses actually decrease rates of crime or reduce the vulnerabilities of the young people, they do most definitely raise the dialogue about young people, and re-focus energy away from schooling to community policing. Because there is often little coordination between departments within a city (e.g., between the police and school departments) and from one city to another, it is not clear whether youth crime will be more directly affected by this kind of legislation or by enhancing opportunities for young people through such initiatives as increased project-based learning or mentorships, school alternatives or community-based, out-of-school approaches. However, research has clearly indicated that schooling significantly reduces criminal activity⁵⁴, and the various initiatives proposed under P-21 to enhance engagement in education are likely to have a positive impact on crime rates.

e. Health & Safety

There are many vulnerabilities that could be ascribed to health or safety issues – from vaccination to suicide rates, from teenage pregnancy to violence, from level of insurance to range of preventive care available at no or low cost. And most of those data confirm what is already amply evident: the needs of vulnerable youth are concentrated in certain communities, while other communities blend into a much less vulnerable profile.

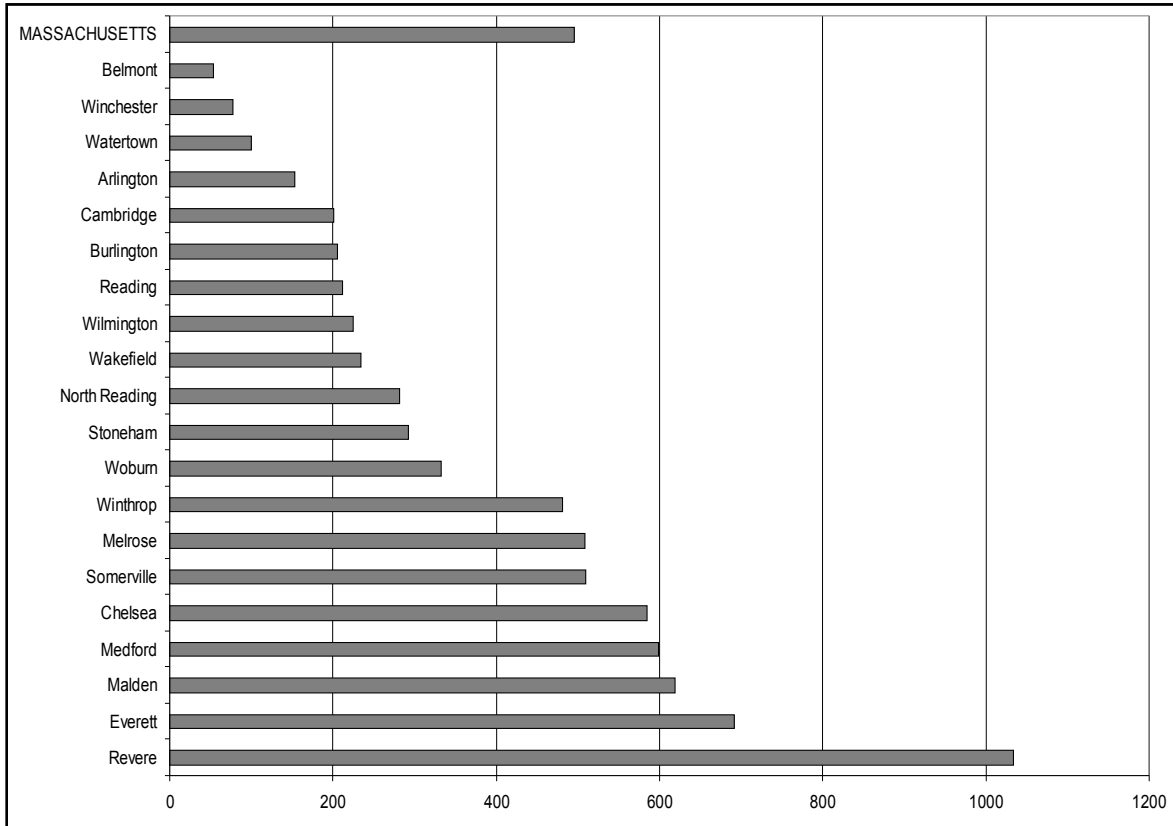


Figure 18: Needle Use per 100,000, Metro North Communities, 2004
 Source: *Massachusetts Community Health Information Profile*⁵⁵

Figure 18 portrays Needle Use per 100,000 in the twelve months prior to August, 2005, arrayed by community. Revere, Everett, Malden, Chelsea and Medford exceed state averages, and only Melrose, Somerville and Winthrop even come near that average. Certainly these data reflect needle users of all ages, and a subset reflect the 16 to 24 year old population, but that is the largest single population for these data, and they are concentrated in a few locations.

Another angle on the same issue of substance abuse is how many are hospitalized for substance abuse per 100,000, as reflected in Figure 19. These reflect 2004 data, the last full year of the reports. Again Revere stands out, while Everett, Chelsea, Winthrop, Malden, and Somerville are

close to the state norm. Because these data report positive substance abuse treatment, they surely only reflect a portion of the community's overall substance abuse problem.

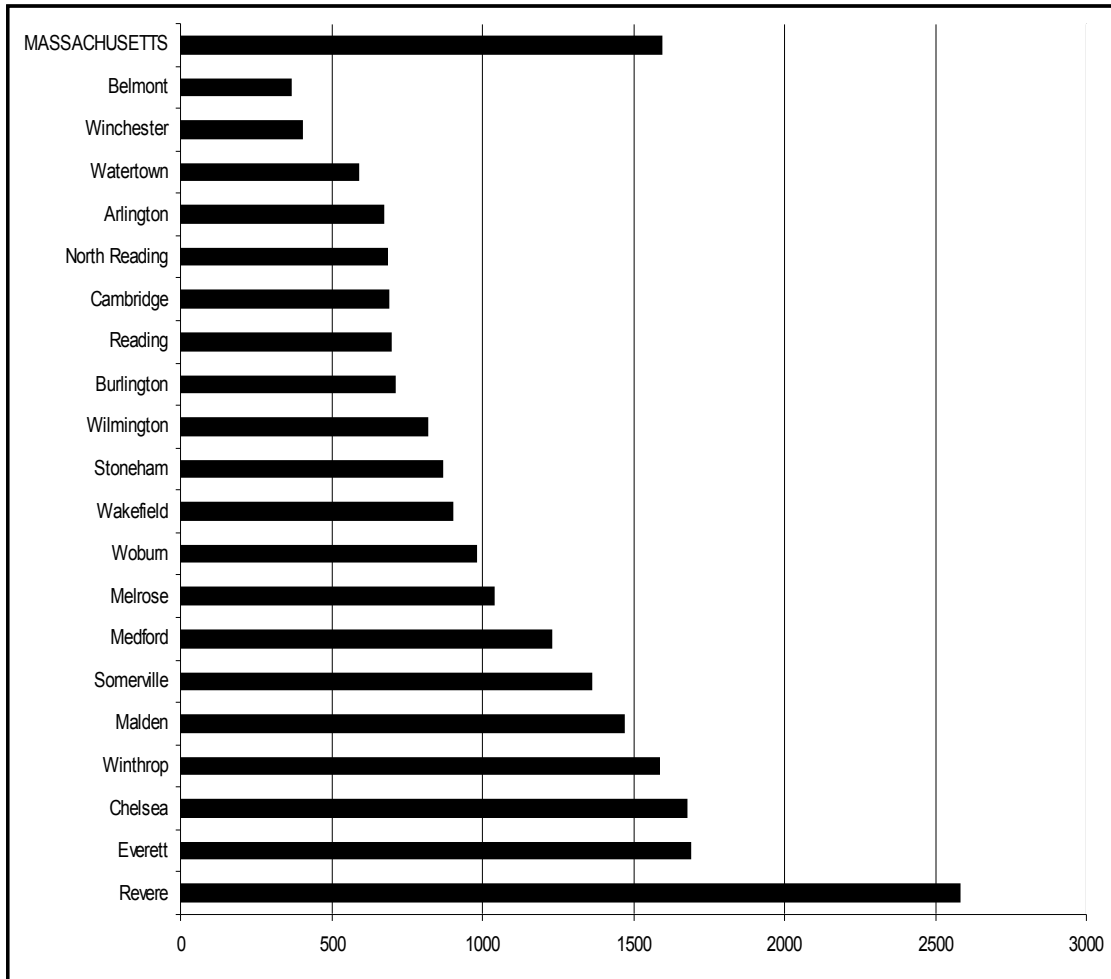


Figure 19: Substance Abuse Hospital Admissions per 100,000, Metro North Communities, 2004
Source: Massachusetts Community Health Information Profile⁵⁶

Teenage pregnancy is also a significant issue in parts of Metro North, with all its attendant consequences on the lives of the young mothers, their children, and larger society. Teen mothers are less likely to graduate from high school, and more likely to live in poverty. The children of teenage mothers often experience health and developmental problems, and are frequently poor, abused and/or neglected. Teenage pregnancy also results in substantial costs to society, estimated at \$7 billion annually on a national basis, in terms of lost tax revenues, cost of public assistance, child health care, foster care, and involvement with the criminal justice system.⁵⁷

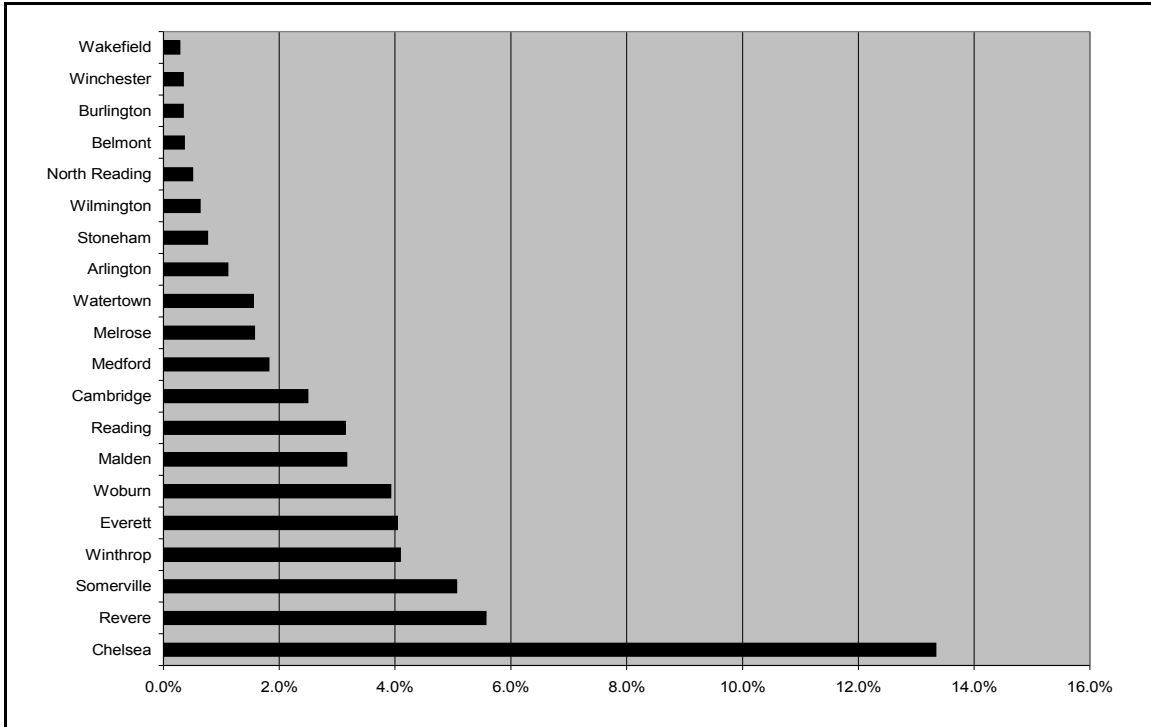


Figure 20: Percentage of Births by Women Under 20 years Old, Metro North Communities, 2000
Source: MassStats⁵⁸

Teen pregnancy data are presented in two ways. Figure 20 shows the percentage of births to women under 20 years old in the year 2000. Figure 21 presents the data in terms of birth rates per 1,000 females ages 15 to 19, and focuses on those communities in Metro North that rank highest statewide for teen birth rates. Figure 21 also includes data from more recent years than Figure 20.

Of the 351 Massachusetts communities, four Metro North communities are among the top 25 for teen birth rates. The issue is particularly acute in Chelsea, with a rate of four times the state average, and Revere at twice the state average. On the positive side, all four of these communities

2002 State Rank	City	Teen Birth Rate 2002	Teen Birth Rate 2001	Teen Birth Rate 1992
2	Chelsea	81.7	80.8	95.1
13	Revere	42.0	41.2	54.5
20	Everett	28.8	26.9	27.6
23	Somerville	24.0	20.1	29.7
	STATE AVERAGE	22.6	24.3	31.7

Figure 21: Teenage Birthrates, Metro North Communities in Top 25 Statewide
 Teen birth rates are calculated by computing births per 1,000 females ages 15-19 years
Source: The Massachusetts Alliance on Teenage Pregnancy⁵⁹

reflect the general trend of reduction in teen birth rates in Massachusetts over ten years. However, there has been an up-tick in birth rates from 2001 to 2002, with Somerville showing a particularly large increase. Whether this is a one year anomaly or the beginning of a trend over time remains to be seen.

The wide array of initiatives being proposed under P-21 are likely to have a potential impact on reducing the teenage birthrate, as research indicates that teens are more likely to make healthy decisions if they develop aspirations for the future and perform well in school.⁶⁰

Conclusion

This supplement to the Metro North P-21 strategic plan provides a wide array of statistical and other data regarding the needs of vulnerable youth in the Metro North region. The data clearly indicate a concentration of need in seven communities within the region. The data also indicate that there is no single variable which defines the extent of need or solution in regards to vulnerable youth. A multi-pronged, comprehensive approach is clearly needed, one that is focused on engagement and re-engagement of young people in school and education, with the necessary support services to maintain that engagement. It is our view that, in line with the findings of national studies⁶¹, such engagement will have a corollary positive impact, in terms of reduction of crime, substance abuse, teenage pregnancy, and other indicators associated with vulnerable youth.

FOOTNOTES

¹ Map taken from MassSTATS Web page -[http://shiraz.caliper.com/Mapitude/MassStatsNETVersion/\(f04s2hy5vofuj5jj0txooi55\)/Map.aspx](http://shiraz.caliper.com/Mapitude/MassStatsNETVersion/(f04s2hy5vofuj5jj0txooi55)/Map.aspx)

² Chaplin, Duncan. 2003. Public and private benefits of education for at-risk youth and the Alliance for Excellent Education Programs. Paper presented at the conference, "Challenges Confronting High Schools: Literacy, Adequacy, and Equity, Nov. 16-18, 2003, Washington, D.C. Online at www.all4ed.org/publications/BenefitsofEducationForAtRiskYouth_Chaplin.doc. See also, Jason Amos, Transforming the American High School, <http://www.all4ed.org/TransformingAmericanHS.ppt>, for the \$1 million estimate.

³ Levin, H., Holmes, N. America's Learning Deficit. *The New York Times*, 6 November 2005.

⁴ In 2004-5, the Belmont twelfth grade class was only 3.1% smaller than the ninth grade class. Comparable numbers in Malden were 30% (ten times the Belmont ratio), and 59.3% in Chelsea (nearly twenty times that ratio). While these ratios were less extreme for Stoneham and Reading (at 10.6%), they were substantial (Mass Department of Education, <http://profiles.doe.mass.edu>).

⁵ MassINC's study, The Changing Face of Massachusetts, treats the substantial increase of immigrants in the state's overall labor market (<http://www.massinc.org/research/index.html>). Supplemental studies deal with the disparities of bilingual education, but those issues, while seriously slowing elementary student progress, have less direct impact on secondary students.

⁶ Only Cambridge (42.3%), Malden (20.3%), Somerville (18.7%), and Medford (15.9%) and Everett (12.1%) have African American high school percentages over 10%, and everywhere but in Chelsea (16.5%), Cambridge (33.7%), Malden (48.8%) and Somerville (48%) do white students outnumber all others by at least two to one.

⁷ Social Science Research & Evaluation. (2004). Summary of Results from the 2003-2004 Somerville High School Health Survey, p. 17. See also the report of the Center for Teen Empowerment, 6/23/04, "Youth Services in the City of Somerville, Massachusetts: Assessment and Recommendations," which noted that two city youth drug prevention programs were closed and slots in detox programs "were severely cut back due when the local Program for Alcoholism and Drug Abuse lost \$3million of its \$7 million state budget." The Teen Empowerment report also noted 15 recorded drug overdoses, including one resulting in the death of a teenager, in the first 40 days of 2004.

⁸ The demographics of "urban youth" critical to this report were well developed by the White House Task Force for Disadvantaged Youth (April, 2003) and most concisely represented in the Memo on Reconnecting Our Youth, last year (<http://www.clasp.org/CampaignForYouth/memo.htm>). Several of their recommendations, e.g., a common definition of dropout, are incorporated here.

⁹ Harris, L., What's a Youngster to Do? *Clearinghouse REVIEW Journal of Poverty Law and Policy*, July-August 2005, p. 130. <http://www.clasp.org/publications.php?id=14&type=1>

¹⁰ In 2004, the "potential dropout" total for the region was 3,302 (the sum of the deficits of grades 10, 11, and 12 from the total in grade 9), while that same potential for the seven cities was 1,928 or 58% of the total of all twenty cities and towns in Metro North. Analysis based on data from Massachusetts Department of Education School & District Profiles: <http://profiles.doe.mass.edu/>

¹¹ Harris, p. 131

¹² Harris, p. 132

¹³ Druian, G., Butler, J., Effective Schooling Practices and At-Risk Youth: What the Research Shows. NW Educational Laboratory School Improvement Research Series. August 31, 2001. p. 5. <http://www.nwrel.org/scpd/sirs/1/topsyn1.html>

¹⁴ Druian, G., Butler, J., Effective Schooling Practices and At-Risk Youth: What the Research Shows. NW Educational Laboratory School Improvement Research Series. 31 August 2001. p. 7. <http://www.nwrel.org/scpd/sirs/1/topsyn1.html>

¹⁵ Lipper, D., Sagehorn, E. Not Your Father's Voc Ed. *EduTopia*, November 2005 - http://www.edutopia.org/magazine/ed1/article.php?id=art_1387&issue=nov_05

¹⁶ Harris, p. 130

¹⁷ Harris, p. 131

¹⁸ Eccles, J., Gootman, J. (Editors). Community Programs to Promote Youth Development. *Report Brief - Board on Children, Youth and Families, National Research Council and Institute of Medicine*, November 2004 - <http://www.iom.edu/Object.File/Master/24/200/0.pdf>

¹⁹ Adria Steinberg, of Jobs for the Future, moderated a recent panel in DC discussing their ongoing study of how much time secondary school may require: <http://www.jff.org/jff/PDFDocuments/EarlyLessonsYTFG.pdf>.

²⁰ Matt Kelly, Getting Down to Business, *CommonWealth*, Fall, 2005, p. 80. The recent economic stimulus package passed by the legislature adds \$32 million new dollars to workforce investments in these fields, in addition to \$25 million for cultural facilities and \$200 million for infrastructure improvements.

²¹ The MBTA's internal planning documents describing "Projects In Planning" include "Beyond Lechmere Planning" (http://www.mbta.com/projects_underway/beyond_lechmere_planning.asp) and the "Urban Ring" (http://www.mbta.com/projects_underway/urbanring.asp), while the Governor's twenty year strategic plan for transportation (<http://www.eot.state.ma.us/default.asp?pgid=content/longplanIndex&sid=level2>) is the subject of current rounds of hearings in various locations across the state. These plans and studies describe these projects as feasible and approved. In addition, both have had relevant earmarks in the recently signed US Transportation bill (H.R. 401, "The Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users," (<http://thomas.loc.gov/cgi-bin/query/D?c109:1::/temp/~c109ix3shB::>)) for \$286.4 billion over six years. This contains \$1.576 billion in transit funding for Massachusetts for the next six years, representing 41,000 jobs, and 8,500 new jobs over the next six years.

²² For an example of the opportunities available through GIS, see Wade Roush, "Killer Maps," *Technology Review.com*, October, 2005. (http://www.technologyreview.com/articles/05/10/issue/feature_maps.asp?p=1).

²³ Somerville (85%), Medford (77.7%), Malden (68.1%), Revere (64.1%), Chelsea (62.4%), Everett (60.7%), Woburn (60.3%), Stoneham (50.6%), and Cambridge (50.4%) all had dramatic increases in their costs per student between 1996 and 2003, according to their state filings. These per pupil costs ranged from \$14,840 in Cambridge to \$7,123 in Everett.

²⁴ There are many partnerships in the region, ranging from Boston University's supervision of the Chelsea system to small scale studies in Somerville, Cambridge and Malden by Tufts, Harvard, and TERC. Yet there are no joint appointments between colleges and schools, no structured long term staff development efforts, no curriculum efforts of the scale of the EDC curriculum projects of the 1960's or 1970's, and no formalized sequence from paraprofessional through mentor teacher like those in the early 1980's.

²⁵ The Early College High School Initiative At A Glance. Jobs for the Future. 2 December 2004. Downloaded 15 October 2005. <http://www.earlycolleges.org/Library.html#ataglance>

²⁶ Dual enrollment, whereby the state paid college tuition for secondary students enrolled in college courses, ended several years ago in this state, although it is still strongly commended by JFF and other students of the field. Tech Prep, the only remaining vehicle for college credit in secondary settings, has a number of limited partners in the region that link Bunker Hill credit to with secondary school coursework and achievement.

²⁷ Rooney, J., Gittleman, J. (2005). A New Era of Higher Education-Community Partnerships. Boston: The Boston Foundation.

²⁸ Problem Based Learning. Problem Based Learning Initiative. Downloaded 15 October 2005. <http://www.pbli.org/pbl/pbl.htm>

²⁹ An Overview of PBL. Maricopa Center for Learning and Instruction. 16 May 2001. Download 15 October 2005. www.mcli.dist.maricopa.edu/pbl/info.html

³⁰ The JFF website includes an extensive library of planning documents (<http://www.earlycolleges.org/>) and the agency itself has made themselves available to the Charter and the REB to assist in planning, as have Bunker Hill Community College and Cambridge College, who have independently developed Early College initiatives.

³¹ The Phoenix Academy Charter School, "Application Prospectus for a Massachusetts Charter, 2004-5," p. 11. These curricular innovations will be paired with comparable instructional innovations – mentorships, community meetings, advisories, before-school and after-school intensives, longer hours, etc. – to assure the school's unique character.

³² While problem based approaches go back at least to Dewey and Montessori, there is a more recent literature on learning styles of many of the target groups of P-21 strongly indicating specific kinds of problems for further exploration and pilot programs. Carraher and Schliemann, for example, have explored using algebra in early elementary classrooms to teach algebra and arithmetic, logic and language to children in Central America as well as in Somerville, Massachusetts. They discovered that concepts like less and more – critical to both algebra and arithmetic – are easier for young children to understand abstractly than through numbers, and that, in effect, *it is easier to teach arithmetic through algebra than, as it is now, algebra through arithmetic*. (Schliemann, A.D., Carraher, D., et. al., "Algebra in Elementary School," Proceedings of the 27th International Conference for the Psychology of Mathematics Education, Honolulu, 2003. See also Carraher & Earnest, "Guess My Rule Revisited. Proceedings of the 27th International Conference for the Psychology of Mathematics Education, Honolulu, 2003. For these and other sources, see the TERC website at <http://earlyalgebra.terc.edu/publications.htm>.) The significance of the Carraher and Schliemann experiments is that students can "slingshot" ahead of the standard sequence in mathematics if they are engaged in timely and authentic thought problems. Carraher and Schliemann suggest both a method and a framework for analyzing other methods. For a specific example with broad implications, they explain, "In our classroom studies we had to build ... situations and engage children in discussions where different approaches are proposed and considered by the instructor and the other children. In this sense, the discussion was much closer to an everyday problem-solving situation than to a traditional mathematics classroom focused on the transmission and application of rules. (Schliemann & Carraher, "The Evolution of Mathematical Reasoning: Everyday versus Idealized Understandings," *Developmental Review*, 22, p. 263, 2002) In other words, it is a particular kind of problem which has this kind of broad intellectual impact.

According to David Jonassen, these authentic problems are often “ill-structured.” That is, they often have “unclear goals, unknown problem elements, multiple solutions and solution paths, no explicit means for determining appropriate action.” Ill-structured problems are both much more common in the real world than their more structured equivalents (a standard math word problem, for example, has both a single correct answer and very little ambiguity), and much more engaging to learners. The SCANS report, for example, as well as the Accreditation Board for Engineering Technology, the National Council of Supervisors of mathematics, and the National Academy of Engineering all suggest “solving problems is the principal reason” for their study. (David H. Jonassen, “Let Us Learn to Solve Problems,” <http://it.coe.uga.edu/itforum/paper83/paper83.html>.) Jonassen goes on to describe six specific arguments for problem solving in classroom instruction: Problems offer authenticity, intentionality, meaningfulness, an appropriate ontology, real intellectual stimulation, and designed experiences that integrate specific skills. As Jonassen suggests, however, perhaps the most important contribution is authenticity, for “In my high school, the only students who solved meaningful problems were in the industrial arts program (a curious irony given their low status).” Through such ironies come dramatic innovations.

In another paper, Jonassen identified a typology of eleven different kinds of problems from well structured to ill-structured, each of which may have any of six different dimensions of analysis, from problems as learning activities, as inputs, as success criteria (as in a test), as context, as degree of structure, and degrees of abstractness. Finally, Jonassen also describe many examples of each of these problem types. For any curriculum design to incorporate a problem based approach, Jonassen’s framework and an associated web page that indexes thousands of other problems (<http://csps.missouri.edu/>) are excellent resources for standards of problems and methods of analyzing student response. (David H. Jonassen, “Toward a Design Theory of Problem Solving,” *Educational Technology Research and Development*, Volume 48, No. 4, 2000, pp. 74-5, and his associated articles, “Instructional Design Models for Well-Structured and Ill-Structured Problem-Solving Learning Outcomes,” *ETR&D*, Volume 45, No. 1, 1997, pp. 65-94; and “Designing Research-Based Instruction for Story Problems,” *Educational Psychology Review*, Volume 15, No. 3, 2003, pp. 267-296.) Finally, the literature does not always distinguish between problems and “patterns,” which share many of the same features but are more commonly used in designing computer science courses. Joseph Bergin’s “Fourteen Pedagogical Patterns” are examples, all a part of the Pedagogical Patterns Project developed by a network of educators for their own use. (Joseph Bergen, “Fourteen Pedagogical Patterns,” <http://csis.pace.edu/~bergin/PedPat1.3.html>, and “Patterns for Experiential Learning,” <http://csis.pace.edu/%7Ebergin/patterns/ExperientialLearning.html>, and the Project at <http://www.pedagogicalpatterns.org/>).

³³ Source: MassStats, based on US Census 2000 data.

[http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(1bijn255gqcn3345gxyzlavd\)/map.aspx?Redirected=True](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(1bijn255gqcn3345gxyzlavd)/map.aspx?Redirected=True)

³⁴ Source: MassStats Economic Data.

[http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(xtenne55hy4xfc55k22mhx55\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(xtenne55hy4xfc55k22mhx55)/Map.aspx)

³⁵ Source: DataPlace, based on US Census 2000 data. <http://www.dataplace.org/charttable>

³⁶ National Center for Children in Poverty. (1996). One in Four: America’s Youngest Poor. New York: Columbia School of Public Health, p. 10. http://www.nccp.org/pub_oif96.html

³⁷ National Center for Children in Poverty. (1999). Young Children in Poverty. A Statistical Update. New York: Columbia School of Public Health, p. 7. <http://www.nccp.org/media/ycp99-text.pdf>

³⁸ Source: DataPlace based on 1990 and 2000 U.S. Census data. <http://www.dataplace.org/>

³⁹ Source: MassStats Demographic Data.

[http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(xtenne55hy4xfc55k22mhx55\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(xtenne55hy4xfc55k22mhx55)/Map.aspx)

⁴⁰ Source: DataPlace, based on US Census 2000 data. <http://www.dataplace.org/charttable>

⁴¹ Sum, A. Uvin, J., Khatiwada, I., Ansel, D. (2005). The Changing Face of Massachusetts, Executive Summary. Boston: The Massachusetts Institute for a New Commonwealth, pp. 10-11.

http://www.massinc.org/fileadmin/researchreports/changingface/changing_face_exec.pdf

⁴² Source: DataPlace, based on US Census 2000 data. <http://www.dataplace.org/charttable>

⁴³ Source: MassStats Education Data.

[http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(xtenne55hy4xfc55k22mhx55\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(xtenne55hy4xfc55k22mhx55)/Map.aspx)

⁴⁴ Source: MassStats Education Data.

[http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(xtenne55hy4xfc55k22mhx55\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(xtenne55hy4xfc55k22mhx55)/Map.aspx)

⁴⁵ National Center for Education Statistics, *Dropout Rates in the United States: 2000*, U.S. D.O.E., Office of Education Research and Improvement, NCES, 2002-114, p. 2. <http://nces.ed.gov/pubs2002/2002114.pdf>

⁴⁶ Educational Testing Service, *One-Third of a Nation: Rising Dropout Rates and Declining Opportunities*, Princeton. February, 2005, p. 7. <http://www.ets.org/Media/Research/pdf/PICONETHIRD.pdf>

⁴⁷ National Governors Association, *Graduation Counts: A Compact on State High School Graduation Data*, 17 July 2005. Downloaded October 15, 2005. http://gov.state.nv.us/pr/2005/20050717NGA_Graduation.htm

⁴⁸ Difference in ninth grade vs. twelfth grade enrollments over five years were determined by totaling for each school the twelfth grade enrollments from 2000-2004 and the ninth grade enrollments from 1997-2001, and calculating the percentage difference. Source: Massachusetts Department of Education. <http://profiles.doe.mass.edu/enrollmentbygrade.aspx>

⁴⁹ Source: Massachusetts Department of Education 2004-05 Enrollment by Race/Gender Report. <http://profiles.doe.mass.edu/enrollmentbyracegender.aspx>

⁵⁰ Data used in Figures 6, 7 & 9, for per pupil expenditures, are figures for all day programs, including regular education, special education, and in-district vocational. Source: Massachusetts Department of Education. <http://profiles.doe.mass.edu/ppx.aspx>

⁵¹ Source: Massachusetts Department of Education MCAS Report. <http://profiles.doe.mass.edu/mcas.aspx>

⁵² Chart indicates overall percentage change in school district population for all grades, from school years 1998-1999 to 2003-2004. Source: Massachusetts Department of Education. <http://profiles.doe.mass.edu/ppx.aspx>

⁵³ Source: MassStats Crime Data. [http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(x1opuqz30ylevluuzzw4itmm\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(x1opuqz30ylevluuzzw4itmm)/Map.aspx)

⁵⁴ McCusker, J. *Dropouts are a Tradition We Can No Longer Afford*. Teachers College – Columbia University: News. 6 November 2005. <http://www.tc.columbia.edu/news/article.htm?id=5353>

⁵⁵ Source: Massachusetts Comprehensive Health Information Profile (MassCHIP). <http://masschip.state.ma.us>

⁵⁶ Source: Massachusetts Comprehensive Health Information Profile (MassCHIP). <http://masschip.state.ma.us>

⁵⁷ Annie E. Casey Foundation. (1998). *When Teens Have Sex: Issues and Trends*. Baltimore, MD: Annie E. Casey Foundation

⁵⁸ Source: MassStats Health Data, from MA Dept. of Public Health. [http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/\(ki2tqw45cb10bg3ony2usgmw\)/Map.aspx](http://shiraz.caliper.com/Maptitude/MassStatsNETVersion/(ki2tqw45cb10bg3ony2usgmw)/Map.aspx)

⁵⁹ Source: The Massachusetts Alliance on Teen Pregnancy. http://www.massteenpregnancy.org/data/birth_local.html

⁶⁰ Kirby, D. (2001). *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. Washington, DC: National Campaign to Prevent Teen Pregnancy

⁶¹ Levin, H., Holmes, N. *America's Learning Deficit*. *The New York Times*, 6 November 2005.

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